



Social Security

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# Social Security Bulletin

Women, Marriage, and Social Security  
Benefits Revisited

Disabled Workers and the Indexing of  
Social Security Benefits

Financing Social Security 1939–1949:  
A Reexamination of the Financing Policies  
of this Period

The Food Stamp Program and Supplemental  
Security Income

The Reservation Wages of Social Security  
Disability Insurance Beneficiaries

KiwiSaver: New Zealand's New Subsidized  
Retirement Savings Plans

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A stylized graphic of the American flag, featuring curved stripes and stars, positioned on the left side of the page.

# Social Security Bulletin

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**Social Security Administration**  
Office of Retirement and Disability Policy  
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# WE'RE LOOKING FOR MANUSCRIPTS

The Social Security Administration is now accepting manuscripts from the research community and others interested in furthering the discussion on how we as a nation can provide the best system of economic security for the aged, the disabled, and survivors of deceased workers and how we can protect our vulnerable poor.

Papers submitted for publication in the *Bulletin's* refereed section, "Perspectives," will be evaluated by top experts in our fields of interest, which include retirement policy, disability policy, and SSI policy. 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.

We are looking for manuscripts that meet basic professional standards and are supported by solid data analysis. Instructions for authors wanting to submit a manuscript can be found on page 101 of this issue.

Papers based on original research in our areas of interest for publication in the *Bulletin* may be submitted to the "Perspectives" Editor at [perspectives@ssa.gov](mailto:perspectives@ssa.gov) or mailed to:

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## ***Social Security Bulletin***

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### **Articles**

- 1**     ***Women, Marriage, and Social Security Benefits Revisited***  
by Christopher R. Tamborini and Kevin Whitman

This article uses a Restricted-Use File of the 2001 Marital History Topical Module to the U.S. Census Bureau's Survey of Income and Program Participation (SIPP) to examine women's marital histories in relation to Social Security spouse and widow benefit eligibility. To assess marital trends over time, the authors compare SIPP estimates to data reported in Iams and Ycas' 1988 article, "Women, Marriage and Social Security Benefits," which used the 1985 Marital History Supplement to the Current Population Survey. The results shed light on important links between sociodemographic trends in marriage and Social Security beneficiaries. Over three-fourths of women aged 40 to 69 in 2001 already had marital histories that guarantee them the option of a spouse or widow benefit at retirement. However, a smaller proportion of these women would be potentially eligible to receive spouse or widow benefits compared to their counterparts in 1985 due to changes in patterns in marriage, particularly among younger women in the baby-boom cohort. Notable shifts include rising proportions of currently divorced women without a 10-year marriage and never-married women.

- 21**    ***Disabled Workers and the Indexing of Social Security Benefits***  
by Alexander Strand and Kalman Rupp

This article presents the distributional effects of changing the Social Security indexing scheme, with an emphasis on the effects upon disabled-worker beneficiaries. Although a class of reform proposals that would slow the rate of growth of initial benefit levels over time—including price indexing and longevity indexing—initially appear to affect all beneficiaries proportionally, there can be different impacts on different groups of beneficiaries. The impacts between and within groups are mitigated by (1) the offsetting effect of changes in Supplemental Security Income benefits at the lower tail of the income distribution, and (2) the dampening effect of other family income at the upper tail of the income distribution. The authors present estimates of the size of these effects.

- 51 ***Financing Social Security 1939–1949: A Reexamination of the Financing Policies of this Period***  
by Larry DeWitt

Presented is an examination of the financing history of the U. S. Social Security system from the passage of the original law in 1935 up through the enactment of the 1950 Amendments to the Social Security Act. In particular, it focuses on the 1939 Social Security Amendments and the subsequent tax rate freezes enacted between 1939 and 1949. It examines the origins of these taxing policies and assesses the impact of the rate freezes on the long-range actuarial balance of the Social Security program during this period.

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by Brad Trenkamp and Michael Wiseman

The Food Stamp Program (FSP) and Supplemental Security Income (SSI) are important parts of national public assistance policy, and there is considerable overlap in the populations that the programs serve. This article investigates FSP participation by households that include SSI recipients and assesses the importance of various provisions of the Food Stamp Program that favor SSI recipients.

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by Sophie Mitra

Using the New Beneficiary Data System, this article examines the reservation wages of a sample of Social Security Disability Insurance (DI) beneficiaries with work capabilities. It analyzes the magnitude of the reservation wages of DI beneficiaries compared to the last wage earned and to benefit amounts. In addition, the article discusses the determinants of reservation wages for DI beneficiaries.

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- 113 ***KiwiSaver: New Zealand's New Subsidized Retirement Savings Plans***  
by Barbara Kritzer

On July 1, 2007, New Zealand introduced KiwiSaver, a new subsidized retirement savings plan. All new entrants to the labor force and anyone starting a new job are automatically enrolled in a plan and may opt out if they wish. Anyone younger than age 65, including the self-employed and anyone not in the labor force, may choose to set up a KiwiSaver account. The government provides tax credits for both employer and account holder contributions, a one-time tax-free payment to each account, and an annual fee subsidy to defray administrative costs.



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## ***Women, Marriage, and Social Security Benefits Revisited***

*by Christopher R. Tamborini and Kevin Whitman*

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*The authors are with the Office of Retirement and Disability Policy, Social Security Administration.*

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### ***Summary and Introduction***

Introduced into the Social Security program in 1939, spouse and survivor benefits have important implications for the retirement experience of women. At the end of 2005, 12.9 million women Social Security beneficiaries aged 62 or older (59 percent) received at least part of their benefit as wives or widows of entitled workers.<sup>1</sup> For these women, a spouse or widow benefit provided a larger payment than that of their own earnings record (SSA 2007, Table 5.A14).

A number of dynamic factors influence the number of women (and men) eligible for, and claiming, Social Security spouse or survivor benefits at retirement. Past and present marital status determines potential benefit eligibility (typically, one must be currently married, widowed, or have had a 10-year marriage to qualify), and the benefit amount is based on a person's lifetime earnings record in relation to a current or former spouse. This article focuses on the marital history component of eligibility, while acknowledging that large-scale changes in women's workforce attachment over the past half century, such as increases in labor market participation and earnings relative to men, have led to an increase in the share of women retirees receiving at least part of their benefit based on their own earnings record.

The connection between marital history and eligibility for spouse or widow benefits is of increasing interest among policymakers and

retirement analysts (Favreault and Steuerle 2007; Harrington Meyer, Wolf, and Himes 2006). Although marital trends have begun to stabilize in the United States in recent years (for example, divorce rates appear to have leveled off), an extensive literature documents dramatic changes in the marital patterns of women over the past several decades. Notable changes include increases in divorce, decreases in marriage durations, and a rise in the number of women who delay or forgo marriage.<sup>2</sup> From a retirement perspective, shifting marital patterns are important as they may mean that the share of women with the option of claiming a spouse or widow benefit at retirement may change as well. For example, recent trends show higher proportions of never-married women in the population (Tamborini 2007), which would reduce the share of women potentially eligible for spouse or widow benefits by the time they reach retirement age.

Since marital histories help establish whether spouse or widow benefits will be a retirement income option for women in old age, it is important to track marital trends, particularly as the leading edge of the baby-boom generation begins retiring. This article uses data from the 2001 Marital History Topical Module (wave 2) to the U.S. Census Bureau's Survey of Income and Program Participation (SIPP) to examine the extent to which marital patterns are changing among different age groups of women. The SIPP

Marital History Module is considered one of the best surveys to gauge recent marital patterns, especially since the National Center for Health Statistics and the Current Population Survey no longer collect comprehensive data on marriage and divorce. Thanks to an agreement with the U.S. Census Bureau, the Social Security Administration has access to a Restricted-Use File of the Marital History Module, which contains the year and month of marital transition events (marriage, divorce, widow). This information is important because it allows for the estimation of length of marriages, an important component of this article's analysis.<sup>3</sup>

To explore how marital patterns have changed over the past 15 years, the article also draws on data reported in Iams and Ycas (1988), which is based on the U.S. Census Bureau's 1985 Marital History Supplement to the Current Population Survey (CPS).<sup>4</sup> To facilitate comparability between the 2001 SIPP data analyzed in this article and the 1985 CPS data reported in Iams and Ycas' work, women are grouped into three age cohorts: Older Age (ages 60 to 69 in the year of analysis), Late Middle Age (ages 50 to 59 in the year of analysis), and Middle Age (ages 40 to 49 in the year of analysis).

Altogether, the article highlights important linkages between sociodemographic trends in marital patterns, the Social Security program, and its beneficiaries. By comparing the marital histories of women aged 40 to 69 in 2001 to similarly aged women in 1985, the article provides an indication of how marital trends are changing and how such changes may impact the extent to which spouse and widow benefits will be an option for future women retirees. Results indicate that the majority of women aged 40 to 69 in 2001 (over three-fourths) already had marital histories that will guarantee them the option of a spouse or widow benefit at retirement. However, a smaller proportion of these women would be potentially eligible to receive spouse or widow benefits compared with their counterparts in 1985 due to changes in current marital status or past marital duration. The magnitude of change between 1985 and 2001 varies markedly by age cohort, with the smallest shift in marital patterns having occurred among the Older Age and Late Middle Age groups and the most dramatic among the Middle Age group. Notable shifts, by and large, reflect marital pattern changes in the younger wave of the large baby-boom cohort and include a rise in the share of divorced women with shorter marriages (less than 10 years) and never-married women.

## **Women and Social Security Auxiliary Benefits**

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The retirement security of women is a clear concern among policymakers and retirement analysts. Although women's economic situation at old age has improved greatly over the past 30 years, women are still more likely than men to experience old-age poverty; partly because women earn less over their lifetimes and live longer than men. In 2004, the poverty rate for women aged 65 or older was 12 percent, compared with 7 percent for men (SSA 2006, Table 8.1).

Established in the 1939 Social Security Amendments, spouse and widow(er) benefits, sometimes called dependent or auxiliary benefits, provide monthly payments to qualified spouses and survivors of insured workers (Martin and Weaver 2005).<sup>5</sup> Receipt of a Social Security auxiliary benefit is contingent on two main factors: marital status/history and lifetime earnings relative to a current or previous spouse. This link between benefit eligibility and marital history has become increasingly important given recent evidence of changing marital patterns among the baby-boom and younger birth cohorts (Butrica and Iams 2000; Favreault and Steuerle 2007; Goldstein and Kenney 2001; Harrington Meyer, Wolf, and Himes 2006; Kreider and Simmons 2003).

Table 1 summarizes the current marital requirements for spouse and widow benefits. Under current law, married women are eligible for a *spouse* benefit at retirement age. The benefit equals 50 percent of their spouse's primary insurance amount (PIA) if claimed at the full retirement age (FRA). Divorcees may be eligible for a divorced spouse benefit based on their previous spouse's lifetime earnings provided that they had a 10-year (120 months) marriage. If a woman qualifies for benefits based on her own work record and her spouse's work record, she will receive the higher amount of the two (her own PIA or 50 percent of her husband's PIA). Qualifying spouse beneficiaries must be married to the retiring spouse for at least one continuous year prior to applying for benefits, with certain exceptions.<sup>6</sup>

The Social Security program also provides benefits to *widow(er)s* of deceased workers.<sup>7</sup> The benefit for widow(er)s can equal 100 percent of a deceased spouse's PIA if the surviving spouse begins to collect benefits at the FRA. A reduced benefit (from 71 percent to 99 percent of the deceased's PIA) is available as early as age 60 (age 50 if disabled).<sup>8</sup> Divorced surviving spouses may also qualify if their marriage

**Table 1.**  
**Entitlement to auxiliary and retired-worker benefits at retirement age, by marital history**

Marital history/status	Retired-worker benefit	Auxiliary benefit
Currently married or separated	Must have at least 40 quarters of covered employment	Yes, up to 50 percent of spouse's PIA if spouse is still living. <sup>a</sup>
Widowed	Must have at least 40 quarters of covered employment	Yes, up to 100 percent of deceased spouse's PIA. <sup>b</sup>
Divorced with 10 years of marriage to an insured former spouse?	Must have at least 40 quarters of covered employment	Yes, if spouse is living, benefits for married or separated women apply, if spouse deceased, widow benefits apply.
Divorced with less than 10 years of marriage	Must have at least 40 quarters of covered employment	None

SOURCE: Authors' compilation based on Iams and Ycas (1988, Table 2).

- a. If person is entitled to a spousal and retired-worker benefit, then the beneficiary is said to be dually entitled. If the spouse benefit exceeds his/her own retired-worker benefit, then the full retired-worker benefit is paid with the difference between the retired worker and spouse benefit added to the benefit amount.
- b. Widows can also be dually entitled. To qualify for survivor benefit, a person must be unmarried or have remarried at or after age 60.

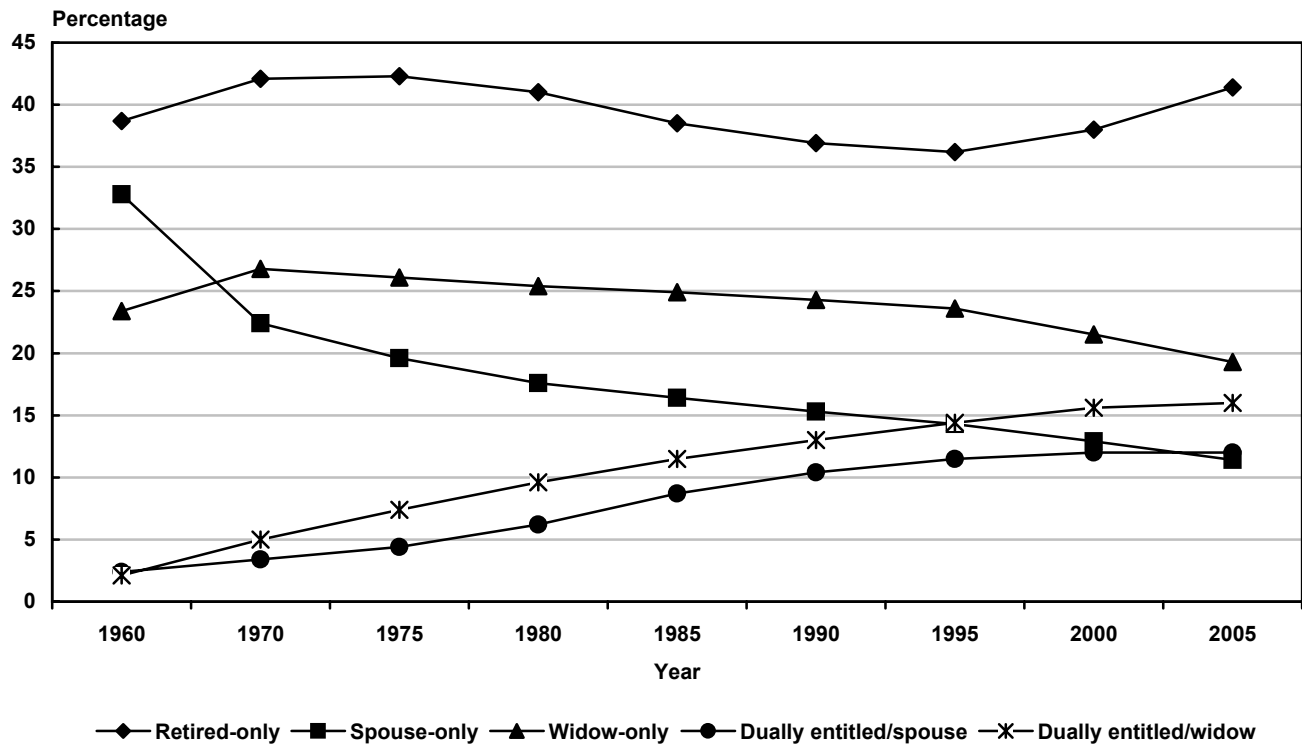
lasted at least 10 years. Qualifying widow(er)s must have been married to the deceased spouse for at least 9 months and have not remarried before the age of 60 (50 if disabled) (SSA 2007b). Since these duration requirements are fairly short, this article assumes that they have been met.

It is important to note that spouse and widow benefit rules have been modified over time.<sup>9</sup> The 1939 Social Security Amendments originally established a spouse benefit equal to one-half of the retired-worker benefit of the present spouse and a survivor's benefit equal to three-fourths of the deceased spouse's worker benefit. Benefits were extended to divorced widows with children and dependent widowers in the 1950 amendments. In 1965, divorced wives and surviving divorced spouses without children became eligible for payments, but there was a dependency and a 20-year length of marriage requirement.<sup>10</sup> Congress raised widow(er)s benefits in 1972 from 82.5 percent of the deceased worker's benefit to 100 percent (Martin and Weaver 2005). In 1977, the length of marriage requirement was reduced from 20 years (240 months) to 10 years (120 months), and remarried women were allowed to receive a regular survivor benefit from the deceased spouse's record if the remarriage occurred after age 60 (age 50 if disabled).

To date, Social Security spouse and widow benefits remain a major source of income for elderly women (Butrica, Iams, and Sandell 1999; Favreault, Sammartino, and Steuerle 2002; Favreault and Steuerle 2007; Harrington Meyer, Wolf, and Himes 2006; Weaver 1997). As shown in Chart 1, over the past 45 years the majority of women Social Security beneficiaries aged 62 or older received a benefit based at least partly on the earnings record of their spouse or previous spouse, 61 percent (4.1 million) in 1960 and 59 percent (12.9 million) in 2005.<sup>11</sup>

That said, increased labor market participation among women and a rise in their earnings relative to men (Blau, Ferber, and Winkler 2006; Bureau of Labor Statistics 2005; Clark and Weismantle 2003),<sup>12</sup> have led to a decline in the share of women receiving benefits as wives or widows only, and correspondingly, an increase in the share of dually entitled women—that is, women who qualify for benefits as retired workers and as spouses and surviving spouses. This development is highlighted in Chart 1, which shows that between 1960 and 1985, the share of female beneficiaries aged 62 or older who were dually entitled grew from 5 percent to 20 percent. By 2005, 28 percent of women beneficiaries 62 or older were dually entitled; 12 percent therein were dually entitled spouses (2.7 million) and 16 percent were dually entitled widows (3.5 million).<sup>13</sup> The

**Chart 1.**  
**Percentage distribution of women Social Security beneficiaries aged 62 or older**  
**by type of benefit, 1960–2005**



SOURCE: Social Security Administration, Master Beneficiary Record. Reported in SSA 2007 (Table 5.A14).

NOTES: All data for 2005 and dual entitlement data for 1995 and 2000 are based on a 10-percent sample. All other years are 100 percent data.

Worker benefits excludes special age-72 beneficiaries and disabled adult children. Dually entitled includes disabled workers.

Widow-only beneficiaries include disabled widows and mothers.

average monthly benefit in 2005 for women aged 65 or older who were dually entitled spouse beneficiaries was \$601 and for dually entitled survivor beneficiaries it was \$1,131; for spouse-only beneficiaries the monthly benefit averaged \$507, and for widow-only beneficiaries the average was \$969 (SSA 2007, Table 5.A15).

### ***Women’s Marital Patterns, 1985 and 2001***

The estimates reported in this article are based on a Restricted-Use File of the 2001 Marital History Module to the U.S. Census Bureau’s Survey of Income and Program Participation (SIPP).<sup>14</sup>

#### ***Data***

The SIPP is a household survey of the civilian non-institutionalized resident U.S. population made up of a series of panels, each of which represents a new sample. The 2001 panel began in 2001 and extended

through 2003 with interviews conducted every 4 months. The survey can be used as a longitudinal sample or cross-sectional study, as is done here.

SIPP’s topical modules represent a variety of topics and are implemented on a rotating basis in survey panels. In this article, we rely on data from the Marital History Module, which was administered in wave two (the second interview) of the 2001 panel. The supplement is designed to collect comprehensive information on the marital histories of persons, families, and households in the United States. Note that, because marital event dates are suppressed in the Public-Use File of the 2001 Marital History Module, the following analysis relies on a Restricted-Use File, which contains the dates (in year and months) at which a respondent’s marriage (up to three) began and ended. Such information allows us to estimate length of marriage(s), an important factor determining potential eligibility for Social Security auxiliary benefits. Similar to other

topical modules, the marital history module is collected in combination with the core questionnaire, which covers general demographic, socioeconomic, and program participation information across all waves of each panel. All users of restricted-use data must be granted permission by the U.S. Census Bureau and the Social Security Administration, and the data must be drawn for research purposes only.<sup>15</sup>

To ascertain how women's marital histories are changing, the article also draws on data from the June 1985 Marital History Supplement to the U.S. Census Bureau's Current Population Survey (CPS), as reported by Iams and Ycas (1988). An important asset of this data is that the marital history supplement questions were essentially the same questions used in the 2001 SIPP panel. In both cases, women were asked a sequence of similar questions relating to the dates that marriage events started and ended, in months and years (up to three marriages).<sup>16</sup> Given that the Current Population Survey (after 1995) and the National Center for Health Statistics no longer collect comprehensive data on marriage and divorce, the SIPP Marital History Module represents one of the best available microlevel data sources to gauge recent marital trends.

All declarations of numeric change between 1985 and 2001 have undergone statistical tests of difference, and only those differences that are statistically

significant at a 95-percent level are cited.<sup>17</sup> To lessen the magnitude of sampling error, statistics from a weighted population base of less than 200,000 are not reported. Nevertheless, particular caution should be used when comparing differences between estimated percentages across data sources. Appendix A discusses the methodological issues of this study in greater detail. Appendix B provides the standard errors of the estimates reported in this article. All estimates are weighted using the final person weights supplied in the data set.

Tables 2–6 report the results, which are organized by age cohort, beginning with the Older Age group.

### **Older Age Cohort: Age 60–69**

The Older Age cohort in 2001 is comprised of women born between 1932 and 1941. Women's marital histories at this age are particularly salient as these women have already reached, or are on the verge of, retirement age. As a starting point, the share of Older Age women potentially eligible for spouse or widow benefits on the basis of current marital status was determined (Table 2). In 2001, 63.7 percent of Older Age women were currently married (including separated) and 19.7 percent were widows, compared with 63.0 percent and 25.4 percent, respectively, in 1985 (Table 2).<sup>18</sup>

In terms of women who would not be potentially eligible for spouse or widow benefits, Table 2 shows

**Table 2.**  
**Percentage distribution of women, by marital status and total number of marriages, age, and survey, 1985 and 2001**

	Middle Age		Late Middle Age		Older Age	
	1985 (CPS)	2001 (SIPP)	1985 (CPS)	2001 (SIPP)	1985 (CPS)	2001 (SIPP)
Marital status total marriages						
Total number (thousands)	13,168	22,036	11,570	16,626	10,950	10,956
Marital Status						
Never-married	5.5	10.5	4.1	6.4	4.3	4.1
Married	73.1	66.5	72.6	65.8	61.3	61.3
Separated	4.0	3.8	3.0	2.9	1.7	2.4
Widowed	3.5	2.4	10.1	7.1	25.4	19.7
Divorced	13.9	16.8	10.3	17.9	7.4	12.6
Total number of marriages						
None	5.5	10.5	4.1	6.4	4.3	4.1
One	73.6	65.1	76.9	65.2	76.7	72.9
Two	17.3	19.8	16.1	22.1	15.7	17.4
Three or more	3.7	4.7	3.0	6.3	3.4	5.6

SOURCES: Iams and Ycas (1988) using CPS data and authors' calculations of SIPP 2001, Marital History File.

NOTES: Data are weighted using sample weights.

CPS = Current Population Survey; SIPP = Survey of Income and Program Participation.

that roughly 4 percent of Older Age women were never-married in 2001, which is consistent with what Iams and Ycas found in the 1985 CPS. While there is no observable change in the share of never-married Older Age women, the data reveal important changes in divorce patterns such that a larger share of Older Age women in 2001 were currently divorced (12.6 percent) or had ever-divorced (28.3 percent) than was recorded in the 1985 CPS estimates (7.4 percent and 17.6 percent, respectively) (Table 3). However, potential eligibility for spouse or widow benefits among divorced women cannot be determined by current marital status alone.

To qualify for the option of receiving a divorced spouse or surviving divorced spouse benefit, currently divorced women must have had at least one marriage lasting 10 years. Among ever-married Older Age women in 2001, roughly 2 percent were both currently divorced and without a 10-year marriage (Table 4). Stated differently, 17 percent of currently divorced Older Age women in 2001 had less than 10 years (120 months) in any marriage. These figures show no significant deviation from Older Age women in 1985.

With respect to length of marriage, estimates also show that nearly 80 percent of ever-married Older Age women had reached their 20-year anniversary in 2001 (Table 5). Older Age women in 2001 had spent a similar average number of years (36.1 years) in marriage (as a total, not just a single marriage) as their counterparts in 1985 (35.4 years) (Table 6).

Overall, estimates indicate relatively small changes between the marital trajectories of Older Age women in the 2001 SIPP and their counterparts in the 1985 CPS. Those Older Age women who were not potentially eligible for auxiliary benefits in 2001 consisted of the 4.1 percent never-married and the 2.2 percent ever-married women who were divorced with less than 10 years in any marriage.<sup>19</sup> This modest continuity in marital patterns between 1985 and 2001 was not as evident among the Late Middle Age and Middle Age groups.

### **Late Middle Age Cohort: Age 50–59**

The Late Middle Age cohort in 2001 consists of women born between 1942 and 1951. The oldest of these women reached age 62 in 2004 and the youngest will be 62 in 2013. In terms of current marital status,

**Table 3.**  
**Percentage of women by marital status, age, and survey sample, 1985 and 2001**

Marital status	Middle Age		Late Middle Age		Older Age	
	1985 (CPS)	2001 (SIPP)	1985 (CPS)	2001 (SIPP)	1985 (CPS)	2001 (SIPP)
Total number (thousands)	13,168	22,036	11,570	16,626	10,950	10,956
Never-married	5.5	10.5	4.1	6.4	4.3	4.1
Ever-married	94.5	89.5	95.9	93.6	95.7	95.9
Ever-widowed	5.4	<sup>a</sup> 3.5	13.5	9.5	30.1	23.3
Currently remarried	1.7	1	3.2	2	4.8	3.2
Currently divorced but previously widowed	0.2	0.2	0.3	0.4	0.4	0.4
Currently widowed	3.5	2.4	10.1	7.1	25.4	19.7
From first marriage	2.9	1.9	8	5.1	20.5	15.5
From subsequent marriage	0.6	0.5	2	2.1	4.8	4.3
Ever-divorced	29.1	35.5	22.4	38.8	17.6	28.3
Currently remarried	14.6	18.2	10.7	19	7.2	12.3
Currently widowed but previously divorced	0.6	0.5	1.4	1.9	3	3.4
Currently divorced	13.9	16.8	10.3	17.9	7.4	12.6
From first marriage	9.8	11.8	7.1	12	5.2	8.3
From subsequent marriage	4	5	3.2	5.9	2.2	4.3

SOURCES: Iams and Ycas (1988) using CPS data and authors' calculations of SIPP 2001, Marital History File.

NOTES: Data are weighted using sample weights.

CPS = Current Population Survey; SIPP = Survey of Income and Program Participation.

a. Sums may not add to total due to rounding.



**Table 4.**  
**Percentage distribution of currently divorced women, by duration of marriage and age, 1985 and 2001**

Marital status and duration of marriage	Middle Age		Late Middle Age		Older Age				
	Total number (thousands)	Percent of currently divorced	Total number (thousands)	Percent of currently divorced	Total number (thousands)	Percent of currently divorced			
	Percent of ever-married		Percent of ever-married		Percent of ever-married				
<b>1985</b>									
Total ever-married	12,443	...	11,100	...	10,483	...	...	...	...
Total currently divorced	1,827	100.0	1,194	100.0	806	100.0	...	...	7.7
First marriage	1,296	70.9	827	69.3	565	70.1	...	...	5.4
Previously widowed	26	1.4	34	2.8	49	6.1	...	...	0.5
Previously divorced	505	27.6	333	27.9	192	23.8	...	...	1.8
Less than 10 years in any marriage	597	32.7	265	22.2	146	18.1	...	...	1.4
First marriage	352	19.3	161	13.5	90	11.2	...	...	0.9
Previously widowed	11	0.6	6	0.5	8	1.0	...	...	0.1
Previously divorced	234	12.8	98	8.2	48	6.0	...	...	0.5
10 years or more in any marriage	1,230	67.3	929	77.8	660	81.9	...	...	6.3
First marriage	944	51.7	666	55.8	475	58.9	...	...	4.5
Previously widowed	15	0.8	28	2.3	40	5.0	...	...	0.4
Previously divorced	271	14.8	235	19.7	145	18.0	...	...	1.4
<b>2001</b>									
Total ever-married	19,715	...	15,559	...	10,508	...	...	...	...
Total currently divorced	3,704	100.0	2,970	100.0	1,376	100.0	...	...	13.1
First marriage	2,597	70.1	1,993	67.1	905	65.8	...	...	8.6
Previously widowed	32	0.9	70	2.4	46	3.4	...	...	0.4
Previously divorced	1,075	29.0	907	30.5	425	30.9	...	...	4.1
Less than 10 years in any marriage	1,904	51.4	920	31.0	235	17.0	...	...	2.2
First marriage	1,200	32.4	522	17.6	168	12.2	...	...	1.6
Previously widowed	13	0.4	12	0.4	13	0.9	...	...	0.1
Previously divorced	690	18.6	385	13.0	54	3.9	...	...	0.5
10 years or more in any marriage	1,801	48.6	2,050	69.1	1,141	82.9	...	...	10.8
First marriage	1,397	37.7	1,471	49.5	737	53.5	...	...	7.0
Previously widowed	19	0.5	58	2.0	33	2.4	...	...	0.3
Previously divorced	384	10.4	521	17.6	371	27.0	...	...	3.5

SOURCES: Iams and Ycas (1988) using Current Population Survey data and authors' calculations using Survey of Income and Program Participation 2001, Marital History File.

NOTES: Data are weighted using sample weights.

... = not applicable.

**Table 5.**  
**Percentage distribution of longest marriage, for ever-married women, by age, 1985 and 2001**

Marital status of ever-married women	Duration of longest marriage				
	Total number (thousands)	Less than 10 years	10 years or more	Less than 20 years	20 years or more
<b>1985</b>					
<i>Late Middle Age</i>					
Total	11,100	4.2	95.8	17.8	82.2
Currently married					
First marriage	7,138	0.6	99.4	2.7	97.3
Previously widowed	366	5.9	94.1	45.5	54.5
Previously divorced	1,239	3.0	97.0	44.2	55.8
Currently widowed					
First marriage	927	7.1	92.9	25.2	74.8
Previously widowed	70	11.7	88.3	54.1	45.9
Previously divorced	166	11.9	88.1	55.7	44.3
Currently divorced					
First marriage	827	19.5	80.5	53.0	47.0
Previously widowed	34	16.7	83.3	60.7	39.3
Previously divorced	333	29.4	70.6	74.2	25.8
<i>Older Age</i>					
Total	10,483	3.2	96.8	11.7	88.3
Currently married					
First marriage	5,585	0.6	99.4	1.7	98.3
Previously widowed	523	0.8	99.2	16.9	83.1
Previously divorced	790	2.0	98.0	17.3	82.7
Currently widowed					
First marriage	2,246	3.9	96.1	14.6	85.4
Previously widowed	202	5.5	94.5	27.9	72.1
Previously divorced	332	10.6	89.4	41.2	58.8
Currently divorced					
First marriage	565	15.9	84.1	42.4	57.6
Previously widowed	49	17.3	92.7	44.0	56.0
Previously divorced	192	24.7	75.3	62.7	37.3

(Continued)

**Table 5.**  
**Continued**

Marital status of ever-married women	Duration of longest marriage				
	Total number (thousands)	Less than 10 years	10 years or more	Less than 20 years	20 years or more
<b>2001</b>					
<i>Late Middle Age</i>					
Total	15,559	10.0	90.0	36.4	63.6
Currently married					
First marriage	8,002	3.4	96.6	11.4	88.6
Previously widowed	330	3.4	96.6	61.8	38.2
Previously divorced	3,073	7.3	92.7	61.2	38.8
Currently widowed					
First marriage	844	9.2	90.8	28.0	72.0
Previously widowed	25	a	a	a	a
Previously divorced	316	16.7	83.3	70.2	29.8
Currently divorced					
First marriage	1,993	26.2	73.8	63.8	36.2
Previously widowed	70	a	a	a	a
Previously divorced	907	42.5	57.5	95.9	4.1
<i>Older Age</i>					
Total	10,508	4.0	96.0	20.2	79.9
Currently married					
First marriage	5,389	1.3	98.7	4.0	96.0
Previously widowed	350	3.4	96.6	34.2	65.8
Previously divorced	1,232	1.6	98.4	35.1	64.9
Currently widowed					
First marriage	1,695	3.6	96.4	15.4	84.6
Previously widowed	117	a	a	a	a
Previously divorced	348	4.7	95.3	50.7	49.4
Currently divorced					
First marriage	905	18.6	81.4	51.5	48.5
Previously widowed	46	a	a	a	a
Previously divorced	425	12.7	87.3	78.4	21.6

SOURCES: Iams and Ycas (1988) using Current Population Survey data and authors' calculations using the Survey of Income and Program Participation 2001, Marital History File.

NOTES: Data are weighted using sample weights. To ensure consistency with data presented in Iams and Ycas (1988), the Middle Age cohort is not included in Tables 5 and 6.

a. Base less than 200,000.

**Table 6.****Percentage distribution and average duration of all marriages for ever-married women, by marital status, survey sample, and age, 1985 and 2001**

Marital status of ever-married women	Total number (thousands)		Percentage distribution		Average number of years married		Percent of years married since age 21	
	1985 (CPS)	2001 (SIPP)	1985 (CPS)	2001 (SIPP)	1985 (CPS)	2001 (SIPP)	1985 (CPS)	2001 (SIPP)
<b>Late Middle Age</b>								
Total	11,100	15,559	100.0	100.0	28.7	26.8	85.5	79.4
Currently married	8,743	11,405	78.8	73.3	30.8	29.5	91.8	87.7
First marriage	7,138	8,002	64.3	51.4	31.6	30.6	94.1	90.6
Previously widowed	366	330	3.3	2.1	26.8	28.0	78.3	82.2
Previously divorced	1,239	3,073	11.2	19.8	27.4	26.8	82.8	80.5
Currently widowed	1,163	1,184	10.5	7.6	23.9	24.9	69.5	71.2
First marriage	927	844	8.4	5.4	24.2	25.1	70.3	71.8
Previously widowed	70	25	0.6	0.2	21.0	a	61.8	a
Previously divorced	166	316	1.5	2.0	23.8	24.2	68.8	69.6
Currently divorced	1,194	2,970	10.8	19.1	18.2	17.0	b	50.7
First marriage	827	1,993	7.5	12.8	18.1	16.3	54.2	48.7
Previously widowed	34	70	0.3	0.5	21.1	a	62.0	a
Previously divorced	333	907	<sup>c</sup> 3.0	5.8	18.3	18.0	54.7	53.9
<b>Older Age</b>								
Total	10,483	10,508	100.0	100.0	35.4	36.1	82.0	82.5
Currently married	6,898	6,972	65.8	66.3	39.1	40.4	90.9	92.4
First marriage	5,585	5,389	53.3	51.3	40.0	41.6	92.9	95.0
Previously widowed	523	351	5.0	3.3	35.2	37.0	81.6	83.7
Previously divorced	790	1,232	7.5	11.7	35.5	36.1	82.8	83.6
Currently widowed	2,779	2,160	26.5	20.6	30.5	31.8	69.2	71.6
First marriage	2,246	1,695	21.4	16.1	30.9	32.3	70.0	72.9
Previously widowed	202	117	1.9	1.1	29.4	a	66.8	a
Previously divorced	332	348	3.2	3.3	28.4	30.2	65.3	68.3
Currently divorced	807	1,376	7.7	13.1	21.3	21.4	50.0	49.3
First marriage	565	905	5.4	8.6	21.1	19.7	49.4	45.4
Previously widowed	49	46	0.5	0.4	27.0	a	62.1	a
Previously divorced	192	425	1.8	4.1	20.5	24.5	48.7	57.0

SOURCES: Iams and Ycas (1988) and authors' calculations of SIPP 2001, Marital History File.

NOTES: Data are weighted using sample weights. To ensure consistency with data presented in Iams and Ycas (1988), the Middle Age cohort is not included in Tables 5 and 6.

CPS = Current Population Survey; SIPP = Survey of Income and Program Participation.

a. Base less than 200,000.

b. Missing value in Iams and Ycas (1988).

c. Figure is reported as ".3" in the original publication, but it is assumed that this is an error and "3.0" is the correct percentage based on

Table 2 shows that 68.7 percent of Late Middle Age women in 2001 were potentially eligible for spouse or widow benefits as a result of being married or separated and 7.1 percent due to their current status as widows, which are lower than the equivalent percentages in the 1985 CPS data.<sup>20</sup>

Estimates also show that the share of this group who were never-married increased by more than 2 percentage points from 1985 to 2001 (Table 2). While never-married women in this age group may change their current status by the time they reach retirement age, a first marriage between the ages of 50 to 59 is relatively unlikely. From 1985 to 2001, the median age at first marriage for women increased from 23.3 years to 25.1 years (U.S. Census Bureau 2005), which is 25 years younger than even the youngest members of the Late Middle Age cohort.

With respect to divorce, 38.8 percent of Late Middle Age women in the 2001 SIPP were ever-divorced (Table 3). This figure represents a substantial increase over the 22.4 percent of ever-divorced women in the 1985 CPS. Currently divorced women also represented a larger share of the Late Middle Age group in 2001 than in 1985 (17.9 percent versus 10.3 percent, respectively). That said, remarriage remained common among Late Middle Age women in 2001, with over half of the ever-divorced having at some point remarried.

The share of currently divorced Late Middle Age women without a 10-year marriage also increased between 1985 and 2001. In 2001, 31.0 percent of those who were currently divorced did not have a marriage that met the 10-year duration requirement, compared with 22.2 percent in 1985 (Table 4). Stated differently, 6.0 percent of the ever-married Late Middle Age female population were currently divorced and without a 10-year marriage in 2001, up from the 2.4 percent reported in the 1985 CPS.

Many Late Middle Age women in 2001 had already been married for a long period of time; 63.6 percent of the ever-married had been married at least 20 years (Table 5). The average number of years married among Late Middle Age women in 2001, 26.8 years, is fairly similar to Iams and Ycas' findings of 28.7 years for 1985 (Table 6).

### ***Middle Age Cohort: Age 40–49***

The Middle Age cohort represents the youngest age group considered in this study. In 2001, women in this group were born between 1952 and 1961 and

are thus reflective of the younger wave of the large baby-boom cohort born between 1946 and 1964. The oldest of this group in 2001 will reach age 62 in 2014 and the youngest in 2023. Since there is less certainty about the marital paths that the Middle Age group will take as they age into retirement, findings in this section should be regarded with caution when estimating women's potential eligibility for spouse or widow benefits between 2014 and 2023.

As shown in Table 2, 70.3 percent of Middle Age women in 2001 were currently married (including separated), compared with 77.1 percent in the corresponding 1985 CPS estimates (Table 3).<sup>21</sup> A particularly striking change between Middle Age women in 1985 and 2001 is the increasing share in the never-married population. Roughly 10.5 percent were never-married in 2001, while about half this amount was documented in the 1985 CPS data. An important consideration that will become evident in future years is whether marriage is simply being delayed until later in life among younger cohorts or avoided altogether (see Goldstein and Kenney 2001).

The experience of Middle Age women with divorce has also changed. In 2001, 16.8 percent were currently divorced and 35.5 percent had at least one divorce, up from 13.9 percent and 29.1 percent, respectively, from their 1985 predecessors (Table 3). Furthermore, 51.4 percent of currently divorced women aged 40 to 49 were without a 10-year marriage in 2001, up from 32.7 percent in 1985 (Table 4). Looking at the ever-married group, 9.7 percent of ever-married Middle Age women were divorced and without a qualifying marriage in 2001, compared with 4.8 percent in 1985 (Table 4). However, some of these currently ineligible women may remarry before retirement.

### ***Concluding Remarks***

Trends in women's retirement income have been a longstanding point of interest in the retirement literature, and Social Security spouse and widow benefits constitute an important source of income for many aged women. Since marital history affects women's potential eligibility for spouse and widow benefits, it is important to understand changes in marital trends in the context of Social Security rules, particularly as the leading edge of the baby-boom cohort begins retiring.

While caution should be used in interpreting differences across data sources, this article highlights both important changes and continuities in women's potential eligibility for spouse and widow benefits since

1985. On the one hand, despite important structural changes in marital patterns such as the “retreat from marriage” (Goldstein and Kenney 2001; Waite 1995), over three-fourths of women aged 40 to 69 in the 2001 SIPP already had marital histories that assured them the option for spouse or widow benefits at retirement. On the other hand, trends reveal a downward shift in the share of women potentially eligible for spouse or widow benefits in future years due to changing marital patterns among baby boomers. Changes are principally evident for the Middle Age cohort (aged 40–49), which had a significantly higher share of never-married and divorced women with shorter marriages in 2001 than in 1985.

As a whole, this article contributes to our understanding of sociodemographic trends affecting the Social Security program and distributional outcomes of its beneficiary population. Most aged women qualify for Social Security benefits as wives or widows today. However, a growing tendency toward never marrying, along with shorter marriages before divorce, among the younger wave of baby boomers may foreshadow a decline in the proportion of women that will be eligible for spouse or widow benefits in future years. These trends could have an important effect on the sources, and in some instances adequacy, of retirement income for some women, as well as the sociodemographic profile of the overall beneficiary population for Social Security.

### ***Appendix A: Methodological Issues***

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This study’s analytic approach raises several methodological issues for elaboration. To begin with, estimates based on the SIPP and CPS, as with any survey data, are subject to errors related to measurement and sampling, among other factors. Because estimates of women’s marital histories may differ from the actual population, a standard error for the estimated percentages was calculated for all reported estimates using the appropriate generalized variance tables for each survey.

Special care should be taken when making numeric contrasts based on two independent data sources. In this article, estimates of women’s marital histories from the 2001 SIPP are evaluated against estimates from the 1985 CPS on which the Iams and Ycas’ (1988) study is based. Although both of these surveys were conducted by the Census Bureau and represent large, nationally-representative samples of U.S. households, they are designed to meet different objectives. Each survey, for example, has different sampling pro-

cedures, sample compositions, and survey reference periods, all of which affect the parameter estimates. The CPS data are based on a single cross-sectional study, whereas SIPP data are based on a longitudinal panel sample. A panel design can introduce nonsampling errors not found in cross-sectional samples, such as a “seam” effect (patterned heavy concentration of responses to adjacent months between waves) and a “historical maturity” effect.<sup>22</sup> Another concern present in both surveys is the potential bias in respondents’ retrospective report of their marital histories (see Lillard and Waite 1989; Weaver 2000).

A number of steps were taken to lessen the negative impact of the aforementioned concerns. All declarations of numeric change between 1985 and 2001 have undergone statistical tests of difference. Only those numeric differences that are statistically significant at a 95-percent level are cited. Moreover, standard error calculations were based on generalized variance tables rather than the formula for random samples. The test of difference between two estimates accounts for, in part, the impact of the individual survey design. To further reduce the magnitude of error, statistics are derived from weighted data. Any statistic from a weighted population base of less than 200,000 is not reported.<sup>23</sup>

It is worthwhile to mention that although the estimates used in this article are derived from separate surveys, they are based on largely consistent supplemental marital history modules. Both the SIPP and CPS surveys used a similar sequence of questions about marital history, focusing on events such as duration of marriages (month and year of each marriage event) and number of times married. This consistency reduces potential bias arising in nonsampling errors between the SIPP and CPS.<sup>24</sup> While estimates of marital status from the CPS have been shown to be rather consistent with those from the SIPP,<sup>25</sup> any numeric contrast between women’s marital histories in 2001 and their counterparts in 1985 should be interpreted as representing a broad directional shift in marital patterns, rather than an exact percentage change over the period of analysis.

### ***Appendix B: Standard Errors***

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The following tables present the standard errors of estimated percentages reported in this article. They were approximated using the formula

$$S_{(x,p)} = \sqrt{\frac{b}{x}(p)(100-p)}$$

where  $x$  is the total number of persons, families, or households (the base of the percentage),  $p$  is the percentage, and  $b$  is the parameter associated with the characteristic in the numerator of the percentage. For parameters associated with estimated percentages

based on the 2001 SIPP Marital History Topical Module (wave 2) see U.S. Census Bureau (2005b, Table 9); for reported 1985 CPS estimates see U.S. Census Bureau (1986, Table C-5).

**Table B-1.**  
**Percentage distribution of women, by current marital status and total number of marriages, age, and survey sample, 1985 and 2001 (standard errors)**

Current marital status and total number of marriages	Middle Age		Late Middle Age		Older Age	
	1985 (CPS)	2001 (SIPP)	1985 (CPS)	2001 (SIPP)	1985 (CPS)	2001 (SIPP)
Total number (thousands)	13,168	22,036	11,570	16,626	10,950	10,956
Current marital status						
Never-married	0.27	0.62	0.25	0.57	0.27	0.57
Married	0.53	0.95	0.57	1.10	0.64	1.39
Separated	0.24	0.39	0.22	0.39	0.17	0.44
Widowed	0.22	0.31	0.39	0.60	0.57	1.14
Divorced	0.42	0.75	0.39	0.89	0.35	0.95
Number of marriages						
None	0.27	0.62	0.25	0.57	0.27	0.57
One	0.53	0.96	0.54	1.11	0.56	1.27
Two	0.45	0.80	0.47	0.96	0.48	1.08
Three or more	0.23	0.43	0.22	0.56	0.24	0.66

SOURCES: Iams and Ycas (1988) using CPS data and authors' calculations of SIPP 2001, Marital History File.

NOTES: CPS = Current Population Survey; SIPP = Survey of Income and Program Participation.

**Table B-2.**  
**Percentage distribution of women by marital status and age, 1985 and 2001 (standard errors)**

Marital status	Middle Age		Late Middle Age		Older Age	
	1985 (CPS)	2001 (SIPP)	1985 (CPS)	2001 (SIPP)	1985 (CPS)	2001 (SIPP)
Total number (thousands)	13,168	22,036	11,570	16,626	10,950	10,956
Never-married	0.27	0.62	0.25	0.57	0.27	0.57
Ever-married	0.27	0.62	0.25	0.57	0.27	0.57
Ever-widowed	0.27	0.37	0.44	0.68	0.60	1.21
Currently remarried	0.16	0.20	0.23	0.33	0.28	0.50
Currently divorced but previously widowed	0.05	0.09	0.07	0.15	0.08	0.18
Currently widowed	0.22	0.31	0.39	0.60	0.57	1.14
From first marriage	0.20	0.28	0.35	0.51	0.53	1.04
From subsequent marriage	0.09	0.14	0.18	0.33	0.28	0.58
Ever-divorced	0.55	0.97	0.53	1.13	0.50	1.29
Currently remarried	0.42	0.78	0.40	0.91	0.34	0.94
Currently widowed but previously divorced	0.09	0.14	0.15	0.32	0.22	0.52
Currently divorced	0.42	0.75	0.39	0.89	0.35	0.95
From first marriage	0.36	0.65	0.33	0.75	0.29	0.79
From subsequent marriage	0.24	0.44	0.23	0.55	0.19	0.58

SOURCES: Iams and Ycas (1988) using CPS data and authors' calculations based on data from SIPP 2001, Marital History File.

NOTES: CPS = Current Population Survey; SIPP = Survey of Income and Program Participation.





**Table B-4.**  
**Percentage distribution of longest marriage for ever-married women, by age,**  
**1985 and 2001 (standard errors)**

Marital status of ever-married women	Total number (thousands)	Less than 10 years	10 years or more	Less than 20 years	20 years or more
<b>1985</b>					
<i>Late Middle Age</i>					
Total	11,100	0.26	0.26	0.50	0.50
Currently married					
First marriage	7,138	0.13	0.13	0.26	0.26
Previously widowed	366	1.70	1.70	3.59	3.59
Previously divorced	1,239	0.67	0.67	1.95	1.95
Currently widowed					
First marriage	927	1.16	1.16	1.97	1.97
Previously widowed	70	a	a	a	a
Previously divorced	166	3.47	3.47	5.32	5.32
Currently divorced					
First marriage	827	1.90	1.90	2.39	2.39
Previously widowed	34	a	a	a	a
Previously divorced	333	3.44	3.44	3.31	3.31
<i>Older Age</i>					
Total	10,483	0.24	0.24	0.43	0.43
Currently married					
First marriage	5,585	0.14	0.14	0.24	0.24
Previously widowed	523	0.54	0.54	2.26	2.26
Previously divorced	790	0.69	0.69	1.86	1.86
Currently widowed					
First marriage	2,246	0.56	0.56	1.03	1.03
Previously widowed	202	a	a	a	a
Previously divorced	332	2.33	2.33	3.73	3.73
Currently divorced					
First marriage	565	2.12	2.12	2.87	2.87
Previously widowed	49	a	a	a	a
Previously divorced	192	4.29	4.29	4.81	4.81

(Continued)

**Table B-4.  
Continued**

Marital status of ever-married women	Duration of longest marriage				
	Total number (thousands)	Less than 10 years	10 years or more	Less than 20 years	20 years or more
<b>2001</b>					
<i>Late Middle Age</i>					
Total	15,559	0.72	0.72	1.15	1.15
Currently married					
First marriage	8,002	0.61	0.61	1.06	1.06
Previously widowed	330	2.99	2.99	8.01	8.01
Previously divorced	3,073	1.40	1.40	2.63	2.63
Currently widowed					
First marriage	844	2.98	2.98	4.63	4.63
Previously widowed	25	a	a	a	a
Previously divorced	316	6.28	6.28	7.70	7.70
Currently divorced					
First marriage	1,993	2.95	2.95	3.22	3.22
Previously widowed	70	a	a	a	a
Previously divorced	907	4.91	4.91	1.97	1.97
<i>Older Age</i>					
Total	10,508	0.57	0.57	1.17	1.17
Currently married					
First marriage	5,389	0.46	0.46	0.80	0.80
Previously widowed	350	2.90	2.90	7.59	7.59
Previously divorced	1,232	1.07	1.07	4.07	4.07
Currently widowed					
First marriage	1,695	1.35	1.35	2.62	2.62
Previously widowed	117	a	a	a	a
Previously divorced	348	3.40	3.40	8.02	8.02
Currently divorced					
First marriage	905	3.87	3.87	4.97	4.97
Previously widowed	46	a	a	a	a
Previously divorced	425	4.84	4.84	5.98	5.98

SOURCES: Iams and Ycas (1988) using Current Population Survey data and authors' calculations using the Survey of Income and Program Participation 2001, Marital History File.

a. Base less than 200,000.

**Table B-5.****Percentage distribution and average duration of all marriages for ever-married women, by age and marital status, 1985 and 2001 (standard errors)**

Marital status of ever-married women	Total number (thousands)		Percentage distribution		Average number of years married		Percent of years married since age 21	
	1985 (CPS)	2001 (SIPP)	1985 (CPS)	2001 (SIPP)	1985 (CPS)	2001 (SIPP)	1985 (CPS)	2001 (SIPP)
<b>Late Middle Age</b>								
Total	11,100	15,559	0.00	0.00	a	0.23	a	0.64
Currently married	8,743	11,405	0.54	1.06	a	0.26	a	0.75
First marriage	7,138	8,002	0.63	1.20	a	0.31	a	0.89
Previously widowed	366	330	0.23	0.34	a	1.55	a	4.40
Previously divorced	1,239	3,073	0.41	0.96	a	0.51	a	1.44
Currently widowed	1,163	1,184	0.40	0.64	a	0.82	a	2.32
First marriage	927	844	0.36	0.54	a	0.97	a	2.75
Previously widowed	70	25	0.10	0.11	a	b	a	b
Previously divorced	166	316	0.16	0.34	a	1.58	a	4.50
Currently divorced	1,194	2,970	0.41	0.94	a	0.52	a	1.47
First marriage	827	1,993	0.34	0.80	a	0.63	a	1.79
Previously widowed	34	70	0.07	0.17	a	b	a	b
Previously divorced	333	907	0.07	0.56	a	0.94	a	2.65
<b>Older Age</b>								
Total	10,483	10,508	0.00	0.00	a	0.27	a	0.78
Currently married	6,898	6,972	0.64	1.38	a	0.34	a	0.96
First marriage	5,585	5,389	0.67	1.46	a	0.38	a	1.09
Previously widowed	523	351	0.29	0.52	a	1.50	a	4.27
Previously divorced	790	1,232	0.35	0.94	a	0.80	a	2.28
Currently widowed	2,779	2,160	0.59	1.18	a	0.61	a	1.72
First marriage	2,246	1,695	0.55	1.07	a	0.68	a	1.94
Previously widowed	202	117	0.18	0.30	a	b	a	b
Previously divorced	332	348	0.24	0.52	a	1.51	a	4.28
Currently divorced	807	1,376	0.36	0.99	a	0.76	a	2.15
First marriage	565	905	0.30	0.82	a	0.94	a	2.66
Previously widowed	49	46	0.10	0.18	a	b	a	b
Previously divorced	192	425	0.18	0.58	a	1.37	a	3.88

SOURCES: Iams and Ycas (1988) using CPS data and authors' calculations based on data from SIPP 2001, Marital History File.

NOTES: Data are weighted using sample weights. To ensure consistency with data presented in Iams and Ycas (1988), the Middle Age cohort is not included.

CPS = Current Population Survey; SIPP = Survey of Income and Program Participation.

a. A standard error was not computed for this average and no statistically significant change is claimed in the text.

b. Base less than 200,000.

## Notes

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<sup>1</sup> Therein, 28 percent dually entitled (12 percent spouse benefit, 16 percent survivor), 11 percent spousal-only, and 19 percent survivor-only.

<sup>2</sup> Divorce rates surged in the 1960s and 1970s in the United States, and have since stabilized at a relatively high level. For useful discussion of recent marital trends within the United States, see Butrica and Iams 2000; Goldstein 1999; Goldstein and Kenney 2001; Kreider 2005; Harrington Meyer et al. 2006; Norton and Miller 1992; Ruggles 1997; Waite 1995.

<sup>3</sup> Marital event dates are suppressed in the Public-Use File of the 2001 Marital History Module. The public file therefore does not contain information that would allow estimates of each respondent's length of marriage(s). To ensure confidentiality, all users of restricted data must be authorized by the U.S. Census Bureau.

<sup>4</sup> The Marital History Supplement (June) to the Current Population Survey was discontinued after 1995.

<sup>5</sup> The definition of auxiliary benefits used in this article follows the Social Security Administration's *Annual Statistical Supplement to the Social Security Bulletin*. OASDI auxiliary benefits are defined as a "monthly benefit payable to a spouse or child of a retired or disabled worker, or to a survivor of a deceased worker" (SSA 2007, G.2).

<sup>6</sup> There are duration requirements for spouse and survivor benefits based on current status, however the minimum standards for a marriage that is still active or ended through death are far shorter than the duration requirement for a divorced spousal benefit.

<sup>7</sup> This article focuses on old-age benefits, not benefits paid based on having a child-in-care. We do not discuss mother's benefits, which are "payable to a widow or surviving divorced mother if (1) the deceased worker on whose account the benefit is paid was either fully or currently insured at the time of his death and (2) the entitled child of the worker is in her care and is under age 16 or disabled" (SSA 2007).

<sup>8</sup> A widow benefit may be limited if the deceased spouse claimed early retirement benefits. The benefit is increased if the deceased spouse earned delayed retirement credits.

<sup>9</sup> The 1939 Social Security Amendments also established survivor benefits for parents and minor children. Since 1939, benefits have been extended to disabled widows, divorced wives, and surviving divorced wives. Auxiliary benefits have become gender neutral (available to men) over time. The 1983 Amendments extended benefits to divorced widowers and eliminated the dependency test for all widowers. For review of legislative history of survivor benefits see Martin and Weaver (2005).

<sup>10</sup> Public Law 84-880.

<sup>11</sup> These can include spouse-only, widow-only, dually entitled spouse, and dually entitled widow benefits.

<sup>12</sup> According to Social Security administrative records, there were 23,810,000 male workers (16 or older) with taxable earnings in 1937 compared to 9,090,000 women (16 or older), a ratio of 2.62 men to every woman. By 1985, there were 66,113,000 male workers with taxable earnings and 53,687,000 female workers, a significantly lower ratio of 1.23 men for each woman. In 2001, this ratio declined to 1.12, with 82,006,000 male workers and 73,410,000 female workers with taxable earnings (SSA 2007, Table 4.B3). See also Fullerton 1999. With respect to earnings, in 2004, the median weekly earnings for women employed full time were 80 percent of men's median earnings, an increase from 68 percent in 1984. Women still earn less on average than men and as a result remain much more likely than men to be eligible for an auxiliary benefit upon retirement, especially a dually entitled widow benefit (Butrica, Iams, and Sandell 1999, Chart 2).

<sup>13</sup> In contrast, in 2005, 11 percent of female beneficiaries aged 62 or older were receiving spouse only (2.5 million) and 19 percent widow only (4.3 million) benefits.

<sup>14</sup> The survey collected a marital history for every person of the household aged 15 or older between June and September 2001. The sample comprises 56,574 persons, or around 30,000 U.S. households. For more detailed information on survey methodology see Kreider (2005, 15-16).

<sup>15</sup> To maintain confidentiality, marriage event dates in the SIPP were approximated by the Census. Bias would occur if the duration between start and finish systematically affects the 120-month (10 year) duration. We cannot know this, but suspect the process would even out in estimating marriage durations short and long of 120 months.

<sup>16</sup> Both the SIPP and CPS universe cover the noninstitutionalized resident population living in the United States, however, only the CPS includes people living in military barracks.

<sup>17</sup> Tests of difference between two sample estimates are based on the square root of the sum of the squares of the standard errors of each estimate considered separately.

<sup>18</sup> Currently married women, however, are not guaranteed eligibility for a spouse or widow benefit if they divorce before retirement without a 10-year marriage. Likewise, some women who are currently divorced may be eligible for a divorced spouse or divorced widow benefit if they had been married for 10 years. To establish the population of women who have guaranteed potential eligibility for a spouse or widow benefit regardless of any future change in marital status such as divorce, we calculated the sum of those who are widowed, already divorced with a 10-year marriage, or currently married with at least one 10-year marriage. Results reveal that 92.8 percent of the women among the Older Age cohort in 2001 had marital histories that provided guaranteed potential eligibility for spouse or widow benefits (figure not included in Tables).

<sup>19</sup> This estimate does not include currently married women who did have 10 years in any marriage. These women would not be eligible for spouse or widow benefits if they divorced before reaching their 10-year anniversary.

<sup>20</sup> This figure underestimates the actual share of women potentially eligible because it excludes divorced women with 10 or more years in any marriage. The sum of those women with more than 10 years in any marriage or with qualifying widowhood shows that over three-fourths (85 percent) of Late Middle Age women in 2001 already have assured eligibility for auxiliary benefits (figure not included in Tables).

<sup>21</sup> Notwithstanding, the sum of Middle Age women in 2001 that have already been married 10 years or with qualifying widowhood reveals that more than two-thirds (71 percent) already had a marital history that ensured eligibility for auxiliary benefits (figure not included in Tables).

<sup>22</sup> The historical maturity effect refers to a situation in which respondents learn from earlier survey waves how to answer anticipated questions in order to shorten the interview and in the process compromise or at least put in question the content validity of responses. However, it should be recognized that the marital history information analyzed in this article is derived from a special module, which is not introduced on a regular basis.

<sup>23</sup> This follows Kreider's (2005) method from the same data source.

<sup>24</sup> A variety of sources can account for nonsampling errors; for example, the inability to obtain information about all cases in the sample; definitional difficulties; differences in the interpretation of questions; inability or unwillingness on the part of the respondents to provide correct information; inability to recall information, errors made in the following: collection such as in recording or coding the data, processing the data, estimating values for missing data; biases resulting from the differing recall periods caused by the interviewing pattern used; and undercoverage (see U.S. Census Bureau 1998).

<sup>25</sup> For example, the 1998 *SIPP Quality Profile* compares estimates of current marital status with results from the CPS across five SIPP panels. The results show estimates of marital status between the two surveys to be largely consistent. For more information, see U.S. Census Bureau (1998).

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## ***Disabled Workers and the Indexing of Social Security Benefits***

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### ***Summary***

We examine how benefit amounts and family income would change in response to changing the Social Security (Old-Age, Survivors, and Disability Insurance, OASDI) benefit indexing scheme. We are interested in a class of reform options designed to gradually slow the growth of benefits across the board. These options include the “price indexing” and “longevity indexing” proposals that have been part of the recent Social Security reform debate in the United States as well as a range of proposals developed in Europe.

In this article, we focus on the distributional effects on the disabled. This focus leads to two comparisons. First, we compare disabled-worker beneficiaries to another group that would be affected by the changes, retired-worker beneficiaries. Second, we examine relative changes for particularly vulnerable subgroups of disabled workers.

In the empirical analysis, we use two illustrative examples of potential indexing changes:

- Shifting from wage indexing to price indexing of the initial level of OASDI benefits; and
- Adjusting the initial benefit level for changes in life expectancy at retirement, that is, longevity indexing.

We employ a historical counterfactual simulation to evaluate outcomes that would have

resulted from changing the indexing scheme at one particular point in time. The hypothetical implementation period begins with the historical start of the current regime of indexing in 1979 and ends with one of the reference periods of the 1996 Survey of Income and Program Participation (SIPP), a 17-year period. However, we briefly assess the extent to which the results would be applicable to other time horizons.

The analysis uses a cross-sectional sample of OASDI beneficiaries from the 1996 SIPP matched to Social Security administrative records. Further, we use total income from the SIPP (as adjusted to correspond to the calculated OASDI benefit amounts) to simulate eligibility for Supplemental Security Income (SSI) and SSI benefit amounts.

Our overall findings pertain to three outcomes: (1) effects on OASDI benefits viewed in isolation, (2) the offsetting role of SSI, and (3) the diluting effect of other sources of family income. We find that a broader perspective incorporating all three measures is necessary to obtain an appropriate picture of distributional outcomes.

Even though the proposals were designed to have proportional effects, differences between groups—such as disabled and retired workers—can arise from differences in the timing of benefit claiming, mortality, and other factors. Specifically, our cross-sectional estimates

suggest that the average change in OASDI benefit levels would be higher for disabled-worker beneficiaries than for retired-worker beneficiaries. These differences are attributable to the fact that a higher proportion of the stock of disabled beneficiaries have been on the Disability Insurance (DI) program rolls for a relatively short period of time and therefore have been affected by the shift in indexing scheme for a longer period of time.

These results must be interpreted within the context of the methodology that was used. Further, other methodologies may lead to different results. For example, in previous studies that restricted the sample to a particular birth cohort, a higher proportion of disabled workers than retired workers were observed to have been on the DI program rolls for a relatively long period of time. Longer time on the beneficiary rolls corresponds to less exposure to the new indexing scheme and smaller estimated benefit changes. Thus, the same underlying factor—the timing of benefit claiming—influences both results.

When the offsetting role of SSI benefits is also considered, we estimate smaller overall changes, especially for those at the bottom of the income distribution. When OASDI and SSI are considered together, differences in average benefit changes between disabled and retired workers are removed. This is due to a higher rate of SSI program participation among disabled workers than among retired workers. In addition, including SSI substantially reduces the proportion of disabled workers that have large simulated changes in benefit amounts.

The estimated effects of changing the indexing scheme are further muted when total family income is considered. This occurs on a roughly equivalent scale for disabled and retired workers. As a result, changing the indexing scheme would produce little change in the status quo differences in poverty status between disabled and retired workers.

Finally, we examine the most economically vulnerable subgroups of OASDI beneficiaries. Within the general group of beneficiaries, we find that the most vulnerable would be less affected than average, primarily as a result of the mitigating effect of SSI benefits. Further, within the population of disabled-worker beneficiaries, we examine economically vulnerable subgroups including those in the lowest primary insurance amount quartile, with less than a high school education, with an early onset of disability, or a primary mental impairment. These groups would also be less affected than average.

## **Introduction**

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Various strategies address how to adjust program benefits to protect solvency or contain costs. One class of strategies uses demographic or economic rates of change as a basis for indexing adjustments. For example, Germany uses the ratio of beneficiaries to workers (the dependency ratio) as an input in its retirement system. Also, Sweden partly indexes benefit growth by a measure of the fiscal balance of the retirement system. These indexing approaches are designed to maintain system solvency or sustainability.

The proposals that have been prominent in the recent Social Security reform debate in the United States have proposed indexing adjustments while using different demographic or economic trends as a basis. Some prominent proposals incorporate “price indexing.” A common method of implementing price indexing would adjust one part of the benefit formulas that converts past earnings into potential benefit amounts by the difference between wages and prices in successive years. Under this method of implementing price indexing, the initial benefit levels would gradually diverge from the levels dictated by current law; however, benefits would remain constant when viewed through the lens of an alternative theoretical standard. In this case, the alternative standard is a consistent level of purchasing power.

Other proposals incorporate “longevity indexing.” Similar to price indexing and other alternatives, longevity indexing would adjust the growth of initial benefits. In this case, the adjustment is according to changes in life expectancy at retirement. Also similar to price indexing, the adjustment maintains benefit levels by an alternative standard, in this case, constant total real lifetime benefits.

The common elements of these indexing approaches are:

1. They would slow the rate of growth of benefits while offering an alternative theoretical benefit standard (such as constant purchasing power, constant lifetime total benefits, or some other standard related to system solvency); and
2. They could be implemented by gradually adjusting the benefit formulas by changes in an economic or demographic index.

We explore this general class of reform options. Because credible estimates of the effects of the most prominent variants of this class of reform options on the long-term trust fund balances are available



(Goss and Wade 2002), we focus on a less explored area—the changing distribution of the well-being of Social Security beneficiaries under alternative indexing schemes. Specifically, we focus on the well-being of disabled-worker beneficiaries under this class of reform options.

At first glance, the distributional effects might appear to be minimal because the same indexing adjustments apply to all new benefit awardees. In fact, a General Accountability Office (GAO 2006) report estimates that there would be a proportional effect on all Old-Age, Survivors, and Disability Insurance (OASDI) beneficiaries. However, we show that there can be differential impacts across groups because of group differences in the timing of benefit claiming, mortality, and other factors. Further, group differences in Supplemental Security Income (SSI) eligibility and participation can lead to differential impacts. Finally, the impact of changes in OASDI benefits on family financial well-being are mitigated by the existing distribution of family income.

We estimate the distributional impact of this class of reform proposals by employing an illustration—based on the counterfactual scenario in which an alternative indexing scheme had been in place between the historical start of the current regime of indexing in 1979 and the national population as sampled in the 1996 SIPP. We illustrate the effects of the two most prominent proposals, price indexing and longevity indexing. Because the two proposals would be implemented using the common mechanism, the illustrations produce similar distributional results.

The rest of this article is organized as follows. We begin by describing the class of alternative indexing approaches addressed in our study, which is followed by a contrasting of possible analytical approaches. Next, we discuss the simulation methodology and then proceed to describe baseline differences in the economic well-being of disabled and other beneficiaries. The simulation results of changing the indexing of benefits are presented next and are followed by a discussion, in the conclusions and implications section, of the generalizability of the results.

### **Indexing Approaches**

An individual's basic OASDI benefit level, known as the primary insurance amount (PIA), is a function of lifetime earnings, measured as average indexed monthly earnings (AIME), the PIA bend points, and the PIA factors. There are two PIA bend points, which divide the PIA into three terms, each of which consists

of a PIA factor multiplied by the portion of the AIME that falls into the interval defined by the bend points. The three PIA factors are 90 percent, 32 percent, and 15 percent. For example, in 1996, the first PIA bend point was \$437 and the applicable PIA factor is 90 percent. The first term would be the lesser of the AIME or \$437 multiplied by the factor of 90 percent. The other terms are calculated in a similar manner.

Wage indexing affects *benefit levels* under current law in two ways. First, the PIA bend points are indexed to wage growth, and second, wage trends are used to inflate earnings in previous years to current levels. In addition, wage indexing affects system *revenues* through the proportion of earnings that is subject to the payroll tax, known as the taxable maximum. The average wage index enters the benefit and revenue formulas in these three ways.

According to the President's Commission to Strengthen Social Security (CSSS 2001, 120), the policy of switching from wage indexing to price indexing "would be implemented by multiplying the PIA bend point factors (the [PIA] bend points would remain indexed to wages) by the ratio of the Consumer Price Index to the Average Wage Index in successive years."<sup>1</sup> The three ways in which wage indexing enters the current law formulas would remain intact and the PIA factors, which are not currently indexed, would be modified by the CSSS method.

This is not the only possible method of implementation. For example, Biggs, Brown, and Springstead (2005) explore the properties of replacing the parts of the benefit formulas that are currently wage indexed with price indexing. They consider the variants of price indexing the AIME, price indexing the PIA bend points, and the combination of price indexing the AIME and the PIA bend points (in addition to considering the CSSS method).<sup>2</sup> The CSSS method, applying price indexing to the PIA factors, is the most widely accepted method,<sup>3</sup> however, and is used by the Social Security Administration's Office of the Chief Actuary in its evaluations (see Chaplain and Wade (2005) and Goss and Wade (2002) for example).

The CSSS method proposes to multiply each term by a constant that is unique to each annual awardee cohort. The constant can be factored out; thus, the method is equivalent to multiplying the initial benefit level by a constant that is unique to each year. The constant is the ratio of price growth to wage growth between the start of the indexing regime and the start of benefit receipt (both with 2-year lags). This method adjusts benefits proportionally for all beneficiaries who

begin receiving benefits in a specific year. Other than by year of the start of benefit receipt, the proportional adjustment would not vary across individuals.

In addition to price indexing, the general class of reform proposals can be implemented by adjusting the PIA factors. In this article, we also simulate adjusting for longevity. The adjustments would be based on changes in life expectancy conditional on having reached retirement age.<sup>4</sup> The CSSS recommends basing these adjustments on changes over 10-year periods with subsequent reevaluations every 10 years.<sup>5</sup>

Several features of this indexing approach are notable. For individuals retiring in successive years with similar retirement benefit levels, this adjustment keeps the expected total sum of real benefit payments roughly constant.<sup>6</sup> Also, the adjustment for life expectancy reflects changes in average life expectancy for a cohort at a particular point in the life cycle rather than for individuals or particular demographic groups. For example, markedly different life expectancies apply to people with disabilities and there is further variation by diagnosis (Rupp and Scott 1998). If the adjustment for life expectancy of the population at retirement age were applied to all new awardees, then other groups of beneficiaries, such as disabled-worker beneficiaries, would be affected as well.

The analysis is based on the assumption that changes in OASDI indexing formulas for retired-worker awardees would apply equivalently to disabled-worker awardees. Following the CSSS,<sup>7</sup> this should not be interpreted as a policy recommendation but rather as an illustration of the effect that the proposed indexing approaches would have on disabled-worker beneficiaries. In fact, some recent policy proposals exempt disabled workers from indexing changes (see Goss and Wade (2006) for example), and the Government Accountability Office (2007) discusses the methods by which this could be implemented.

### ***Analytical Approaches***

There are different perspectives from which to view the impact of changes in the Social Security indexing scheme. First, one can estimate the effect on a cohort of benefit awardees, which allows for comparing, for example, subgroups of a given awardee cohort after implementation of a new indexing scheme. Second, one can analyze the effect on a birth cohort as it progresses through the life cycle, which allows for comparing outcomes for subgroups of the same birth cohort. Third, one can analyze a cross section of the

beneficiary population at a given point in time, which allows for examination of the effects on different subgroups of current beneficiaries, such as subgroups defined by marital status, poverty status, or type of OASDI beneficiary. The different perspectives seek answers to different questions, a fact that is important to keep in mind when interpreting results. Some of the results may differ based on the analytic perspective used, while others may be robust across different perspectives.

When analyzing changes in the Social Security indexing scheme, a beneficiary awardee cohort approach is sometimes implied. In an example of this analytical approach, GAO (2006, 4) states:

Regardless of the index, adjusting the initial benefit level through the benefit formula typically would have a proportional effect, with constant percentage changes at all earnings levels, on the distribution of benefits.

As will be explained below, differences in the impact of indexing changes can arise from differences in the timing of benefit claiming. Thus, statements such as the one above assume that there are no differences in the timing of benefit claiming and apply to groups that are similar in this regard, that is, people in the same benefit awardee cohort.

By contrast, differences in the timing of benefit claiming arise when viewing the impacts from a birth cohort perspective. For example, Mermin (2005, 7) predicts that:

Because the effect of substituting price indexing for wage indexing is cumulative over time, individuals who become eligible for benefits earlier experience relatively smaller reductions compared with scheduled amounts. Disability recipients and survivors often become eligible for benefits before age 62 and therefore receive smaller reductions in initial benefits under price indexing.

The difference in group impacts between disabled and retired workers is a direct result of choosing a birth cohort analytical perspective.<sup>8</sup> From this perspective, disabled workers appear less vulnerable to changes in the indexing scheme than do retired workers.

Different outcomes might be expected from a cross-sectional analytical perspective, at least when OASDI benefit changes are analyzed in isolation. A cross-sectional analysis examines a stock of beneficiaries at a specific point in time after the simulated start of the new indexing scheme. By construction, benefit

changes for each beneficiary will be a function of the time between the simulated start of the new indexing scheme and the cross-sectional observation point as well as observed duration on the program rolls at that point. The first of these factors is constant across individuals at the time, while duration may vary. Since the duration of the period in beneficiary status is inversely related to the period subject to the new indexing scheme, it will also be inversely related to the size of the impact of the change in indexing scheme. If disabled workers have a shorter average duration than retired workers, one might expect relatively large percent changes in OASDI benefits for the disabled. As was the case with the birth cohort analytical perspective, this result is strongly influenced by the choice of a cross-sectional analytical perspective.

## **Methodology**

We employ a cross-sectional sample from the 1996 Survey of Income and Program Participation (SIPP). Our study universe is all noninstitutionalized adults (aged 18 or older) in current OASDI pay status in November 1996. The sample is extracted from wave 3 of the 1996 SIPP. Observations without a match to the Summary Earnings Record (SER)—14.8 percent—are excluded and the sampling weights are adjusted accordingly. Participation in the Disability Insurance (DI) and SSI programs is defined as having a positive benefit indicated in the Master Beneficiary Record and Supplemental Security Record, respectively.

We estimate the effects of two indexing approaches that employ price indexing or life expectancy indexing in the determination of the initial level of benefits. We present estimates of the effect on the current stock of OASDI beneficiaries. This represents the “direct effect” (Bound and others 2002) of the indexing schemes. Estimates of “indirect effects” are left for future research; we assume that the indexing approaches do not lead to changes in participation in the OASDI and SSI programs. Changes in benefit amounts for current participants are estimated for both programs.

We construct a benefit calculator that estimates AIME and insured status based on the earnings history recorded in the SER. The PIA is obtained by applying the benefit formula to the AIME. We calculate OASDI benefit amounts for the individual and spouse but not other family members.<sup>9</sup> Benefit amounts are calculated at the initial entitlement date and updated using price indexing.<sup>10, 11</sup> The PIA factors are then multiplied by

the relevant ratio in order to implement the two indexing approaches.

The indexing approaches are implemented by applying the long-term trend in both real wages and life expectancy. In the half century from 1951 to 2002, wages increased by 4.97 percent per year compared with only 3.81 percent per year for prices. The difference of 1.16 percentage points a year measures the gain in real wages and is used in the formula adjustments. For life expectancy, an increase of one-half of one percent per year is used, as recommended by the CSSS. This is compatible with the average changes over the 1940 to 2002 period (Bell and Miller 2002).<sup>12</sup>

We apply the adjustments to observations that have an initial entitlement date after the historical start of the current regime of indexing, 1979.<sup>13</sup> Over the 17-year period from this date to the reference period of the sample (November 1996), the maximum change in benefits based on changes in real wages is less than 18 percent. For adjustments based on life expectancy, the maximum change is slightly more than 8 percent.

Benefit amounts are tied to the earnings record of the spouse in many cases, so we also consider the calculated benefit of living spouses and the relevant program rules, but do not attempt to link to previous or deceased spouses; thus, we do not calculate survivor or other benefits that are not based on the individual’s or living spouse’s earnings records. Those types of benefits fall under the “other beneficiaries” headings in the tables. In the simulations, we impose the average percentage benefit change for the calculated benefit amounts (by age group) to simulate the change in benefit amounts for these benefit types.

We present simulation results using the individual beneficiary as the unit of observation and calculate OASDI benefits for the reference person and for the individual’s “unit.” The unit includes the spouse if the individual is married and the spouse is present, otherwise the unit includes only the individual. This construction is similar to the concept used in the SSI program, which determines financial eligibility for individuals or couples.

When simulating financial eligibility for SSI, we evaluate income and resources, and consider spousal deeming rules.<sup>14</sup> Countable resources and countable income are measured in the SIPP (see Davies and others (2001/2002) for more information). Because SSI benefit receipt is often misreported in the SIPP (Huynh, Rupp and Sears 2002), we use administrative records to determine program participation. Benefit

amounts also may be misreported. Thus, we replace self-reported OASDI and SSI benefit amounts with administrative amounts for the family members for whom we do not calculate benefit amounts (those outside of the unit).<sup>15</sup>

### ***The Well-Being of the Disabled***

We analyze the initial position of the group of disabled-worker beneficiaries from two perspectives. First, we measure the well-being of the group of

disabled-worker beneficiaries relative to other groups, and second, we measure the well-being of subgroups of disabled-worker beneficiaries relative to other subgroups. Of the many aspects of well-being, we restrict the analysis to financial well-being and focus on changes in income.

### ***The Relative Well-Being of the Disabled***

The population of interest in this article is generally the baseline set of disabled-worker beneficiaries.

**Table 1.**  
**Sample means by beneficiary status of individuals**

Variable subgroup	OASDI beneficiaries			Non-beneficiaries <sup>a</sup>
	Disabled workers	Retired workers	Other beneficiaries	
<b>Economic variables</b>				
Total family income (dollars, monthly)	2,624 (97)	2,617 (29)	2,353 (59)	4,317 (21)
Poverty rate (percent)	24.0 (1.3)	8.7 (0.3)	15.0 (0.7)	12.6 (0.2)
<b>Programmatic variables</b>				
OASDI benefit of individual (dollars) <sup>b</sup>	663 (8)	706 (3)	601 (7)	...
Duration of benefit receipt (years)	7.2 (0.2)	11.4 (0.1)	11.9 (0.2)	...
OASDI benefit of unit (dollars) <sup>c</sup>	710 (9)	1,046 (6)	861 (10)	...
SSI financial eligibility (percent)	20.7 (1.2)	5.4 (0.3)	13.8 (0.7)	10.5 (0.1)
SSI participation among eligibles (percent)	71.9 (2.9)	50.3 (2.3)	63.3 (2.6)	2.0 (0.1)
OASDI plus SSI benefit of unit (dollars)	733 (9.0)	1,052 (6.0)	879 (10.0)	...
<b>Demographic variables</b>				
Age (years)	47.7 (0.3)	72.4 (0.1)	67.8 (0.3)	38.9 (0.1)
Women (percent)	41.7 (1.4)	47.3 (0.6)	93.5 (0.5)	51.2 (0.2)
Married (percent)	47.1 (1.5)	59.5 (0.6)	36.5 (1.0)	58.6 (0.2)
Family size	2.5 (*)	1.9 (*)	2.0 (*)	3.0 (*)
Household size	2.7 (*)	2.0 (*)	2.1 (*)	3.2 (*)
Reside in a metropolitan statistical area (percent)	71.6 (1.3)	74.0 (0.5)	69.4 (1.0)	78.0 (0.2)
Black (percent)	19.4 (1.2)	8.4 (0.3)	10.0 (0.6)	11.4 (0.2)
Hispanic (percent)	5.9 (0.7)	3.9 (0.2)	5.3 (0.5)	9.5 (0.1)
Completed high school (percent)	68.1 (1.4)	67.2 (0.5)	57.2 (1.0)	86.3 (0.2)

(Continued)

Comparisons of this group with retired-worker beneficiaries are central to our study, and therefore we assess baseline differences between the two groups. Also, we compare disabled-worker beneficiaries with the group of nonbeneficiaries because this group is a valuable comparison group composed mainly of nondisabled working-aged people. A comparison of the characteristics of disability beneficiaries with these two comparison groups is shown in Table 1.<sup>16, 17</sup>

DI beneficiaries differ most notably from these two comparison groups in terms of a variety of health measures. For disabled workers, 36.9 percent describe their health status as poor compared with only 2.4 percent in the nonbeneficiary population and 12.2 percent of retired workers. In addition, 53.6 percent of disabled workers report some sort of functional limitation, about twice the percentage of retired workers and more than ten times the percentage in the nonbeneficiary population. These patterns are confirmed by more objective self-reported health measures such as the

number of hospital and doctors visits. These differences are all statistically significant.

The demographic composition of the group of disabled workers also differs from the other two groups. Compared with retired workers, disabled workers are of course younger on average but also less often married and more often black. Also, disabled workers live in larger households and families. Compared with the nonbeneficiary population, disabled workers are older, less often female, married, or Hispanic, and more often black. By contrast to the comparison with retired workers, disabled workers live in smaller households and families than the nonbeneficiary population. Also, they are less likely to have completed high school. All of these differences are also statistically significant.

Disabled workers also differ from the two comparison groups in terms of benefit amounts. For average OASDI benefits, the difference between disabled and retired workers is statistically significant, however, the

**Table 1.**  
**Continued**

Variable subgroup	OASDI beneficiaries			Non-beneficiaries <sup>a</sup>
	Disabled workers	Retired workers	Other beneficiaries	
<b>Health and mortality variables</b>				
Poor health (percent)	36.9 (1.4)	12.2 (0.4)	13.0 (0.7)	2.4 (0.1)
Nights spent in hospital (annual number)	4.1 (0.4)	2.0 (0.1)	1.7 (0.1)	0.4 (*)
Doctor visits (annual number)	17.1 (1.0)	7.4 (0.2)	7.9 (0.4)	4.4 (0.1)
Any functional impairment (percent) <sup>d</sup>	53.6 (1.5)	26.7 (0.5)	37.9 (1.0)	4.7 (0.1)
Work limitation in two periods (percent)	73.1 (1.3)	5.4 (0.3)	12.8 (0.7)	4.3 (0.1)
Death within 4 years of survey (percent)	8.9 (0.8)	13.7 (0.4)	11.1 (0.7)	0.9 (*)
Numbers of observations (unweighted)	1,161	7,555	2,302	42,804

SOURCES: Calculations based on the Survey of Income and Program Participation (SIPP) matched to Social Security administrative records.

NOTES: The survey reference month is November 1996. The sample is restricted to adults who have SIPP observations that have been successfully matched to the Summary Earnings Record. Sampling weights have been adjusted by the inverse of the matching rate. Standard error estimates assume simple random sampling and are included in parentheses.

... = not applicable; \* = less than 0.05; OASDI = Old-Age, Survivors, and Disability Insurance; SSI = Supplemental Security Income.

- a. The sample is restricted to people aged 18 or older.
- b. Values are for the sample reference person.
- c. Values are for the sample reference person if unmarried and for the reference person and spouse combined if married (spouse present).
- d. Including difficulty with any activities of daily living (ADL) or instrumental activities of daily living (IADL).

dollar amounts are relatively small. Of course, nonbeneficiaries receive no benefit from OASDI, which is a fundamental difference between them and the beneficiary groups.<sup>18</sup>

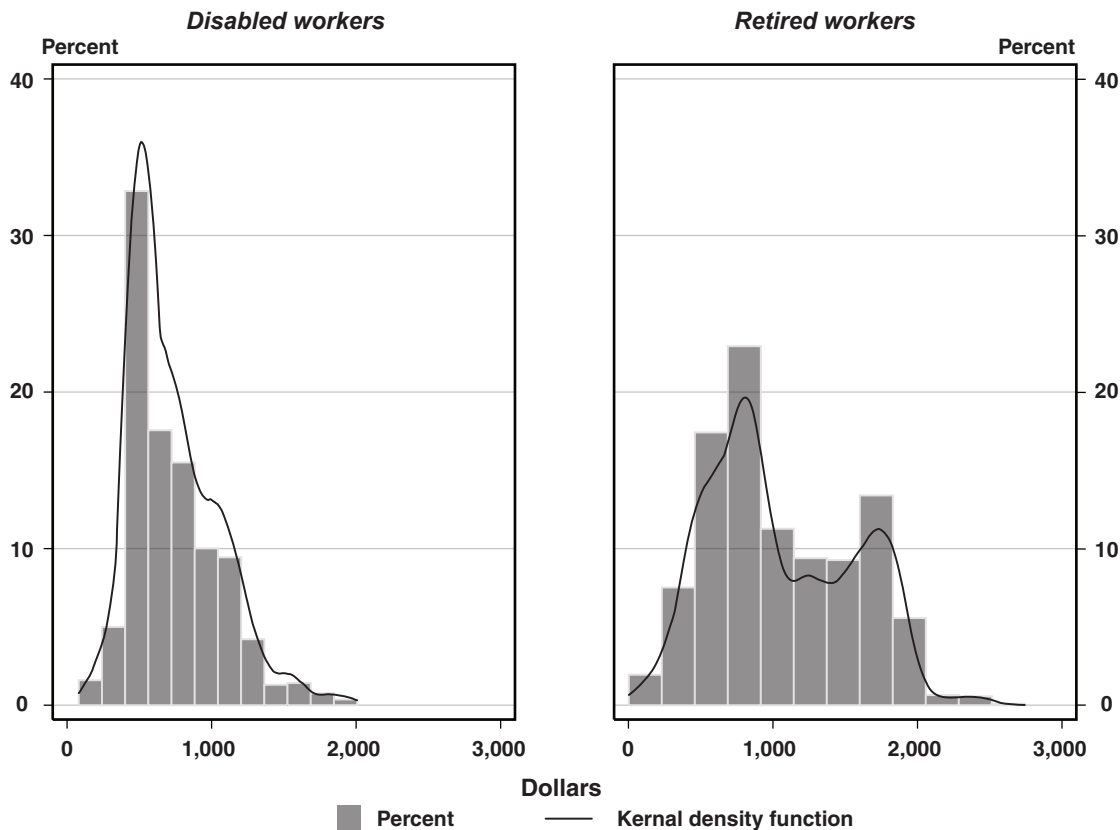
As mentioned, disabled workers are less likely to be married than are members of the comparison groups. Compared with retired workers, this contributes to a lower probability that the disabled worker has a spouse with OASDI benefits. When OASDI benefits are calculated for the individual's unit (including the benefits of a spouse if present), a difference is observed that is both statistically significant and a meaningful dollar amount (more than \$300 lower for disabled workers per month).

In contrast to spouse benefits, the receipt of SSI is much more important for disabled workers than for retired workers. As shown in Table 1, 20.7 percent of disabled workers are estimated to be financially eligible for SSI versus only 5.4 percent of retired workers.

Further, 71.9 percent of financially eligible disabled workers participate in the SSI program versus only 50.3 percent for retired workers. Thus SSI adds more to the average OASDI benefit for disabled-worker beneficiaries (\$23 on the average) than for retired-worker beneficiaries (\$6 on the average) on a unit basis.<sup>19</sup> Still, the combined OASDI and SSI benefits of the unit are smaller for disabled workers than they are for retired workers mainly because the inclusion of the spouse's OASDI benefit far outweighs the opposing effect of SSI.

In general, total benefits (OASDI and SSI combined) are smaller for disabled workers than retired workers. Further, the differences in the prevalence of low benefits may be larger than suggested by the means. Chart 1 shows the distributions of total benefits for the two groups as bar charts overlaid by kernel density functions.<sup>20</sup> For disabled workers, the distribution is skewed such that the most probable benefit

**Chart 1.**  
**Distribution of total benefits (OASDI and SSI) for disabled- and retired-worker beneficiaries**



SOURCES: Calculations based on the 1996 Survey of Income and Program Participation matched to Social Security administrative records.

NOTES: Values are for the sample reference person if unmarried and for the reference person and spouse combined if married (spouse present).

OASDI = Old-Age, Survivors, and Disability Insurance; SSI = Supplemental Security Income.

amount is smaller than the mean. By contrast, the distribution for retired workers is bimodal because of the role of spouse benefits<sup>21</sup> with one peak above and one peak below the mean. Thus, relatively more disabled workers have low levels of benefits than is indicated by relative differences in the means. We will examine some groups of disabled workers that are more likely to appear in the lower tail of the distribution in the next section.

Measuring overall economic vulnerability involves more than just benefit amounts. It is necessary to consider the individual in the broader context of family consumption and benefit amounts in the broader context of family income to get an accurate picture. Although both disabled and retired workers are in families with significantly lower income than nonbeneficiaries, they do not significantly differ from each other in terms of average family income. This is the net result of two factors that work in opposite directions. The combined OASDI and SSI income of the unit is significantly larger for retired workers as we have seen. However, the families of disabled workers have more income from other sources. The share of other income is 72 percent for disabled workers, while it is only 60 percent for retired workers.<sup>22</sup> This is related to the larger family size of disabled workers.

Once we look at distributional indicators that adjust for family size, the substantial differences in the economic well-being of disabled-worker and retired-worker beneficiaries becomes transparent. Disabled worker beneficiaries experience much higher poverty rates than retired workers or nonbeneficiaries (see Table 1), and the differences are statistically significant.

### ***Well-Being within the Group of Disabled Beneficiaries***

Disabled workers as a group form an economically vulnerable segment of OASDI beneficiaries. We operationally define beneficiaries as economically vulnerable if their family income is at or below the official poverty threshold. Accordingly, a subgroup of disabled workers is defined as economically vulnerable if the proportion that is classified as poor is high compared with the rate for disabled workers as a whole. We define economically vulnerable subgroups on the basis of four variables commonly believed to be associated with the risk of economic vulnerability. The subgroups of disabled workers include (1) those in the lowest PIA quartile, (2) those with less than a high school educa-

tion, (3) beneficiaries with an early onset of disabilities, and (4) those with a primary mental impairment. These subgroups display poverty rates ranging from 30 percent to 44 percent (Table A-1)—compared with the average of 24 percent for all disabled beneficiaries.

What is the contribution of various income sources to alleviating economic vulnerability? We distinguish three principal sources of family income: OASDI, SSI, and other income (from any source except OASDI or SSI). We first look at the subgroup directly defined by economic vulnerability: disabled workers in poverty. The first set of bars on Chart 2 presents their average income as a percent of the corresponding average for all disabled workers from each of the three sources. The data show that relatively low income from OASDI and especially from other sources are the reasons for economic vulnerability among poor disabled workers. By contrast, SSI plays a mitigating role.

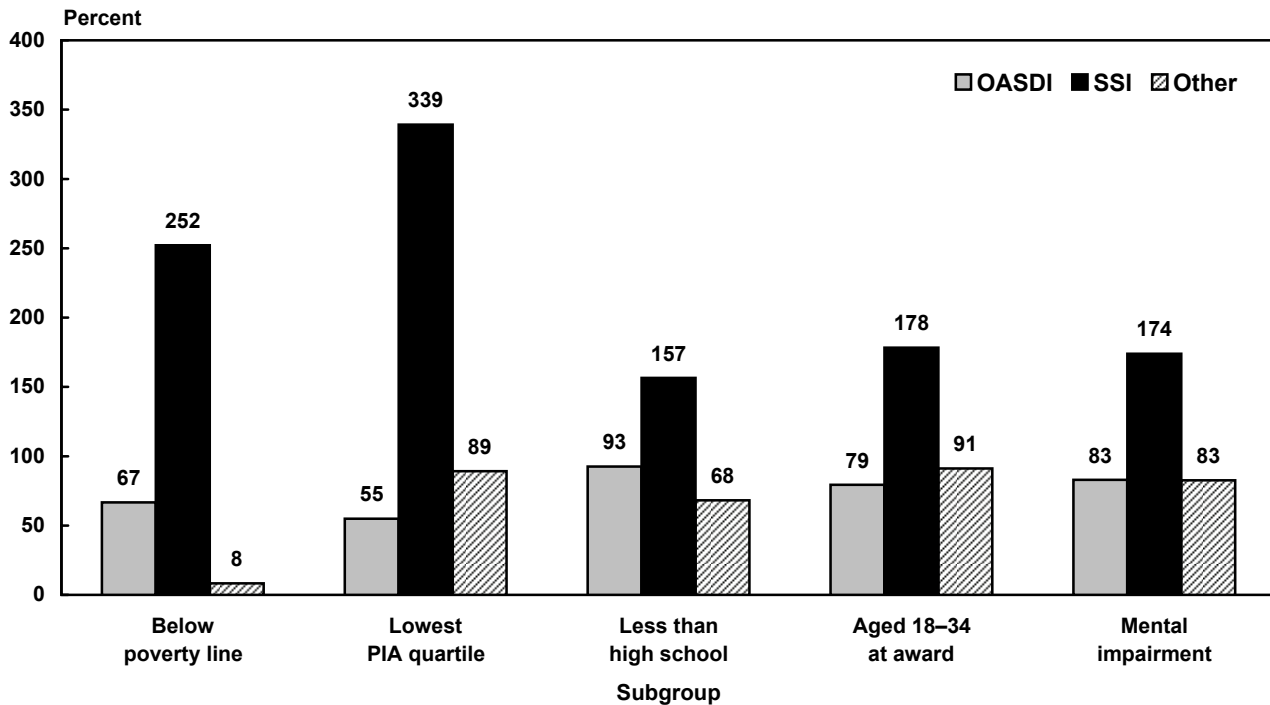
A complementary perspective is provided by the share of income from various sources for disabled workers in poverty. More than two-thirds of their income (69 percent)<sup>23</sup> comes from OASDI, and less than a fourth comes from other income sources (besides SSI). This suggests that the effects of any OASDI changes might not be much dampened by the cushion of other family income. Thus, those in poverty are not only the most economically vulnerable under the baseline, but also vulnerable to OASDI changes.

Chart 2 also presents the average income of the four other economically vulnerable subgroups identified above relative to the average for all disabled workers. Not surprisingly, the overall patterns are similar to the findings for disabled workers in poverty. The one difference for all four of these groups is that income from other sources is much closer to the average.

Interestingly, there are other groups of disabled beneficiaries that are often thought of as vulnerable that do not meet the criteria of economic vulnerability we employ here. For example, severity of disabilities is not clearly associated with economic vulnerability (again see Table A-1). Being close to the end of one's life during the reference month (as measured by death within 4 years of the survey) is also not associated with economic vulnerability. The figures for high mortality risk (as measured by death within 4 years of onset of disability) are also at least suggestive of the absence of a positive relationship between high mortality risk and economic vulnerability.<sup>24</sup>

**Chart 2.**

**Average family income by source as a percent of the average for all disabled-worker beneficiaries, by selected subgroups**



SOURCES: Calculations based on the 1996 Survey of Income and Program Participation matched to Social Security administrative records.

NOTES: OASDI and SSI values are for the sample reference person if unmarried and for the reference person and spouse combined if married (spouse present).

OASDI = Old-Age, Survivors, and Disability Insurance; SSI = Supplemental Security Income; PIA = primary insurance amount.

### ***The Effects of Changing the Indexing of Benefits***

In this section we describe the overall results of the two simulations on OASDI benefits, OASDI and SSI combined, family income, and the poverty rate. Next, we identify the general distributional effects underlying the overall patterns of results and, finally, examine changes within the group of disabled-worker beneficiaries.

#### ***Group Effects***

We analyze both estimated average changes and the variability of those outcomes for both disabled workers and retired workers. Further, we explore the ways in which SSI and other family income mitigate the effects of the indexing approaches. As we shall see, looking at OASDI benefits alone may lead to misleading conclusions; other sources of family income also need to be considered.

**OASDI Benefit Changes.** The percentage changes in OASDI benefit levels corresponding to the indexing approaches are larger for disabled workers than for retired-worker beneficiaries. The first column of Table 2 presents the average results overall and for relevant subgroups of the OASDI beneficiary population. For both price indexing and life expectancy indexing, disabled workers are more affected than retired workers and the differences are statistically significant.<sup>25</sup> As will be explained in the General Distributional Effects subsection, this is related to average differences in the timing of benefit entitlement between retired and disabled workers that is a direct consequence of our choice of a cross-sectional analytical approach.

When the OASDI benefit of the spouse, if any, is considered in combination with the beneficiary (second column), the results are similar. Although the OASDI benefit of the spouse can potentially have a large effect on the level of total benefits in the



base case, the percentage changes in outcomes are robust with respect to the inclusion of the benefit of the spouse. This implies that the effect of changing the indexing approach on the benefit of the spouse is equivalent to the effect on the individual's benefit, on average.<sup>26, 27</sup>

Although the comparison of averages is a useful first step, the variability of the estimated changes also needs to be considered. Even if the magnitude of

average changes is somewhat larger for the disabled, it is possible that a substantially smaller portion of disabled workers would experience large changes compared with retired workers and, thus, the consideration of distributional detail would make the results more ambiguous. However, we find that a substantially larger portion of disabled workers are expected to experience relatively large OASDI changes. This can be seen in the top panel of Chart 3. This chart summa-

**Table 2.**  
**Simulated change in outcome measures, by indexing option and OASDI beneficiary subgroup**

Indexing option and OASDI beneficiary subgroup	Individual OASDI benefits <sup>a</sup> (percent change)	Unit OASDI benefits <sup>b</sup> (percent change)	Unit OASDI plus SSI benefits <sup>b</sup> (percent change)	Family income (percent change)	Poverty rate (percentage-point change)
<b>Price indexing</b>					
All beneficiaries	-9.6 (0.049)	-9.6 (0.048)	-9.0 (0.051)	-4.7 (0.036)	2.0 (0.134)
Disabled worker	-10.6 (0.159)	-10.7 (0.157)	-9.1 (0.185)	-4.4 (0.127)	2.1 (0.423)
Retired worker	-9.1 (0.063)	-9.2 (0.060)	-8.9 (0.062)	-4.6 (0.043)	1.7 (0.150)
Of which:					
Former disabled worker	-5.3 (0.182)	-5.7 (0.178)	-5.3 (0.178)	-3.2 (0.123)	1.5 (0.428)
Never a disabled worker	-9.5 (0.064)	-9.6 (0.062)	-9.4 (0.064)	-4.8 (0.045)	1.7 (0.160)
Other	-10.7 (0.069)	-10.0 (0.082)	-9.1 (0.100)	-5.0 (0.078)	3.0 (0.388)
<b>Life expectancy indexing</b>					
All beneficiaries	-4.6 (0.023)	-4.6 (0.023)	-4.3 (0.024)	-2.3 (0.017)	1.0 (0.095)
Disabled worker	-5.0 (0.076)	-5.1 (0.075)	-4.3 (0.088)	-2.1 (0.060)	1.2 (0.323)
Retired worker	-4.3 (0.030)	-4.4 (0.029)	-4.3 (0.030)	-2.2 (0.021)	0.8 (0.104)
Of which:					
Former disabled worker	-2.5 (0.087)	-2.7 (0.085)	-2.5 (0.085)	-1.5 (0.059)	0.9 (0.330)
Never a disabled worker	-4.5 (0.031)	-4.6 (0.030)	-4.5 (0.031)	-2.3 (0.022)	0.8 (0.110)
Other	-5.1 (0.033)	-4.8 (0.039)	-4.3 (0.048)	-2.4 (0.037)	1.6 (0.284)

SOURCES: Calculations based on the Survey of Income and Program Participation (SIPP) matched to Social Security administrative records.

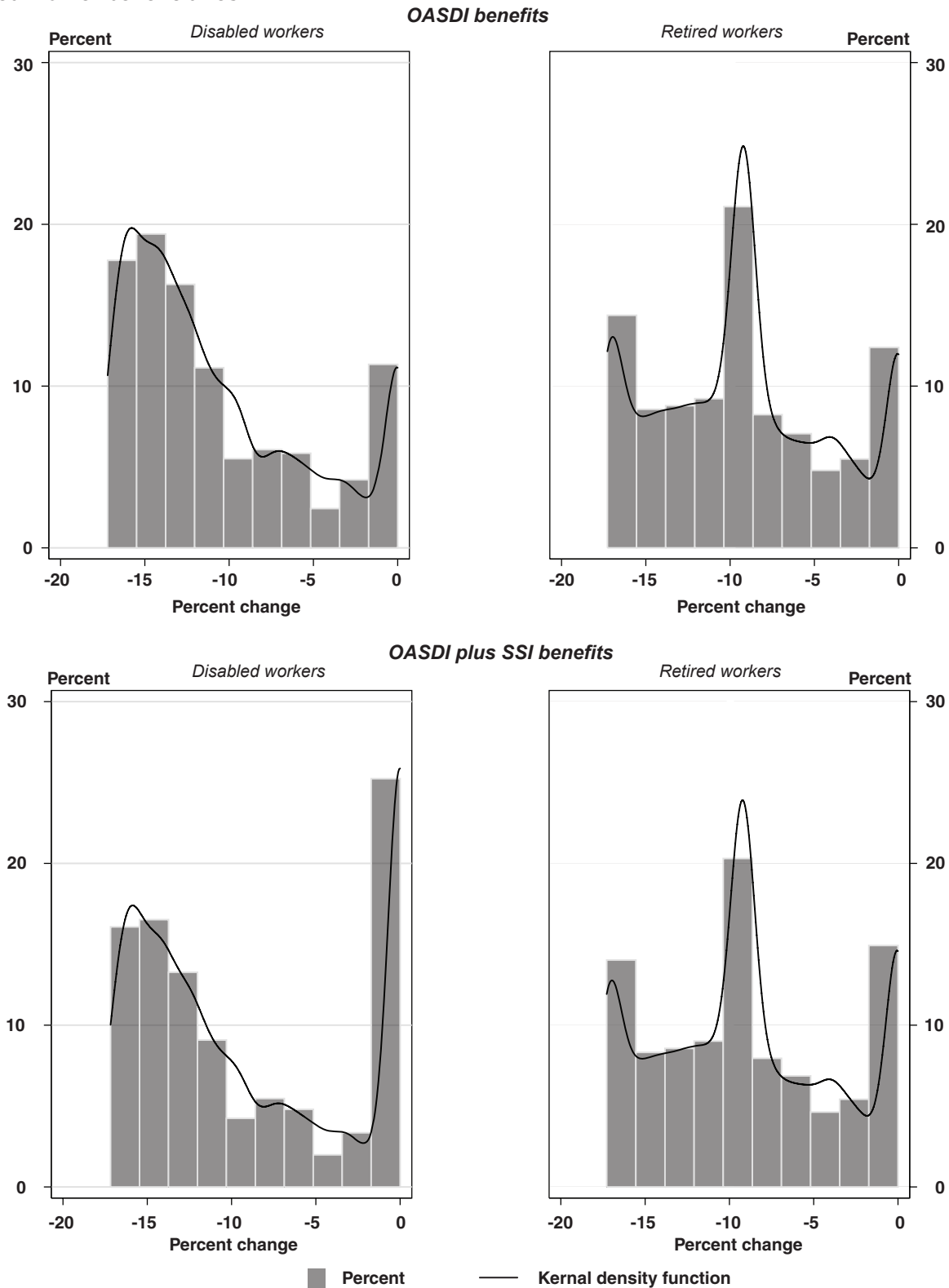
NOTES: The survey reference month is November 1996. The sample is restricted to adults who have SIPP observations that have been successfully matched to the Summary Earnings Record. Sampling weights have been adjusted by the inverse of the matching rate. Standard error estimates assume simple random sampling and are included in parentheses.

OASDI = Old-Age, Survivors, and Disability Insurance; SSI = Supplemental Security Income.

a. Values are for the sample reference person.

b. Values are for the sample reference person if unmarried and for the reference person and spouse combined if married (spouse present).

**Chart 3.**  
**Distribution of simulated changes in benefits under price indexing for disabled- and retired-worker beneficiaries**



SOURCES: Calculations based on the 1996 Survey of Income and Program Participation matched to Social Security administrative records.

NOTES: Values are for the sample reference person if unmarried and for the reference person and spouse combined if married (spouse present).

OASDI = Old-Age, Survivors, and Disability Insurance; SSI = Supplemental Security Income.

rizes the distributions for disabled- and retired-worker beneficiaries of OASDI benefit changes (top panel) and changes in OASDI and SSI benefits combined (bottom panel) for the price indexing simulation.<sup>28</sup> Looking at the top panel we see that the distribution of OASDI changes for the disabled is bimodal, with a large peak at the high end of the estimated changes (on the left), and a smaller peak at the low end of the distribution (on the right). By contrast, the peak indicating large changes (on the left) is much smaller for retired workers. The peak indicating relatively small changes (on the right) is relatively close for the two groups. Importantly, there is a third peak for retired workers that is the highest (in the middle) and centers around the average. Thus, a substantially higher portion of disabled workers are estimated to experience relatively large OASDI benefit changes under price indexing. This also holds for life expectancy indexing, as seen in Chart A-1. The shape of the distribution of changes corresponding to the two indexing schemes is very similar.

**The Role of SSI and Other Family Income.** We examine the role of SSI and other family income in mitigating the effects of OASDI benefit changes on economic well-being. We start with SSI, an important source of financial support among low-income beneficiaries. The interactions between OASDI and SSI need to be considered in the context of the effect of the different indexing approaches on economic well-being. For concurrent beneficiaries, SSI could offset up to 100 percent of the simulated reductions. This is so because OASDI benefits are considered unearned income under SSI rules: other things equal, lower OASDI benefits should increase SSI payments \$1 for \$1 up to the SSI federal benefit rate for most concurrent beneficiaries.<sup>29</sup> The third column in Table 2 shows the estimated average change in OASDI and SSI payments combined. The data show nearly uniform reductions that are smaller than individual (first column) or unit (second column) OASDI reductions.

Upon closer inspection it becomes clear that, on average, the estimated changes in SSI benefits would counteract a greater portion of the change in OASDI benefits for disabled workers than for retired workers. The differences between the numbers in the second and third columns of Table 2 are much larger for disabled workers than for retired workers. For example, for the price indexing simulation, the difference between the OASDI percentage change and the OASDI plus SSI percentage change is 1.6 percentage

points for disabled workers and only 0.3 percentage points for all retired workers. Similar differences can be observed for the life expectancy indexing simulation. The differences between the two groups are important, but not surprising given the higher rates of SSI eligibility and participation among disabled workers. Thus the “exposure” of disabled workers to the potential SSI offset is much greater than that of retired workers. As a net result of the changes for the two groups, the changes in the combined OASDI and SSI benefits are virtually identical, and the difference in changes is not statistically significant. Thus, SSI effectively eliminated the difference that was observed for changes in OASDI benefits alone.

When we look at the variability of total benefit changes (the bottom panel of Chart 3), we find that the shape of the distribution remains largely unaffected for retired workers but changes substantially for disabled workers. Consistent with the offsetting mechanism provided by SSI, the proportion of disabled workers with large changes decreases, while the proportion with zero or close to zero changes dramatically increases; it essentially doubles.

Next we consider family income changes. Although SSI is the only source of family income besides OASDI that is changing under the simulations, other family income also affects the relative magnitude of the simulated changes in total family income. Because access to other sources of earned and unearned income varies across beneficiaries, the dampening effect of other sources of family income should also vary. The fourth column of Table 2 provides the average changes in family income for the various subgroups. The absolute magnitude of these numbers is much smaller than the magnitudes in the first three columns of the table across the board. This reflects the substantial muting effect of other family income. The difference in the point estimates between disabled workers and retired workers is small, and not statistically significant. This reflects the combination of the SSI effect, which is larger for the disabled, and the roughly equal marginal effect of other family income.

When we consider the variation of the change measures, the evidence indicates that SSI reduces the proportion with relatively large reductions in combined benefits and substantially increases the proportion with no or very small changes in combined benefits for disabled workers. For retired workers, SSI does not have a major effect on the distribution of estimated changes. However, the consideration of other family income

results in a shift for both disabled workers and retired workers towards zero or very small reductions.<sup>30</sup>

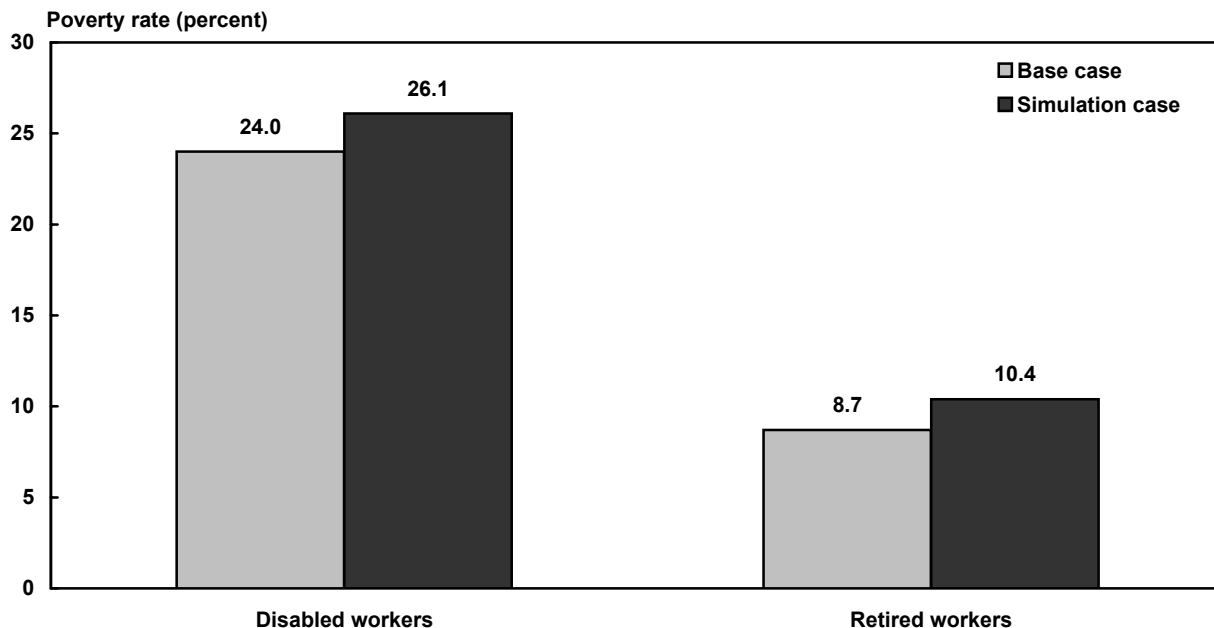
In summary, we find that the average changes in OASDI benefits are somewhat larger for disabled workers than for retired workers. However, SSI counteracts these differences: changes in the average total benefit payments are virtually identical, and the differences are not statistically significant. Other family income further dampens the average effect of the OASDI changes for both groups, and does so substantially. The net result is roughly similar average changes in total family income for the two groups of beneficiaries, with estimated differences that are not statistically significantly different from zero. This finding is clearly driven by the differential effects of SSI on the two groups.

**The Effects on Family Well-Being.** Next we consider changes in a key measure of distributional outcomes: the poverty rate. This statistic is difficult to interpret without reference to baseline differences in the rate of poverty among the different groups, because the same percentage-point difference may translate into very different percentage changes for the different groups. For example, the same 2 percentage-point change is twice as large compared with a baseline poverty rate of 10 percent than compared with a baseline poverty rate of 20 percent.

More broadly, we need to assess how much baseline differences and the indexing changes contribute to simulation differences in economic well-being. This is relevant because it is possible for an economically vulnerable group, such as the disabled, to experience less change as a result of indexing changes than for other groups, and still end up in a situation of greater economic vulnerability. The induced changes are relevant to whether the policy change per se increases the economic vulnerability of a certain group. By contrast, the simulation results reflect the net effect of baseline differences and the indexing changes and therefore provide a useful complementary perspective on economic vulnerability.<sup>31</sup> Some policymakers may be more concerned about changes in economic vulnerability directly attributable to a policy intervention, while others are more interested in the absolute levels under the simulation. Our analysis provides empirical results informing both of these complementary perspectives.

Chart 4 shows the baseline and price indexing simulation poverty rates for disabled-worker and retired-worker beneficiaries. Although the induced changes are comparable for disabled and retired workers in percentage-point terms (2.1 percentage points versus 1.7 percentage points<sup>32</sup>), the relative changes are much smaller for disabled workers (9 percent versus 20 per-

**Chart 4.**  
**Poverty rate of disabled and retired workers under baseline and price indexing simulations**



SOURCES: Calculations based on the 1996 Survey of Income and Program Participation matched to Social Security administrative records.

cent). Thus, the results are somewhat ambiguous, and arguably, the simulations had less of an effect on the prevalence of poverty among disabled workers when compared with retired workers. In any event, the chart clearly indicates that the simulation differences in economic vulnerability are roughly the same for the two groups as they were under the baseline.<sup>33</sup> This is so because the simulation poverty rate is dominated by large baseline differences rather than the simulated policy interventions per se, at least for the time horizon of this study.

### **General Distributional Effects**

A comprehensive evaluation of simulation results requires an understanding of the underlying mechanisms that produce the distributional outcomes. There are three important factors affecting all OASDI beneficiaries:

1. Length of time before OASDI award subject to the new indexing scheme;<sup>34</sup>
2. Availability of SSI; and
3. The absolute and relative economic well-being of the family.

Under the assumption of a monotonic increase in real wages (or life expectancy) the first factor is directly related to the design of the two indexing schemes. The simulated OASDI reduction for each individual in the sample is a function of the number of years between the presumed start of the new indexing scheme and the time of claiming benefits. This amount of time—the years of exposure to the new indexing scheme—in combination with the change in the index produces the simulated outcomes. In our observed sample, disabled-worker beneficiaries have shorter durations of benefit receipt than retired-worker beneficiaries (see Table 1). Thus, because the time since the presumed start of the new indexing scheme is divided into the time of exposure to the new scheme and the time of benefit receipt, disabled-worker beneficiaries have more exposure to the new scheme, and consequently, they have larger simulated changes in benefit amounts.

More information about the distribution of benefit duration is given in the Appendix tables. When observed in a cross section, the portion of disabled workers with short durations is relatively large.<sup>35</sup> Conversely, the proportion of disabled workers with long duration is relatively small. Short duration in our cross-sectional sample translates into long exposure to the simulated indexing regime. Table A-1 shows that the proportion of disabled-worker beneficiaries with

12–17 years of exposure is 53 percent. In contrast, the average in the general population of beneficiaries (Table A-2) is only 28 percent. These distributional differences reconfirm that the average changes in OASDI benefits corresponding to the simulated indexing approaches are larger for disabled workers than for retired workers.

The importance of length of exposure is further highlighted by the fact that differences in simulated OASDI benefit change levels are not observed for disabled workers when examining the group of relatively new beneficiaries. In contrast to the general population of beneficiaries, the group of new beneficiaries is homogenous in length of exposure to the new indexing scheme. Table 3 shows that the change among beneficiaries who are relatively new beneficiaries (12–17 years of exposure) is 14.6 percent. This is virtually identical to the estimate for disabled workers who are relatively new beneficiaries, 14.7 percent (see Table 4).

The cross-sectional results related to duration of benefit receipt are not expected to apply to other samples, such as a longitudinal sample following a birth cohort. In fact, using a life-cycle perspective, Mermin (2005) has predicted that the timing of benefit claiming would lead to the opposite result: smaller OASDI benefit changes for disabled-worker beneficiaries. Mermin's conclusions are not inconsistent with our findings, however, when the differences in analytical approach (birth cohort versus cross sectional) are removed; the study does focus on outcomes for members of the same birth cohort at ages 62–65 and 80–85. The “disabled” in Mermin's study are either very close to the historical full retirement age or are actually older retired workers (80–85) who are former disability beneficiaries. When we restrict our sample to current retired-worker beneficiaries, we get similar results; previous disabled-worker beneficiaries have smaller simulated changes in OASDI benefits than other retired-worker beneficiaries (see Table 2).

In addition to the length of time subject to the new indexing scheme, other factors that affect the simulated outcomes include the availability of SSI and the effects of total family income.

Table 3 demonstrates each of these effects within the population of OASDI beneficiaries. There is a clear positive relationship between the years subject to the new indexing scheme and the magnitude of percentage changes in average OASDI benefits, OASDI and SSI combined, and family income. It is also notable that within each of the three categories there is a clear pat-

**Table 3.**  
**Percent change in outcome measures for price indexing simulations among all OASDI beneficiaries, by length of simulation period before OASDI award and family income category**

Simulation variable	OASDI benefits <sup>a</sup>	OASDI plus SSI benefits	Family income
Years between start of indexing scheme and OASDI award			
0–6	-7.0 (0.056)	-6.6 (0.061)	-3.8 (0.053)
7–11	-10.7 (0.054)	-10.2 (0.069)	-5.4 (0.066)
12–17	-14.6 (0.059)	-13.8 (0.083)	-6.3 (0.080)
Family income category			
At or below poverty threshold	-9.2 (0.137)	-6.0 (0.160)	-5.2 (0.142)
Above threshold to 200 percent of poverty threshold	-9.0 (0.087)	-8.5 (0.092)	-6.3 (0.073)
Above 200 percent of poverty threshold	-9.9 (0.062)	-9.8 (0.063)	-4.0 (0.038)

SOURCES: Calculations based on the Survey of Income and Program Participation (SIPP) matched to Social Security administrative records.

NOTES: The survey reference month is November 1996. The sample is restricted to adults who have SIPP observations that have been successfully matched to the Summary Earnings Record. Sampling weights have been adjusted by the inverse of the matching rate. Standard error estimates assume simple random sampling and are included in parentheses.

OASDI = Old-Age, Survivors, and Disability Insurance; SSI = Supplemental Security Income.

a. Values are for the sample reference person if unmarried and for the reference person and spouse combined if married (spouse present).

tern indicating the dampening effect of both SSI and other family income.<sup>36</sup>

The role of the second and third factors can be represented in a unified framework if we look at the three outcome variables as a function of family income relative to the poverty threshold. In Table 3 we create three family income categories representing:

1. Those at or below the official poverty threshold;
2. Those above the poverty threshold but below twice the threshold; and
3. Those above twice the poverty threshold.

Looking at these three categories we can see that the percent reduction in family income is lowest in the third category, second in the first category, and largest in the second category. The data clearly show that the magnitude of OASDI reductions is not responsible for this pattern. SSI plays the largest role for the first category, and virtually no role for the third category. Other income is more important for the second and third categories, with the third category experienc-

ing the larger dampening effect. In summary, the SSI offset is the key mechanism at the lower tail of the income distribution, and other family income is the key mechanism at the higher end of the distribution.

In addition to the dampening effect of SSI and other family income, these same factors also reduce the variability of simulation outcomes. Chart 5 focuses directly on the proportion with relatively large changes (10 percent or larger reductions) in three outcome variables using the group of disabled workers as an example. The results dramatically indicate the dampening role of SSI at the lower tail of the relative income distribution, and the overwhelming buffering role of other family income in the top group.

The evidence in this section all refers to the price indexing simulation. However, the mechanisms described above apply to the life expectancy simulation as well. Because the relative outcomes are very similar for both sets of simulations, we present only the results for price indexing.

**Table 4.**  
**Outcome measures for price indexing simulations among disabled-worker**  
**OASDI beneficiaries, by various beneficiary characteristics**

Beneficiary characteristic	OASDI benefit <sup>a</sup> (percent change)	OASDI plus SSI benefits <sup>a</sup> (percent change)	Family income (percent change)	Poverty rate (percentage-point change)	Average poverty gap (dollar per month change)
Years between start of indexing scheme and OASDI award					
0–6	-3.8 (0.181)	-3.1 (0.203)	-1.8 (0.162)	0.5 (0.552)	2 (0.729)
7–11	-9.9 (0.094)	-8.0 (0.251)	-4.3 (0.225)	2.7 (1.104)	12 (1.542)
12–17	-14.7 (0.067)	-12.7 (0.214)	-5.8 (0.185)	2.7 (0.648)	11 (1.109)
Family income category					
At or below poverty threshold	-9.6 (0.325)	-5.7 (0.377)	-4.7 (0.331)	0.0 (0.000)	33 (2.250)
Above threshold to 200 percent of poverty threshold	-10.7 (0.286)	-9.4 (0.334)	-6.2 (0.256)	7.6 (1.460)	3 (0.738)
Above 200 percent of poverty threshold	-11.1 (0.227)	-10.6 (0.244)	-3.2 (0.114)	0.0 (0.000)	0 (0.000)
Primary insurance amount quartile					
1st	-9.8 (0.295)	-5.0 (0.335)	-1.9 (0.166)	0.2 (0.258)	5 (0.853)
2nd	-10.3 (0.280)	-10.2 (0.282)	-5.5 (0.234)	3.0 (0.906)	19 (1.666)
3rd	-11.2 (0.402)	-11.3 (0.401)	-5.7 (0.363)	7.6 (2.120)	9 (2.131)
4th	-11.6 -0.3	-11.7 -0.3	-5.4 -0.2	0.3 -0.3	2 -0.9
Age at initial entitlement					
18–34	-7.6 (0.317)	-5.2 (0.321)	-2.8 (0.198)	1.5 (0.667)	8 (1.206)
35–44	-10.3 (0.290)	-8.9 (0.333)	-4.0 (0.222)	3.0 (0.928)	8 (1.286)
45–54	-12.5 (0.178)	-11.2 (0.266)	-5.4 (0.227)	1.8 (0.707)	10 (1.407)
55–61	-15.3 -0.1	-14.4 -0.3	-6.9 -0.4	2.4 -1.3	7 -2.2
Education					
Less than high school	-10.1 (0.272)	-7.9 (0.328)	-4.6 (0.236)	3.2 (0.904)	12 (1.406)
Other	-10.9 (0.191)	-9.6 (0.221)	-4.3 (0.149)	1.6 (0.454)	7 (0.797)
Reported health status					
Poor	-11.0 (0.250)	-9.3 (0.302)	-4.7 (0.216)	2.2 (0.695)	9 (1.190)
Other	-10.5 (0.201)	-8.9 (0.233)	-4.2 (0.156)	2.1 (0.534)	8 (0.878)

(Continued)

**Table 4.**  
**Continued**

Beneficiary characteristic	OASDI benefit <sup>a</sup> (percent change)	OASDI plus SSI benefits <sup>a</sup> (percent change)	Family income (percent change)	Poverty rate (percentage-point change)	Average poverty gap (dollar per month change)
Number of functional impairments <sup>b</sup>					
Two or less	-10.7 (0.184)	-9.1 (0.219)	-4.3 (0.147)	1.9 (0.470)	8 (0.770)
Three or more	-10.5 (0.298)	-9.1 (0.345)	-4.6 (0.246)	2.7 (0.899)	11 (1.539)
Primary impairment					
Mental	-9.6 (0.275)	-7.3 (0.326)	-3.8 (0.212)	3.1 (0.887)	9 (1.230)
Other	-11.2 (0.188)	-9.9 (0.217)	-4.7 (0.157)	1.6 (0.456)	9 (0.864)
Death within 4 years of disability <sup>c</sup>					
Yes	-16.1 (0.212)	-16.1 (0.212)	-8.0 (0.933)	5.1 (4.155)	7 (4.304)
Other	-15.1 (0.063)	-12.9 (0.245)	-5.7 (0.205)	1.8 (0.597)	11 (1.275)
Death within 4 years of survey					
Yes	-11.1 (0.505)	-10.6 (0.560)	-5.7 (0.459)	4.9 (2.120)	8 (2.441)
No	-10.6 (0.165)	-8.9 (0.195)	-4.3 (0.131)	1.9 (0.416)	9 (0.739)

SOURCES: Calculations based on the Survey of Income and Program Participation (SIPP) matched to Social Security administrative records.

NOTES: The survey reference month is November 1996. The sample is restricted to adults who have SIPP observations that have been successfully matched to the Summary Earnings Record. Sampling weights have been adjusted by the inverse of the matching rate. Standard error estimates assume simple random sampling and are included in parentheses.

OASDI = Old-Age, Survivors, and Disability Insurance; SSI = Supplemental Security Income.

- a. Values are for the sample reference person if unmarried and for the reference person and spouse combined if married (spouse present).
- b. Number of difficulties with any activities of daily living (ADL) or instrumental activities of daily living (IADL).
- c. Subgroup means are limited to the subsample with an estimated duration of 4 years or less at November 1996 reference month.

### **Disabled-Worker Beneficiaries**

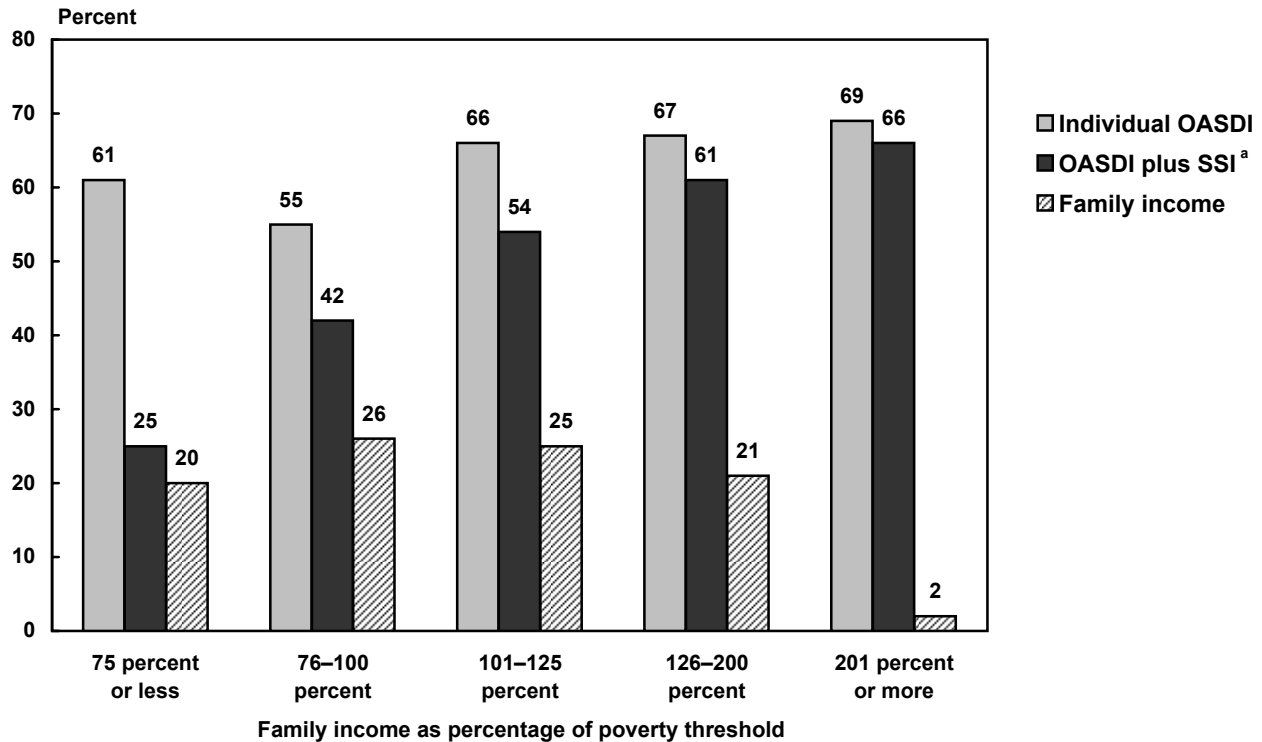
In this section we provide a more detailed analysis of the simulated effects on disabled beneficiaries. Several concerns motivate our focus here. First, we would like to confirm our expectation that the same mechanisms that explained the overall results for all OASDI beneficiaries are detectable among disabled-worker beneficiaries as well. Second, we have seen that the disabled as a group had a high level of economic vulnerability under the baseline. Even though the differences in the overall effects of the indexing approaches between disabled and retired workers were relatively small, it is possible that the indexing approaches have particularly

unfavorable effects on some subgroups of disabled workers. We examine the subgroups identified as economically vulnerable above including those in the lowest PIA quartile, with less than a high school education, with an early onset of disability, or a primary mental impairment.

Table 4 shows that the same underlying mechanisms are at work for disabled workers as for OASDI beneficiaries in general. For “years between start of indexing scheme and OASDI award,” there is a wide dispersion of outcomes across categories. As before, those with the longest exposure to the new indexing scheme experience the largest changes. Also, SSI



**Chart 5.**  
**Percentage of disabled-worker beneficiaries with 10 percent or larger reduction of various outcomes, by family income category**



SOURCES: Calculations based on the 1996 Survey of Income and Program Participation matched to Social Security administrative records.

NOTES: Old-Age, Survivors, and Disability Insurance (OASDI) and Supplemental Security Income (SSI) values are for the sample reference person if unmarried and for the reference person and spouse combined if married (spouse present).

a. Values are for the sample reference person if unmarried and for the reference person and spouse combined if married (spouse present).

has a visible impact on outcomes for those below the poverty thresholds whereas other family income has a noticeable impact for those above twice the poverty thresholds. In addition to the subgroup in poverty, the role of SSI is also notable for the four other economically vulnerable subgroups. When SSI is considered together with OASDI, the changes are relatively small for all these subgroups. For two of the subgroups, those without a high school education and those with a primary mental diagnosis, we compare the vulnerable subgroups with the group of all other disabled workers. By comparison, we use the adjacent subgroup for those with an early onset of disability (the next earliest entitlement age category) and those in the lowest PIA quartile (the second PIA quartile). For all of these subgroups, the estimated change in total benefits is smaller than for the comparison subgroup and these comparisons are all statistically significant.

These differences do not imply that vulnerability would not be a concern for these subgroups under the alternative indexing approaches. We use the subgroup of disabled beneficiaries in poverty as an illustration. For this subgroup, the change in total benefits is -5.7 percent compared with -9.4 percent for the subgroup between the poverty level and twice the poverty level.<sup>37</sup> In the base case, these two subgroups had average benefits of \$532 and \$737 respectively (Table A-1), a difference of \$205. These amounts changed to \$502 and \$668 respectively under the price indexing approach, a difference of \$166. Thus, the percentage changes translate into narrowing the difference in average total benefits between subgroups by \$39. This is less than 20 percent of the original difference. Similar comparisons hold for the four economically vulnerable subgroups.<sup>38</sup> At least for the analysis period of this study, differences in simulated average

total benefits among disabled-worker beneficiaries are dominated by baseline differences rather than the effects of the alternative indexing approaches.

When we examine other aspects of vulnerability that are not associated with poverty, such as severity of impairment and expected mortality, we generally do not find meaningful differences. The one exception is for mortality within 4 years of the onset of disability and the differences are significant only for the outcome of total benefits. For this outcome, the subgroup with high mortality has a larger simulated benefit change.

### ***Conclusions and Implications***

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In this study, we found similar impacts of changing the indexing scheme on disabled-worker beneficiaries and retired-worker beneficiaries. While the change in OASDI benefits is larger for disabled workers, the counterbalancing effect of SSI is also larger. This is partly due to higher rates of SSI eligibility among disabled workers relative to retired workers, and partly due to higher rates of SSI participation. As a result, the overall differences between disabled- and retired-worker beneficiaries are small and not statistically significant. Since the prevalence of poverty is relatively high among the disabled under the status quo, the relative economic vulnerability of the disabled would change only slightly.

Moreover, disaggregated estimates indicate that economically vulnerable groups of disabled-worker beneficiaries would be less affected by the alternative indexing approaches than disabled workers in general. Thus, the alternative indexing approaches would lead to a narrowing of the distribution of well-being within the group of disabled-worker beneficiaries. However, the magnitudes of the estimated changes are small compared with the differences in well-being in the status quo.

These results are due to three general distributional effects that affect outcomes on an individual level, including 1) the number of years that a person is subject to the new indexing approach, 2) the offsetting effect of the SSI program, and 3) the diluting effect of other family income. Thus, changes in distributional outcomes are due to differences within and between groups in the timing of entitlement to benefits, participation in the SSI program and, naturally, differences in family economic well-being.

We conclude by discussing four study features that affect the interpretation of our results. One concern is whether the study results are generalizable, that is,

whether they are robust to the choice of analytical perspective. A second issue is whether results based on the current stock of beneficiaries are applicable to future beneficiary populations, especially given secular changes in the age and diagnostic mix of awardees. A third concern is the effect of the analysis period on the distributional analysis. What are the potential effects of using a shorter or longer time horizon for the analysis? Fourth, we discuss how the consideration of behavioral effects might alter the results.

### ***Generalizability***

We have found that although the indexing schemes were designed to result in proportional changes in benefits for new awardees in a given year, the effects of these changes on the family income of the beneficiaries would vary across individuals because of differences in the timing of benefit claiming, the offsetting effect of SSI, and the diluting effect of other sources of family income. Although the observed differences that are associated with the timing of benefit claiming are sensitive to the analytic perspective (such as cross section, birth cohort, or new awardee cohort comparisons), the roles of SSI and other sources of family income in dampening the effects of indexing changes seem fairly robust to a variety of factors and assumptions. The following paragraphs provide a brief summary of our assessment of the generalizability of our key results.

There will be an SSI offset effect as long as new OASDI awardees are financially eligible for SSI or would become financially eligible as a result of OASDI benefit reductions. For example, whether we use a cross-sectional or another analytical perspective, based on the current income distribution, there will always be beneficiaries for whom SSI will offset some of the OASDI reductions. Because disabled-worker beneficiaries are more likely than retired-worker beneficiaries to be in the lower tail of the income distribution, SSI will tend to have a relatively large dampening effect for disabled workers. Further, this effect will be magnified by higher SSI participation rates among disabled workers than retired workers. While the directions of these effects seem robust to analytical choices made by the researcher, the magnitudes might depend heavily on assumptions made about future trends. For example, the results of a study that estimates the effects of the reforms on a young birth cohort into the future would depend on the assumptions made about future trends in real wage growth and income inequality. By contrast, our study uses historical trends.

Similarly, the effects of other sources of family income should be robust to choice of analytical perspective, although other studies may make different assumptions about family wage growth and distribution. In our study, we have found that this dampening effect is important for both disabled and retired workers. Based on the observed distribution of income, disabled-worker and retired-worker beneficiaries have similar levels of family income on average. However, the distribution of family income is considerably more disperse for disabled workers. Studies using other analytical perspectives would need to consider these differences in income distribution.

### ***Applicability to Future Beneficiary Stocks***

The generalizability of our results to more recent or future target populations is a natural concern given that the characteristics of the disability caseload have changed substantially over the past couple of decades. For example, a secular shift to younger new awardees and toward mental impairments is clearly observable. Also, the aging of the baby boom generation will affect the trend in the age distribution of awardees.

For these factors to have a substantial effect on the generalizability of our results, two conditions must hold. First, there must be substantial change in at least one of the compositional variables measuring the mix of the target population (for example in age distribution), and, second, there must be an association between this variable and the simulation outcome of interest. This article has provided new evidence on the second condition. For example, younger age at onset of disability is associated with relatively low reductions in benefits (Table 4). Also, estimated changes for those with a primary mental impairment are smaller than for other types of impairments on average. Thus, we can surmise that a shift toward younger new DI awardees and toward mental diagnoses might result in smaller average benefit changes for a future caseload than would be the case without changes in the future diagnostic mix. As a result, our results might overestimate the magnitude of changes for the disabled attributable to the change in indexing scheme.

### ***Relevance of Analysis Period to Distributional Results***

The empirical estimates presented in this study are all conditional on the assumption that the shift in the indexing approach occurred 17 years before the reference month. This implies that the length of time between the change in indexing and the OASDI award

can vary between 0 and 17 years for an individual. In theory, one can reduce (let us say to 10 years) or increase (to 20, 30, or 40 years) the length of the time from the start of the alternative indexing approach to the reference period of interest.

As long as one is maintaining the assumption of real wage (or life expectancy) increases, the nature of the indexing approaches is such that the magnitude of changes in OASDI benefits should increase as a positive function of the length of time elapsing after the introduction of the new indexing approach. The magnitudes will generally increase with an increasing time period into the indefinite future.

This relationship needs to be considered in any comparisons with studies that employ a different time horizon. Further, can we make inferences about the effect of different time horizons on distributional outcomes? For example, what can we say about the effects of SSI and other family income? Under reasonable assumptions, we can make plausible inferences about both. Note that under current law, the SSI federal benefit rate is indexed to inflation.<sup>39</sup> Because the magnitudes of OASDI benefit changes are expected to increase as a positive function of the time horizon, an increasing proportion of OASDI beneficiaries will meet the SSI financial eligibility test. It follows that SSI will offset the changes in OASDI benefits for an increasing number of beneficiaries. Likewise, the buffering role of other family income is also expected to increase as we increase the time horizon of the analysis. Finally, as we extend the time horizon of the implementation of the alternative indexing approach, the effects of the change in indexing should become an increasingly important influence on well-being relative to the influence of the status quo.

### ***Behavioral Responses***

Our findings reflect the “direct effect” (see Bound and others 2002) of the indexing approaches and are predicated on the simplifying assumption of no behavioral effects. Are the empirical results robust to the assumption of no behavioral effects? To answer this question empirically requires a model capable of capturing “indirect (behavioral) effects.” Behavioral changes in program participation may be relevant as well as behavioral changes in labor markets, financial markets, and private disability insurance markets.

Changes in program participation may be particularly relevant in this case because participation in the DI program may be more or less responsive to the

change in indexing approach than participation in the OASI program. For example, disabled people face substantial opportunity costs as a result of the disability determination process, but may be more constrained in their choices as a result of their disabling conditions than people contemplating early retirement.

Since the simulated changes in total benefits are comparable for disabled- and retired-worker beneficiaries, whether disabled-worker beneficiaries are more or less affected in the aggregate will mainly be a function of the relative elasticities for the two groups. For disability, reduced benefit levels are expected to result in lower lifetime participation in the DI program. For retirement, benefit levels are expected to primarily affect the timing of retirement, particularly early retirement.

Perhaps a firmer expectation of the importance of “indirect effects” can be made by considering the degree of economic vulnerability of the disabled group. Disabled workers are more likely to be in poverty and, further, the “direct effects” (for OASDI and SSI combined) are lower for those in poverty. Thus, we surmise that unless participation in the DI program is much more responsive to changes in the bundle of expected benefits, the qualitative conclusions will be robust to the consideration of behavioral effects.

## ***Appendix***

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This appendix gives information about the baseline values of the analysis variables. Table A-1 gives the values for disabled-worker beneficiaries and Table A-2 gives the values for the entire sample of OASDI beneficiaries as background for the section on general distributional effects.

**Table A-1.**  
**Distribution of disabled-worker OASDI beneficiaries, by various characteristics and subgroup means of income variables at baseline**

Beneficiary characteristic at baseline	Distribution at baseline (percent)	Subgroup mean at baseline				
		Individual OASDI benefits <sup>a</sup> (dollars)	Unit OASDI benefits <sup>b</sup> (dollars)	Unit OASDI plus SSI benefits <sup>b</sup> (dollars)	Family income (dollars)	Poverty rate (percent)
Primary insurance amount quartile <sup>c</sup>						
1st	31	365 (5)	407 (11)	477 (10)	2,193 (195)	43.8 (2.6)
2nd	30	593 (4)	635 (10)	639 (10)	2,108 (94)	30.3 (2.4)
3rd	14	783 (3)	836 (15)	836 (15)	2,774 (182)	5.5 (1.8)
4th	25	1,054 (7)	1,111 (13)	1,111 (13)	3,711 (262)	1.6 (0.8)
Family income category						
At or below poverty threshold	24	466 (9)	474 (10)	532 (8)	690 (20)	100.0 (0.0)
Above threshold to 200 percent of poverty threshold	28	667 (14)	719 (16)	737 (15)	1,421 (35)	0.0 (0.0)
Above 200 percent of poverty threshold	48	758 (13)	822 (15)	831 (15)	4,279 (179)	0.0 (0.0)
Years between start of stimulated policy change and OASDI award						
0–6	15	593 (18)	614 (20)	640 (19)	2,316 (138)	26.2 (3.4)
7–11	22	643 (17)	691 (22)	720 (20)	2,337 (121)	29.6 (2.8)
12–17	53	697 (12)	750 (14)	770 (13)	2,916 (168)	20.0 (1.6)
Award before policy change	9	633 (29)	684 (33)	705 (31)	2,151 (201)	29.4 (4.5)
Age at initial entitlement <sup>d</sup>						
18–34	30	543 (13)	564 (15)	605 (14)	2,329 (118)	35.1 (2.6)
35–44	30	679 (15)	703 (16)	724 (15)	2,784 (256)	21.0 (2.2)
45–54	29	723 (15)	790 (18)	803 (17)	2,601 (146)	20.6 (2.2)
55–61	11	793 (25)	899 (34)	909 (33)	3,075 (252)	10.6 (2.7)
Education						
Less than high school	32	601 (13)	657 (17)	693 (15)	1,982 (177)	34.5 (2.5)
Other	68	692 (10)	734 (12)	752 (11)	2,925 (116)	19.0 (1.4)

(Continued)

**Table A-1.**  
**Continued**

Beneficiary characteristic at baseline	Distribution at baseline (percent)	Subgroup mean at baseline				
		Individual OASDI benefits <sup>a</sup> (dollars)	Unit OASDI benefits <sup>b</sup> (dollars)	Unit OASDI plus SSI benefits <sup>b</sup> (dollars)	Family income (dollars)	Poverty rate (percent)
Reported health status						
Poor	37	671 (12)	716 (15)	742 (13)	2,271 (97)	25.4 (2.1)
Other	63	658 (11)	706 (13)	728 (12)	2,832 (145)	23.1 (1.6)
Number of functional impairments						
Two or less	71	663 (10)	707 (12)	730 (11)	2,610 (108)	23.2 (1.5)
Three or more	29	663 (15)	717 (18)	740 (17)	2,660 (210)	25.8 (2.4)
Primary impairment						
Mental	33	572 (14)	589 (15)	629 (13)	2,191 (106)	30.4 (2.4)
Other	67	708 (10)	770 (12)	785 (12)	2,842 (136)	20.7 (1.5)
Death within 4 years of onset <sup>e</sup>						
Yes	6	761 (51)	887 (64)	887 (64)	2,504 (291)	3.9 (3.7)
Other	94	695 (13)	743 (15)	764 (14)	3,035 (202)	20.1 (1.8)
Death within 4 years of survey						
Yes	9	744 (26)	815 (32)	824 (31)	2,312 (170)	15.5 (3.6)
No	91	655 (9)	700 (10)	724 (10)	2,655 (106)	24.8 (1.3)

SOURCES: Calculations based on the Survey of Income and Program Participation (SIPP) matched to Social Security administrative records.

NOTES: The survey reference month is November 1996. The sample is restricted to adults who have SIPP observations that have been successfully matched to the Summary Earnings Record. Sampling weights have been adjusted by the inverse of the matching rate. Standard error estimates assume simple random sampling and are included in parentheses.

OASDI = Old-Age, Survivors, and Disability Insurance; SSI = Supplemental Security Income.

- a. Values are for the sample reference person.
- b. Values are for the sample reference person if unmarried and for the reference person and spouse combined if married (spouse present).
- c. Quartile of primary insurance amounts among all beneficiaries.
- d. An estimated 0.4 percent of the sample was aged 62–64 at the time of initial entitlement. Subgroup means are not shown for this subcategory.
- e. Subgroup means are limited to the subsample with an estimated duration of 4 years or less at November 1996 reference month.

**Table A-2.**  
**Distribution of OASDI beneficiaries, by various characteristics and subgroup means**  
**of income variables at baseline**

Beneficiary characteristic at baseline	Distribution at baseline (percent)	Subgroup mean at baseline				
		Individual OASDI benefits <sup>a</sup> (dollars)	Unit OASDI benefits <sup>b</sup> (dollars)	Unit OASDI plus SSI benefits <sup>b</sup> (dollars)	Family income (dollars)	Poverty rate (percent)
Primary insurance amount quartile						
1st	25	335 (2)	545 (6)	584 (6)	2,181 (51)	29.6 (0.9)
2nd	25	605 (1)	814 (6)	815 (6)	2,208 (41)	15.1 (0.7)
3rd	25	794 (1)	1,142 (8)	1,142 (8)	2,655 (43)	1.0 (0.2)
4th	25	989 (3)	1,395 (9)	1,395 (9)	3,479 (63)	0.4 (0.1)
Family income category						
At or below poverty threshold	11	422 (4)	449 (5)	502 (4)	612 (8)	100.0 (0.0)
Above threshold to 200 percent of poverty threshold	27	641 (4)	791 (6)	800 (5)	1,205 (9)	0.0 (0.0)
Above 200 percent of poverty threshold	62	736 (3)	1,136 (6)	1,138 (6)	3,606 (37)	0.0 (0.0)
Years between start of stimulated policy change and OASDI award						
0–6	26	680 (5)	968 (9)	977 (9)	3,082 (58)	10.4 (0.6)
7–11	24	700 (5)	1,073 (10)	1,082 (10)	2,771 (50)	9.3 (0.6)
12–17	28	666 (5)	967 (9)	976 (9)	2,489 (48)	10.5 (0.6)
Award before policy change	21	651 (5)	840 (9)	852 (8)	2,029 (41)	15.9 (0.8)
Education						
Less than high school	34	613 (4)	844 (7)	864 (7)	2,004 (35)	19.6 (0.6)
Other	66	707 (3)	1,030 (6)	1,034 (6)	2,947 (34)	7.0 (0.3)
Reported health status						
Poor	15	624 (6)	839 (11)	860 (10)	2,145 (54)	20.0 (1.0)
Other	85	684 (3)	988 (5)	995 (5)	2,707 (29)	9.8 (0.3)

(Continued)

**Table A-2.**  
**Continued**

Beneficiary characteristic at baseline	Distribution at baseline (percent)	Subgroup mean at baseline				
		Individual OASDI benefits <sup>a</sup> (dollars)	Unit OASDI benefits <sup>b</sup> (dollars)	Unit OASDI plus SSI benefits <sup>b</sup> (dollars)	Family income (dollars)	Poverty rate (percent)
Number of functional impairments						
Two or less	84	686 (3)	997 (5)	1,004 (5)	2,702 (27)	9.7 (0.3)
Three or more	16	619 (6)	802 (10)	823 (10)	2,207 (72)	20.2 (1.0)
Death within 4 years of survey						
Yes	13	666 (7)	922 (12)	931 (12)	2,379 (66)	12.7 (0.9)
No	87	676 (3)	972 (5)	982 (5)	2,660 (28)	11.1 (0.3)

SOURCES: Calculations based on the Survey of Income and Program Participation (SIPP) matched to Social Security administrative records.

NOTES: The survey reference month is November 1996. The sample is restricted to adults who have SIPP observations that have been successfully matched to the Summary Earnings Record. Sampling weights have been adjusted by the inverse of the matching rate. Standard error estimates assume simple random sampling and are included in parentheses.

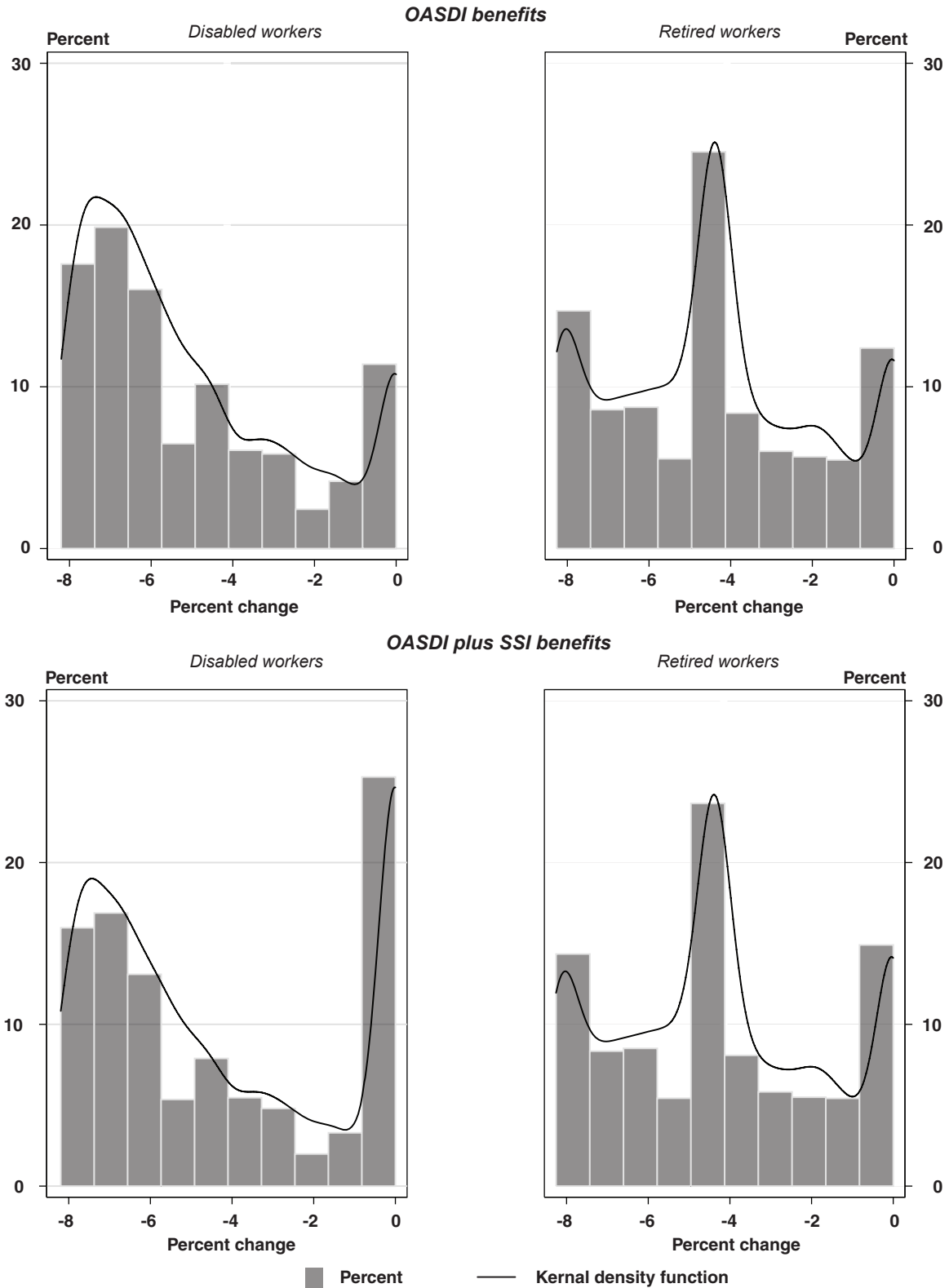
OASDI = Old-Age, Survivors, and Disability Insurance; SSI = Supplemental Security Income.

a. Values are for the sample reference person.

b. Values are for the sample reference person if unmarried and for the reference person and spouse combined if married (spouse present).



**Chart A-1.**  
**Distribution of simulated changes in benefits under life expectancy indexing for disabled- and retired-worker beneficiaries**



SOURCES: Calculations based on the 1996 Survey of Income and Program Participation matched to Social Security administrative records.

NOTES: Values are for the sample reference person if unmarried and for the reference person and spouse combined if married (spouse present).

OASDI = Old-Age, Survivors, and Disability Insurance; SSI = Supplemental Security Income.

## Notes

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<sup>1</sup> In addition to indexing provisions, the CSSS reform models have other important elements. For example, the minimum benefit provisions and changes in the benefit formulas for widow(er)s would affect the population that is eligible for SSI. Other plans that have been proposed also include indexing provisions. In this article we are focusing on indexing and do not attempt to model other provisions of the CSSS reform models or other approaches.

<sup>2</sup> Munnell and Soto (2005) also describe the transition properties of some of these variants of the alternative methods of implementation. On the revenue side, the General Accountability Office (2006) explores different effects of wage and price indexing on system revenues through the mechanism of the taxable maximum.

<sup>3</sup> See Munnell and Soto (2005) for one justification.

<sup>4</sup> The historical full retirement age, 65, is used.

<sup>5</sup> See CSSS (2001), p. 132.

<sup>6</sup> See CSSS (2001) p. 132.

<sup>7</sup> See CSSS (2001) p. 149.

<sup>8</sup> Government Accountability Office (2007) is another example of analysis from a birth cohort perspective.

<sup>9</sup> The estimates ignore the effect that the family maximum may have on the simulated benefit changes.

<sup>10</sup> For retired-worker beneficiaries, we assume that entitlement is at age 62 with the corresponding reduction in benefits.

<sup>11</sup> The calculated benefit amounts correspond closely to the amounts given in the administrative records. For instance, the average calculated benefit amount is 100.0 percent and 97.8 percent of the average administrative amount for disabled and retired workers, respectively.

<sup>12</sup> For comparison, we also estimated the impact using the actual trends in wages and prices over the 1977 to 1994 period (accounting for the 2-year lags). Although wages are shown to grow faster than prices over the long term, there was a reversal of this trend during the high-inflation period of the late 1970s. The net result is that there is almost no change in the relative position of wages and prices during our analysis period. Simulations based on the observable trend during this period show an overall change in OASDI benefits of -0.4 percent and 0.3 percent for disabled and retired workers respectively, magnitudes that are not statistically significantly different from zero. In the case of retired workers, the simulation results do not even have the sign expected by proponents of the indexing changes (negative).

<sup>13</sup> We have chosen the starting point for the alternative indexing approaches in order to isolate the effects of a single policy change: the shift from wage indexing to price indexing (or life expectancy indexing). Given this starting date, beneficiaries initially entitled to benefits before 1979 are unaffected by the alternative indexing approaches. Note that for observations with an initial entitlement after the start of the current regime of indexing, all earnings are indexed in order to calculate the AIME, including earnings before 1979.

This starting date may introduce an upward (more negative) bias in the estimated changes for beneficiaries whose entitlement was near the start of the current regime of indexing. During this period, beneficiaries were given the higher of the benefit calculated under the old and new formulas. Consequently, hypothetical changes could possibly have been counteracted by this provision if the old formula produced a higher benefit than the simulation (hypothetical) formula.

<sup>14</sup> As with OASDI, we do not estimate changes in SSI benefits for family members other than the self and spouse. Also, we consider only federal SSI benefits and not state SSI supplements.

<sup>15</sup> We assume that concurrent beneficiaries under the baseline also participate in SSI under the alternative indexing approaches. This is a reasonable assumption because this set of beneficiaries is observed to participate in the SSI program at a lower SSI benefit amount than might be available to them under the alternative indexing approaches. Note, however, that there are other OASDI beneficiaries who are eligible for SSI and choose not to participate or are ineligible but become eligible as a result of reduced income from OASDI. We conservatively assume that members of both of these groups will continue not to participate in SSI under the alternative indexing approaches.

<sup>16</sup> The standard errors used in statistical tests need to be adjusted in order to account for the complex sample design of the SIPP. We give unadjusted standard errors in the tables; however, we use an approximate adjustment for statistical tests. The U.S. Census Bureau (2001) gives design effects (adjustment factors) accounting for the effect of the complex sample design on the variances of various survey items. Because the estimated design effect exceeds four only for one item (metro status), and is much smaller for other survey items, we adopt a design effect of four for the variances. This implies true standard errors that are twice as large as the unadjusted standard errors. Assuming a design effect of four provides conservative tests of population differences. All statistical tests are performed at the 5 percent level of significance.

<sup>17</sup> We do not employ the group that we label “Other Beneficiaries” as a comparison group because it is heterogeneous and has markedly different demographic characteris-

tics than the other groups. Primarily, the group differs in that it has mostly women and has a lower percentage of people that are married or have finished high school. These differences are statistically significant.

<sup>18</sup> Interestingly, the potential (calculated) average benefit of nonbeneficiaries (assuming a hypothetical entitlement date of the reference month) is \$667, a point estimate very close to the average benefit for the disabled.

<sup>19</sup> Both of these averages refer to the average for the reference person. In general, all unit averages are based on the unit variable associated with the sample reference person because the unit of analysis is the individual throughout the study.

<sup>20</sup> Kernel density estimators provide a visual representation of the distribution of observations similar to bar charts of frequency distributions. In contrast to bar charts, they provide a smooth curve.

<sup>21</sup> A bimodal distribution is not observed when benefits are measured on an individual basis (not shown).

<sup>22</sup> Authors' calculations.

<sup>23</sup> Authors' calculations.

<sup>24</sup> While the high mortality groups actually have lower poverty rates than the comparison groups, the differences are not statistically significant. Contributing factors include the strict statistical tests we employ and the sample size of the group with an onset of disability within 4 years of the survey. Thus the conclusion of no evidence of a positive relationship with economic vulnerability is supported by the data.

<sup>25</sup> Heterogeneity within the group of retired workers modifies the main result. Among retired workers, a statistically significant difference is evident between the average benefits of retired workers who were never disabled workers and the average benefits of retired workers who had converted from the DI program.

<sup>26</sup> Of the distributional effects considered below, the only one that can vary across spouses is the length of time the person is subject to the alternative indexing approach (inversely related to duration of benefit receipt).

<sup>27</sup> The differences between the individual and unit OASDI benefit change statistics are generally small and not statistically significant. Further, meaningful differences are also not observed between the distributions of individual and unit OASDI benefits for sample beneficiaries. In general, this means that differences in statistics between "individual OASDI benefits" and "unit OASDI plus SSI benefits" are exclusively attributable to the inclusion of SSI benefits rather than to the shift from the individual to the unit OASDI benefit. Thus, we include unit changes in subsequent tables and drop individual-only benefit changes.

<sup>28</sup> The comparison is on a unit basis.

<sup>29</sup> The SSI income eligibility rules allow for the exclusion of up to \$20 from any source in the benefit calculation. Thus a concurrent individual or couple beneficiary with \$20 of OASDI benefits and no income from other sources under the baseline would experience no increase in the SSI benefit with any simulated reduction in the OASDI benefit. Similarly, an individual or couple with \$30 of OASDI benefits would have a 100 percent potential offset for the first \$10 reduction in OASDI benefits and no offset for additional reductions. In general, the SSI offset would be reduced from the 100 percent rate only if the OASDI change results in a benefit less than \$20 and there is no or only very little countable income from other sources.

<sup>30</sup> We do not present the distributions for family income changes in this article; however, we note that the distribution becomes unimodal for both groups (with a peak at the smallest change category). Also, although the proportion with essentially no change in family income is much higher for disabled workers, the proportion with relatively large changes (15 percent or more) continues to appear somewhat larger for the disabled. Thus, the dampening effects of SSI and other family income might not entirely eliminate the greater variability for disabled workers.

<sup>31</sup> More formally, if  $I(B)$  is the baseline value of a distributional indicator, and  $I(S)$  is the corresponding simulation value, then the first perspective focuses on  $\Delta I = I(S) - I(B)$ . The second perspective focuses on  $I(S)$ , which equals  $I(B) + \Delta I$ .

<sup>32</sup> This difference is not statistically significant.

<sup>33</sup> Of course, economic vulnerability increases for both groups relative to the baseline as a result of the simulated policy changes that were designed to reduce the growth of benefits across the board.

<sup>34</sup> For those observed in the cross section, there is an exact mathematical relationship between duration and our measure of the length of time between the start of the new indexing scheme and award. Duration equals 17 years minus the length of time before OASDI award subject to the new indexing scheme. For members of the same birth cohort there is a similar relationship between age at entry and our length measure. However, people with identical age at entry in the cross section may belong to different birth cohorts and therefore the relationship between age at entry and our length measure is more indirect.

<sup>35</sup> Our cross-section estimates of duration reflect right-censoring at the survey reference month. Therefore they are not indicative of lifetime duration on DI. Indeed, Rupp and Scott (1998) provide cohort-based estimates of duration on disability before age 62 that are clearly higher. Considering the fact that many disabled people survive until age 62 and even well after the full retirement age, our cross-sectional estimate of duration would be substantially biased in a

downward direction if one mistakenly took it as a proxy for lifetime duration.

<sup>36</sup> The starting values for the variables shown in Table 3 are shown in Table A-2.

<sup>37</sup> This difference is statistically significant.

<sup>38</sup> These differences can be calculated from the figures given in Table 4 and Table A-1.

<sup>39</sup> Currently SSI is not a “fully indexed” program because program parameters such as the general income exclusion and the thresholds applied to the resource test are not automatically adjusted for inflation.

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# *Financing Social Security, 1939–1949: A Reexamination of the Financing Policies of this Period*

by Larry DeWitt

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## **Summary**

This article examines the financing history of the U.S. Social Security system during the period starting with the amendments of 1939 and concluding with the amendments of 1950. It reviews the program's financing policies during this period, and in particular, a series of tax-rate "freezes" enacted during this time. The tax-rate schedule codified in the Social Security Act of 1935 was prevented from taking full effect during these years and the rates were "frozen" at their 1935 level for 15 years. This article seeks to explain the policy context of these rate freezes and their impact on the program's long-range financial solvency.

Two major findings emerge from this research:

1. One of the most basic tests of any policy proposal involving Social Security is the projected impact of that proposal on the program's short-range and long-range financing. It would be virtually impossible to propose any serious policy change without a certification from the Social Security actuaries regarding the potential impact of such change. Although Congress enacted the 1939–1949 rate freezes in eight separate legislative acts, the legislative history contains no useable long-range actuarial estimates to gauge the impact of the rate freezes on program financing. How and why such an anomalous circumstance could arise is explored here.
2. Based on research in the archives of the Social Security actuaries, the author has been able to reconstruct the likely impact of these taxing poli-

cies and has discovered that throughout the period from 1939 to 1950, the Social Security program was almost certainly rendered out of long-range actuarial balance by the rate freezes. How such a circumstance could arise, without serious policy debate, is then examined by situating the rate-freeze decisions in the larger frame of Social Security policymaking during this period.

## **Background**

During the period starting with the passage of the Social Security amendments of 1939 and extending until the passage of the amendments of 1950, eight bills were enacted that had the effect of freezing existing tax rates at 1937 levels and preventing the tax schedule in the original Social Security Act of 1935 from taking full effect. No clear assessment was made available to lawmakers at the time of the impact of these rate changes on the long-range financing of the system. Moreover, the principles of long-range cost estimation incorporated into the 1935 law were not adhered to during this period.

Because the legislation after the landmark amendments of 1939 made few changes other than in tax rates<sup>1</sup> before the important amendments of 1950, previous scholars have treated this period under study as if little of policy importance happened. Closer scrutiny suggests that the principles of Social Security financing were not followed as expected. In particular, it seems that significant financing policies were adopted without benefit of an assessment

of their impact on the overall long-range solvency of the program. Using internal actuarial studies and other documents produced by the Social Security Board (the Board)<sup>2</sup> during this period, the impact of the rate freezes can be reconstructed. This analysis provides documentation that the Social Security system was probably not in long-range actuarial balance<sup>3</sup> during much, if not all, of this decade—a point that has previously gone essentially unnoticed.

Five factors combined to produce this anomalous period: (1) the ambivalent policy posture of the Roosevelt Administration toward the tax rate increases, (2) determined efforts by opponents of reserve-financing to limit the growth of the Social Security Trust Fund, (3) an apparent willingness on the part of Congress to enact legislation without benefit of long-range cost estimates, (4) a short-term cash-flow surplus in the system because of the booming economy of the war years, and (5) a previously overlooked institutional dynamic within the Board itself that acted to prevent the release of clear-cut long-range actuarial estimates during this period.

### ***An Anomalous Period in Social Security Tax Policy***

The amendments of 1939 were a major turning point in the Social Security program, in which the modest retirement program of the 1935 Act was transformed into a family centered social insurance scheme, and benefits were significantly expanded and liberalized. This legislative and political transformation has been the main focus of most previous work on this period. But the other, less studied, policy change during these years was a series of tax-rate freezes. Starting with the amendments of 1939, Congress enacted eight bills that cancelled scheduled payroll tax rates that had been codified in the 1935 Social Security Act. The net result was that the payroll tax rate, which was scheduled to triple between 1937 and 1949, was in fact frozen at the initial 1937 rate until 1950 (Table 1).

These policy decisions were made in a climate in which the major policy players all declined to make an issue of the long-range impact of their policies. Since the amendments of 1950, proposed Social Security financing changes have been rationalized in terms of their impact on the long-range actuarial balance of the system. It is an almost unquestioned feature of contemporary Social Security policymaking that long-range actuarial cost projections must accompany any serious proposal for changes in program policies. Each year, the actuaries project program finances

**Table 1.**  
**Projected versus actual Social Security tax rates**  
**(employee and employer rates combined)**

Calendar year	1935 law	1939 law	Actual rates
1937	2.0	2.0	2.0
1938	2.0	2.0	2.0
1939	2.0	2.0	2.0
1940	3.0	2.0	2.0
1941	3.0	2.0	2.0
1942	3.0	2.0	2.0
1943	4.0	4.0	2.0
1944	4.0	4.0	2.0
1945	4.0	4.0	2.0
1946	5.0	5.0	2.0
1947	5.0	5.0	2.0
1948	5.0	5.0	2.0
1949	6.0	6.0	2.0
1950	6.0	6.0	3.0

SOURCE: Author's compilation.

75 years into the future and the program is said to be in long-range balance only if the trust fund assets plus projected income are within prescribed percentages of outgo during the 75-year estimating period. The use of a long-range estimating period was a principle established and insisted upon in the original Social Security Act of 1935. While this principle was adhered to in every significant legislative change from 1950 onward, it was absent during the period between these two legislative milestones—a period which encompassed the major amendments of 1939 and the tax-rate freezes of the 1940s.

Previous scholarship has been largely dismissive of the rate freezes, on the plausible assumption that the tax-rate freezes were not significant policy milestones but were more on the order of calm before the policy storms of the 1950s and beyond. Berkowitz (1983, 1986) touches on the rate freezes in passing; Tynes (1996) sees them as distant reflections of more salient political battles; Zelizer (1997, 1998) hits only the political highpoints of the story; Schieber and Shoven (1999) examine the debate between reserve and pay-as-you-go funding, but make no effort to assess the impact of the rate freezes. Even those scholars who focus on tax policy, such as Leff (1984), have tended to look at this episode primarily in terms of overall “new deal” tax policy. Even Leff’s insightful and detailed look at the Social Security rate freezes (Leff 1988) missed important drivers of these decisions, such as the conflicted internal institutional dynamics

within the Social Security Board that contributed to the absence of long-range actuarial estimates from the legislative process, and the crucial role the absence of long-range estimates played in facilitating passage of this legislation. And no scholar has yet attempted an assessment of the impact of these policy decisions on the underlying financing of the program during this period.

Analysis indicates that the amendments of 1939 cannot be properly understood without reference to the rate-freeze debates that followed them. Looking at those amendments in isolation—or only looking backward and comparing them with the 1935 law—is likely to lead to erroneous conclusions. For example, Neustadt and May (1988) asserted that the change in financing policy in the amendments is evidence that in 1939 the Roosevelt Administration abandoned the principles it had held in the 1935 law and decided to content itself with a merely “symbolic” commitment to the financing principles of the 1935 Act. This was not in fact how the Administration viewed the changes of 1939. In general, the Roosevelt Administration viewed the financing of the amendments of 1939 as a one-time deviation from the principles of the 1935 law—in the name of sealing a political deal with the conservatives—and intended to resume its commitment to the 1935 Act’s financing principles after passage of the 1939 compromise.

### ***The 1935 Law and the Issue of Reserve Financing***

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When President Roosevelt tasked the Committee on Economic Security in June 1934 with designing the Administration’s social insurance proposals, he gave it one general proposition relative to financing as a guide in designing the Social Security program: he wanted a self-supporting program that would be funded by contributions from the workers who participated in the system and their employers. He did not want a traditional welfare program in which eligibility is based on need, nor did he want a system in which the general taxpayer was expected to pay a portion of the costs. This last stricture meant that the program was not to be funded, even in part, by general tax revenues.

The question of general revenues was embedded in a larger policy debate over reserve versus pay-as-you-go financing. The main advantage of a reserve is that it allows long-term payroll tax rates to be kept lower than they otherwise would have to be, because some portion of the income to the program can presumably come from the reserve rather than from current pay-

roll taxation. But reserve financing requires near-term taxes to be higher than they would otherwise have to be, in order to build up the reserve. Pay-as-you-go offers the reverse pattern, with lower rates immediately, because benefit demands are lower at the start of a new pension system, along with the implicit obligation to higher rates in the future as demands on the system rise over time.

The ultimate financing plan put forward by the Administration was a partial-reserve scheme, with a significant portion of program financing coming from interest earned on the assets in the reserve. In fact, by 1980 tax receipts would only cover 60 percent of the benefit payments; the remainder of the benefit payout would have to come from the reserve.

Both President Roosevelt and Treasury Secretary Henry Morgenthau Jr. were firm supporters of the build-up of a large reserve, primarily because they saw a reciprocal relationship between a reserve and tax rates or the use of general revenues for financing. By using a large reserve, they believed that they could hold tax rates lower than would otherwise be necessary, and at the same time, avoid the use of general revenue subsidies as an alternative means of keeping payroll tax rates low.<sup>4</sup>

The use of reserve financing in the 1935 law was controversial from the start. Businesses were unhappy with the new taxes and wanted to find some justification for lowering them. Some economists were concerned with the contractionary macroeconomic effects of the higher tax rates at a time when the economy was still depressed. Many in Congress wanted lower tax rates here and now; and some were especially unhappy with the prospect of the federal government having access to this large source of funds, which they expected would be used to fund expansions of government that they opposed.

However this larger debate between reserve and pay-as-you-go financing is viewed, either approach is usually thought to require the use of long-range actuarial estimates. In pay-as-you-go, planners need to make long-range projections in order to specify the long-term tax rates to which they are committing future taxpayers by their current benefit policies. In reserve funding, planners need to make long-range projections to make sure that the reserve will in fact generate sufficient income to keep the system in long-range actuarial balance.

The actuarial estimates underlying the Social Security Act of 1935 provided cost estimates from

1937 up through 1980. The year 1980 was chosen as the end-point for the actuarial estimates so that there would be sufficient time for the youngest workers participating in the system to attain retirement age. This choice of estimating period was an effort to account for the impact of all program participants, young and old.<sup>5</sup> At the end of this 43-year estimating period, the reserve would equal \$47 billion. Even though the program had adequate financing on average during the estimating period, by 1967 the program would be spending more than it took in from payroll taxes and it would run a steady annual deficit from that point forward, were it not for the assets in the reserve.

The financing of the Social Security Act of 1935 was thus premised on three key policies: (1) the system used the partial-reserve approach to financing, (2) no general revenue subsidies were used, and (3) long-range actuarial estimates were provided to ensure that the system was actuarially sound. These were matters of high principle to the president and other key policymaking officials in 1935.

### ***The Amendments of 1939***

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In 1937, in an effort to reopen the issue of the reserve, Senator Arthur Vandenberg (R-MI) persuaded the Social Security Board to jointly sponsor with the Senate Finance Committee an Advisory Council on Social Security. The scope of the council reflected the dual objectives of its sponsors: It was to consider the question of the reserves and also various types of program expansion. Vandenberg hoped to use the council to reduce the reserve, and Board Chairman Arthur Altmeyer hoped to use it to gain support for program expansion—and both of their objectives were achieved.

The Advisory Council report was issued in December 1938. It ended up recommending a huge expansion of the Social Security program by adding dependents and survivors benefits and moving up the start of benefit payments by 2 years. These recommendations were enacted into law in the amendments of 1939.

Although the amendments of 1939 significantly expanded the program, there were offsetting cut-backs in other features of the program, including the elimination of the lump-sum benefits from the 1935 Act and numerous changes in the benefit formula (Schmitter and Goldwasser 1939). The general effect of all the changes introduced in the amendments was to dramatically increase the generosity of the program in the early years (and hence, its costs), while reducing the

level of benefits payable in later years. Although the benefit changes increased program costs in the near term (benefit payments were essentially doubled during the first 15 years following passage), they reduced costs in the long term such that the benefit changes were claimed to have no net cost, or even to result in some slight net savings.

During the council's deliberations, the continuing conflict between proponents of pay-as-you-go and reserve financing re-emerged. Edwin Witte, the former executive director of the Committee on Economic Security, and Altmeyer defended the reserve financing scheme, while a group of business representatives, led by Albert Linton, wanted to abandon the reserve and move immediately to a pay-as-you-go approach. Mixed in with this debate was again the issue of partial government financing of the system, which some in the business group favored as an alternative to higher payroll tax rates. Ultimately, the council finessed the dispute with a recommendation for an undefined "reasonable contingency reserve."

Although the Advisory Council recommended moving to a "contingency reserve," it would be reading too much into this recommendation to surmise that the council was advocating pay-as-you-go financing. Rather, this was a political compromise, developed to finesse the issue in the interests of unanimity in the council's final report.<sup>6</sup>

### ***The Political Deal on Financing in the Amendments of 1939***

As part of the political trade-offs around the amendments of 1939, the Roosevelt Administration agreed that the next scheduled tax-rate increase (in 1940) would be canceled, which would mean the tax rate would be frozen at the 1937 level for 1940, 1941, and 1942. The next rate increase would then be the 4 percent rate scheduled for 1943, and thereafter the 1935 tax schedule would pick back up. This rate cancellation would produce a loss of revenue to the trust funds of \$825 million during the 3-year period, which would compound over time.

The freeze in the tax rate was put into the law at the insistence of the Republicans in Congress, as part of their efforts to both roll back taxes and to reduce the size of the reserve. In exchange for these concessions on financing, the Administration got the programmatic expansions it desired.

One key underlying the 1939 deal was the testimony of Secretary Morgenthau before the House



Ways and Means Committee, during which he told the committee that he no longer believed it was important to build a large reserve (Committee Report 1939, 2111–2120). He said he now thought it sufficient that the trust fund reserve not be any greater than three times the highest annual payout expected during the next 5 years. Morgenthau characterized this much smaller reserve as a “contingency reserve,” as recommended by the Advisory Council. This suggestion became the “rule of three” (or the Morgenthau Rule) and it would shape Social Security policy for the next decade.

Records indicate that congressional opponents of the existing tax rates and the large reserve were pleased with this outcome. One excited member of the Ways and Means Committee went so far as to call Morgenthau’s brief testimony “. . . a very powerful presentation; in my opinion, one of the finest I have ever heard since I have been a Member of Congress” (Committee Report 1939, 2180). Senator Vandenberg proclaimed, “This is the healthiest thing that has happened in a long time” (Leff 1984, 281).

Morgenthau reversed his 1935 course in this fashion primarily because his agenda focused on federal taxing policy much more than on the financing of the Social Security system. Morgenthau was concerned about the possible contractionary impacts of increased payroll taxes at a time when the economy was in the doldrums following the recession of 1937–1938. He thought that by postponing the tax increases for 3 years, the economy would have time to improve and the deflationary impact of the rate increases would then presumably be lessened. There was in fact by this time a core of Keynesian economists at Treasury who pushed for Social Security taxing policy to be made subservient to larger efforts at counter-cyclical economic management (Leff 1988). Morgenthau also supported the idea of the Advisory Council that the program be allowed to make use of general revenues for a portion of its financing. Altmeyer (1966) would dryly observe, “This, of course, represented a complete reversal of his attitude in 1935.”

Morgenthau’s stated rationale for his reversal was tied to the argument he had made in 1935 against the use of general revenue funding. In 1935 he argued that because the program was not universal (only about 50 percent of the workers in the economy were covered by the 1935 law), it was unfair to tax general taxpayers to support a system from which all of them could not benefit. By 1939, it was known that coverage rates were actually somewhat higher than expected

because of the “in-and-out” movement of some workers into and out of Social Security–covered jobs. In fact, the latest Board estimates showed that about 80 percent of all workers would earn some measure of coverage during their working lives (although not necessarily enough to be fully insured). So as part of the 1939 deal, Morgenthau supported the use of general revenue funding based on the argument that his earlier reservations about taxpayer fairness no longer applied.

Although this was Morgenthau’s stated rationale, it is more likely that he was moved to embrace general revenue funding because of his perception that there was a reciprocal relationship between reserve funding, tax rates, and general revenues. By embracing general revenues, he could proffer a source of funding for future program costs that did not depend on the build-up of a large reserve, with its attendant up-front high rates of payroll taxation. Morgenthau’s shifting back and forth on general revenues was thus being driven by his underlying concerns with fiscal policy, and not by any considerations about coverage.

The idea of the potential use of general revenues became a kind of implicit “blank check” so that if the financing of the program became problematic, one could assume that general revenues could be used to bridge any shortfalls. However, a key point here is that the use of general revenues was not put into the law in 1939, and it was not necessarily agreed to by all parties. Both the Board and the Advisory Council insisted that if the program were shifted to a pay-as-you-go basis, then there should be a statutory commitment to general revenues to guarantee adequate long-range financing. But their insistence was ignored, and the idea of general revenue financing was left suggested but not codified.

Thus a lawmaker could pose as being fiscally responsible (as having made provision for future costs) by alluding to this idea of the use of general revenues, without having to actually make an explicit commitment to such use and risk conflict with those who opposed general revenue financing of the program. The ambiguity in the commitment to the use of general revenues helped to seal the political deal, and the explicit inclusion of such a provision in the bill would most likely have killed the compromise because there was no consensus on the use of general revenue.<sup>7</sup>

One could also view the amendments of 1939 as a de facto decision to move to pay-as-you-go financing. A few observers supported this interpretation at the time, but the policy was far from being agreed upon. Administration officials, for their part, clearly viewed

the amendments of 1939 as a one-time political deal, with the expectation of a return to the reserve build-up following the temporary rate freeze. Even Morgenthau gave no indication that he had shifted to supporting pay-as-you-go financing beyond what was needed for short-term fiscal stimulus.

Nevertheless, the financing of the amendments of 1939 clearly moved the program in the direction of pay-as-you-go financing by virtue of the fact that it dramatically reduced the size of the reserve and the resulting interest income to the program. To measure the size of this movement away from reserve financing, note that in 1955, under the original Social Security Act, 25 percent of the program financing would be from interest earned on the reserve; under the amendments of 1939 the corresponding figure was less than 9 percent (Senate Report 1939, Table 6).<sup>8</sup>

### ***The Missing Actuarial Estimates***

In light of the historical background here, perhaps it is not entirely surprising that in the legislative history of the amendments of 1939 there are no long-range actuarial estimates showing the net effects of the benefit and tax changes. The published actuarial estimates extended only for a 15-year period (1940–1955), showing a trust fund balance at that time about one-third the size of that under the 1935 law. In contrast to the 1935 estimates, these projections did not stretch far enough into the future to show the cost of the program for the younger workers then in the system. So the choice of a 15-year projection period was not rationalized in the manner of the 1935 estimating period.

Although no long-range data were presented, the actuaries reported that the trust fund would pass into a negative cash flow position after 1955. If the tables were extended past 1955, they would show that program financing would be inadequate for some period. One cannot escape the suspicion that this was the reason for the truncated estimating period. Had there been detailed actuarial estimates showing the program to be insolvent over the long run, it is likely this would have constituted a major obstacle to the political compromise of the 1939 law. The absence of such long-range estimates thus was a key enabler in the passage of the amendments. Perhaps this explains why no political actor in 1939 made an issue of the absence of these estimates.<sup>9</sup>

Even these shortened projections were the subject of some congressional discomfort, but not on the

grounds of insufficiency—quite the contrary. Ways and Means Committee member Allen Treadway (R-MA) complained during the House hearings, “Aren’t we borrowing trouble for future generations perhaps when we, by actuarial tables, look ahead for 16 years and use 1955? That is 16 years away . . . why not tend to the problem of today rather than 16 years hence? We have got a big enough job here looking after the present system, it seems to me.” (Committee Report 1939, 2211).

Even though the Congress and the Administration presented no data to quantify the long-range impact of the 1939 changes, it is quite possible the system was no longer in actuarial balance. The Senate Finance Committee report on the bill soberly acknowledged such a possibility (Senate Report 1939, 18). The Ways and Means Committee report contained a more exultant acknowledgment. In a separate dissent to the formal committee report, several of the minority members of the Ways and Means Committee announced their dissatisfaction with the legislation, except in one key aspect, “We particularly commend the abandonment of the staggering and illusory \$47,000,000,000 reserve fund . . . As a consequence of the abandonment of the \$47,000,000,000 reserve fund, a 3-year delay in the scheduled increase in the old-age insurance pay-roll tax has been made possible . . . thus eliminating the immediate threat of higher pay-roll taxes . . .” (Committee Report 1939, 113–114).

Social Security Board officials represented the amendments as merely reducing somewhat the \$47 billion reserve, but not sending it into negative territory. It is unclear what actuarial data they used to validate this claim. The only data presented to the Congress was an abbreviated set of actuarial tables showing trust fund transactions to 1955. The actuarial consultant for the Board, W. R. Williamson, testified that the new program was less costly than the existing program, but he did not answer the question of whether either the existing or the revised program was in actuarial balance in the long-run, under the most recent economic and demographic assumptions (House Committee Report 1939, 2473–2488).

Although the actuaries reported that the program would experience a negative cash-flow position after 1955, they made no published effort to estimate how long this negative cash-flow might last, and hence, whether or not the system was in long-range balance. And, most remarkable of all, no member of Congress was moved to ask.

## ***The Impact of the War Years on Social Security Financing***

World War II years were paradoxical ones for Social Security financing, producing an abundance of good news in the midst of one of the nation's gravest crises. During the war, unemployment was virtually zero (1.2 percent) as the nation mobilized. The mobilization meant that older workers returned to work or delayed their retirement and younger workers and women entered the labor force in unprecedented numbers. The net effect was that demand for benefits declined while tax revenues increased. Throughout the war years, benefit payments were running at only about 30 percent of what had been expected in 1939.

The Morgenthau reserve target (which was a cap on the reserve) was repeatedly exceeded during this period. For example, by the summer of 1942 the trust fund reserve stood at about 6 times the highest expected annual payout in the next 5 years, and by the summer of 1944 it was closer to 10 times the highest annual payout (Annual Trustees Reports 1942–1945). In simple absolute terms, the reserve was rising much faster than had been expected in 1939 (see Table 2).

From the exterior, the program appeared to be overfinanced. But Board officials argued that it was not. In the post-war period the economics would probably be the reverse of the wartime experience, with large numbers of postponed retirement claims being filed and with many workers leaving the workforce and many higher-paying defense jobs disappearing from the economy. By 1943, the Board estimated that

there were between 500,000 and 600,000 fully insured retirement-age workers in the labor force who were deferring their retirement for the duration. So the “windfall” to the trust funds from the wartime economy would most likely be offset by an opposite effect following the end of the war. There was also a widely held concern among economists that the post-war economic adjustments would produce a depressed economy and perhaps even a return to a lesser version of the Depression of the 1930s. Thus, the Board argued, the long-range view required the nation to conserve the growing surplus because it would be needed to meet benefit obligations in the years after the end of the war. As it turned out, the Board was only half right. The predicted surge in retirement applications did appear. New retirement claims increased from 298,789 during the 1942–1944 peak-war years to 715,642 in the 1945–1947 post-war period. But the feared post-war depression never materialized.

## ***The Subsequent Tax-Rate Freezes***

On the eve of the next scheduled step-up in tax rates in January 1943 (under the 1939 law), Congress moved to repeal the increase. Legislation was introduced to cancel the 1943 increase and resume the schedule again in 1944. This time, the president and the Social Security Board strongly opposed the idea. In a letter to the chairman of the Senate Finance Committee, the president reminded Congress of their one-time deal in 1939, and the opportunity presented by the wartime economy, “In 1939, in a period of underemployment, we departed temporarily from the original schedule of contributions, with the understanding that the original schedule would be resumed on January 1, 1943. There is certainly no sound reason for departing again under present circumstances. . . . This is the time to strengthen, not weaken, the social security system. It is time now to prepare for the security of workers in the post-war years” (Congressional Record 1942, 7983–7984).

Board Chairman Altmeyer tried to frame the argument in more technical terms. He stated to the Congress, “The lower rates of contribution now in effect are only possible because the benefit load during the initial period of operation is a small fraction of what it will be in the later years. Moreover, the accruing liability which has been accruing for the payment of the future benefits is several times in excess of the amount in the existing trust fund. The actuaries have estimated that the present program may entail a level annual charge of as much as 7 percent of pay roll.

**Table 2.**  
**Projected versus actual trust fund reserves**  
**(dollars in millions)**

Calendar year	1939 projections	Actual reserves
1940	1,871	2,031
1941	2,127	2,762
1942	2,254	3,688
1943	2,651	4,820
1944	3,122	6,005
1945	3,506	7,121
1946	--	8,150
1947	--	9,360
1948	--	10,722
1949	--	11,816
1950	5,737	13,721

SOURCE: Data for 1939 projections from *Senate Report 1939*, Table 6:17. Actual reserves from *Annual Statistical Supplement to the Social Security Bulletin*, 1985, Table 14: 77.

NOTE: -- = not available.

**Table 3.**  
**History of tax-rate freeze legislation**

Legislation and data	Impact on tax rates	Senate vote in favor <sup>a</sup> (in percent)	House vote in favor <sup>a</sup> (in percent)
Amendments of 1939 (August 10, 1939)	Cancelled rate increases for 1940, 1941, and 1942	87	99
Revenue Act of 1942 (October 21, 1942)	Cancelled rate increase for 1943	100	98 <sup>b</sup>
Tariff Act of 1943 (December 22, 1943)	Rate increase scheduled for 1944 postponed for 60 days	c	c
Revenue Act of 1943 (February 25, 1944)	Cancelled rate increase for the remainder of 1944	75	69
Federal Insurance Contributions Act of 1945 (December 16, 1944)	Cancelled rate increase for 1945	71	78
Revenue Act of 1945 (November 8, 1945)	Cancelled rate increase for 1946	c	c
Social Security Amendments of 1946 (August 10, 1946)	Cancelled rate increase for 1947	c	c
Social Security Amendments of 1947 (August 6, 1947)	Cancelled rate increases for 1948 and 1949	c	c

SOURCE: Author's compilation.

- a. These vote totals are on passage of the overall bill in those cases where the freeze provision was embedded in a larger bill.
- b. House vote on the Revenue Act of 1942 was on conference report. Provision not contained in original House bill. Vote taken by division.
- c. Voice vote.

On this basis the fund would already have a deficit of nearly \$9,000,000,000 . . ." (Congressional Record 1942, 8005–8006).

This concept of the "level annual charge" (or level premium rate, as it was usually called) was the main long-range actuarial measure that Altmeyer was able to obtain from the Board's actuaries. However, a reading of the congressional hearing transcripts suggests that the members of the committees may not have fully understood this concept. At least they showed no concern at the report that the payroll tax rate was substantially below the level premium rate and that the trust funds were already in a form of deficit. As this was the main long-range actuarial measure available to Congress at this time, it is important to understand what such a measure means.

The level premium rate is the tax rate that would have to be charged throughout an estimating period in order for the system to be fully funded. So, for example, if the actuaries provided an estimate of trust fund transactions for the next 50 years, and they stated that

the level premium rate for this period was 5 percent, this would mean that the tax rate would have to be set at 5 percent at the beginning of the 50-year period and maintained at that rate throughout the 50 years in order for the system to be in balance. That is to say, in order for the income/outgo of the system to balance over that 50-year period, a tax rate of at least 5 percent would need to be maintained throughout the period. There would of course be other ways to achieve this balance. One could set the tax rate lower than 5 percent in some years and higher than 5 percent in other years and still achieve balance. But the level premium rate is not a straightforward average, because the timing of the cost curve and the rate schedule is critical. One could, for example, set the rate at 3 percent for the first 25 years and 7 percent for the second 25 years (for a 5 percent average for the period), but this would not necessarily yield a balanced fund.<sup>10</sup>

The level premium rate is thus a crude measure of the adequacy of a tax-rate schedule in that a tax schedule in which the rate never rises to the level premium

rate is one that can be presumed to be underfinanced. But the converse is not necessarily true. Even if the ultimate tax rate is greater than the level premium rate, this does not necessarily mean the program is fully funded. Again, it depends on the timing of the rate schedule and the cost curve. It appears that the deficit-to-date to which Altmeyer referred with his \$9 million figure reflects this concept. At a given point in time after the tax rate has been running below the level premium rate since the start of the estimating period, an implicit deficit-to-date accrual can be assumed. So the level premium rate provides us a crude indicator of the program's long-run financial health.

Altmeyer's arguments were not persuasive to the members of Congress who embraced a simple syllogism: The Social Security program was taking in more than it needed to pay current benefits and more than was projected it would need for future obligations at that point in time, therefore, payroll taxes were too high. A coalition of highly motivated opponents of reserve funding, and rank-and-file members who found themselves hard-pressed to defend tax increases in the face of large surpluses, joined together for substantial majorities each time the tax-rate issue came up for a vote.

In all, the Congress enacted eight bills canceling scheduled Social Security payroll tax increases, covering the entire decade of the 1940s (see Table 3). President Roosevelt vetoed the 1944 repeal, but was overridden. Although he "reluctantly approved" the freeze for 1945, the president warned in his signing statement, "Two matters should be clearly understood. The Congress should realize that this bill deferring a statutory increase in contributions toward existing social security merely defers until next year the necessary fiscal receipts to pay the benefits. Also, it does not seem to me wholly sound to enact a tax law and then defer the taxes year after year" (Statement by President Roosevelt 1944).

With the exception of the 1939 compromise, these rate cancellations essentially pitted the Roosevelt Administration and the Social Security Board against a bipartisan Congress. The last repeal bill was enacted in August 1947 and covered the 1948–1949 period. So as late as 1947, the Congress was persuaded by the vision of large trust fund surpluses that tax-rate increases still were not needed.

### ***The Impact of the Morgenthau Rule***

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The presence of the Morgenthau Rule changed the political dynamic around the actuarial estimates. There

was less expectation of long-range actuarial projections once the secretary of the Treasury suggested that the next 5 years were the yardstick for assessing the adequacy of the program's reserves. However, the Roosevelt Administration appeared chagrined by the use of the Morgenthau Rule beyond the life of the 1939 compromise. They intended the 1939 compromise to be a one-time deviation from the existing tax-rate schedule and were not contemplating that the Congress would use the Morgenthau Rule to justify a whole series of subsequent rate freezes.

The posture of the Treasury Department was especially awkward in the post-1939 freeze debates. Morgenthau tried to shift course with the president and the Social Security Board in opposition to the subsequent rate freezes, but with less than evident grace. In 1939, when Morgenthau was concerned about stimulating a sluggish economy, he wanted a rate freeze. In 1942, and subsequently, when he was more worried about inflation, he wanted the rate increases to go forward. But having broken the strong link between the reserve and the tax rates needed to build it, to argue for this shift in policy would be difficult. Abandoning the idea of the reserve in 1939 allowed Morgenthau to get his desired tax freeze. But to make a coherent argument in favor of the subsequent rate increases, he needed the commitment to the reserve as a rationalizing idea. Without a reserve build-up to justify rate increases, Treasury appeared to be less focused on issues of long-term financing of the Social Security system than on overall fiscal policy. But to admit using Social Security tax policy for these broader general aims of government fiscal management was to open a whole line of additional critique from those who thought that the Social Security system ought to be independent of these kinds of considerations.

### ***The Role of the Trustees Reports***

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The amendments of 1939 created a formal Old-Age and Survivors Insurance Trust Fund and a Board of Trustees to oversee the operation of the fund. The law also required these Trustees to issue an annual report on the transactions of the fund, as a means of quantifying the program's financial commitments. The first such report was issued in 1941 and annual reports have been issued each year since. These reports, prepared by the actuaries at the Social Security Administration, are the touchstone of long-range financial planning for the Social Security system.

During the period from 1941 through 1950, the Trustees issued 10 reports on the actuarial status of

the trust funds. It would be expected that these reports addressed the impact of the rate freezes on long-term financing. However, the data in the Trustees Reports during this period were ambiguous and made a clear assessment of the rate freezes difficult—which is a contrast to the greater long-range detail now produced in the Trustees’ Annual Reports.

Some indicators in the reports suggested that the long-term financing of the system was in doubt following passage of the amendments of 1939. In several of the reports there is a general discussion of the problem of level premium rates and the observation that existing tax rates were lower than the level premium rates. In a subtle way, the actuaries were sounding warnings about the potential for the system to be out of long-range actuarial balance. In the 1944 report, the Trustees warned that the refusal of Congress to allow scheduled tax rates to rise as contemplated in the 1939 law was potentially placing the program in financial jeopardy (Annual Trustees Report 1944, 29).

These warnings, however, were muffled by three factors. First, they were couched in terms of using level premium rates, which is a less clear-cut way of expressing the issue of long-range actuarial balance than by using year-to-year tables showing dollars incoming, dollars outgoing, and the resultant trust fund balances. Second, there were multiple long-range projections in each of these reports with no guidance given as to which projection policymakers ought to utilize. And third, in most of the reports from this period, there are no tables of long-range data at all, only illustrative graphs showing a tax-rate line and a benefit-payout line crossing at some point in time. As previously discussed, whether the program is in long-range actuarial balance is a function of the timing of these two curves. One simply cannot tell from a visual inspection of the graphs whether or not the system is in long-range actuarial balance. This determination can only be made by looking at the detailed data used by the actuaries in constructing the graphs, and these detailed data are precisely what is missing from the Trustees Reports during this period.

It became necessary following the amendments of 1950 to make an unambiguous assessment of actuarial status because the Congress expressly stated it wanted the program to be “self-supporting” and wanted the annual reports to make an assessment of whether this goal was being met. Therefore three significant changes were introduced in the 1951 Trustees Report: (1) the Trustees included a table showing actual dollar figures for income, outgo, and trust fund balances

for the long-range projection period; (2) the Trustees added, for the first time, a single intermediate set of estimates, and (3) the Trustees specifically identified the intermediate set of estimates as the one that Congress should use in setting tax-rate schedules and in assessing whether or not the program was “self-supporting.” Although the other mechanics of the 1951 report are not dramatically different from those of earlier reports, these three changes gave policymakers a benchmark against which to make their policy decisions. It was therefore a major innovation from the perspective of Social Security policymakers, marking a watershed break from the actuarial practices prevailing during the 1939–1950 period and a return to a practice of estimating long-range actuarial projections more consistent with that used in the 1935 law.

### ***Why Were There No Effective Long-Range Actuarial Estimates?***

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Four factors contributed to the absence of long-range estimates: (1) the temporizing of the Roosevelt Administration in 1939 and its unintended consequences in the subsequent freeze legislation; (2) the ad hoc nature of the rate freezes in the absence of a considered long-range financing policy; (3) an unusual staffing issue within the Social Security Board’s Office of the Actuary; and (4) Congressional intent, reflected in the ease of enactment of the freeze legislation in the absence of long-range estimates.<sup>11</sup>

### ***The Precedent in 1939***

By promulgating the Morgenthau Rule in 1939 and providing only short-range estimates for the 1939 legislation, the Roosevelt Administration had inadvertently introduced a precedent that would be repeated in subsequent years. Thus the practice of providing only short-term detailed estimates had a methodological precedent, and this was certainly a factor in the subsequent freeze debates, as it was mentioned often by members of Congress (in the form of their support for the Morgenthau Rule).

### ***Ad hoc Policymaking***

The ad hoc nature of the policymaking during this period also provides some degree of rationale for the absence of effective long-range estimates. The 3-year freeze in the amendments of 1939 was part of a considered financing policy, even if it was done without benefit of long-range cost estimates. But the subsequent freezes were 1-year decisions—made on an ad hoc basis year after year. Making what appeared

to be 1-year changes in financing might seem to not require the kind of long-range evaluations that one might expect when introducing a full-fledged financing policy. And one could argue that these ad hoc freezes did not represent a financing policy, but rather the absence of one. But after a series of ad hoc actions that had the effect of holding the tax rate unchanged at 2 percent from 1937 through 1949, it begins to look very much like a long-term policy. In any case, the actuaries were placed in a dilemma when trying to produce long-range estimates because they either had to decide to use the 2 percent rate as the basis of the estimates (which was not what the law dictated) or use the schedule in the law (which was repeatedly invalidated by the ad hoc actions).

### **An Unusual Staffing Issue**

Staffing issues centered on the Social Security Board's selection of W.R. Williamson as the Board's actuarial consultant. Williamson had served briefly as a consultant to the Committee on Economic Security on the unemployment insurance subgroup, but he was not actively involved in the design of the retirement program. In fact, Williamson was opposed to the contributory, wage-related, model of social insurance adopted in the 1935 Act. Williamson was a proponent of what he called "social budgeting." This approach involved a universal, flat-rate benefit, unrelated to wage history or program contributions, and the only financing arrangement involved annual budget appropriations to cover annual program expenditures. Thus the irony here is that the chief actuary for the Social Security program advocated a form of social insurance in which actuarial estimates had little place.

Williamson's advocacy of social budgeting put him at odds with his peers and his superiors on the Board over the issue of long-range estimates. Williamson declined to provide unambiguous long-range cost estimates, even to his colleagues within the Board, arguing that uncertainty in estimating required that the actuaries only produce a *range* of numbers and then not speculate as to the most likely place in that range that future experience would land. Thus he refused to provide detailed long-range cost estimates for policymakers to use in crafting legislation.

Colleagues within the Board were frustrated by their inability to obtain useful long-range cost estimates and thought Williamson's point about actuarial uncertainty was being misused to justify a practice he preferred for other reasons. Some suspected that his personal antipathy to contributory social insurance was

a motive behind his refusal to provide useable long-range estimates.

The actuary's office, under Williamson, would generally provide detailed short-range estimates and would only provide ranges of possible values for any long-range estimates. But policymakers need something more definite—a most likely set of numbers, or an average, or something, however imprecise, which can be used for such practical matters as setting tax rates. After all, tax rates and benefit amounts are fixed values, neither of which can be expressed as a range. And in setting tax rates and determining benefit amounts, Williamson's estimates were thus of limited practical use—which is one key reason that the actuarial estimates during this period failed to perform their role as a framing constraint to policymaking.

Williamson's peers in the Bureau of Old-Age and Survivors Insurance (BOASI) and the Bureau of Research and Statistics (BRS) constantly tried to get the actuaries to produce long-range estimates that were more usable for policymakers. In complaining about the draft of one particular actuarial study (No. 23), an exasperated Oscar Pogge (BOASI director) wrote, "... the use of the four illustrations is to present so wide a range in costs as to be of doubtful value to policy-makers. The range in some of the figures is so broad as to produce almost ridiculous results. . . ." Pogge's colleague, I.S. Falk (BRS director), complained about the same study and accused Williamson of intentionally fuzzing-up his estimates because of his personal antipathy to the program (Pogge 1947; Falk 1947). Even Board Chairman Altmeyer was frustrated by Williamson's refusal to provide him with information. Altmeyer felt that he needed to formulate program policy and despite being Williamson's boss, he too could not persuade Williamson to provide him with long-range actuarial estimates. In one exchange of memoranda, Altmeyer gave voice to the policymaker's lament when he complained to Williamson, "... as I have said to you before, I feel considerably handicapped in discussing actuarial cost estimates because of your unwillingness to indicate what you consider to be the most reasonable estimates" to which Williamson offered the actuary's rejoinder, "The existence of many interlocking factors, each of them with a considerable possible cost range in any dynamic functioning of our economy, makes any specific single cost estimate which implies definiteness of knowledge as to the future an undesirable thing to use, so our practice in actuarial studies has been to choose two reasonable sets of values for many of these factors

and to determine two estimates, a low and a high, both lying within a wider range whose absolute limits we do not know” (Altmeyer 1943; Williamson 1943).

These internal debates (no matter who was right or wrong) revealed that the actuarial estimates in use during this period were seen by policymakers as seriously inadequate to their needs.<sup>12</sup> The debates are also evidence of the general point here: The actuarial estimates used from 1939–1950 were unlike those in use before or after this period.

### ***Congressional Intent***

Some of the responsibility for the missing long-range estimates has to be put on the posture of the Congress. Despite Williamson’s reticence, the committees of jurisdiction in the Congress could have insisted the Board’s actuaries produce long-range estimates during legislative consideration of the amendments of 1939 and the freeze bills, if they had any interest in obtaining them. The Board’s actuaries did perform a handful of internal studies during this period that, with a little effort, could be read as indicating the program was not in long-range balance. But none of these actuarial studies were made part of the legislative history of any of these eight laws.

During the period of the rate freezes most members of Congress appeared to be perfectly content with the absence of long-range cost estimates. In the 1944 freeze debate, a member of the Ways and Means Committee, Congressman Thomas Jenkins (R-OH), even introduced a proposal to freeze the tax rate at 2 percent permanently. He justified it by complaining that Social Security financing was too long-range. “Everything will be all right for 20 years,” he told his colleagues. “Why should we worry about it? Sufficient to the day is the evil thereof.” (Newspaper article 1944) Jenkins’ viewpoint was probably shared by many members, although few would admit to it as openly. In any case, members repeatedly voted without long-range estimates and without complaint.

### ***The Impact of the Rate Freezes on Social Security’s Long-Range Actuarial Balance***

Given the absence of long-range estimates during this period, what, then, can be said about the consequences of the tax-rate freezes on Social Security’s financial prospects? This question has not been addressed in previous scholarship because of the absence of long-range actuarial estimates in the published legislative history. Even so, an approximate idea of the impact of the rate freezes can be found by looking at the pub-

lished Trustees Reports; a small number of actuarial studies produced by the Board’s actuaries; some internal memoranda prepared by the Board’s actuaries for Altmeyer’s use and other Board officials; and at least one published study.

### ***The 1939 Freeze***

In his testimony before the House Ways and Means Committee on the amendments of 1939, Williamson’s presentation to the members of the Committee did not clarify the long-term financing issues (Committee Report 1939, 2473–2488). Williamson presented no dollar income/outgo data beyond 1955, but his actuarial tables included a statement of the probable level premium cost of both the existing and the contemplated program, under both the 1935 actuarial assumptions and a more current set of assumptions.

The first startling fact from Williamson’s testimony was that the existing program, without any changes, was already out of long-range balance under the updated actuarial assumptions. The current estimates were that the level premium cost for the existing law might be as high as 7.88 percent of payroll. Because tax rates under the 1935 law came nowhere near this level premium rate, the existing program was no longer self-sustaining. This apparent long-range imbalance should have been a major issue for Altmeyer and President Roosevelt, for whom the self-sustaining principle was of prime importance in 1935. But this implicit insolvency in the existing program passed unremarked.

In support of the Board’s repeated assurances about the costs of the 1939 proposals, Williamson’s data showed the 1939 law to be less costly than existing law, under either the original or the updated assumptions. But here too a problem lurked. Under the updated assumptions, the level premium rate for the 1939 law was 6.60 percent of payroll. The combination of the existing tax schedule and this level premium rate meant that the 1939 program was out-of-balance under the updated assumptions as well, and these figures were computed by Williamson without considering any changes in the 1935 rate schedule.

It was evident from the discussion at the hearing that the members of the committee had not grasped the potential implications of Williamson’s limited data for the question of the program’s long-range balance. The committee members spent most of their time looking at the short-range dollar figures—which included year-by-year income, outgo, and net-balance figures. The level premium rate formulation appeared too



abstract to engage the members' interest. Had Williamson presented the same type of date and dollar figures for the long-range as he did for the short-range estimates, it would have been much more difficult for the Congress to overlook the consequences of their decisions. Such data were available in the internal worksheets from which the actuaries extracted the level premium figures that Williamson reported to the committee. But the actuaries refused to release the long-range dollar data. Even other high-level officials of the Social Security Board could not get the figures. Two months after enactment of the amendments of 1939, G.R. Parker, the Board's regional director, sent a memo to the head of BOASI (his boss and Williamson's peer) asking for the long-range figures used in computing the level premium rate numbers Williamson used in his Congressional testimony. Williamson's deputy, D.C. Bronson, replied to Parker, refusing to provide the long-range figures, telling him, "As to the projection of costs beyond 1955 we do not have figures which are susceptible to sending you. We have of course worked on these far distant figures under various projections and assumptions. We do not feel, however, that it would be advisable to send them out although possibly at a later date some distillation of our results may be available" (Bronson 1939).

Williamson was also asked during his testimony what would happen if the tax rate were frozen for 3 years, as under the 1939 law. He replied that roughly "a billion dollars" would be lost causing the program to have a negative cash flow in 1942, but that following the rate step-up in 1943 the program would resume its glide path and would not again be in a negative cash-flow position until 1955. Asked by an alert committee member whether he was telling them that it did not matter if they froze the rate for 3 years, Williamson replied that over the long run a billion dollars more or less would get lost in the static of actuarial estimation. No Committee member thought to ask what would happen after 1955 when the program passed into a negative cash-flow.

### ***The Subsequent Freezes***

Expecting the 1939 deal to be a one-time affair, the Roosevelt Administration was shocked into action when in 1942 rumblings began to be seriously heard about freezing the rate for another year. In a letter to Congress in October 1942, Altmeyer warned that the system already had a \$9 billion deficit, even without additional freezes; in other words, by this time the system should have accumulated that much additional

tax revenue if it were operating at its level premium rate. This figure meant either that the program was insolvent, or at some future time tax rates would have to be raised sufficiently above the level premium rate to recoup this amount of "lost" revenue. As mentioned, this type of deficit figure is not a direct measure of long-range balance; it is a current measure of where the system ought to be presently if it is to be in balance in the long run. So whether the system was in balance in the long run and what the dollar value of its balance sheet might be in the future could not be determined from this measure.

A second similar set of estimates, obtained from Bronson (1943), showed the level premium range to be roughly 4 percent to 7 percent, and the dollar deficit to be between \$5.4 billion and \$13.5 billion. In November 1944 Bronson updated the dollar figures for the 4 percent and 7 percent level premium rates, reporting that the deficit to date had risen to between \$6.6 billion and \$16.5 billion.

Altmeyer reported all of these figures to the Congress, but to no avail. The actuaries continued to decline to produce detailed year-by-year projections showing income, outgo, and reserve figures in dollar terms. Expressed in the abstract shorthand of level premium rates or in the indirect measure of a present deficit, the long-range imbalance of the system provoked no Congressional debate.

The first complete long-range actuarial estimate of the costs of the amendments of 1939 was produced by the Social Security Board actuaries in a December 1942 study (Actuarial Study No. 17). At that point, the tax rate had been statutorily frozen up through 1943. The actuaries developed two sets of estimates, a low-cost and a high-cost estimate, and projected trust fund reserves for 50 years, from 1950–2000. The projections assumed the freezes would stop at that point and the 1935 tax schedule would resume in 1944. Under both sets of estimates, the program passed into a negative cash-flow position no later than 1980 but was out of long-range balance under only the high-cost estimates. So by December 1942, there was some after-the-fact indication that the program might have already been insolvent because of the 1939 legislation (see Table 4).

In September 1943 the Board's actuaries produced their second detailed evaluation of the long-range picture of the trust funds, using slightly updated demographic and beneficiary data. In this study (Actuarial Study No. 19) the actuaries concluded that if the tax rates were permitted to return to the 1935 schedule in

**Table 4.**  
**Long-range trust fund estimates from Actuarial Study No. 17 (dollars in millions)**

Calendar year	Net income	Balance in fund at end of year
<i>Low-cost estimate</i>		
1950	1,446	14,380
1960	911	31,532
1970	418	47,644
1980	(96)	62,678
1990	(487)	76,578
2000	(610)	91,504
<i>High-cost estimate</i>		
1950	1,147	12,570
1960	406	24,691
1970	-347	31,781
1980	(1,388)	30,844
1990	(2,206)	18,376
2000	(2,572)	a

SOURCE: "New Cost Estimates for the Old-Age and Survivors Insurance System, with the Assumption of a Static Future Wage level." Actuarial Study No. 17, Social Security Board (December 1942).

NOTE: Estimates in parentheses indicate deficits.

a. Fund exhausted in 1999.

1944, that under both the high-cost and low-cost estimates the program would remain in balance through the year 2000. Three months later Congress acted to freeze the 1944 rate at the 1937 level, rendering this estimate outdated.

In one published study in October 1945, which appeared in a professional journal, a junior Board actuary presented data showing that if the tax rate were not raised beyond the 2 percent prevailing at that time, the long-range deficit in the program would be between \$17 billion and \$24 billion by 1980 and between \$83 billion and \$136 billion by the year 2000 (Immerwahr 1945). This article was the first published study that attempted to answer the question of what the long-range impact would be if the 2 percent payroll tax were pursued as a long-term policy (as some in Congress clearly intended). It showed unambiguous numbers in that the entire range, low and high, was in the red. At this point, if not earlier, it was at last clear that the tax-rate schedule in place at that time had rendered the Social Security program out of long-range actuarial balance.

In January 1946, the Social Security Technical Staff of the House Ways and Means Committee produced a study of the Social Security program, including the issues of financing. This document, the Calhoun Report, recommended that the Congress stop the practice of ad hoc freezes and adopt a newly rationalized contribution schedule under which rates would go up to 3 percent in 1947, 4 percent in 1957, 5 percent in 1967, 6 percent in 1977, and that a general revenue subsidy of one-third of costs be instituted thereafter. As part of justifying its recommendations, the Technical Staff produced a table, based on Actuarial Study No. 19, in which they showed that if the Congress held to the Morgenthau Rule's limit on the size of the reserve—or abandoned a reserve altogether—payroll taxes would have to be continually increased after 1964 until, in 1995, they would range somewhere between 8.4 percent and 10.1 percent of payroll (Technical Staff Report 1946). Their point was that a rate frozen at 2 percent was not viable in the long run. However, since their table also showed that the rate could be held at 2 percent for several more years before encountering a negative cash flow, the Congress opted to freeze the rate again later that same year.

The third set of long-range projections by the Board's actuaries was finalized in April 1947. This study (Actuarial Study No. 23) had the benefit of being able to examine the first seven of the eight rate-freeze actions, enabling it to develop four possible cost scenarios (see Table 5). Assuming that the frozen rate of 2 percent continued, the projections showed that under any of the four possible scenarios, the program would be insolvent—as early as 1965, or at the latest, by 1990.

In August 1947, the Congress acted to freeze the tax rate for the remaining years in the decade (1948 and 1949). However, this time, rather than making a simple ad hoc freeze, a new contribution schedule was enacted replacing the one in the 1935 law. Under this new schedule, the tax would remain at 2 percent through 1949, rise to 3 percent in 1950 and 1951, and rise to a maximum rate of 4 percent in 1952 and thereafter. Although the 1947 law promised an increase in tax rates in 1950, the ultimate tax rate was lowered from 6 percent under prior law to only 4 percent. In a supplement to Actuarial Study No. 23, produced after the law was enacted, the actuaries projected that the new tax schedule—which clearly represented a new long-range taxing policy—would produce negative cash flows in all four scenarios and a depleted fund

**Table 5.**  
**Long-range trust fund estimates from Actuarial Study No. 23 (dollars in millions)**

Calendar year	Net income	Balance in fund at end of year
<b>Low employment, low-cost estimate</b>		
1950	88	9,042
1955	(242)	9,417
1960	(558)	8,132
1970	(1,108)	586
1980	(1,759)	a
<b>Low employment, high-cost estimate</b>		
1950	(102)	8,163
1955	(499)	7,247
1960	(867)	4,247
1970	(1,738)	b
<b>High employment, low-cost estimate</b>		
1950	868	13,142
1955	512	17,979
1960	162	21,473
1970	(594)	23,553
1980	(1,475)	17,200
1990	(2,368)	c
<b>High employment, high-cost estimate</b>		
1950	506	11,446
1955	41	13,875
1960	(458)	14,009
1970	(1,665)	5,293
1980	(3,325)	d

SOURCE: "Long-Range Cost Estimates for Old-Age, and Survivors Insurance, 1946." Actuarial Study No. 23, Social Security Board (April 1947).

NOTE: Estimates in parentheses indicate deficits.

- a. Fund exhausted in 1971.
- b. Fund exhausted in 1965.
- c. Fund exhausted in 1990.
- d. Fund exhausted in 1973.

in two of the four alternatives. The salient point is that this actuarial study was developed only after the passage of the law—it too was absent from the legislative history of the 1947 legislation. Thus, here again, Congress enacted a major change in tax policy without benefit of long-range actuarial estimates.

The end to this period in Social Security's financing came with the passage of the amendments of 1950. Just 3 years after the enactment of the 1947 tax schedule it was discarded and the financing of the program was re-rationalized from scratch, based on the newly modified program. The amendments of 1950 made

major changes in the value of the benefits (increasing them by 77 percent on average). The changes were so profound that benefit computations from that point forward are referred to in Social Security Administration regulations as "New Start" computations.

This re-rationalization had several impacts on financing policy: A new tax schedule was put in place, long-range actuarial balance was certified for 50 years into the future, language was put in the legislative history insisting that the tax schedule be sufficient to make the program "self-supporting," the authorization to use general revenues to make up funding shortfalls was repealed, and the actuaries were required to redesign the Annual Trustees Reports to make a clear finding of whether or not the system was in long-range actuarial balance. From that point forward, long-range actuarial projections have always been available to Social Security policymakers. Thus ended this anomalous period in which major taxing policies were adopted without benefit of an assessment of their long-range consequences.

### Conclusion

In the ordinary course of making Social Security policy, today's policymakers would expect to see annual long-range cost estimates showing the projected income and outgo to the system and its long-range actuarial balance. Such long-range cost estimates are a framing constraint on policymaking, limiting the ability of policymakers to adopt financing schemes that threaten the system's long-range solvency.

One of the most startling facts about the Social Security Amendments of 1939 is that this type of long-range data was not presented in support of the legislation. Congress enacted the amendments in the absence of any long-range actuarial estimates showing their potential long-term impact. The foreshortened estimates used in the 1939 legislation actually masked a very uncertain long-range financing picture and were an important policy departure from the actuarial practices surrounding the creation of the program in 1935. Moreover, following the amendments of 1939, seven additional legislative enactments blocked scheduled tax-rate increases from taking effect. For the entire decade of the 1940s, a scheduled tripling of tax rates was repeatedly deferred. These subsequent pieces of legislation were likewise enacted without benefit of any long-range actuarial estimates.

Although the question of long-range actuarial assessments was caught up in larger debates during this period over reserve versus pay-as-you-go financ-

ing and the use of general revenue funding, long-range actuarial estimates are required in order to quantify long-term financing commitments whether under a reserve or a pay-as-you-go theory of financing. The absence of effective long-range estimates during the period under study is thus anomalous under either approach, and it is a marked departure from the way financing policy has been framed in Social Security both before 1939 and after 1949.

The problem is not so much that Congress enacted freezes in the Social Security tax rates during this period. In some respects, it might have been a rational policy, given the economic bonanza of the war years and given the inclination of some to want to move away from reserve funding to a more obviously pay-as-you-go financing basis. The problem is that the rate freezes were enacted without benefit of a clear assessment of the long-range impacts of these decisions. Freezing previously scheduled tax rates is not necessarily bad policymaking, but making changes in payroll tax rates without an assessment of the long-range impact on the system can hardly be seen in any other way.

The absence of effective long-range estimates during these years is, in the author's view, an indication of policy failures in several respects. The advocates of pay-as-you-go financing did not meet the implicit obligations of this approach by setting a schedule of future payroll tax rates sufficient to fund the program. The Roosevelt Administration, while initially insisting on a large reserve and associated long-range actuarial projections, temporarily abandoned both principles as an expedient to easing passage of the political compromise underlying the amendments of 1939. Rank-and-file members of Congress found it easy to defer scheduled tax increases as long as there were no long-range data suggesting their actions were problematic, and they were apparently content to accept the absence of such data. The Treasury Department apparently was willing to abandon long-range estimates when the resulting tax policy was more consistent with their efforts to manage the larger economy. And the fortuitous financial windfall to the program from the wartime economy offered an irresistible temptation to policymakers to focus on the short-term surpluses in the system and turn their gaze from the demands of a longer view.

Prior scholarship has generally overlooked the significance of the absence of long-range actuarial estimates from the legislative history of the bills enacted during this period. Far from being a mere "technical"

matter, the author suggests this absence of long-range estimates was a key factor easing passage of the amendments of 1939 and the subsequent freeze legislation. Moreover, the absence of long-range actuarial estimates was a key enabler that allowed policymakers to drive the program into probable insolvency, without explicitly acknowledging this possibility. Indeed, it may very well be the case that the Social Security amendments of 1939 rendered the program insolvent, a fact that was kept hidden from view by the absence of any long-range actuarial estimates in the legislation.

This review suggests that the amendments of 1939 are linked with the rate freezes of the 1940s by a common approach to financing policy, and that the changes in 1939 cannot be fully understood without positioning them within the context of this later historical period. While the *benefit provisions* of the 1939 law are linked backwards in policy to the provisions of the 1935 law, the *financing provisions* of the 1939 law are the starting point of a sequence of policymaking by which this law is linked to the subsequent rate freezes of the 1940s. One of the results of the present research is to place a new emphasis on this period from 1939 to 1949 as a significant one for Social Security policymaking and to correct the existing historiography, which tends to overlook this period.

From the perspective of the program's financing, this period features a unique combination of circumstances: the promulgation of the Morgenthau Rule and the precedent of the 1939 legislation using only short-range estimates, the reticence of the Social Security Board actuaries to provide long-range estimates, the skillful politics of the opponents of reserve financing in moving the program toward a pay-as-you-go basis by reducing the size of the reserve, the acquiescence of rank-and-file members of Congress in a series of tax deferral decisions, and the unprecedented financial windfall of the war years—all combined to produce this unusual period in Social Security policymaking. This combination of circumstances allowed policymakers to enact laws that probably placed the Social Security system in a long-term deficit, without ever adopting this underfunding as an explicit policy goal and without ever being forced to acknowledge that this underfunding was the probable consequence of their actions. But from the passage of the amendments of 1939 until the enactment of the amendments of 1950, the Social Security system was more than likely insolvent in the long run—a fact that has gone largely unnoticed.

## Notes

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<sup>1</sup> There were some minor revisions to coverage rules during this period, but the net effect was to leave the scope of the program essentially unchanged.

<sup>2</sup> Originally the U.S. Social Security Administration was known as the Social Security Board. It did not acquire its present name until 1946.

<sup>3</sup> “Long-range actuarial balance” is a *summary measure* assessing whether the Social Security program's financing is sufficient to meet its projected benefit obligations over a long-range estimation period. Actuarial balance is computed by determining whether total tax revenues and trust fund assets are sufficient to meet total projected expenses over an extended period. Long-range actuarial balance is one of several alternative ways of characterizing the program's financial health. Thus it should be understood that even if the system is in long-range actuarial balance, it might still suffer substantial financial shortfalls during specific times within the estimating period. On the other hand, to determine that the program is not in long-range actuarial balance does not mean that it is unsustainable at a given point in time, but only that on average over a long-range estimation period it lacks sufficient sources of revenue to fully cover its commitments. In more commonplace usage, one might ask whether the program is *solvent or insolvent* in the long run. In this article, the terms “solvent” and “insolvent” are to be understood as informal synonyms for the summary measure of long-range actuarial balance.

<sup>4</sup> The question of whether the trust funds reduce overall taxpayer burdens or whether they constitute a form of real savings is outside the scope of this study. These larger issues were indeed part of the debates over financing during this period, although the analysis presented here is independent

of any particular view on these larger issues. Suffice it to observe that Administration policymakers viewed their financing options in the terms described here—that is to say, that the reserve was a device to reduce future payroll tax rates.

<sup>5</sup> The current estimating period of 75 years was adopted in 1965 in an explicit effort to provide a projection period that encompassed not just the retirement of the youngest workers in the system, but their full period of benefit receipt as well.

<sup>6</sup> Berkowitz (1983, 146–147) suggests that the council report contained no definition of what a “reasonable contingency reserve” might be precisely so that this ambiguous phrase could mean different things to different people—improving the prospects for a political compromise on the issue.

<sup>7</sup> Because of their discontent with this ambiguity, officials from the Social Security Board lobbied for a specific provision authorizing the use of general revenues to be enacted into law as part of the 1943 freeze legislation (enacted in early 1944). This provision was law until it was repealed in the amendments of 1950, never having been used.

<sup>8</sup> The 1935 income figure was a projected \$2.5 billion in 1955, of which \$640 million would be income from the reserve. The 1939 figure was a projected \$2 billion income in 1955, of which only \$169 million would be income from the reserve. Clearly, the program had become more pay-go in the short run; whether this was true also in the long run (beyond 1955) is impossible to say because of the missing long-range estimates.

<sup>9</sup> Edwin Witte, almost single-handedly, strongly argued for the necessity of a large reserve fund (and implicitly certifying it through proposed long-range actuarial projections). But no one in the Congress or the Administration made an issue of the absence of long-range actuarial estimates from the legislative history of the 1939 law.

<sup>10</sup> To see why this is so, assume that the total taxable payroll was \$1,000 billion for the first 25 years of the period and \$500 billion for the second 25 years. A split tax rate of 3 percent to 7 percent would yield \$65 billion in tax revenue, whereas a single 5 percent rate for the full 50 years would yield \$75 billion. So if the level premium rate was 5 percent, the split rate schedule would leave the program with a \$10 billion shortfall, even though the tax rate averaged 5 percent over the estimating period.

(For simplicity's sake, the example does not include discussion of trust fund assets or interest income on those assets. However, when the actuaries set a level premium rate they generally considered trust fund balances and interest income as part of the computation of the level premium rate.) Before 1972, the level premium rate, as described here, was used in actuarial estimates. Starting in 1972, the actuaries shifted their methodology to an “average cost” technique, which is an arithmetic average of costs/income without regard to trust fund balances or interest income.

This methodology is not the same as the pre-1972 actuarial technique, even though it is sometimes described using similar names. If trust fund assets are not included in the computation, the indicated “level premium” tax rate would be higher than otherwise required during periods of positive fund balances (Myers 1993, 416–417.)

<sup>11</sup> Although they do not specifically address the issue of long-range estimates, both Berkowitz (1983) and Leff (1988) argue that Social Security’s financing was part of an unsettled policymaking climate during this period, and perhaps we might think that the missing estimates could be explained by appeal to this unsettled policy climate. However, the principles of actuarial estimation were well-established long before this time (Myers 1954), and they were used in the 1935 Act and were used again starting in 1950. So the absence of expected principles of actuarial practice during this period cannot easily be explained by the generally unsettled nature of Social Security policymaking during this era.

<sup>12</sup> Williamson, for his part, grew increasingly estranged from the Social Security program and from his peers. In 1947, he resigned to go into the private sector where he became an open advocate for his “social budgeting” model.

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# *The Food Stamp Program and Supplemental Security Income*

by Brad Trenkamp and Michael Wiseman

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## **Summary**

The Food Stamp Program (FSP) and Supplemental Security Income (SSI) are important parts of national public assistance policy, and there is considerable overlap in the populations that the programs serve. About half of all SSI recipients reside in FSP recipient households. This article uses Social Security administrative data and the Food Stamp Quality Control samples for federal fiscal years 2001–2006 to study the prevalence of food stamp receipt among households with SSI recipients, the contribution of FSP to household income, and the importance of various FSP features in contributing to the well-being of recipient households. The prevalence of FSP participation among households that include SSI recipients is estimated to have grown steadily over the entire 2001–2006 period, rising from 47.4 percent in 2001 to 55.6 percent in 2006. This growth has occurred across all age groups of SSI recipients. The FSP contribution to household income has grown as well. In 2001, FSP increased the income of the households of SSI/FSP recipients by 13 percent; by 2006 the increase was 16.8 percent. Almost 80 percent of the food stamp recipient households that include SSI recipients receive increased benefits because of excess housing costs. In 2006, 44 percent of SSI recipients lived in households that did not receive food stamps. Given available information, it is difficult to gauge the FSP eligibility of nonparticipat-

ing households and, therefore, to assess the potential benefit of outreach efforts. Currently available measures of FSP take-up probably overstate participation among eligible households that include SSI recipients, and there is some evidence that enhanced state promotion of the FSP raises participation among households with SSI recipients. We conclude with recommendation for review and renewal of collaboration between the Food and Nutrition Service of the U.S. Department of Agriculture (the agency responsible for administering the FSP) and the Social Security Administration in ensuring that eligible SSI recipients utilize FSP benefits.

## **Introduction**

The United States addresses poverty with multiple programs. Often the programs are intended to at least partially overlap—for example, people may receive both Temporary Assistance for Needy Families (TANF) benefits and Section 8 Housing Assistance.<sup>1</sup> However, because programs are operated by various agencies and under different federal/state relationships, it is sometimes difficult to gain a clear picture of their combined effects on individual and family well-being. Understanding program overlap and interaction experienced “on the ground” is important to effective program management and comprehensive policy evaluation.

This article investigates interaction between Supplemental Security Income (SSI) and the Food Stamp Program (FSP). The two programs are important parts of national social assistance policy, and there is overlap in the populations they serve. In 2004 the nation spent \$24.6 billion on FSP benefits and \$34.7 billion on SSI benefits (Spar 2006, 236–239). While SSI recipients constitute only about 12 percent of all persons receiving food stamps, about half of all SSI recipients reside in FSP recipient households. Thus the FSP plays some role in the well-being of SSI recipients. We are interested in just what, and how large, that role is.

We begin with summaries of both programs and then analyze the prevalence of FSP participation among SSI recipients, the size of the FSP benefit and its relationship to overall household resources, and the relationship between FSP administration and SSI/FSP take-up. For data consistency we generally report program characteristics and other data for 2004, but where useful we extend the analysis to investigate changes over the 2001–2006 interval. We conclude that (1) FSP is a significant benefit for many households that include SSI recipients; (2) the FSP contribution to the well-being of SSI recipients has been increasing in recent years; (3) FSP treatment of housing costs is an important factor in the contribution of FSP benefits to the income of households with SSI recipients; and (4) there is some evidence that some SSI households not currently receiving food stamps are eligible, but the potential gain from outreach efforts is uncertain. We identify opportunities for collaboration between the U.S. Department of Agriculture’s Food and Nutrition Service (FNS) and the Social Security Administration (SSA) in improving the linkage between SSI and the FSP.

### ***Supplemental Security Income***

The SSI program provides a basic national monthly income guarantee, called the federal benefit rate (FBR), to children and adults with disabilities as well as to persons aged 65 or older.

### ***Benefits and Eligibility***

In 2004 the FBR was \$564 for a single individual and \$846 for a couple. The FBR is adjusted annually for inflation. Because SSI is intended to be a program of last resort, payments are reduced if an individual or a couple has earnings or other income, and the amount depends as well on a person’s living arrangements. In about half of the states,<sup>2</sup> the federal SSI benefit is

augmented by a state supplemental cash payment. In 33 states, SSI recipients are also immediately eligible for Medicaid (SSA 2005b, 11).

To be eligible, SSI nonelderly (younger than age 65) applicants must pass a disability test. Both elderly and nonelderly individuals must meet the same income and resource requirements. For adults, financial eligibility requires that countable income (whether from work or other sources) be less than the current FBR plus any state supplement, where available. Certain income exclusions are applied in the calculation of countable income. The SSI rules exclude the first \$20 of income from all sources (the “general income exclusion”), \$65 of earned income (for a total exclusion from earnings of \$85 if the applicant or recipient does not have \$20 of unearned income), and half of any additional earnings beyond \$65. The FBR is reduced by one-third for applicants or recipients receiving food and shelter—“in-kind support and maintenance” (ISM)—in another’s household and not contributing to those expenses. Generally, assets cannot exceed \$2,000 for an individual and \$3,000 for a couple, but one’s home and automobile, as well as certain other resources, are not counted. There is a complex set of rules regarding how assets other than cash are considered.

For children, the financial eligibility requirements generally pertain to the parents whose income and resources from sources other than public assistance is partially deemed to the child. Before any income is deemed to the child recipient, certain exclusions are applied to account for needs of other family members. The disability test for children is that the child must have a medically determinable impairment (or a combination of impairments) resulting in “marked and severe functional limitations.”

For persons aged 65 or older, only the financial test for SSI eligibility applies. The disability test for non-elderly adults is the same test used for Social Security Disability Insurance (DI) and is quite stringent. It requires that the applicant be either blind or have a physical or mental impairment that prevents him or her from engaging in any substantial gainful activity (SGA) and that has lasted or is expected to last for a continuous period of at least 12 months or to result in death. Substantial gainful activity is generally defined in terms of specific earnings thresholds. In 2004 the SGA standard was \$810 or more per month, so applicants judged capable of earning this much anywhere in the economy were ineligible for SSI. The threshold of SGA is automatically adjusted each year for changes in the average wage.

Once eligibility is established, the monthly SSI payment is simply the FBR (plus the applicable state supplement), less any countable income.

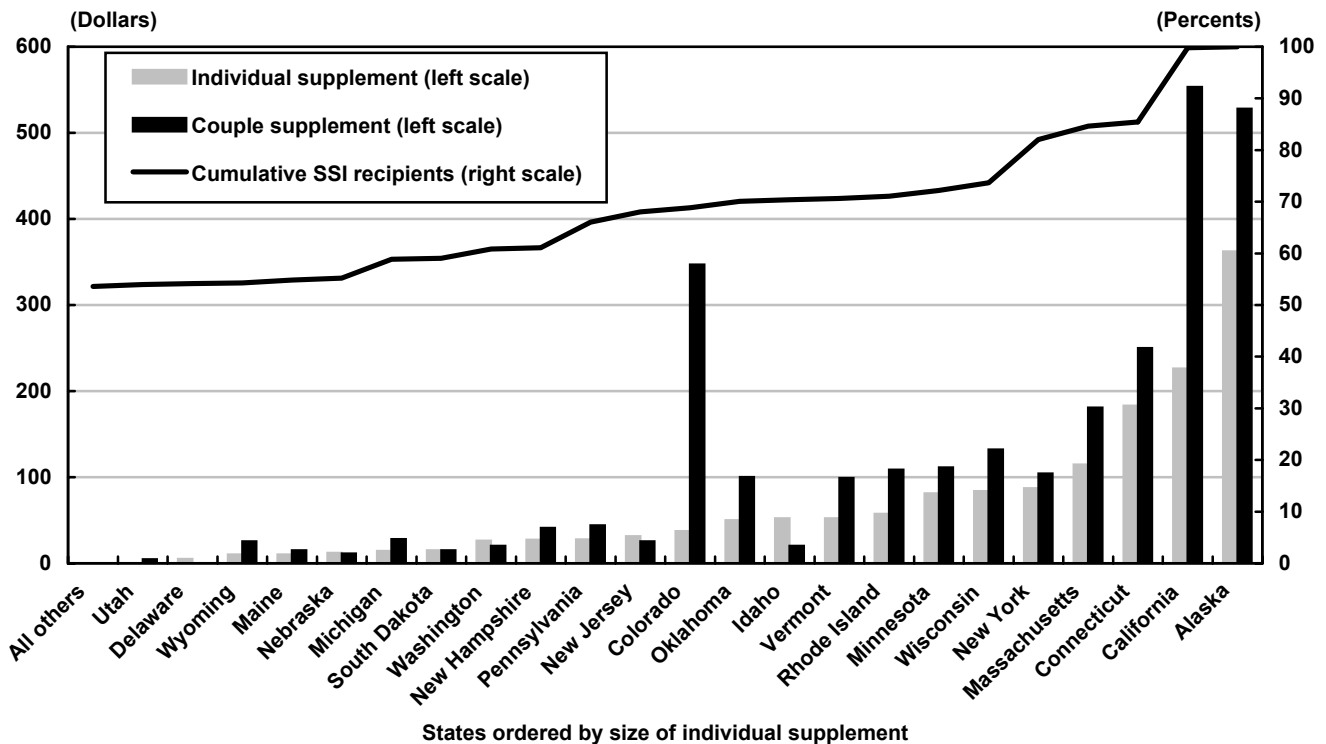
### State Supplements

All but six states supplement the federal benefit rate, and in some cases the supplement is substantial (SSA 2005a). For 22 states, these supplements only address special needs and are not paid to all recipients. However, 23 states provide a cash supplement to the FBR that is paid to all single or couple recipients or (in most cases) both. Chart 1 provides information on the size of supplements provided universally to nonelderly adult SSI recipients living independently, which is generally matched for elderly cases. The chart presents states ordered by size of the supplement paid to individuals living alone and, moving from lowest to highest, shows the cumulative share of SSI recipients accounted for. Twenty-eight states provide no universal supplement for nonelderly adult SSI recipients. These states accounted for 53 percent of all SSI recipi-

ents in this age group. Beyond this, several states provide supplements that are well under \$50 per month. The “median supplement recipient”—ranked by state supplement—resides in Oklahoma. California’s supplement is exaggerated by inclusion of a payment in lieu of food stamps.

**A Sample Case.** To illustrate the process of SSI eligibility determination for a nonelderly adult, consider for example a nonelderly woman, living alone, who comes to the local Social Security field office to apply for SSI in 2004. She receives preliminary application materials that require assembling detailed information on her disability and recent medical and work histories, as well as income and assets. Following an interview covering the nature of her disability and the nondisability factors of entitlement, the disability related documentation of her case is passed to the respective state’s Disability Determination Services for disability assessment, while the financial requirements are assessed by the Social Security Administration.

**Chart 1.**  
**Monthly state SSI supplements to the federal benefit rate for nonelderly adult individuals and couples living independently, 2004**



SOURCE: Social Security Administration (2005a).

NOTES: SSI = Supplemental Security Income.

California includes food stamp cash-out.

An applicant determined to be eligible is said to be “awarded” benefits. With no other income, the woman in this example receives the 2004 FBR, \$564.

The first \$20 of income from sources other than earnings is ignored in SSI payment calculation. Beyond this general income exclusion amount, such “unearned” income is counted dollar-for-dollar against SSI. Payments from the Old-Age, Survivors, and Disability Insurance (OASDI) programs are treated as unearned income, so a disabled person using SSI to supplement a meager Social Security Disability Insurance or Old-Age and Survivors benefit could at most gain a combined benefit only \$20 greater than the FBR.

Earnings are treated differently. Suppose that the woman previously profiled is determined SSI eligible and begins receiving the FBR monthly. Suppose also that she takes a job, working 15 hours per week at \$5.15 per hour for a monthly income of \$334.75. Her benefit is reduced by her countable income. Deductions include the general income exclusion of \$20 (if not already applied to unearned income), an earned income exclusion of \$65, and half of what remains after the fixed deductions are applied, for total deductions of \$209.87. Countable income is therefore  $\$334.75 - \$209.87 = \$124.88$ . Therefore this woman would receive  $\$564$  (again, the 2004 FBR)  $- \$124.88 = \$439$  (benefits are rounded down to the nearest dollar), and have a total income of  $\$773.75$ . Note that because of the general and earned income exclusions, the benefit has been reduced by only  $\$124.88$ , so the average benefit reduction rate is  $(\$124.88 / \$334.75) \times 100 = \$.373$  per dollar of earnings. Each additional dollar of earnings reduces the SSI payment by \$.50, the marginal benefit reduction rate. Because  $\$334.75$  is well below the SGA threshold of \$810, earning this amount does not threaten payment or eligibility unless upon eligibility redetermination this part-time work signals to the state Disability Determination Service a capacity to earn more.

In practice the rules surrounding work are more complex and generally more permissive than this mechanical example suggests, but only about 5 percent of SSI recipients report earnings (SSA 2005b, 74). In states that supplement the FBR, the benefit calculation is generally conducted in the same way, but it is the FBR *plus* the state supplement that is used as the point of reference in determining eligibility and payment amounts.

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## ***The Food Stamp Program***

The FSP helps people buy food by providing grocery credit. The name is an anachronism; today all recipient households receive the FSP benefit through the use of electronic benefit transfer (EBT) cards. These are ATM-like debit cards that recipients use to purchase food from authorized grocery stores and supermarkets. The benefit is adjusted annually for changes in food costs. The FSP eligibility unit is the household, defined as an individual or group of people who live, buy food, and prepare meals together. This contrasts with SSI, which is determined on an individual, and not household, basis.

### ***Establishing Eligibility***

Households with elderly or disabled members, including all households that have an SSI recipient, are advantaged in evaluation of FSP eligibility. To be eligible for the FSP benefit, households without elderly or disabled members must have gross (before tax) monthly incomes less than 130 percent of federal poverty guidelines for the previous year (in 2004 this was \$973 per month for a single individual and \$1,313 for two persons). After certain allowed deductions for living, working, dependent care, child support, and excess shelter costs, countable income cannot exceed 100 percent of the poverty standard. Households must not have more than \$2,000 in countable assets such as cash, savings deposits, stocks and bonds, and certain nonessential vehicles. Certain adults are required to register for work, and some adults without dependents are required to work or to participate in training as a condition of assistance.

Persons receiving SSI are in most circumstances automatically eligible for the FSP if they live alone—they are “categorically” eligible. Categorical eligibility also applies to multiple person households in which all members receive SSI, TANF, or General Assistance income. When SSI recipients live with others who are not public assistance recipients, FSP eligibility is assessed on the basis of total household income and composition, and the resources of the household may make the entire group, including SSI recipients, ineligible. Such households are exempted from the FSP gross income eligibility test, and the countable assets standard is \$3,000, not \$2,000. (The net income test continues to apply.) A more generous allowance is made for excess housing costs. Out-of-pocket medical expenses in excess of \$35 per month incurred

by elderly or disabled household members are also deducted in calculating countable household income. In California the food stamp benefit is “cashed out” in the state’s SSI supplement. Consequently, SSI recipients in California living independently are ineligible for the FSP, and benefits for other households that include SSI recipients are calculated without including the SSI recipient in the budget unit or counting the SSI recipient’s income in assessing household resources (Arnold and Marinacci 2003).

### The Food Stamp Program Benefit

Once eligibility is established, participating households are expected to be able to devote 30 percent of their counted monthly cash income (after adjustment for the deductions already cited) to food purchases. The FSP benefit then makes up the difference between 30 percent of countable income and a maximum benefit level that is derived from a model budget developed by the U.S. Department of Agriculture, called the Thrifty Food Plan (TFP). Because both the TFP and the allowable standard (living expense) deduction vary by household size, benefits vary as well. The maximum benefit schedule is detailed in Table 1. Few

households receive the maximum benefit, because most have countable income.

Calculation of the FSP benefit is highly dependent on the nature and amount of deductions for the household unit. Consequently, benefit calculation is best illustrated by example. We begin with a simple illustration of eligibility and benefit determination pertinent to SSI recipients and then highlight variants.

#### Single and Couple Example with Standard Deduction Only.

Consider first the single SSI recipient living alone and wholly dependent on SSI in a state without a state supplement. In 2004, the FBR for this individual was \$564. The FSP standard deduction was \$134 for households of four or fewer people, so countable income was \$430. Thirty percent of \$430 is \$129. The maximum FSP allotment for a 1 person household was \$141 (see Table 1), therefore the person was eligible for  $\$141 - \$129 = \$12$  in food stamps. The corresponding calculation for an SSI couple, again without income other than the (\$846) SSI payment and only the standard deduction, indicates an FSP benefit of \$45.

The FSP benefit in this standard deduction example is not large: Calculated as a change in total resources for spending, what we call the food stamp increment is 2.1 percent for the single individual and 5.4 percent for a couple. These figures apply to states without a supplement. If we consider Oklahoma, the state with the median supplement (see Chart 1), the FSP benefit for the single person falls to \$10 (all categorically eligible households receive at least this amount); the couple’s benefit is now \$32.

#### Single and Couple Example with Additional FSP Deductions.

These examples involve only the standard deduction; most recipient households are allowed more. Working recipients deduct 20 percent of earnings for work expenses. SSI recipients living alone are additionally allowed to deduct from income out-of-pocket medical expenses in excess of \$35 per month and “excess shelter costs,” defined as the amount by which rent or mortgage payments plus utility costs exceed half of income after all other deductions. For an SSI couple or individual with low housing costs, in principle each dollar of out-of-pocket medical costs beyond \$35 leads to \$.30 more in food stamps. For an SSI individual or couple, every \$1 in rent paid beyond half of countable income before adjustment for excess housing costs produces \$.30 more in food stamps. The excess medical and housing costs deductions interact: Each \$1 of excess medical costs for households with excess housing costs produces an increase of \$.45 in

**Table 1.**  
**Maximum monthly Food Stamp Program allotment and income limits, by household size, 2004 (in dollars)**

Household size	Maximum allotment <sup>a</sup>	Maximum gross income <sup>b</sup>	Maximum net (countable) income
1	141	973	749
2	259	1,313	1,010
3	371	1,654	1,272
4	471	1,994	1,534
5	560	2,334	1,795
6	672	2,647	2,057
7	743	3,014	2,319
8	849	3,354	2,580
Per each additional person	106	341	262

SOURCE: U.S. Department of Agriculture, Food and Nutrition Service.

- a. Values differ for Alaska, Hawaii, Guam, and the U.S. Virgin Islands.
- b. Gross income is the household's total nonexcluded income before any deductions. Net or countable income is gross income less allowable deductions.

FSP benefits. Obviously, the medical expenses and excess housing cost deductions potentially have a substantial effect on the food stamp increment. The practical importance of the deductions depends on how many recipients have them, a matter to be investigated later in this article.

**Households Shared with Others.** The examples developed above involved a single individual living alone or a married couple, both of whom are SSI recipients, also living alone. If this individual or couple were to be living with others not receiving SSI, a number of things would change. The standard deduction would increase if the household included more than four persons. The combined income of household members would be used to calculate countable income and compute benefits. The excess housing cost deduction is restricted—“capped”—for households without a disabled or elderly person (in 2004 the cap was \$378,<sup>3</sup> but all households with SSI recipients receive the deduction without restriction. The excess out-of-pocket medical expenses deduction applies only to the SSI recipient’s expenses.

### **When Income Changes**

While emphasizing nutrition, the FSP provides real income support, offsetting income decline with increased benefits and reducing these benefits when income rises. For most families, especially those with income based on wages, income changes from month to month. In principle this should mean monthly variation in the FSP benefit as well. In practice, requiring adjustment for small changes in income is administratively inefficient. Instead FSP regulations require reporting only changes in gross monthly income from earnings in excess of \$100 and from other sources in excess of \$50. Adjustments to changes less than those amounts occur periodically when eligibility is reassessed. Some states operate “Combined Application Projects” or CAPs (FNS 2005). Under the CAP demonstrations, SSI recipients living alone without other income can file a shortened Food Stamp application without having a face-to-face interview at the FSP office. Benefit amounts are either standardized or calculated automatically based on a standard shelter and medical expense deduction. An application constructed from the SSA interview is transferred to the FSP office electronically. As of mid-2007, 11 states were operating CAPs in some locations.<sup>4</sup> CAP cases are expected to experience little month-to-month income change, reducing the need for frequent review and redetermination.

### **Managing the Food Stamp Program**

Although the federal government pays most FSP costs and sets most of the regulations, the program is operated by states, generally through local welfare offices.

Payment accuracy is evaluated annually by a joint federal/state review of a sample of cases drawn from each state’s recipient list. This “quality control” (QC) sample is sufficiently large to provide reliable information on the people receiving food stamps, the rate at which administrators make errors in benefit determination, and the amounts of payments involved. States can be charged for the benefit cost of error rates in excess of national averages. In practice such penalties are often waived; when enforced, states pay by investing the fine (penalty) in programs to improve performance. The QC system creates incentive for promoting accurate collection of data on income, including SSI receipt. States can and do check on SSI status by using the Social Security Administration’s State Data Exchange program to investigate benefit status for all members of applicant households.

### **Important Questions**

The Food Stamp Program overview sets the stage for more detailed study of FSP receipt among SSI recipients. Important questions include:

- What is the prevalence of FSP participation among SSI recipients?
- What is the contribution of the FSP to the income of households in which SSI recipients reside?
- How important are the housing and medical cost deductions in determination of benefits for the households of SSI recipients?
- Could outreach efforts increase FSP participation among households of SSI recipients?

### **Data Overview**

We use two data sources for this analysis. The first is unpublished tabulations of administrative data on SSI receipt from administrative files provided by the Social Security Administration. The second is the Food Stamp Program Quality Control (FSPQC) Database for federal fiscal years FYs 2001–2006. The FSPQC Database is produced by Mathematica Policy Research, Inc., under contract to the Food and Nutrition Service of the U.S. Department of Agriculture (Poikolainen and Ewell 2005). The FSPQC Database for each year contains a rich set of demographic, economic, and FSP eligibility and benefit information on a nationally

representative probability sample of approximately 49,000 recipient households. “Nationally representative” here means representative of the FSP caseload in an average month during the year. The sample is collected throughout the 12 months and therefore differs from a simple single month cross section. Our analysis excludes California because of the cash-out. Over the 2001–2006 interval, California accounted for 16.8 percent of all SSI recipients.

### **The Prevalence of Food Stamp Receipt**

Table 2 illustrates the use of both resources, SSI and the FSP. The data for each year are separately tabulated by SSI recipient age group. The SSI recipient counts in the first row for each group are from Social Security administrative records and are averages for the months of the fiscal year. These are exact counts of payments made. The counts in the second row are derived from FSPQC sampling probabilities. “Prevalence” is just the ratio of the estimated total number of SSI recipients living in units receiving food stamps (from the FSPQC) divided by the total number of recipients in the relevant age class (also from Social Security administrative data). Thus we estimate (see

the age group at the bottom of the table) that 939,106 elderly SSI recipients lived in FSP recipient households in 2006; this was 63.6 percent of all SSI recipients in the group. Although the denominators for these statistics are from administrative data and are effectively known with certainty, the FSP recipient counts are sample based and therefore subject to sampling errors. However, since the samples are quite large, confidence intervals around the sample-based recipient estimates are small, so the precision of the prevalence estimates is high.

Table 2 supports a number of inferences. One is that utilization of food stamps is not universal among households that include SSI recipients. However, these data do not reveal the extent to which nonparticipation reflects household ineligibility or failure to take advantage of a benefit to which the household is entitled. A second inference is that in general, child SSI recipients are less likely to live in FSP households than are adults, and elderly SSI recipients are more likely to receive food stamps than others. Perhaps the most significant discovery is that the prevalence of food stamp receipt grew substantially over the 2001–2006 interval, with the largest increases occurring in the last 2 years.

**Table 2.**  
**Estimated prevalence of food stamp receipt among SSI recipients, by age group, fiscal years 2001–2006**

SSI recipient characteristic	2001	2002	2003	2004	2005	2006
All	5,566,070	5,616,037	5,689,695	5,780,685	5,865,265	5,954,299
Estimated SSI/FSP beneficiaries	2,638,113	2,692,525	2,784,340	2,976,889	3,142,254	3,308,251
Prevalence of receipt (percents)	47.4 (0.63)	47.9 (0.64)	48.9 (0.67)	51.5 (0.74)	53.6 (1.02)	55.6 (0.88)
Under age 18						
SSI recipients	778,437	802,661	834,929	876,994	919,647	956,814
Estimated SSI/FSP beneficiaries	239,804	266,452	301,471	346,522	367,951	368,303
Prevalence of receipt (percents)	30.8 (1.26)	33.2 (1.25)	36.1 (1.31)	39.5 (1.50)	40.0 (1.67)	38.5 (1.76)
Aged 18 to 64						
SSI recipients	3,253,574	3,300,656	3,354,074	3,415,654	3,470,322	3,521,144
Estimated SSI/FSP beneficiaries	1,603,342	1,659,351	1,671,763	1,791,523	1,910,882	2,000,843
Prevalence of receipt (percents)	49.3 (0.79)	50.3 (0.82)	49.8 (0.83)	52.5 (0.92)	55.1 (1.22)	56.8 (1.09)
Over age 64						
SSI recipients	1,534,059	1,512,721	1,500,691	1,488,036	1,475,297	1,476,342
Estimated SSI/FSP beneficiaries	794,966	766,722	811,106	838,844	863,421	939,106
Prevalence of receipt (percents)	51.8 (1.38)	50.7 (1.42)	54.0 (1.57)	56.4 (1.74)	58.5 (2.67)	63.6 (2.08)

SOURCE: Authors' calculations using data from the Social Security Administration, Office of Research, Evaluation, and Statistics, Division of SSI Statistics and Analysis and the Food Stamp Program Quality Control Database.

NOTES: SSI = Supplemental Security Income; FSP = Food Stamp Program.

Ninety-five percent confidence intervals (plus/minus) in parentheses are shown in percentage points.

The differences between 2001 and 2006 are statistically significant ( $\alpha = .05$ ) for all subgroups.

### ***State Supplements and Food Stamp Receipt***

Because the FSP benefit is nationally uniform (with the exception of Hawaii and Alaska), it would be reasonable to expect that the prevalence of food stamp receipt would be lower in states with a substantial SSI supplement than in states without. However, separate calculation of FSP prevalence in states grouped by size of supplement revealed no clear pattern. For the elderly, living in a high supplement state is associated with higher, not lower, prevalence of food stamp receipt. For children, the opposite is true. It may be that the effect of high benefits is offset by high living costs. On average, housing costs—the key component of interstate variation in costs of living—are positively correlated with the presence and amount of the SSI state supplement.<sup>5</sup>

### ***The Food Stamp Program and Income***

Next, we turn to the contribution of FSP benefits to household income. For this purpose we continue separate analysis by age and further differentiate between recipients living alone or with spouses only and SSI recipients living with others. Table 3 provides a sense of the reliability of estimates for various subgroups by reporting sample sizes and the estimated number of SSI recipients (the sum of sample weights) for various subgroups in 2004. Some of the subgroups are so small (singles under age 18 living alone, married recipients under age 18 living with spouse, and married persons over age 64 living with others) that the results are meaningless. However for subgroup samples that are large, results can be viewed with considerable confidence.

For each subgroup we report average income and benefit sources plus, on the right-hand side, three measures of the increment to resources provided by the FSP. The first increment measure (Aggregate: Mean food stamp benefit as increment to mean cash income) is simply the average food stamp benefit for the households of SSI recipients in the housing/marital status class, expressed as a percentage of average monthly household income from all other sources. This provides a sense of the size of the aggregate resources provided by the FSP for the respective classes of SSI/FSP recipient households. The second increment measure (Across households: Ratio of food stamp benefit to total household income—mean) is the average across SSI recipients of the ratio of the household's

food stamp benefit to household cash income. This measure is an “average of ratios,” as opposed to the first measure, which is a “ratio of averages.” The second measure corresponds to the increment calculation introduced in the earlier discussion of the standard FSP income deduction. We include estimated standard errors for this mean. Within each housing/marital status class, the distribution of the food stamp increment is typically skewed to the right; so the median of the distribution, the third measure of the food stamp increment and the last column in the table, falls below the mean in every age/housing situation class.

Consider single working-age SSI adult recipients who live alone. We estimate that in 2004 there were slightly more than 1 million (1,046,809) people in this group. About one-third (33.5 percent) of all such recipients received OASDI benefits in addition to SSI payments. Very few—4 percent—had earned income. The FSP increased current income in aggregate for this group by 12.3 percent and on average across these households by 13 percent. The median of the increment distribution is 12 percent. Thus in contrast to the very modest (2.1 percent) food stamp increment calculated earlier for a single individual without excess housing or medical cost deductions, the FSPQC data reveal an average increment of 13 percent. For couples, the increment is not 5.4 percent, as in our earlier without-deductions example, but 16.7 percent. The largest increment is found for SSI recipients living in households with others. Cases like this include child SSI recipients living with single mothers, single mother recipients living with children who are supported by TANF, and elderly adults living with a child. For SSI recipients living in households with others, the average increment is over 20 percent. By all measures, we find that the FSP benefit is important.

Table 4 presents the results of repeating the first of the increment measures, the ratio of mean food stamp benefit to mean SSI recipient household income, across all six years of our data. We have excluded results for the three subgroups with very small sample sizes. For the other subgroups the results are clear: The FSP contribution to the resources of recipient households that include SSI recipients grew over the 2001–2006 interval. Overall from 2001 through 2002, the food stamp increment is estimated to have been 13.3 percent; from 2005 through 2006, the corresponding estimate is 16.8 percent. Thus, over the 2001–2006 period under study, the likelihood that SSI recipients live in FSP recipient households has grown (recall



**Table 3.**

**SSI recipients in food stamp recipient households, by living arrangements and benefits, fiscal year 2004**

SSI recipient characteristic	Population estimate	Sample size	Average monthly household receipt						The Food Stamp increment (percent)				
			SSI payment (dollars)	Food stamp benefit	OASDI		Earned income		Aggregate: Mean food stamp benefit as increment to mean household cash income	Across households: Ratio of food stamp benefit to total household cash income			
					Average benefit (dollars)	Percent receiving benefit	Average amount (dollars)	Percent with earned income		Mean	Standard error of mean	Median	
<b>Total sample</b>													
Over age 64	838,844	3,487	383.83	83.10	254.31	57.5	8.58	1.7	22.68	12.4	12.8	0.2	10.5
Aged 18 to 64	1,791,523	9,013	479.31	116.65	154.94	34.3	32.20	6.6	68.62	15.9	17.4	0.3	13.8
Under age 18	346,522	1,650	711.85	245.85	77.85	14.3	177.06	23.0	188.9	21.3	28.8	0.7	20.6
Total	2,976,889	14,150	479.47	122.23	173.97	38.5	42.40	7.1	69.67	16.0	17.4	0.2	13.4
<b>Living alone or with spouse</b>													
<i>Single</i>													
Over age 64	610,728	2,544	357.51	68.40	250.53	60.7	1.01	0.6	13.13	11.0	11.8	0.2	9.9
Aged 18 to 64	1,046,809	5,353	424.01	72.13	143.86	33.5	8.38	4.0	11.38	12.3	13.0	0.2	12.0
Under age 18	a	32	a	a	a	a	a	a	a	a	a	a	a
Total	1,661,346	7,929	388.45	70.69	183.10	43.5	5.67	2.7	12.03	12.0	12.5	0.1	11.3
<i>Married</i>													
Over age 64	169,722	674	557.10	109.89	257.16	45.0	17.26	3.1	22.22	12.9	13.6	0.4	11.1
Aged 18 to 64	137,738	663	515.98	116.27	258.64	46.3	24.68	6.4	21.60	14.2	16.7	0.6	12.0
Under age 18	a	1	a	a	a	a	a	a	a	a	a	a	a
Total	307,524	1,338	538.68	112.75	257.77	45.6	20.58	4.6	21.93	13.4	15.0	0.4	11.3
<b>Living with others</b>													
<i>Single</i>													
Over age 64	43,639	209	410.50	159.78	303.67	65.7	73.32	9.6	103.82	17.9	21.0	1.3	16.8
Aged 18 to 64	489,552	2,410	559.81	181.56	137.04	30.9	46.07	8.4	181.22	19.6	23.5	0.5	19.8
Under age 18	342,649	1,617	715.49	248.14	77.04	14.1	178.99	23.2	190.85	21.3	29.1	0.7	21.0
Total	875,840	4,236	613.28	206.52	121.86	26.0	99.43	14.3	181.13	20.3	25.6	0.4	19.9
<i>Married</i>													
Over age 64	14,755	60	642.79	156.56	232.07	43.6	30.56	6.0	183.33	14.4	18.4	2.3	10.8
Aged 18 to 64	117,424	587	593.70	243.35	206.65	40.6	195.45	23.1	164.60	21.0	31.8	4.2	19.3
Under age 18	a	a	a	a	a	a	a	a	a	a	a	a	a
Total	132,179	647	599.18	233.66	209.49	41.0	177.04	21.2	166.69	20.3	30.2	3.8	18.6

SOURCE: Authors' calculations using the Food Stamp Program Quality Control Database.

NOTES: SSI = Supplemental Security Income; OASDI = Old-Age, Survivors, and Disability Insurance.

a. Too few observations for meaningful calculations.

Table 2), and, among those recipient households, the contribution made by the FSP has increased.

The results in Table 4 cover all SSI recipients living in FSP recipient households. As Table 3 indicates, many of these households have income from other sources. Suppose we consider instead just the subset of individuals and couples living alone that depends wholly on SSI or a combination of SSI and OASDI benefits for cash income and receives nothing from other sources, as reported in the FSPQC Database. In 2004, 66 percent of all SSI/FSP recipients belonged to this subset. Given the amount of the FBR and procedures for SSI payment calculation (each dollar

of OASDI income beyond the first \$20 reduces the SSI payment by a dollar), these people have incomes below the official poverty standard as applied by the U.S. Census Bureau (DeNavas-Walt, Proctor, and Lee 2005) and thus are of particular concern. How significant is the FSP benefit for this officially poor and “wholly dependent” group?

Table 5 presents the average increment to household income created by the FSP for adults in wholly dependent households, by age and marital status. The table also reports the percentage of all persons in each age/housing situation class (that is, whether single or married, living alone or with others) accounted for

**Table 4.**  
**Food stamp increment to total household income for SSI recipients in food stamp recipient households, 2001–2005**

SSI recipient characteristic	2001		2002		2003		2004		2005	
	Mean (percent)	Standard error	Mean (percent)	Standard error	Mean (percent)	Standard error	Mean (percent)	Standard error	Mean (percent)	Standard error
<b>Total sample</b>										
Over age 64	9.7	0.3	10.2	0.2	10.1	0.3	12.8	0.2	13.1	0.3
Aged 18 to 64	21.3	2.8	17.3	1.3	16.3	0.5	17.4	0.4	18.6	0.4
Under age 18	46.0	13.7	25.3	0.9	27.7	0.9	28.9	0.8	30.1	0.8
Total	20.0	2.1	16.1	0.8	15.7	0.3	17.4	0.2	18.4	0.3
<b>Living alone or with spouse</b>										
<i>Single</i>										
Over age 64	7.9	0.2	8.8	0.2	9.5	0.4	11.8	0.2	12.1	0.3
Aged 18 to 64	10.8	0.8	11.0	0.7	12.0	0.7	13.0	0.2	13.9	0.3
Under age 18	a	a	a	a	a	a	a	a	a	a
Total	9.6	0.5	10.2	0.5	11.1	0.5	12.5	0.1	13.3	0.2
<i>Married</i>										
Over age 64	9.8	0.6	10.7	0.6	9.6	0.4	13.6	0.5	14.0	0.6
Aged 18 to 64	12.2	0.6	13.9	1.1	14.4	0.7	16.7	0.8	17.1	0.7
Under age 18	a	a	a	a	a	a	a	a	a	a
Total	10.9	0.4	12.1	0.6	11.4	0.4	15.0	0.5	15.2	0.5
<b>Living with others</b>										
<i>Single</i>										
Over age 64	16.2	1.4	14.2	0.7	18.3	1.7	21.0	1.7	22.7	2.0
Aged 18 to 64	28.3	4.9	24.6	3.6	22.9	0.5	23.5	0.5	27.0	1.2
Under age 18	46.1	13.7	25.7	0.9	27.9	0.9	29.1	0.8	30.2	0.9
Total	31.1	4.6	23.7	2.2	24.5	0.5	25.6	0.4	28.1	0.7
<i>Married</i>										
Over age 64	a	a	a	a	a	a	a	a	a	a
Aged 18 to 64	62.8	26.6	28.0	1.3	26.8	1.2	31.8	4.4	30.6	1.3
Under age 18	a	a	a	a	a	a	a	a	a	a
Total	55.6	22.7	26.5	1.2	26.4	1.1	30.3	3.9	30.2	1.2

SOURCE: Authors' calculations using the Food Stamp Program Quality Control Database, 2001–2006.

NOTE: SSI = Supplemental Security Income.

a. Too few observations for meaningful calculations.

**Table 5.**  
**Food stamp receipt and income for the wholly dependent: SSI recipients living alone with only OASDI and/or SSI as income, fiscal year 2004**

SSI recipient characteristic	Food stamp increment to total household income (standard error)	Population estimate	Estimate of total wholly dependent	Share of all persons estimated to be wholly dependent
Aged 18 to 64				
Single living alone	13.4 (.20)	1,046,809	913,428	87.3
Married living alone with spouse	20.1 (1.2)	137,738	84,164	61.1
Over age 64				
Single living alone	12.2 (.25)	610,728	534,943	87.6
Married living alone with spouse	15.8 (.71)	169,722	100,989	59.5

SOURCE: Authors' calculations using the Food Stamp Program Quality Control Database.

NOTES: SSI = Supplemental Security Income; OASDI = Old-Age, Survivors, and Disability Insurance.

by the wholly dependent group. The results for the two subgroups of wholly dependent singles living alone (those aged 18–64 and 65 or older) do not differ much from what is reported in Table 4 because over 87 percent of single SSI recipients are wholly dependent. For the wholly dependent married subgroups, the food stamp increment is larger than the average for those not wholly dependent. Overall, 66 percent of all SSI recipients living in FSP households were singles or couples completely reliant on FSP benefits.

Singles or couples wholly dependent on OASDI and/or SSI are not the only SSI/FSP recipients relying on public assistance. SSI recipients living in food stamp recipient households that have income from only OASDI and/or SSI and TANF (Wamhoff and Wiseman 2007) are in a similar situation. There are 1,614 SSI recipients in the 2004 FSPQC sample who live in a household that receives TANF and nothing else, except in some instances OASDI. This group represents an estimated 332,345 recipients nationwide. One-quarter of these recipients are children. On average for this group of TANF/SSI families, the FSP increases effective income by 20.7 percent ( $\sigma = .45$ ), even more than was true for wholly dependent non-TANF cases.

### ***The Deductions that Count***

The difference between the value of the FSP benefit calculated on the basis of the FBR and standard deduc-

tion alone and the much more substantial actual contribution uncovered in the FSPQC data is attributable to allowed deductions. For SSI recipients, two deductions are likely to be important: excess medical and housing costs. Table 6 reports the prevalence of each type of deduction among FSP recipient households that include SSI recipients. Prevalence is the estimated proportion of SSI/FSP recipients in the living arrangement class for which deduction occurs in some amount. The tabulations in Table 6 are divided by recipient age and living arrangements. (This tabulation covers all FSP households with SSI recipients, not only the wholly dependent group considered in Table 5.)

The excess housing cost deduction is much more important than medical costs as a factor increasing the amount of the food stamp benefit (Table 6). For example, housing costs affect the food stamp benefit for 75.6 percent of the single SSI recipients aged 18–64 and living alone; the medical cost deduction is relevant in only 4.3 percent of such cases. This outcome may reflect the fact that most SSI recipients are eligible for Medicaid. There are nuances: The excess housing cost deduction is important for an even higher percentage of persons living with a spouse than for singles living alone, and the prevalence of the medical cost deduction is lower for the elderly than for working-age recipients.

It is possible that the excess shelter cost deduction is important, but that this importance is not the product

**Table 6.**  
**Food Stamp Program income deductions for SSI recipients, fiscal year 2004**

SSI recipient characteristic	Total	Medical cost		Excess shelter	
		Receiving deduction	Prevalence (percents)	Receiving deduction	Prevalence (percents)
All under age 18	346,522	7,557	2.2	215,420	62.2
Aged 18 to 64					
Single living alone	1,046,809	44,517	4.3	790,882	75.6
Married living alone with spouse	137,738	10,728	7.8	110,317	80.1
All others	606,976	17,824	2.9	412,363	67.9
Over age 64	838,844	29,650	3.5	543,760	64.8

SOURCE: Authors' calculations using the Food Stamp Program Quality Control Database, 2004.

NOTE: SSI = Supplemental Security Income.

of special treatment of FSP households that include SSI recipients—in other words, the household's housing cost deduction does not exceed the maximum deduction (\$378, in 2004) allowed for households without disabled or elderly persons. To investigate the importance of the excess housing cost deduction cap for these households, we counted the number of households where the deduction exceeds the cap. We include as having an excess shelter deduction all persons in Combined Application Project demonstrations, because they typically include a standardized housing cost deduction. As indicated by Table 7, in FY2004 the excess shelter deduction affects the food stamp benefit of almost 80 percent of households with SSI recipi-

ents. Seventeen percent of the SSI recipients affected by the excess housing cost deduction had an excess shelter cost that exceeded the cap applied to households without disabled or elderly members. For over 13 percent of all SSI/FSP recipients, the special treatment of SSI recipients in calculating the excess shelter cost deduction increased the monthly food stamp benefit by an average of \$33 above what otherwise would have been received.

Again, we consider trends. Chart 2 shows the results of extending the calculation of the prevalence of effective excess housing cost deduction over time. For all groups, prevalence is greater in 2006 than in 2001, and in all cases the difference is statistically significant.

**Table 7.**  
**SSI/FSP recipients who benefit from Food Stamp Program excess shelter cost provisions, fiscal year 2004**

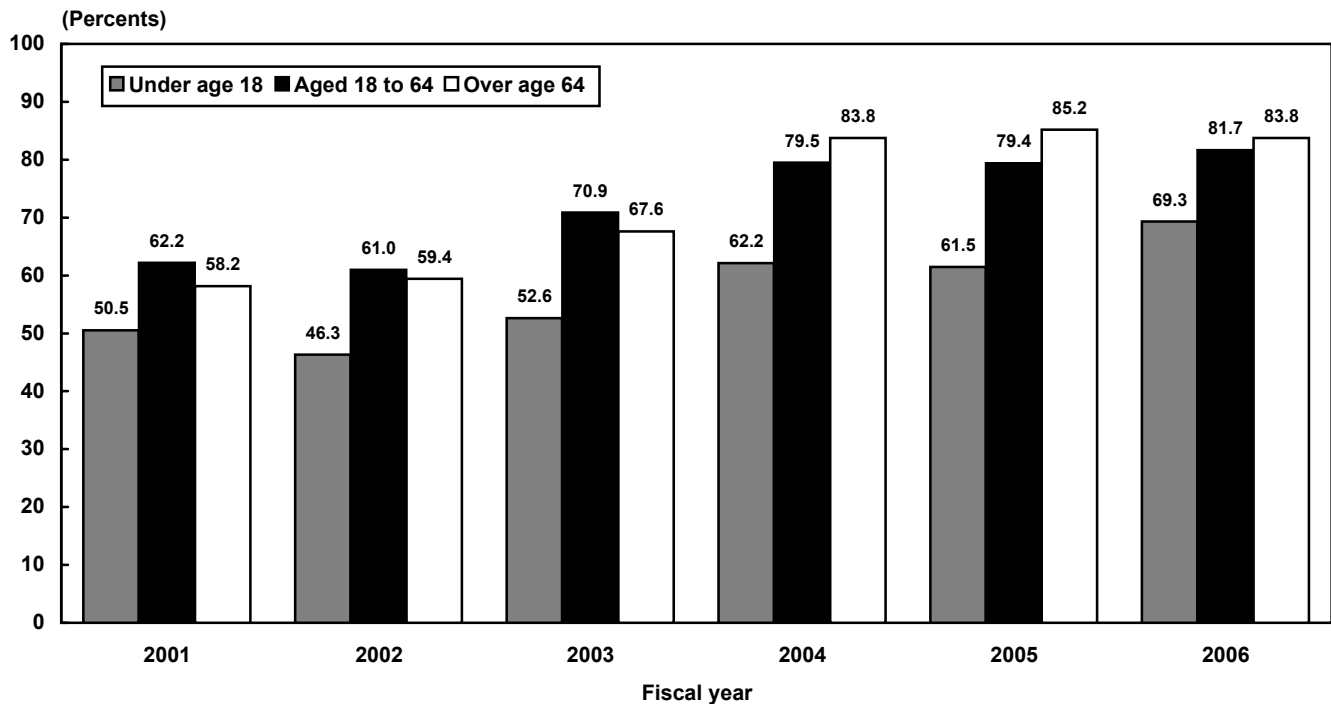
	Total	Under age 18	Aged 18 to 64	Over age 64
Estimated total SSI/FSP recipients <sup>a</sup>	2,976,889	346,522	1,791,523	838,844
Combined Application Project	310,069	0	143,084	166,985
With excess shelter deduction (including Combined Application Project participants)	2,342,508	215,368	1,424,572	702,568
Proportion of total receiving shelter deduction (percents)	78.7	62.2	79.5	83.8
Excess shelter deduction exceeds cap	398,350	52,876	233,889	111,585
Proportion living in households exceeding the shelter cap (percents)	17.0	24.6	16.4	15.9
Of those receiving the deduction of total	13.4	15.3	13.1	13.3

SOURCE: Authors' calculations using the Food Stamp Program Quality Control Database, 2004.

NOTES: SSI = Supplemental Security Income; FSP = Food Stamp Program.

a. Excludes California.

**Chart 2.**  
**Prevalence of excess shelter cost deductions for SSI/FSP recipients, by age group, fiscal years 2001–2006**



SOURCE: Authors' calculations using the Food Stamp Program Quality Control Database, 2001–2006.

NOTE: SSI = Supplemental Security Income; FSP = Food Stamp Program.

### ***Improving Take-up***

In sum, the Food Stamp Program quality control data indicate that the FSP provides benefits to at least half of all SSI recipients and that on average this contribution is a substantial increase in resources. This contribution is concentrated among recipients living in households that are wholly dependent on SSI or a combination of SSI and OASDI and are in consequence officially poor. It is natural to ask about the status of those SSI recipients who are not currently in households using food stamps. Is it possible that a significant number of these households might be eligible? In this section we show that the evidence is mixed, but there is evidence of potential for expanding take-up among currently nonparticipating households with SSI recipients.

### ***Food Stamp Program Participation***

Understanding the evidence of opportunity for increasing participation requires sufficient knowledge of how FSP participation is currently assessed.

While federally funded, the FSP is operated by states. The quality of state management varies; the FSPQC sample is in part conducted to monitor and reduce the variance in accuracy of benefit assessment, and the Farm Security and Rural Investment Act of 2002 established a “high performance bonus” to reward states for “actions taken to correct errors, reduce the rates of error, improve eligibility determinations, or other activities that demonstrate effective administration as determined by USDA” (Committee on Ways and Means 2004, 15–19; FNS 2002). In recent years, attention has also been paid to variation across states in FSP participation rates, the ratio of recipients to persons believed to be eligible. The Department of Agriculture estimates that nationwide only 60 percent of persons eligible for FSP in 2004 actually received benefits (Cunnyngham, Castner, and Schirm 2006, 3). The department has announced a target national participation rate of 68 percent in 2010 (FNS 2007). States varied enormously in estimated take-up rates in 2005, from a low of 40 percent in Wyoming to a high of 95 percent in Missouri (FNS 2007, 7).

The validity of estimates of FSP take-up is open to question, and this complicates their use as a measure of comparative state performance. The numerator of the ratio—persons in FSP recipient households—comes from Social Security administrative data and is reliable, at least in aggregate. Estimates of the denominator—the FSP eligible population—are more problematic. To estimate the number of individuals, the Food and Nutrition Service uses data on annual income for households from the Current Population Survey (CPS), which does not include information on all aspects of FSP eligibility requirements; some types of income are underreported, and the monthly pattern of income variation must be inferred from annual totals and other reported household characteristics, including joblessness and benefit receipt (Barrett and Poikolainen 2006, Appendix C). For some states the CPS samples are small, so estimates of the numbers of eligible households are constructed by combining state sample data with predictions based on data from other states (Cunningham, Castner, and Schirm 2007). Participation rate estimates are then reported with confidence intervals built around the assumptions that the imputation of eligibility is certain and uncertainty arises only from household sampling variability inherent in the CPS and FSPQC sample (Barrett and Poikolainen 2006, Appendix D). If there is error in the eligibility imputation itself, the reported confidence intervals exaggerate the reliability of the estimates both for assessing actual take-up among eligible households in any state and for comparing performance of one state with that of others.

The shortcomings of the FSP participation calculations are illustrated by recently published FNS estimates for SSI recipients (see Table 8). (The FNS is the division of the Department of Agricultural responsible for FSP operation.) If the estimates are accurate, by

2004 virtually every household with an SSI recipient that was FSP eligible in fact received benefits. In that case, promotion of FSP utilization among households with SSI recipients would not seem a promising opportunity for antipoverty strategy. However, SSI receipt is substantially underreported in the CPS, especially among children (Weinberg 2004; Nicholas and Wiseman 2007). FNS does not correct for SSI underreporting in its eligibility estimates, so there are presumably fewer SSI households than there should be in the denominator of the participation rates reported in the table. On the other hand, because of financial incentives created by the quality control program, it is likely that SSI is much more accurately reported in the FSPQC survey, the source of the numerator figures. Underreporting of the prevalence of SSI therefore exaggerates the degree of participation. The problem is even worse for TANF: The reported participation rate estimate for TANF was a logically impossible 125.8 percent in 2003 and 145.3 percent in 2004 (Barrett and Poikolainen 2006, 11). The participation report cautions that “Participation rates over 100 percent are due to reporting errors in the CPS,” but fails to note acknowledged underreporting of SSI. Although not leading to participation rate figures as illogical as those reported for TANF, undoubtedly the report also exaggerates food stamp take-up within this group.

In unpublished work based on matching the 2003 CPS with Social Security administrative data, Nicholas and Wiseman (2007) estimate that the CPS undercounts SSI recipients for the entire year 2002 by one-third. If this applies as well to those households eligible for food stamps in each month, the participation rate among eligible households with SSI recipients is closer to 64 percent. This would seem to offer margin for improvement.

**Table 8.**  
**Estimated Food Stamp Program participation by SSI recipients, fiscal years 2001–2004**

	Eligible individuals (thousands)		Participating individuals (thousands)		Participation rate (percents)	
	2003	2004	2003	2004	2003	2004
SSI recipients						
Elderly	1,264	1,288	1,167	1,250	92.3	97.0
Nonelderly	3,703	3,848	3,509	3,745	94.8	97.3
Combined	4,967	5,136	4,676	4,995	94.1	97.3

SOURCE: Barrett and Poikolainen (2006).

NOTE: SSI = Supplemental Security Income.

## SSI Participation and State Food Stamp Program Management

There is indirect evidence that supports the hypothesis that the prevalence of FSP participation could be increased, at least in some states. Despite the technical issues raised above, there is general agreement that variation across states in estimated FSP participation does bear some relationship to state effectiveness in FSP promotion.<sup>6</sup> If this is the case, it is interesting to see if interstate variation in food stamp receipt among households that include SSI recipients is related to variation in estimated aggregate state participation rates. If states with high aggregate participation rates also show exceptional participation by households that include SSI recipients, this would suggest that management makes a difference and that outreach procedures followed in high participation states should be studied and, if appropriate, imitated.

Note that if households with SSI recipients constituted a large fraction of all FSP eligible households, any connection between aggregate FSP take-up and prevalence among households with SSI recipients would be virtually tautological. However, the FNS estimate of the number of persons eligible for the FSP in an average month in 2004 is five times greater than the total number of SSI recipients (not all of whom are eligible), so it would be possible for variation in aggregate FSP take-up to occur independently of program participation among households that include SSI recipients.

Table 9 presents the results of regressing the ratio of the number of SSI recipients in FSP recipient households to total SSI caseload on the estimated state FSP participation rate. Recall from Table 2 that the nationwide FSP receipt rate for SSI recipients was about 50 percent. Our estimates by state for 2002 range from 31 percent to 78 percent. The regression estimate for 2002 shows that for each percentage increase in the state's estimated participant rate, the prevalence of food stamp receipt among SSI recipients increased by 7 percent. It is important to keep in mind what this does, and does not, mean. Not all SSI recipients are categorically eligible for the FSP, because some do not live alone or with only a recipient spouse. Because some SSI recipients live in households with substantial amounts of other income, we would not expect 100 percent prevalence of food stamp receipt even if every SSI eligible household took up the benefit. Nevertheless, the regressions indicate that SSI recipients in those states estimated to have high participation rates among all eligible persons are more likely themselves

**Table 9.**  
**SSI/FSP take-up and state Food Stamp Program participation, fiscal years 2002–2004<sup>a</sup>**

Fiscal year	Intercept	Food stamp participation rate coefficient	R <sup>2</sup>
2002	0.0897 (0.0848)	0.7115 (0.1512)	0.32
2003	0.0838 (0.0775)	0.5222 (0.1319)	0.25
2004	0.2935 (0.0768)	0.4344 (0.1431)	0.16

SOURCE: Authors' calculations.

NOTES: SSI = Supplemental Security Income; FSP = Food Stamp Program.

a. Percent of state SSI recipients living in households receiving food stamp benefits.

to be in FSP recipient households. The strength of the estimated relationship is surprising given that the independent variable, the participation rate, is probably measured with error and in consequence the estimated coefficient is biased downward.

Food and Nutrition Service researchers estimate that over the 2002–2004 period, the aggregate national FSP participation rate increased from 54 percent to 56 percent to 60 percent, respectively (Cunningham and others 2006, 5). Comparison of the regression results in Table 9 across these three years indicates that while in each year interstate variation in receipt of FSP benefits by SSI recipients is correlated with variation in participation rates, both the slope and correlation diminish. Whatever it is about a state that is measured by the estimated aggregate participation rate, the connection with interstate variation in food stamp receipt by SSI recipients is weakening.

We conclude that FSP participation by households with SSI recipients is lower than some estimates suggest and that attention should be paid to obtaining better estimates of potential gains from renewed FSP outreach among SSI recipients, especially those who live with others.

## Conclusion and Future Research

The Congressional Research Service counts 84 federal mean-tested social assistance programs (Spar 2006). Such multiplicity serves many ends, both substantive and political, and in many instances efforts at coordi-

nation would probably not have benefits commensurate with the costs of developing the agency linkages required. This article has shown that the overlap between the FSP and SSI is significant and that the FSP benefit contributes substantially to the resources of the households of about half of all SSI recipients. We argue that measures of FSP take-up by eligible households that include SSI recipients overstate participation and, as a result, may be misleading as a basis for predicting the payoff to renewed agency efforts to raise FSP participation.

There are at least three promising future steps: First, we need better estimates of FSP participation, both generally and among households that include SSI recipients. In cooperation with the Census Bureau, the Social Security Administration regularly merges data from the Annual Social and Economic Supplement (ASEC), known as the March Supplement, to the Current Population Survey (CPS) with its own administrative data on earnings, OASDI, and SSI receipt (see Nicholas and Wiseman (2007) for an example of use of these data). Merging is performed under secure conditions using a special “cross-walk” file that includes Social Security numbers. The FSPQC sample data do not include Social Security numbers, but FNS collects such information for its FSP recipients. The addition of FSP administrative data on food stamp receipt to the merged CPS/ASEC file, carried out under a security protocol comparable with that used for SSA data, would support better estimation of participation and better identification of households that are eligible for food stamps but do not receive the benefits. From the FNS perspective, the results could be used to assess the validity of participation rates estimated using unadjusted CPS data (as is current practice). For SSA, the results might provide greater insight concerning the characteristics of SSI recipient households that are eligible for food stamps but not participating in the program and the gains from greater outreach effort. Haider, Jackowitz, and Schoeni (2003) argue that while Food Stamp Program take-up among apparently eligible elderly families is lower than for other groups, so too is the need for food assistance. Are the characteristics of nonparticipating SSI recipients consistent with this conclusion?

Second, the effort to merge FNS and SSA data to assess the potential gain from outreach should be complemented with a more direct approach to assessing FSP participation among households with SSI recipients—a survey. Our estimates indicate that

46 percent of all SSI recipients live in households that do not receive FSP benefits. Thus about half of persons interviewed in a well-designed random survey of SSI recipients should be found to reside in households not receiving food stamp assistance. The survey could investigate eligibility. The results would provide direct evidence on the likely gains from expanded systematic FSP promotion among SSI recipients and possibly create a profile of eligible nonrecipients that could focus outreach efforts.

Third, consideration should be given to conducting a joint review of the FNS/SSA Combined (food stamp) Application Project (CAP). CAP is described as “A Government Partnership to Increase Food Stamp Program Participation among the Elderly and Disabled” (FNS 2005). At present most outreach efforts are focused on single SSI recipients living independently. However, attention should be given to (1) expanding the project to include couples and (2) finding ways of informing households in which SSI recipients live with others of the benefits of FSP participation. Recently a number of states have developed innovative ways to stimulate participation, but these efforts have been carried out largely without SSA involvement. The time may have come for a review and renewal of the inter-agency partnership. A comprehensive and collaborative review of the CAP record would seem a place to start and a useful complement to what is learned from a data merge experiment and a recipient survey.

## Notes

<sup>1</sup> TANF is the nation’s income of last resort program for needy families with children. The Section 8 Housing Assistance program provides means-tested rent subsidies to low-income families and individuals. For details, see Committee on Ways and Means (2004), sections 7 and 15.

<sup>2</sup> Unless otherwise noted, throughout this article the term “states” includes the District of Columbia.

<sup>3</sup> This amount is adjusted annually; different caps apply in Alaska and Hawaii.

<sup>4</sup> This count comes from unpublished tabulations provided by the Office of Evaluation, Food and Consumer Service, U.S. Department of Agriculture.

<sup>5</sup> To support this statement, we constructed a measure of state housing costs in 2004 using the area data in the Economic Policy Institute’s *Basic Family Budgets* series (Economic Policy Institute 2005). The simple correlation between the housing cost index and presence of a state supplement was .35. Details on this and an analysis of the prevalence of food stamp receipt by state supplement size are available from the authors of this article.



<sup>6</sup> As a result, FNS bases part of the Food Stamp High Performance Bonus on participation achievement, which is taken to reflect “exceptional customer service” and “exceptional administration of the Food Stamp Program.” See “USDA Awards \$18 Million to States for Exceptional Customer Service in Food Stamp Program” (Press release No 0255.07, September 20, 2007, <http://www.fns.usda.gov/cga/PressReleases/2007/PR-0255.htm>).

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## *The Reservation Wages of Social Security Disability Insurance Beneficiaries*

by *Sophie Mitra*

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### **Summary**

There exists a lot of research on the reservation wages of the unemployed as a determinant of unemployment duration. Little is known about the reservation wages of those who are not in the labor force but might be potential labor force returnees, such as Social Security Disability Insurance (DI) beneficiaries. The main objective of this article is to assess what can be learned from the subjective reservation wages of DI beneficiaries. Using the New Beneficiary Data System (NBDS), the article assesses the magnitudes of reservation wages compared to the last wage earned and the benefit amount, as well as the determinants of reservation wages in a regression framework. The NBDS is unique in that it provides the reservation wages and the work history of DI beneficiaries before and after joining the DI rolls.

The article has several noteworthy results and policy implications:

- Data show that a significant portion of beneficiaries report being likely to accept a job if offered one. Based on the NBDS, 13 percent of DI beneficiaries who did not work since joining the rolls in 1981–1982 reported in 1991 that they would be willing to work if offered a job and provided their reservation wages.
- DI beneficiaries do not appear to price themselves out of the labor market. Half of them would want a wage that is 80 percent or less of the last wage earned before receiving DI. It is estimated that approximately 7 percent of long-term DI beneficiaries may potentially return-to-work if they search for jobs and have a wage offer distribution with a mean at 80 percent of their last wage.
- The nonlabor income in addition to the benefit is positively and significantly associated with the reservation wage, while the benefit amount per se is not. However, this result needs to be treated with caution given that nonlabor income is endogenous to the model.
- Heterogeneity exists between persons still under the DI program and those that have moved to the Old-Age program. The subsamples of persons who have shifted to the Old-Age program and those who are still under the DI program have median reservation wage to the last wage ratios of 0.69 and 0.93, respectively. A significantly lower reservation wage for persons who have moved to the Old-Age program was also found in a regression framework. This heterogeneity between the two groups may result in part from the different program characteristics both groups face,

for instance, in terms of benefit termination and Medicare eligibility rules.

- Subjective reservation wage data can be useful to study populations that are out of the labor force. This article is innovative in that it focuses on a group of persons who are typically considered as being out of the labor force, and therefore are not asked reservation wages in general household surveys such as the Current Population Survey. It would be of great interest to collect more reservation wage data for DI beneficiaries in a longitudinal data set to expand this analysis, for instance, to assess conclusively the effects of changing program characteristics on reservation wages and return-to-work outcomes as beneficiaries transition to the Old-Age program or as new return-to-work programs are put in place.

## **Introduction**

The objective of this article is to examine the reservation wages of Social Security Disability Insurance (DI) beneficiaries, and derive implications for return-to-work policy. In labor economics, in the labor leisure choice model, the reservation wage is a fundamental aspect of the decision to work or not to work. The reservation wage is the amount an individual would need to earn at work in order to accept a job. For a beneficiary to return to work, the market wage would need to exceed the reservation wage. Reservation wages of DI beneficiaries are important in the context of return-to-work policies for the DI program. Since the establishment of the DI program in 1956, return to work has been an integral component of the program. On August 1, 1956, as President Eisenhower signed the legislation establishing the DI program, he was quoted as saying (SSA 2003), “We will endeavor to administer the disability [program] efficiently and effectively, [and]...to help rehabilitate the disabled so that they may return to useful employment.” However, until recently, modest return-to-work policies were implemented and their ineffectiveness was demonstrated (Hennessey and Muller 1994). DI benefit terminations due to return to work are rare: in 2005, the percentage of all beneficiaries that were terminated from the rolls due to return to work stood at 0.6 percent (SSA 2005). After the passage of the Ticket to Work and Work Incentives Improvement Act of 1999, several return-to-work programs and experiments were launched (Green, Eigen, Lefko, and Ebling 2006). This recent interest in return to work is not limited to the United States (Block and Prinz 2001), nor to disabil-

ity programs. Several welfare programs around the world have changed in recent years so as to encourage employment and self-reliance among recipients.<sup>1</sup> In the United States, effective return-to-work policies may be a way to contain the growth of the disability rolls. The potential savings of return-to-work policies to the Social Security trust fund are large. According to GAO (1999), if an additional 1 percent of the DI and Supplementary Security Income (SSI) working age population were to leave the rolls due to return-to-work, lifetime disability cash benefits would be reduced by \$3 billion.

If return-to-work is rare among beneficiaries, it may be because beneficiaries are unable to work or because the wages they would earn in the labor market are well below their reservation wages. This article characterizes the reservation wages of persons on DI. To inform return-to-work policies, the article answers three questions. Is there a pool of DI beneficiaries who have work capabilities and are potential labor force returnees? If so few beneficiaries return to work, is it because these beneficiaries have high reservation wages? Finally, what influences their reservation wages?

One may wonder why beneficiaries would have a reservation wage if they are considered unable to work. DI beneficiaries have passed the Social Security Administration’s disability test that demonstrates their inability to work above a given earnings limit, the substantial gainful activity level. For disability programs, reservation wages and generally return-to-work policies make sense under the assumption that there is a pool of beneficiaries who have work capabilities and represent potential labor force returnees. In the DI program, disability is defined as: “*the inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last, for a continuous period of not less than 12 months*” (SSA 2005). It is inherently difficult to determine whether or not a person is able to engage in any substantial gainful activity. Two persons may have the same impairment but end up with different work capabilities because of differences in the environments they live in and differences in unobservables (for example, motivation). Classification errors are therefore made. Some studies have found that a significant portion of DI beneficiaries are not disabled while others who are rejected are disabled (Benitez-Silva, Buchinsky, and Rust 2004; Nagi 1969). For these reasons, an investigation of the determinants

of the return-to-work behavior of beneficiaries is warranted, and an analysis of their reservation wages is part of this effort.

This article is related to two separate literatures. The first literature deals with the labor market participation of persons with disabilities and the implications of disability benefit programs.<sup>2</sup> Interest was in part generated following the passage of the Americans with Disabilities Act in 1990 and by the steady rise of the rolls of the disability benefit programs despite the strong labor demand in the United States in the 1990s (Hotchkiss 2003; Autor and Duggan 2003). Much of the research on disability benefit programs was focused on benefit levels, exits from the labor force, and screening stringency at the entry into the program. However, growth in the DI rolls can also be affected by changes in exit rates, including return-to-work rates, which are affected by reservation wages. Only a few studies have dealt with return to work and have generally focused on worker's compensation (Butler, Johnson, and Baldwin 1995). The second is related to the extensive literature on reservation wages and their determinants: this literature has mainly dealt with the reservation wages of the short-term unemployed, particularly unemployment insurance beneficiaries (Feldstein and Poterba 1984; Haurin and Sridhar 2003). Reservation wage data are typically not available for DI beneficiaries. Surveys such as the Current Population Survey and the Survey of Income and Program Participation collected reservation wage data for unemployed persons. DI beneficiaries and more generally, persons who report being unable to work due to a disability, are counted as not in the labor force and therefore would not typically be asked to report their reservation wages. This article uses a unique data set, the New Beneficiary Data System (NBDS), which has reservation wage data for DI beneficiaries.

## **Background**

In the economics literature, the term "reservation wage" has been used with two different meanings. In the job search literature, the term refers to the lowest wage a person would accept if the person has to pay a positive sum to gain another job offer from a wage distribution (Mortensen 1986). In the labor supply literature (Killingsworth 1983), it has been used as the lowest wage at which a person will work, which has also been referred to as the "asking wage." In this article, the reservation wage is not used within the context of the job search literature given that most DI beneficiaries do not search for jobs (Hennessey and

Muller 1994). Instead, the reservation wage is used in the same sense as that of the labor supply literature, as detailed below.

In the standard labor leisure choice model of the labor supply literature, individuals select the combination of the numbers of hours of work and leisure to maximize utility (Kaufman and Hotchkiss 2006). Leisure includes the amount of time spent on nonlabor market activities, whether housework, self-care, school, or pure leisure. The slope of the budget constraint reflects the value of the offered wage rate. The slope of the indifference curve is the marginal rate of substitution, the subjective value a person places on time spent on work versus leisure. The slope of the indifference curve at the point of zero hours of work is of particular significance and is called the reservation wage: it measures the amount of money that will induce a person to work the first hour.

It is important to note that for DI beneficiaries, the labor leisure choice model of the labor supply literature is relevant only for those beneficiaries who have work capabilities. As noted earlier, beneficiaries may have work capabilities because the DI definition does not require beneficiaries to be completely unable to work: beneficiaries may be able to work below the substantial gainful activity level. In addition, as a result of tagging errors at the entry into DI, persons able to work above SGA may be included in the rolls.<sup>3</sup> For those beneficiaries with no work capabilities, hours of leisure are perfectly inelastic thus leading to an infinite reservation wage: whatever the wage, the person is unwilling to work.

As the slope of the indifference curve at the point of zero hours of work, the reservation wage is a function of the individual's nonlabor income and variables that affect the tastes of individuals for leisure versus income. The assumption that leisure is a normal good in the labor leisure choice model implies that the reservation wage increases as nonlabor income increases (Borjas 2000, p. 42). Nonlabor income may include the DI benefit, other benefits, a spouse's earnings, and the value of the health insurance coverage provided through DI (Medicare) and/or through a spouse's employment. Intuitively, as the nonlabor income increases, workers want to consume more leisure and therefore a larger wage is required to induce the person to work. In addition to the nonlabor income, there are several possible sources for differences in tastes that may influence the reservation wage (Kaufman and Hotchkiss 2006). First, there are personality differences that, for instance, differentiate a workaholic

from a laid-back person. These personality differences are typically not observed through household surveys. Second, the type of work people do also influences the taste for leisure versus work. Other factors remaining constant, persons in disagreeable jobs are expected to have higher reservation wages. Variables representing working conditions (for example, whether a person has suffered an accident on the job), or job insecurity (for example, whether the person lost her last job), are therefore expected to be positively associated with the reservation wage. Third, the use of leisure time is a determinant of the tastes for work and therefore the reservation wage. A person with a relatively more valuable use for leisure time, for example, due to an activity limitation or a health condition requiring time for self-care, will have a higher reservation wage. It is important to note that the labor leisure choice model yields no indication of the expected relation of age per se and the reservation wage, everything else held constant. However, because age is generally associated with the prevalence of health conditions and activity limitations, age may be observed to be positively related to the reservation wage in raw reservation wage data. Other variables (gender, marital status, race, human capital (education, vocational rehabilitation)) may also affect the reservation wage but there is not a priori expectation of the direction of their effect. Finally, other than nonlabor income, tastes, and individual characteristics, public policies may have an effect on reservation wages. This has been demonstrated with regard to minimum wage policies. In a laboratory experiment, Falk, Fehr, and Zehnder (2006) show that the temporary introduction of a minimum wage leads to a rise in subjects' reservation wages, which persists even after the minimum wage has been removed.

The empirical literature on the determinants of the reservation wages for unemployment compensation beneficiaries provides results that are generally consistent with the predictions previously mentioned, especially with regard to the positive association between nonlabor income and the reservation wage. Feldstein and Poterba (1984), Gorter and Gorter (1993), Bloemen and Stancanelli (2001), and Ryscavage (2002) found that the larger the unemployment compensation benefit, the higher the reservation wage. They also found the same positive association between other nonlabor income and the reservation wage. Results are mixed for human capital and demographic variables. Feldstein and Poterba (1984) found that age, race, gender, and education had no signifi-

cant effect on the reservation wage. Gorter and Gorter (1993) found that age and having a high educational level were positively associated with the reservation wage, while being a male and being married had no significant effect. Jones (1989) found that age, being a male, being married, and the log of past wages have positive and significant coefficients, while the log of unemployment benefit and education variables have coefficients close to zero.

Finally, two remarks are in order regarding the application of the reservation wage concept in the context of the DI program. First, it is important to note, in the context of DI beneficiaries, that the concept of reservation utility may be more pertinent than that of reservation wage. Instead of demanding a lowest wage in order to accept a job offer, a beneficiary would demand an expected utility that is at least as high as the reservation utility provided by being on the DI rolls and not working. Besides the wage, a variety of factors would influence the reservation utility including working conditions, number of hours worked, job location, availability of accommodations for the disability while on the job, income security, and access to health insurance. The concept of a reservation utility, as opposed to a reservation wage, has received very little attention in the labor supply literature. Second, the "reservation wage" used in consistency with the labor supply literature (Killingsworth 1983) as previously described is relevant for return-to-work policy. If a DI beneficiary has work capabilities, there exists a wage rate ( $w^*$ ) for which the person would go back to work. That is, the person would accept jobs paying  $w^*$  or more. Based on Burdett and Mortensen (1978), the return-to-work probability for a given beneficiary  $i$  is

$$p_{i,1} = s_i \alpha_i (1 - F_i(w_i^*)) \quad (1)$$

where  $\alpha_i$  is the offer arrival rate, and  $s_i$  the time allocated to job search  $0 \leq s_i \leq 1$ . A job is characterized by a wage  $\tilde{w}$ , which is a random draw from the cumulative wage distribution function  $F$ . If person  $i$  is unable to work, whatever the job and working conditions, then  $(1 - F_i(w_i^*))$  is null and the return-to-work probability is null. If person  $i$  is able to work for a wage  $w_i^*$ , then  $(1 - F_i(w_i^*)) > 0$ . In this case,  $p_{i,1}$  may be null if the person does not search for a job ( $s_i = 0$ ), or if the labor market is such that he or she has little chance to find a job at a wage rate equal or beyond the reservation wage ( $\alpha_i (1 - F_i(w_i^*)) = 0$ ).<sup>4</sup> The above formulation illustrates how the reservation wage is a determinant of return-to-work and exit probabilities of a beneficiary and how it is an important variable in the context of return-to-work policies. The data here do

not make it possible to assess the relation between the reservation wage on the one hand, and return-to-work and exit probabilities, on the other. Instead, the magnitude and determinants of the reservation wage are the focus of the rest of the article.

## Data

The data source is a panel survey of the Social Security Administration's New Beneficiary Data System (NBDS). The NBDS is a data set with a wealth of information on the postentitlement work efforts of DI beneficiaries. The data set is unique in that it provides reservation wages and work history of a sample of DI beneficiaries. Reservation wage data have never been utilized for disability beneficiaries, but instead have been used to study unemployment duration for unemployment insurance beneficiaries. The NBDS is based initially on a nationally representative cohort of new beneficiaries who joined DI in 1980 and 1981, and were interviewed in 1982 as part of the New Beneficiary Survey (NBS). NBS respondents were reinterviewed as part of the National Beneficiary Followup (NBF) survey in 1991. The analysis is focused on beneficiaries who responded to both the NBS in 1982 and to the NBF in 1991 and is based on data from the three different parts of the data system: the NBS, the NBF, and administrative records. Administrative records include Social Security earnings and benefit records and records from the then Health Care Finance Administration.

All NBF respondents were asked if they "*worked for pay either part time or full time*" after the month they started receiving Social Security DI benefits. Those beneficiaries who reported that they never worked since joining the rolls were asked the following: "*If you were offered a job by some employer in this area, how likely would you be to take it?*" Individuals had to answer yes or no to the following: '*yes, definitely,*' '*yes, if it were something you could do,*' '*yes, if the wages were satisfactory,*' '*yes, if the location was satisfactory,*' '*yes, if the hours were satisfactory,*' and finally '*yes, for some other conditions.*' Individuals who gave at least one yes answer to the above conditions were then asked to provide their reservation wages: "*What would the smallest wage or salary have to be for you to take a job offered by some employer?*" Respondents had to give a dollar amount and specify the time unit the amount referred to (year, month, week, day, or hour).

The focus of the analysis is on beneficiaries with work capabilities. Persons with work capabilities are

identified through self-reports of whether they worked since joining the rolls, and if not, whether they would be willing to take a job if offered one.<sup>5</sup> Out of 2,490 DI beneficiaries who joined the rolls in 1980–1981, responded to the NBF in 1991, and were still on the DI rolls or had moved onto the Old-Age program, 147 reported that they worked for pay either full time or part time since joining the rolls.<sup>6</sup> The remaining 2,343 did not work for pay, and 332 of them reported that they would likely accept a job if they were offered one and reported their reservation wages. So 13.33 percent of the cohort who joined the rolls in 1980–1981 and answered the NBF in 1991, reported a willingness to work and gave their reservation wage. This fraction stands at 16.01 percent for persons who are still under the DI program and at 10.20 percent for persons who have shifted to the Old-Age program.

After removing 15 individuals with missing data on selected variables, the sample of reservation wage respondents includes 317 individuals. Seventy-three percent of respondents provided a reservation wage on an hourly basis and 10 percent, 8 percent, and 9 percent on a weekly, monthly, and annual basis, respectively (Table 1). Only two respondents provided a daily reservation wage, \$10 and \$20, respectively. Table 1 gives the number of persons whose last job before receiving DI was a full-time job. More than 90 percent of reservation wage respondents were full-time workers before getting onto DI, which will be useful to know while calculating the reservation wage relative to the last wage earned ratio. Table 2 has monthly reservation wages based on 40 hours of work per week, 4.3 weeks per month, and 20.5 working days per month. The mean monthly reservation wage stands at \$1,175 and the median at \$860. Answers to the conditions under which reservation wage respondents would accept a job if offered one can be found in Table 3. It is important to understand that the answers are not mutually exclusive. In particular, a person can answer positively to both "*yes, definitely*" and also "*yes, if it were something you could do or any other condition.*" In fact, only 0.6 percent of reservation wage respondents would be willing to accept a job unconditionally, that is, would definitely accept a job if offered one and do not require that any condition be met. This result shows that the DI beneficiaries who have reported their reservation wages have largely done so based on certain conditions being met in the work place. Compared to persons who are still on DI, persons who have transitioned to the Old-Age program are less likely to report they would definitely accept

**Table 1.**  
**Distribution of raw reservation wages based on hourly, weekly, monthly, and annual pay ranges**

Hourly		Weekly		Monthly		Annual	
Range	Number	Range	Number	Range	Number	Range	Number
\$1–\$3	11	Less than \$100	0	Less than \$400	2	Less than \$10,000	3
\$4–\$5	133	\$100–\$200	6	\$400–\$799	1	\$10,000–\$19,999	8
\$6–\$7	36	\$200–\$300	12	\$800–\$1,199	9	\$20,000–\$29,999	11
\$8–\$9	11	\$300–\$400	10	\$1,200–\$1,599	8	\$30,000–\$39,999	2
\$10–\$11	22	\$400–\$500	2	\$1,600–\$1,999	0	\$40,000–\$49,999	2
\$12–\$24	19	\$500 or more	2	\$2,000 or more	4	\$50,000 or more	1
<i>N</i>	232	--	32	--	24	--	27
Mean	6.35	--	285	--	1,243.96	--	21,870.37
<i>N</i> full time	217	--	25	--	24	--	24

SOURCE: The data are from the New Beneficiary Data System.

NOTES: Full time includes working more than 35 hours a week and more than 47 weeks a year.

-- = not applicable.

a job, and more likely to report that the job should involve something the person could do (Table 3).

In this article, subjective reservation wage information is used in a way that is consistent with prior research in the reservation wage literature (Bloemen 1996). A lot of caution is needed while using such data. Indeed, while the reservation wage is a simple concept, measuring it is difficult. One may wonder if reported reservation wages are reliable. The population under study includes individuals who were judged to be disabled when they applied for DI and who have not worked since joining the rolls 10 years earlier, in 1980 and 1981. Most investigations on the reservation wage have used reported reservation wages for the short-term unemployed, typically beneficiaries of unemployment insurance (Jones 1988). Before proceeding with the analysis of the determinants of the reservation wage, it is important to check the consistency of the data of those persons not in the labor force. The reservation wage is first compared to the minimum federal wage in 1991, that is, \$4.25 per hour.<sup>7</sup> Thirty-one percent of reservation wage respondents had a reservation wage below the federal minimum wage. A large portion of the respondents who reported a reservation wage on an hourly basis had a reservation wage close to the minimum wage: 31 percent at \$4, 25 percent at \$5, and 11 percent at \$6. This was not the case for respondents who used other time units and who mostly had reservation wages above the federal minimum wage.

Reservation wages are also compared to benefit amounts. The means of the reservation wage and of

the monthly family benefit amount are compared.

The cumulative distribution of the reservation wage to benefit ratio is given in Table A-1 in the appendix. The mean and median reservation wage to benefit ratio stand at 1.64 and 1.35, respectively, and 70.66 percent of the entire sample have a ratio of more than one. Because individuals would primarily expect to have a higher income while they work than when they do not, the reported reservation wages seem to be reasonable.

This data set with reservation wages is unique and yet presents several limitations. One caveat of the data set is that respondents were not asked to report the *desired* number of hours or working days. One possibility would be to use observed working hours in the

**Table 2.**  
**All reservation wages expressed on a monthly basis, by pay range, number, and percentage distribution**

Pay range	Number	Percentage
Less than \$400	5	1.58
\$400–\$799	94	29.97
\$800–\$1,199	104	32.81
\$1,200–\$1,599	49	15.46
\$1,600–\$1,999	34	10.73
\$2,000 or more	31	9.78
<i>N</i>	317	--
Mean	1,174.83	--
Median	860	--

SOURCE: The data are from the New Beneficiary Data System.

NOTE: -- = not applicable.



**Table 3.**  
**Conditions for working among reservation wage respondents (in percent)**

Conditions for working	Entire sample	Still on DI	Now on Old-Age
Yes, definitely <sup>a</sup>	21.45	16.67	16.67
Yes, if it was something I could do	88.33	87.57	91.24
Yes, if the wage is satisfactory	62.78	64.94	64.18
Yes, if location is satisfactory	59.62	61.49	61.19
Yes, if hours are satisfactory	60.88	62.64	62.69
Yes, for some other condition	23.66	28.25	18.66

SOURCE: The data are from the New Beneficiary Data System.

NOTE: DI = Disability Insurance.

a. The answer "Yes, definitely" is not mutually exclusive from the other conditions.

last job or in the longest employment before getting onto DI rolls: however, this number of hours worked is likely to have been affected by the onset of a disability. One implication of this caveat is that the interaction between the reservation wage and the number of hours worked, that is, the potential endogeneity of hours, cannot be accounted for as has been done elsewhere (Bloemen 1996).

Another caveat of the data set is that it suffered from a significant attrition between 1982–1991. Antonovics, Haveman, Holden, and Wolfe (2000) showed that at the 1991 reinterview, 39 percent of the DI beneficiaries had been reduced from the sample due to attrition, and 30.8 percent of attritions can be attributed to death. They also found that being male, older, and the number of health conditions are positively associated with the likelihood of attrition due to death and other reasons, while being married is negatively associated with the probability of attrition. The sample of workers who may have answered the reservation wage question in 1991 may therefore no longer be representative of the initial cohort of new beneficiaries and the results of the analysis below may be affected by a nonrandom attrition bias.

In addition, the reservation wage data may well overestimate the reservation wages of all beneficiaries with work capabilities because the reservation wage question was not asked among persons who worked at some point since joining the rolls. These beneficiaries might have had work capabilities at the time of the survey in 1991 and it would have been of interest to know their reservation wages.<sup>8</sup> In the appendix, Table A-2 gives the descriptive characteristics of persons who did not answer the reservation wage question, either because they had worked since joining the rolls or reported not being willing to take up a job if offered one. Column (1) of Table A-3 gives the result of a

probit model of the probability of responding to the reservation wage question. The probit model shows that reservation wage respondents are younger and more likely to have received vocational rehabilitation services compared to nonrespondents. In this article, in the reservation wage equation analysis, the nonresponse by beneficiaries who worked while on the rolls will be controlled for through the Heckman procedure. It can be argued that the sample of reservation wage respondents is the group of beneficiaries who are of much interest from a return-to-work policy perspective: these are long-term beneficiaries with work capabilities who have not worked since becoming beneficiaries. If the return-to-work rate of DI beneficiaries is to increase, this group is certainly where there is potential for improvement in return-to-work outcomes.

Despite the important limitations of the reservation wage data at hand, a first study of the reservation wages of DI beneficiaries can be informative and may lead to improved data collection and analysis of reservation wages in the future.

### ***Distribution of the Reservation Wage Ratio***

Of particular interest in the analysis below is the ratio of the reservation wage and the last wage earned before getting onto the DI rolls. The ratio ranges from 0.03 to 21.27. The data for the last wage earned before tax prior to receiving DI was collected in 1981 as part of the NBS and was converted into 1991 dollars. The analysis below builds upon past analysis of the ratio developed by Feldstein and Poterba (1984) and used by Jones (1989, 2000) and Ryscavage (2002).

For the entire sample, the median ratio is 0.79 and the mean is 1.11 with some strong variations by subsample (Table 4). Persons who are still on DI, females, and those who lost their jobs have the highest median ratios—0.93, 0.9, and 0.9, respectively.

**Table 4.**  
**Cumulative distribution of reservation wage ratio based on self-reported last wage**

Group	N	Mean	Median	Share with reservation wage ratio less than or equal to—					
				0.6	0.8	1.0	1.2	1.4	1.6
Entire Sample	317	1.11	0.79	33.44	50.16	63.09	72.56	82.02	86.80
Still on Disability Insurance rolls	178	1.32	0.93	25.84	42.13	53.93	67.42	77.53	82.58
Moved to the Old-Age program	139	0.85	0.69	43.17	60.43	74.82	79.14	87.77	89.93
Lost job	40	1.07	0.90	25.00	37.50	52.50	65.00	77.50	82.50
Left job	277	1.11	0.76	34.66	51.99	64.62	73.65	82.67	86.28
Accident on job	73	1.08	0.77	39.73	49.32	64.38	75.34	83.56	84.93
Females	101	1.26	0.90	24.75	41.58	56.44	63.37	70.30	78.22
Males	216	1.04	0.74	37.50	54.17	66.20	77.78	87.50	89.35

SOURCE: Author's calculations based on the New Beneficiary Data System.

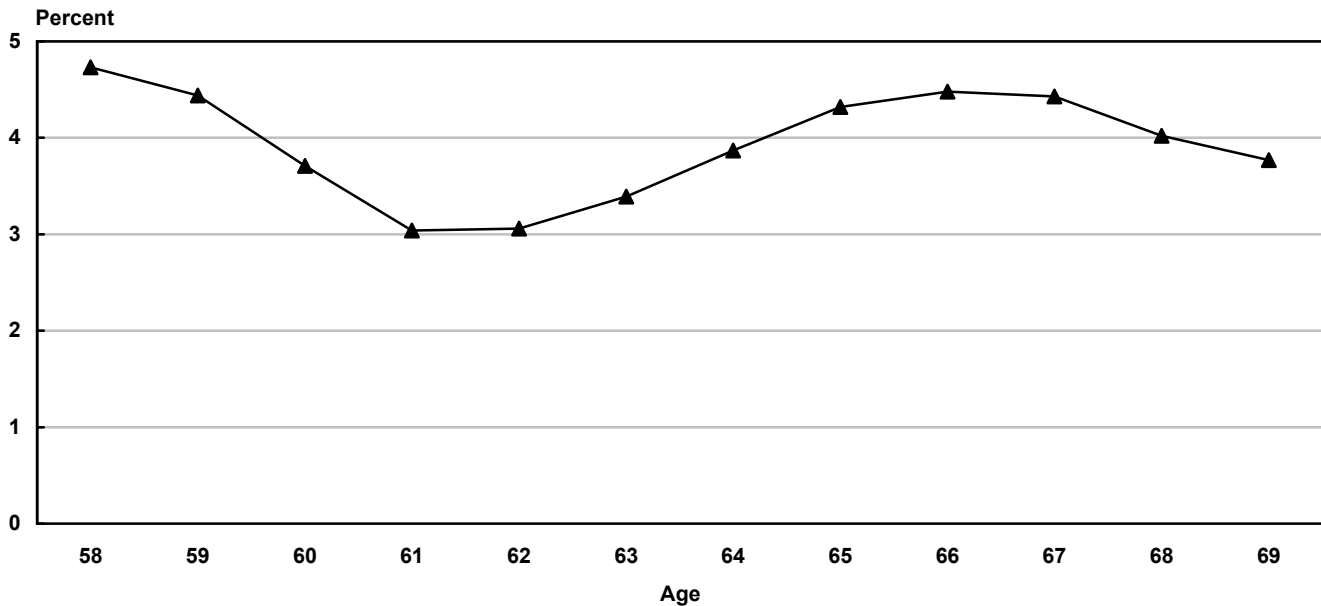
The subsample with the lowest median ratio (0.69) is that of individuals who have moved to the Old-Age program. Overall, almost two-thirds of the entire sample are ready to accept a wage reduction. This is shown as the cumulative portion of 63.09 percent who are ready to work at a wage equal to or less than their last wage earned before getting on DI. The subsamples of persons who have moved to the Old-Age program and those who are still on DI show strong differences. Indeed, 43.17 percent of individuals now on the Old-Age program are ready to work for 60 percent or less of the last wage earned compared with 25.84 percent of the persons who are still receiving DI. This result is surprising given that older persons, because they are more likely to have activity limitations and health conditions, are expected to have relatively higher reservation wage ratios. Such disparity between the two subsamples may result from different personal characteristics (for example, gender) and from different program characteristics. The Old-Age and DI programs have different Medicare eligibility conditions and termination rules, which may affect the reservation wage. Persons on the Old-Age program (hereafter “Old-Age pensioners”) are entitled to Medicare irrespective of their work status, whereas persons who are still on DI would lose Medicare after going back to work above the earnings limit. In addition, in 1991, at the time of the survey, DI beneficiaries who worked were more likely to be labeled as work able and subject to a continuing disability review, which might have led to a termination of benefits due to earnings above the earnings disregard.<sup>10</sup> Old-Age pensioners are not subject to continuing disability reviews and possible termination due to work. An Old-Age pension might stop if earnings exceed the breakeven point, but would be reinstated automatically if earnings dropped below such point. A DI beneficiary terminated due to work would

have to reapply for DI. Therefore, to a risk-averse individual, working while on DI is associated with the risk of losing the DI benefit and Medicare. There is no such risk for the Old-Age pensioner. It may therefore be that DI beneficiaries have higher reservation wages in order to compensate for the risk associated with working while receiving DI.

In addition, the DI and Old-Age programs have different earnings limit and benefit reduction rates, which affect the offered wage distribution.<sup>11</sup> Because the earnings disregard is higher and the benefit reduction rate is lower for the Old-Age program than for DI, any wage offered above the substantial gainful activity (SGA) will be reduced by a greater amount for a DI beneficiary compared to an Old-Age pensioner. An expected higher reservation wage due to program characteristics, all else held constant, and a reduced wage distribution also due to program characteristics, may explain the growth in the percentage of DI beneficiaries with positive earnings as they transition to the Old-Age program at preretirement age (age 62) and at full retirement age (age 65) as shown in Chart 1.

One could argue that the self-reported last wage earned reported as part of the NBS in 1980–1981 might suffer from recall bias and noise. Administrative earnings records for 1979 were therefore used instead of the self-reported wage to estimate the reservation wage ratio. Out of the 317 reservation wage respondents, 299 had positive earnings as per administrative records, and the monthly wage was estimated for them assuming that persons worked full time in 1979. Results in Table A-4 in the Appendix are very close to those obtained in Table 4, with a median ratio of 0.71 and 64.88 percent of the sample willing to work for a wage equal or less than the last wage earned.

**Chart 1.**  
**Percent of beneficiaries with positive work earnings, by age**



SOURCE: Author's calculations based on the New Beneficiary Data System.

Do DI beneficiaries price themselves out of the labor market? They do not appear to, given that close to one-third of beneficiaries have a reservation wage below the minimum wage. Another way to answer this question is to compare the results on the distribution of the reservation wage ratio with those from the literature on unemployment insurance beneficiaries. Feldstein and Poterba (1984) and Jones (1989) found that 62 percent and 56.5 percent of the unemployed have reservation wages that are lower or equal to their last wages earned in the United States and in the United Kingdom, respectively, compared with 63.09 percent for DI beneficiaries. The share of persons with the reservation wage ratio below one for the subsample of DI beneficiaries now under the Old-Age program (74.82 percent) is higher than in the unemployment insurance studies, while the reverse is true for persons still on DI (53.93 percent).<sup>12</sup> About 50 percent of the entire sample has reservation wages less than 80 percent of their last wage. In Jones (1989), based on a sample of short term unemployed in the United Kingdom, almost 30 percent of respondents have reservation wages at least 20 percent below their last wage. In Feldstein and Poterba (1984) 24 percent have reservation wages less than 90 percent below their last wage. It then appears that, compared with the short term unemployed, DI beneficiaries have lower reservation wage ratios.

One can gauge the return-to-work probability of a beneficiary by comparing the reservation wage to the person's wage offer distribution, which is unknown here, and assuming that the beneficiary is searching for a job<sup>13</sup> ( $s_i > 0$ ). If the last wage earned before getting onto DI is used as a proxy for the mean of the current wage offer distribution, then the reservation wage ratio distribution given in Table 4 provides estimates of the wage offer distribution ( $1 - F_i(w_i^*)$ ). One may expect that DI beneficiaries would have to suffer a wage reduction if they go back to work. The impairment itself can be the cause of a wage reduction. Past research has shown that wage reductions following the onset of a disability can be substantial. Burkhauser and Daly (1996) showed that the median drop in earnings between one year before the onset of a disability to 2 years afterward was 31 percent for men and 61.7 percent for women. Baldwin, Zeager, and Flacco (1994) showed that wage losses following a disability onset vary substantially by gender and by type of impairment: depending on the nature of the impairment for impaired males, estimated wage offers range from 97 percent to 74 percent of the unimpaired benchmark, while for females they range from 101 percent to 85 percent. In addition, persons on DI have been out of the labor force for some time, the beneficiary's skills and productivity may have deteriorated, and there may have been a change in production methods

that makes remaining skills less valuable. Together with the possible perception of reduced productivity and discrimination among potential employers with respect to persons with disabilities, this would suggest that the mean wage offer would lie below the last wage earned. Based on these grounds and on previous literature, it is assumed that the expected mean wage offer stands at 80 percent of the last wage earned. As shown in Table 4, 50.16 percent of the entire sample has a reservation wage below the expected mean wage offer, and results vary greatly across subsamples. In addition, 42.13 percent of the subsample of beneficiaries who are still on DI and willing to work have a reservation wage that is less than the mean wage offer, compared with 60.43 percent for those who have transitioned to the Old-Age program.

Given that 16.01 percent of persons who are still on DI reported their reservation wages, and 42.13 percent of these reservation wage respondents have a reservation wage that is less than the expected mean wage offer, one can estimate that among long-term DI beneficiaries 6.78 percent may potentially return to work if they search for jobs and have a mean wage offer at 80 percent of their last wage. This represents more than 10 times the actual return-to-work termination rate at 0.6 percent (SSA 2005). Despite relatively low reservation wages, actual return-to-work termination rates may be so low because of the conditions beneficiaries may place upon accepting a job offer, job location, hours, and type of work. To better understand the reservation wage data presented so far, the rest of this article includes an analysis of the determinants of the reservation wage in a regression framework.

### ***The Reservation Wage Equation***

This section deals with the determinants of the reservation wage. The specification of the reservation wage equation is described below. Of particular importance is the amount of DI benefits and the amount of other nonlabor income received. A well-known prediction of the labor-leisure choice model is that the reservation wage increases with nonlabor income. The dependent variable is the natural log of the reservation wage  $\ln RW_i$  for person  $i$ .

$$\ln RW_i = \alpha_1 + \sum_{j=1}^k \delta_j X_{j,i} + \varepsilon_{1,i} \quad (2)$$

where  $\alpha_1$  is the intercept,  $X_{1i}, \dots, X_{ki}$  are the explanatory variables,  $\delta_1, \dots, \delta_k$  are the coefficients of the  $X_{j,i}$  variables and  $\varepsilon_{1,i}$  is the error term for person  $i$ .

Reservation wages are relevant only for beneficiaries with work capabilities. However, reservation wages are available only for a selective subsample of the cohort of beneficiaries with work capabilities, which can lead to the biased estimation of coefficients. It is not available among beneficiaries who worked since joining the rolls, that is, among those who had work capabilities at some point while on the rolls and may still do at the time of the 1991 survey round. Of course it is possible that individuals who have worked since joining the rolls in 1981–1982 may have had work capabilities at one point but may no longer have capabilities in 1991. The data are thus “selected” by a systematic process that is accounted for through the well-known technique developed by Heckman (1979). For inferences from estimating equation (2) on a subsample of persons reporting their reservation wages to be generalizable to the entire cohort of beneficiaries *with* work capabilities, the estimation needs to take into account a beneficiary’s propensity to report their reservation wages. A probit model that explains the response or absence of response to the reservation wage question is first estimated:

$$I_i = \alpha_2 + \sum_{j=1}^k \delta'_j X'_{j,i} + \varepsilon_{2,i} \quad (3)$$

where  $\alpha_2$  is the intercept,  $X'_{1i}, \dots, X'_{ki}$  are the explanatory variables,  $\delta'_1, \dots, \delta'_k$  are the coefficients of the  $X'_{j,i}$  variables and  $\varepsilon_{2,i}$  is the error term for person  $i$ .

The system (2) and (3) is identified if at least one variable is included in (3) that is not in (2). Among persons with work capabilities, the challenge is to have a variable that influences whether a person worked while on the rolls but does not influence the reservation wage. In this application, this exclusion variable is the natural logarithm of the last wage earned prior to joining DI. The last wage earned is assumed to influence the expected mean wage offer, and thus the budget constraint as per the labor leisure choice model, but not the tastes for leisure versus work as represented in the reservation wage (slope of the indifference curve at zero hours of work). A sample correction variable (the inverse Mills ratio) is created to account for the fact that the sample of respondents is not random. This variable is then included as an explanatory variable in the reservation wage equation (2) to correct for sample selection bias. Equation (2) was also estimated through simple ordinary least square without sample selection correction and the results were unchanged.

The independent variables to be included in equations (2) and (3) can be inferred based on the labor supply model described earlier in the background. The model includes independent variables on the beneficiary's nonlabor income. The log of the benefit is the log of the family benefit amount, which includes payment to the beneficiary and dependents. A variable is used for self-reported nonlabor income other than the DI benefit. Beneficiaries in the NBF are eligible for Medicare, since they have been on DI for more than 2 years. A dummy indicates whether the person reports having health insurance coverage in addition to Medicare<sup>14</sup> in order to assess the potential impact that health insurance coverage may have on return to work. Other health insurance may include Medicaid, Champus, a military coverage, or any other health insurance coverage. It also includes measures of the health of the beneficiary through a binary variable for the prevalence of an activity limitation and a continuous variable for the number of health conditions. Variables related to human capital (educational level variables, vocational rehabilitation) as well as job separation (accident on the job, job loss) are also included. Finally, the model has demographic variables (age, white, male, marital status) without any clear a priori expectation on the direction of their effect on the reservation wage. This data set does not include information on the states or the regions where respondents live.<sup>15</sup>

Descriptive statistics are given in Table 5 for the variables used for the entire sample, the subsamples of persons who are still on DI, and those who have transitioned to the Old-Age program. All variables were collected in 1991 as part of the NBF and administrative data except for race and information on the last job held (lost job, accident on the job, and the last wage), which were collected in 1982 as part of the NBS. Results of the first stage probit selection model are presented in Table A-3 of the Appendix, while results of the reservation wage equation are presented in Table 6. Sample size for the probit estimation is 453, of which 317 individuals have responded to the reservation wage question. Beneficiaries who were in the younger age group, lost their last job, had more than a high school educational level, and did not have any limitation in activity of daily living nor any health insurance coverage besides Medicare were found to be more likely to respond to the reservation wage question among those with work capabilities. Column (a) of Table 6 includes the results of a first specification. The coefficients of the log of the monthly benefit

amount (0.08) and the other health insurance binary variable (0.02) are not significantly different from zero, while that of the log of the other nonlabor income (0.27) is significant. A 10-percent increase in the other nonlabor income is associated with a 2.7 percent increase in the reservation wage. As expected, the accident on the job variable has a positive and significant coefficient, however, this is not the case for the variable representing whether the separation for the last job was a job loss. The older than age 64 binary variable has a negative and significant coefficient, while the age 45 to 64 variable does not. After controlling for observed characteristics, beneficiaries who have transitioned to the Old-Age program do have significantly lower reservation wages than those still on DI. This extends the descriptive result reached earlier for the reservation wage ratio. Finally, being married is significantly associated with a lower reservation wage. When being married is interacted with being male, the net effect of being married is found to be a lot lower for males compared to females.<sup>16</sup> In addition, the sample selection bias variable has a coefficient that is not significantly different from zero, which indicates that the model does not suffer from selection bias.

In columns (b), (c), and (d) of Table 6 alternative specifications are tested. First, the results in (a) may suffer from an omitted variable bias given that in the descriptive statistics presented earlier, persons with reported hourly reservation wages had lower reservation wages than respondents using other reporting units. In (b), variables are therefore included to control for the reporting unit of the reservation wage. Persons with annually reported reservation wages are found to have a statistically significant higher reservation wage, and the main results from specification (a) hold. However, a limitation of specification (b) is the potential endogeneity of the reporting unit. The selected reporting unit may depend on past job characteristics, which may be influenced by several factors accounted for in the model, including human capital. Secondly, the results in (a) may not reflect the variety of conditions alongside the wage that beneficiaries take into account while considering whether to accept a job. Binary variables are included in (c) to account for the conditions placed by reservation wage respondents on the type of work done, the wage, and some other condition. It is important to note that answers to three of the conditions are highly correlated: the wage, the location, and the hours. Conditions related to the location, and the hours are therefore left out of the model. Persons who condition the acceptance of a job on the type of work

**Table 5.**  
**Descriptive statistics on reservation wage respondents**

Variable	Entire sample	Still on DI rolls	Now on Old-Age rolls	Source in NBDS		
				NBS	NBF	Administrative records
Log monthly reservation wage	6.928 (0.504)	6.959 (0.530)	6.888 (0.468)		x	
Log DI benefit amount	6.449 (0.348)	6.379 (0.375)	6.540 (0.288)			x
Log monthly other income	6.946 (0.654)	6.911 (0.734)	6.990 (0.535)		x	
Health insurance besides Medicare	0.713	0.697	0.734		x	
Lost job	0.126	0.152	0.094	x		
Accident on the job	0.230	0.185	0.288	x		
Less than high school education	0.517	0.444	0.612		x	
High school diploma	0.287	0.337	0.223		x	
More than high school education	0.196	0.219	0.165		x	
Vocational rehabilitation	0.309	0.382	0.216		x	
Limitation(s) in activities of daily living	0.587	0.634	0.525		x	
Number of health conditions	4.183 (2.089)	4.073 (2.134)	4.323 (2.030)		x	
White	0.773	0.758	0.791	x		
Male	0.681	0.652	0.719	x		
Married	0.543	0.534	0.554		x	
Younger than age 45	0.151	0.270	...			x
Ages 45–64	0.410	0.730	...			x
Aged 65 or older	0.438	...	1.000			x
Health condition						
Blindness or serious problem seeing	0.347	0.343	0.331		x	
Conditions affecting eyes	0.246	0.188	0.324		x	
Hearing conditions	0.255	0.174	0.360		x	
Missing hand, arm, foot or leg	0.032	0.028	0.036		x	
Bone or muscle conditions	0.735	0.699	0.784		x	
Stiffness or deformity, limbs	0.483	0.472	0.496		x	
Nervous system conditions	0.114	0.163	0.050		x	
Other paralysis	0.088	0.135	0.029		x	
Respiratory system conditions	0.246	0.225	0.273		x	
Urinary system conditions	0.208	0.219	0.194		x	
Cancer	0.060	0.067	0.050		x	
Mental conditions	0.369	0.444	0.273		x	
Heart conditions	0.584	0.687	0.683		x	
<b>N</b>	<b>317</b>	<b>178</b>	<b>139</b>			

SOURCE: Author's calculations based on the New Beneficiary Data System.

NOTES: Standard deviations are in parenthesis. DI = Disability Insurance; NBDS = New Beneficiary Data System; NBS = New Beneficiary Survey; NBF = New Beneficiary Followup.

... = not applicable; X = presence of variable in source.

**Table 6.**  
**Determinants of the reservation wage**

Variable	(a)	(b)	(c)	(d)	(e) Still on DI rolls	(f) Now on Old-Age rolls
Log DI benefit amount	0.078 (0.100)	0.076 (0.100)	0.073 (0.100)	0.057 (0.100)	0.145 (0.127)	0.069 (0.185)
Log monthly other income	0.267 *** (0.064)	0.236 *** (0.064)	0.291 *** (0.063)	0.254 *** (0.064)	0.266 *** (0.078)	0.232 * (0.124)
Health Insurance besides Medicare	0.022 (0.065)	0.021 (0.065)	0.01 (0.066)	-0.008 (0.066)	0.106 (0.088)	-0.093 (0.105)
Lost job	-0.02 (0.082)	-0.024 (0.081)	-0.012 (0.081)	-0.017 (0.083)	-0.024 (0.105)	0.044 (0.140)
Accident on the job	0.125 * (0.066)	0.131 * (0.066)	0.132 * (0.067)	0.152 ** (0.068)	0.173 * (0.096)	0.089 (0.092)
High school diploma	0.049 (0.066)	0.057 (0.066)	0.04 (0.066)	0.058 (0.066)	0.016 (0.087)	0.119 (0.106)
More than high school education	0.049 (0.066)	-0.04 (0.077)	-0.013 (0.078)	-0.005 (0.078)	0.005 (0.100)	-0.068 (0.128)
Vocational rehabilitation	-0.016 (0.063)	-0.012 (0.063)	-0.032 (0.063)	-0.011 (0.064)	-0.084 (0.083)	0.133 (0.104)
Limitation(s) in activities of daily living	0.058 (0.059)	0.050 (0.059)	0.021 (0.060)	-0.077 (0.061)	0.022 (0.079)	0.090 (0.101)
Number of health conditions	0.0002 (0.014)	0.000 (0.014)	0.005 (0.014)		0.022 (0.018)	-0.042 * (0.021)
White	-0.054 (0.066)	-0.066 (0.066)	-0.069 (0.066)	-0.027 (0.067)	-0.005 (0.091)	-0.054 (0.103)
Male	-0.005 (0.080)	-0.039 (0.081)	-0.002 (0.082)	-0.047 (0.082)	-0.108 (0.113)	0.094 (0.128)
Married	-0.402 *** (0.119)	-0.384 *** (0.119)	-0.394 *** (0.119)	-0.413 *** (0.121)	-0.446 *** (0.150)	-0.289 (0.208)
Ages 45–64	-0.075 (0.084)	-0.047 (0.084)	-0.084 (0.083)	-0.104 (0.087)		
Aged 65 or older	-0.182 * (0.088)	-0.139 (0.088)	-0.161 * (0.087)	-0.209 ** (0.097)		
Male * Married	0.389 *** (0.126)	0.399 *** (0.125)	0.385 *** (0.126)	-0.416 *** (0.127)	0.495 *** (0.166)	0.205 (0.207)
Inverse Mills ratio	-0.534 (0.386)	-0.512 (0.384)	-0.583 (0.389)	-0.472 (0.392)	-0.967 * (0.515)	0.191 (0.697)
Intercept	5.118 *** (0.701)	5.292 *** (0.706)	5.187 *** (0.699)	5.365 *** (0.709)	5.226 *** (0.896)	3.963 ** (1.584)
Reported annual reservation wage		0.268 ** (0.102)				
Reported monthly reservation wage		-0.006 (0.103)				
Reported weekly reservation wage		0.092 (0.089)				
Would work if it was something I could do			-0.223 ** (0.094)			
Would work if the wage is satisfactory			0.079 (0.058)			
Would work if other condition is met			0.057 (0.066)			

Continued

**Table 6.**  
**Continued**

Variable	(a)	(b)	(c)	(d)	(e) Still on DI rolls	(f) Now on Old-Age rolls
Health condition						
Blindness or serious problem seeing				0.046 (0.059)		
Conditions affecting eyes				0.033 (0.067)		
Hearing conditions				-0.034 (0.064)		
Missing hand, arm, foot, or leg				-0.034 (0.064)		
Bone or muscle conditions				-0.139 ** (0.067)		
Limb stiffness or deformity				0.024 (0.058)		
Nervous system conditions				0.116 (0.089)		
Other paralysis				-0.047 (0.100)		
Respiratory system conditions				-0.073 (0.063)		
Urinary system conditions				-0.074 (0.068)		
Cancer				0.061 (0.114)		
Mental conditions				-0.066 (0.056)		
Heart conditions				0.143 ** (0.057)		
Age					-0.006 (0.005)	0.012 -0.017
R square	0.197	0.218	0.231	0.242	0.281	0.158
F Statistic	4.32	4.11	4.25	3.16	3.92	1.43

SOURCE: Author's calculations based on the New Beneficiary Data System.

NOTES: Standard deviations are in parenthesis.

DI = Disability Insurance.

\* indicates significance at the 10-percent level; \*\* indicates significance at the 5-percent level; \*\*\* indicates significance at the 1-percent level.

done are found to have significantly lower reservation wages. Again the major results in (a) hold in (c). However, this specification may also suffer from an endogeneity bias as the conditions on accepting a job may well be formulated in simultaneity with the reservation wage. Finally, in (d) the number of health conditions used in (a) is replaced by binary variables for specific health conditions. The number of health conditions in (a) has a coefficient that is close to zero, which might be due to the inability of this variable to account for the possible varying time and self-care constraints, and hence, the taste for leisure, resulting from differ-

ent health conditions. In (d), having a bone or muscle condition is found to be negatively associated with the reservation wage, while having a heart condition is positively associated with the reservation wage. However, when the health binary variables are introduced in (d), the overall fit of the model is reduced compared to (a).<sup>17</sup>

Specification (a) is therefore the preferred specification for the model. Given the heterogeneity between beneficiaries still on DI and Old-Age pensioners found in the descriptive statistics and in (a), specification (a) is run on the two subsamples in columns (e) and



(f) and a continuous age variable is introduced. The results in (a) hold for the subsample still on DI in (e), with the exception that the coefficient of the log of the benefit amount is higher (0.15) but remains imprecisely estimated. The coefficient of the age variable is negative and close to zero. However, the coefficient of the sample selection variable is significantly different from zero, which indicates that results from this regression need to be used with caution. The results in (f) also need to be treated with caution given that the equation is overall poorly estimated ( $F=1.43$ ).

Overall, the results are consistent with the predictions of the labor leisure choice model, with regard to the positive association of the reservation wage with other nonlabor income and an accident on the job history. The coefficient on the benefit amount close to zero in specifications (a) through (d) above is surprising and adds to the reservation wage literature. As noted earlier, most studies on unemployment compensation found a positive relationship between reservation wages and benefits. An advantage of this study is the use of administrative data for the benefit amount while earlier studies on the reservation wage relied on self-reported benefit data. However, great caution is needed in interpreting the coefficients of the benefit amount and the other nonlabor income given the endogeneity of these variables in the model. The benefit amount and the other nonlabor income indeed depend on age, past experience, and earnings, which depend on demographic and human capital characteristics. In this case, an instrumental variable approach may be a more appropriate estimation method than OLS. The challenge is to find an instrument with a high correlation with the benefit amount and the other nonlabor income and a low correlation with the reservation wage. In the absence of a credible instrument in the available data set, simple OLS estimates are to be interpreted with caution.

Another limitation of the analysis above is that self-reports were used for work activity over the 1982–1991 period to identify persons who worked while on the rolls and who have had work capabilities. These individuals together with those who report being willing to work and give their reservation wages constitute the overall sample within which the correction for sample selection bias was made for reservation wages. Given that administrative earnings records are available in the NBDS, one can check the work history of beneficiaries while on the rolls. This is done in Table 7. Among those who reported that they did not work while on the rolls and gave their reservation

wages, 21.14 percent had positive earnings for at least a year. Among those who did not report their reservation wages and reported not working while on the rolls, 13.25 percent had positive earnings for at least a year. For both of these subgroups, most of those who reported not working but did have positive earnings had positive earnings for 1 or 2 years. In contrast, a large majority of the persons who did report that they worked had positive earnings for more than 2 years: a small percentage of this group (6.61 percent) did not have any earnings records, which might be explained by the fact that only earnings subject to Social Security payroll taxes are recorded. The sample selection bias correction was conducted again based on the broader sample of persons with work capabilities including reservation wage respondents as well as the 393 persons with positive earnings during 1982–1991. Results of the regression analysis remained unchanged and are available from the author.

## **Conclusion**

Based on a unique data set, the primary objective of this article is to examine the reservation wages of DI beneficiaries with work capabilities and derive implications for return-to-work policies. The first result of interest is that a significant portion of beneficiaries have work capabilities and report being likely to accept a job if offered one. Based on the NBDS, 13 percent of a cohort of DI beneficiaries who joined the rolls in 1981–1982 and answered the NBF survey in 1991 reported that they would be willing to work if offered a job and reported their reservation wages.

The second result of interest is that DI beneficiaries do not appear to price themselves out of the labor market: the reservation wages of DI beneficiaries are relatively low compared to the last wage earned before joining DI. About half of them would want a wage that is 80 percent or less of the last wage earned before getting onto DI. It is estimated that approximately 7 percent of long-term DI beneficiaries may potentially return to work if they search for jobs and have a mean wage offer at 80 percent of their last wage. Actual return-to-work rates are very low in the order of 0.6 percent for a variety of possible reasons including conditions placed on accepting a job offer beside the wage such as the type of work done, the location, and hours of the job as well as income security. The lack of accommodations on the job, at least in the pre-ADA period of the NBDS, may also constitute a barrier to return to work.

A third important result of this study is the heterogeneity between persons still on DI and those that have moved to the Old-Age program. The subsamples of persons who have shifted to the Old-Age program and those who are still on DI have mean ratios of 0.91 and 1.38 respectively, and the former has a more dispersed distribution. This result was also reached in a regression framework. This heterogeneity between the two groups may result in part from the different program characteristics both groups face in terms of benefit termination rules and Medicare eligibility. Longitudinal data is not available to investigate the impact of changes in the program characteristics on the reservation wage as beneficiaries transition to the Old-Age program.

A fourth result of interest is that in the regression analysis, the nonlabor income beside the benefit is positively associated with the reservation wage while the DI benefit amount has a coefficient that is not significantly different from zero. However, this result needs to be interpreted with caution given the endogeneity of the benefit amount and other nonlabor income variables.

Finally, this article shows that subjective reservation wage data can be useful to study populations that are out of the labor force. Reservation wages have typically been used to assess the behavior of the

unemployed and the determinants of unemployment duration. The analysis above is innovative in that it focuses on a group of persons who are typically considered as being out of the labor force, and therefore are not asked reservation wage questions in general household surveys such as the Current Population Survey. However, it is important to note that the analysis was constrained by caveats of the data set at hand. A major caveat of this data set is that reservation wages were collected only at one point in time in 1991, which limits the scope of research that may be conducted based on this data set. Currently, the NBDS is the only source of reservation wage data for DI beneficiaries. It would be very valuable to collect further reservation wage data in the post-ADA period when accommodations in the work place have become more common and with improvements in survey design as the Social Security Administration expands its return-to-work programs. It would be of great interest to collect more reservation wage data for DI beneficiaries in a longitudinal data set to expand this analysis, for instance to assess conclusively the effects of changing program characteristics on reservation wages and return-to-work outcomes as beneficiaries transition to the Old-Age program or as new return-to-work programs are put in place. With improved reservation data, another important next step would be to explore the link between reservation wages and return-to-work experiences for DI beneficiaries.

**Table 7.**  
**Responses to reservation wage question, work self-reports, and administrative earnings records**

Administrative earnings record 1982–1991	Response to the reservation wage question—					
	Yes		No			
			Work self-report		No work self-report	
	Number	Percent	Number	Percent	Number	Percent
Total earnings record	317	100.00	136	100.00	2,023	100.00
Total without earnings record	250	78.86	9	6.61	1,755	86.75
Number with positive earnings						
Total	67	21.14	125	93.39	268	13.25
1	36		16		152	
2	18		18		62	
3	4		22		18	
4	6		20		14	
5	0		12		8	
6	2		9		2	
7	1		7		6	
8	0		10		3	
9	0		4		2	
10	0		9		1	

SOURCE: Author's calculations based on the New Beneficiary Data System.

**Table A-1.**  
**Cumulative distribution of reservation wage to benefit ratio**

Group	N	Mean	Median	Percentage share with reservation wage to benefit ratio less than or equal to—						
				0.6	0.8	1.0	1.2	1.4	1.6	1.8
Entire Sample	317	1.64	1.35	8.83	20.19	29.34	41.01	53.00	58.99	66.88
Still on DI rolls	178	1.86	1.56	4.49	14.61	21.91	30.34	43.82	49.44	57.87
Moved to the Old-Age	139	1.35	1.15	14.39	27.34	38.85	54.68	64.75	71.22	78.42
Lost job	40	1.58	1.35	2.50	10.00	17.50	30.00	52.30	60.00	67.50
Left job	277	1.65	1.35	9.75	21.66	31.05	42.60	53.07	58.84	66.79
Accident on job	73	1.68	1.37	12.33	19.18	24.66	39.73	49.32	57.53	67.12
Females	101	1.65	1.41	8.91	16.83	26.73	63.37	70.30	78.22	80.20
Males	216	1.63	1.33	8.80	21.76	30.56	43.98	55.09	60.65	67.59

SOURCE: Author's calculations based on the New Beneficiary Data System.

NOTE: DI = Disability Insurance.

**Table A-2.**  
**Characteristics of the reservation wage nonrespondents**

Variable	Worked Mean	Did not work Mean
Log DI benefit amount	6.468 (0.371)	6.470 (0.350)
Log monthly other income	7.049 (0.735)	7.056 (0.621)
Health insurance besides Medicare	0.694	0.741
Lost job	0.221	0.107
Accident on the job	0.235	0.208
Less than high school education	0.287	0.556
High school diploma	0.272	0.296
More than high school education	0.441	0.149
Vocational rehabilitation	0.426	0.214
Limitation(s) in activities of daily living	0.375	0.637
Number of health conditions	3.485 (1.790)	4.107 (1.952)
Log of the last wage	6.865 (0.604)	6.752 (0.711)
White	0.776	0.812
Male	0.633	0.661
Married	0.537	0.626
Younger than age 45	0.272	0.067
Ages 45–64	0.338	0.354
Aged 65 or older	0.39	0.579
Health condition		
Blindness or serious problem seeing	0.243	0.320
Conditions affecting eyes	0.228	0.255
Hearing conditions	0.221	0.286
Missing hand, arm, foot, or leg	0.014	0.034
Bone or muscle conditions	0.603	0.726
Limb stiffness or deformity	0.390	0.469
Nervous system conditions	0.103	0.091
Other paralysis	0.074	0.086
Respiratory system conditions	0.189	0.304
Urinary system conditions	0.169	0.250
Cancer	0.059	0.074
Mental conditions	0.412	0.479
Heart conditions	0.551	0.682
<b>N</b>	<b>136</b>	<b>2,023</b>

SOURCE: Author's calculations based on the New Beneficiary Data System.

NOTES: Standard deviations are in parenthesis.

DI = Disability Insurance.

**Table A-3.**  
**Probit estimates for reservation wage response among those with work capabilities**

Variable	(1)	(2)
Log DI Benefit amount	0.052 (0.139)	-0.091 (0.194)
Log monthly other income	0.108 (0.080)	0.059 (0.140)
Health insurance besides Medicare	0.032 (0.076)	-0.367 ** (0.158)
Lost job	-0.042 (0.102)	0.543 ** (0.180)
Accident on the job	0.091 (0.080)	0.117 (0.117)
High school diploma	-0.015 (0.079)	0.277 (0.168)
More than high school education	0.048 (0.096)	0.747 *** (0.183)
Vocational rehabilitation	0.191 ** (0.076)	0.190 (0.151)
Number of health conditions	-0.026 (0.016)	-0.028 (0.034)
Limitation(s) in activities of daily living	-0.080 (0.070)	-0.587 *** (0.148)
White	-0.079 (0.084)	-0.054 (0.168)
Male	0.049 (0.105)	-0.153 (0.206)
Married	-0.165 (0.144)	0.376 (0.268)
Ages 45–64	-0.172 (0.115)	-0.370 ** (0.188)
Aged 65 or older	-0.383 *** (0.117)	-0.188 (0.180)
Male * Married	0.119 (0.154)	-0.424 (0.296)
Log of last wage	-0.003 (0.061)	0.253 * (0.146)
Intercept	-0.288 (0.702)	-2.907 ** (1.243)
log-likelihood	-931.036	-238.376
N	2,159	453

SOURCE: Author's calculations based on the New Beneficiary Data System.

NOTES: Standard deviations are in parenthesis.

DI = Disability Insurance.

\* indicates significance at the 10-percent level; \*\* indicates significance at the 5-percent level; \*\*\* indicates significance at the 1-percent level.

**Table A-4.**  
**Cumulative distribution of reservation wage ratio based on last wage from administrative earnings data**

Group	N	Mean	Median	Share with reservation wage ratio less than or equal to—					
				0.6	0.8	1.0	1.2	1.4	1.6
Entire sample	299	6.08	0.71	41.14	52.17	64.88	70.57	75.92	77.93
Still on DI rolls	165	10.27	0.90	30.91	41.82	56.97	64.24	70.91	71.52
Moved to the Old-Age program	134	0.92	0.58	53.73	64.93	74.63	78.36	82.09	85.82
Lost job	38	16.78	1.23	31.58	34.21	44.74	47.37	55.26	55.26
Left job	261	4.52	0.68	42.53	54.79	67.82	73.95	78.93	81.23
Accident on job	69	1.55	0.60	49.28	59.42	69.57	73.91	78.26	78.26
Females	95	4.03	0.82	34.74	47.37	58.95	65.26	71.58	75.79
Males	204	7.03	0.67	44.12	54.41	67.65	73.04	77.94	78.92

SOURCE: Author's calculations based on the New Beneficiary Data System.

NOTES: The last wage is estimated based on 1979 administrative earnings record expressed on a monthly basis and in 1991 dollars.

DI = Disability Insurance.

## Notes

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<sup>1</sup> For instance, Gilbert and Parent (2003) provide an analysis of French and U.S. experiences.

<sup>2</sup> A review of this literature can be found in Bound and Burkhauser (1999).

<sup>3</sup> If the tagging system were perfect, a beneficiary may still be willing and able to work below the earnings limit, but would be unable to work above the limit. The exercise of assessing the reservation wages would still be important in the context of return-to-work policies. Of course, the objective of a return-to-work policy would then change. It would no longer fulfill the objective of reducing the size of the program through terminations of beneficiaries due to return to work. However, it would continue to serve the purpose of encouraging the participation of persons with disabilities in society through employment.

<sup>4</sup> The person may return to work but stay on the rolls if his or her work earnings are below the earnings limit ( $g$ ). The reservation wage (expressed here on a monthly basis) can be below  $g$ , in which case the person could accept a job below  $g$  and stay on the roll, or above  $g$  and leave the rolls. A reservation wage above  $g$  would indicate that the person would only accept a job that would ultimately make her ineligible for DI. The probability that person  $i$  exits the rolls is as follows:

$$p_{i,2} = \alpha_i s_i (1 - F_i(g))$$

If  $w_i^* \geq g$ ,  $p_{i,1} = p_{i,2}$ . If  $w_i^* < g$ , then  $p_{i,1} > p_{i,2}$ , and the probability of returning to work while staying on the DI roll is  $p_{i,1} - p_{i,2}$ . According to the above formulation, the DI exit probability is a function of the following parameters ( $\alpha_i, s_i, F_i, w_i^*, g$ ), where  $\alpha_i$  and  $F_i$  reflect conditions of the labor market. Some of the above parameters can be influenced through public policy, directly ( $g$ ) or indirectly ( $\alpha_i, s_i, F_i, w_i^*$ ). First of all, whether or not the reservation wage is finite (in other words whether or not the person has work capabilities) depends on the disability tagging system in place and how frequently classification errors occur. In addition, policies that encourage beneficiaries to participate in return-to-work services, as in the recently implemented Ticket to Work program, can have an impact on  $s_i$  by

encouraging persons to search for a job through services like job counseling. Such services can also improve the person's wage offer distribution  $F_i$  if they enhance the human capital of the beneficiary and thus give prospects for improved wages. They can also increase the person's offer arrival rate ( $\alpha_i$ ) through job search coaching services. In this context, return-to-work policies may be evaluated in their ability to boost  $\alpha_i$ ,  $s_i$  and  $F_i$  for those beneficiaries who have work capabilities. A return-to-work policy will aim to increase the reemployment probability and the DI roll exit probability of every person who is on the roll with some work capabilities.

<sup>5</sup> Another question in the NBDS that can be used to identify persons with work capabilities is: "are you limited in the kind and amount of work that you can do?" 80.37 percent persons who report that they worked since joining DI or would be willing to accept a job if offered one also answered that they do not have a work limitation.

<sup>6</sup> The characteristics of this group and the determinants of whether or not a beneficiary worked was analyzed in detail in Muller (1992).

<sup>7</sup> The author uses \$180, \$774, and \$9,288 for the equivalent weekly, monthly, and annual minimum wages, respectively.

<sup>8</sup> Wage data is available for persons who have worked since joining the rolls. It would be of interest to compare these wages to the reservation wages of persons who have not worked since becoming beneficiaries. However, this wage data is not used in this article due to missing values.

<sup>9</sup> As of October 2000, DI beneficiaries who work above the earnings limit could receive Medicare Part A premium-free coverage for 93 months after the trial work period (SSA (2003)).

<sup>10</sup> This changed recently. The Ticket to Work and Work Incentives Improvement Act of 1999 (section 111) provided that effective January 1, 2002, a return to work alone cannot trigger a continuing disability review for DI beneficiaries who have received benefits for at least 2 years.

<sup>11</sup> Among Old-Age pensioners, persons aged 65–70 have their benefits reduced by \$1 for every \$3 earned above \$9,720 per year, and persons aged 70 or older are not subject to any earnings limit (SSA 2003). DI beneficiaries whose work earnings are above the earnings limit of \$500 per month in 1991 have their benefits terminated. To be more precise, if work earnings are above the earnings limit, beneficiaries are not immediately terminated from the DI program, without meeting certain conditions. First, beneficiaries can test their ability to work above the earnings limit without affecting their eligibility for benefits during a 9-month long trial work period. After the trial work period ends, there is a 3-year period, the so-called extended period of eligibility (EPE), during which benefits are withheld for those months in which earnings exceed the earnings limit (SSA (2003)). Once the EPE is over, and the person continues to exceed the limit, the person's DI benefit is terminated.

<sup>12</sup> In addition, an interesting finding is that for DI beneficiaries the mean of the reservation wage ratio (1.32) is higher than that of unemployment insurance recipients: 1.07 (Feldstein and Poterba 1984), 1.045 (Jones 1989), 0.85 in Jones (2000), and 0.83 (Ryscavage 2002). This may be explained by the fact that persons receiving DI receive it as a permanent benefit, whereas persons on unemployment insurance receive it only temporary. However, the mean of the reservation ratio for the subsample that have transitioned to the Old-Age program (0.85) is within the range of estimates for unemployment insurance recipients.

<sup>13</sup> Persons who have a job search history while on the rolls between 1981–1982 and 1991 account for 17.03 percent of reservation wage respondents.

<sup>14</sup> Beneficiaries become eligible to receive Medicare 2 years after joining the DI rolls, and coverage continues after they transition to the Old-Age program.

<sup>15</sup> If disability is understood as resulting from environmental factors, among others, then changes in the environment such as the passage of antidiscrimination laws, the availability of accessible transport system, and physical environment could affect the reservation wages of persons with disabilities. This cannot be captured with the data set at hand.

<sup>16</sup> Using the coefficients estimated in (a), the net effect on the reservation wage of being married for a male is given by  $\delta_{\text{Married}} + \delta_{\text{Male}} + \delta_{\text{Married} \times \text{Male}} = -0.40 - 0.01 + 0.39 = -0.02$ . For females, the net effect of being married is  $\delta_{\text{Married}} = -0.40$ .

<sup>17</sup>  $F_{(a)} - F_{(d)} = 4.32 - 3.16 = 1.16$ , which is below the critical value of 2.18 for the  $F$  distribution with 12 degrees of freedom for the denominator (based on the difference in the number of independent variables between models (a) and (d),  $\infty$  degrees of freedom for the denominator based on the sample size).

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## ***KiwiSaver: New Zealand's New Subsidized Retirement Savings Plans***

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### ***Introduction***

Since July 1, 2007, New Zealanders have had a new option for their retirement savings—KiwiSaver—a type of subsidized, defined contribution retirement savings plan offered by private-sector providers. New labor force entrants in permanent positions who are aged 18 or older are automatically enrolled in a KiwiSaver plan, but are able to opt out of the plan if they wish. Also, all individuals younger than age 65, including anyone not in the labor force, are permitted to set up a KiwiSaver account.

A law passed in September 2006 created the KiwiSaver to encourage New Zealanders to save more for retirement and to supplement the New Zealand Superannuation (NZS) benefit, a flat-rate universal old-age pension. Although lower earners mainly rely on NZS benefits for their retirement income, middle and higher earners must supplement this benefit to maintain their preretirement standard of living. Workers may also purchase supplementary retirement plans, called superannuation plans either through their employers or directly from an insurance or other financial services company.<sup>1</sup> The New Zealand government introduced the KiwiSaver, in part, because by the end of 2005, less than 30 percent of the active labor force was covered by some type of superannuation plan.

This note provides a brief description of the New Zealand public pension system and its sources of funding, statistics on the country's savings rates before the KiwiSaver law was passed, and a detailed description of KiwiSaver.

### ***New Zealand's Public Pension***

New Zealand Superannuation is the flat-rate public pension available to all New Zealand residents aged 65 or older who have lived in the country for 10 years since age 20, or for 5 years since age 50 (SSA 2007). NZS benefit amounts depend on marital status and living arrangements and are taxed as income. Each year benefit amounts for a married or civil union couple are adjusted for inflation and then adjusted to fall between 65.0 percent and 72.5 percent of the country's net average wage.<sup>2</sup> The NZS retirement benefit for other categories is computed as a percentage of the benefit amount for married couples and civil unions: single persons living alone receive 65 percent of the benefit, and single persons living with others receive 60 percent. NZS benefits are adjusted according to changes in the consumer price index (Toder and Khitatrakun 2006). NZS is the government's largest single budget item with a current net cost of 3.4 percent of gross domestic product (GDP), which is expected to rise to 6.9 percent of GDP by 2050 with the aging of the population (NZSF 2006).

Although NZS currently is funded by general revenues, as the population ages this program will need an additional source of funding to meet benefit payment projections. The New Zealand Superannuation Act 2001 created a separate investment fund called the New Zealand Superannuation Fund (NZSF, or the Fund) to partially finance the projected rise in costs of New Zealand Superannuation benefits as the country's population ages. From 1970 through 2005, while the

overall population grew by 44 percent, the number of people aged 65 or older doubled. In 2006, the number of people aged 65 or older represented 12 percent of the population and is expected to reach 26 percent by 2051 (Statistics 2006). According to the National Population Projections, the ratio of the working-age population (aged 16–64) to the population aged 65 or older was 5.5 to 1.0 in 2004. This figure is expected to drop to 3.0 to 1.0 in 2028 and to 2.2 to 1.0 by 2051 (Statistics 2004).

The government expects to finance the NZSF from general revenues with an average contribution of NZ\$1.95 billion (US\$1.6 billion) a year until about 2027.<sup>3</sup> In September 2003, the government made the first payment to the NZSF of NZ\$2.4 billion (US\$1.9 billion). By October 30, 2007, its assets totaled NZ\$14 billion (US\$11.3 billion), and the average nominal rate of return since 2003 was 14.29 percent.

By law, the government may not withdraw any capital from the Fund before July 1, 2020. The New Zealand Treasury estimates that by about 2028, when the ratio of the working-age population to the population aged 65 or older falls to about 3 to 1, the government will stop contributing to the NZSF and begin taking money out of the Fund to cover about 15 percent of the net yearly superannuation costs from 2055 through 2075.<sup>4</sup> The Fund is expected to continue growing over time because the capital withdrawals are projected to be less than the Fund's income (NZSF 2006 and 2007; MSD 2007; Treasury 2006).

The Fund operates “at arms length” from the government. The Guardians of New Zealand Superannuation, a separate government organization, manages and administers the Fund's assets. The Board, which oversees the Guardians, is made up of five to seven members who are recommended by the Minister of Finance and appointed by the Governor General. A formal review of the Guardians' performance will be conducted about every 5 years by an independent agent appointed by the Minister of Finance (NZSF 2006).<sup>5</sup>

### ***Saving for Retirement***

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KiwiSaver was introduced to help New Zealanders save more for retirement. In March 2007, Finance Minister Michael Cullen stated that New Zealanders have one of the lowest household savings rates among the developed countries. Cullen (2007a) cited the New Zealand Reserve Bank estimates of current household

savings rate at negative 17.5 percent. A March 2007 New Zealand Treasury study concluded that about 20 percent of the population aged 45–64 needs to save more for retirement, including about 9 percent of individuals and 13 percent of couples aged 55–65 (Hosking 2007).<sup>6</sup>

A 2003 report from a panel of experts found that economic well-being in retirement may be substantially different for the future cohort of retirees, compared with current retirees.<sup>7</sup> The report concluded that a large percentage of current retirees are able to maintain their standard of living through a variety of sources: NZS, private savings, and mortgage-free home ownership. The report also found that although those nearing retirement should be able to meet their needs, younger workers may have lower standards of living in retirement because of high levels of debt, student loans, child-bearing at later ages, and potentially fewer mortgage-free homes (IBIS 2004).

Participation in supplementary retirement plans has been relatively low. In New Zealand, voluntary supplementary retirement plans (called superannuation plans) are available through employers or directly from an insurance or other financial services company. At the end of 2005, more than 600,000 individuals were enrolled in some type of superannuation plan with a total of NZ\$18.2 billion (US\$14.6 billion) in assets. Half of these individuals (about 13 percent of the labor force) were enrolled in employer-sponsored retirement superannuation plans with a total of NZ\$11.5 billion (US\$9.2 billion) in assets (MED 2006).<sup>8</sup> According to the 2001 Household Savings Survey, less than 20 percent of those who earned between NZ\$15,000 and NZ\$50,000 (US\$12,000 and US\$40,000) per year were enrolled in some type of superannuation plan. The government is targeting this group of earners with KiwiSaver (Cullen 2007b).

### ***KiwiSaver***

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KiwiSaver is a new type of subsidized, defined contribution retirement savings plan created to supplement NZS and help increase an individual's retirement income.<sup>9</sup>

### ***Eligibility***

Beginning July 1, 2007, new permanent workers aged 18–65 are automatically enrolled in a workplace KiwiSaver plan, but have from the second to the eighth week of their employment to opt out of the plan.<sup>10</sup> Anyone younger than age 65, including

the self-employed and anyone not in the labor force, may choose to set up a KiwiSaver account with any provider. Workers who are automatically enrolled in a KiwiSaver plan may choose to move their account to another provider at any time. Those aged 65 or older may continue to contribute to their KiwiSaver account as long as they joined a plan before age 65. Although individuals are permitted only one KiwiSaver account, workers with multiple jobs may contribute to their account from each of their current jobs.

Individuals who are younger than age 65 and either citizens of New Zealand or entitled to stay in New Zealand indefinitely are permitted to have a KiwiSaver account as long as they reside in the country. New Zealand government employees working outside of the country may also opt into a KiwiSaver plan.

### **Contributions and Government Subsidies**

Workers may select a monthly contribution rate of either 4 percent or 8 percent of gross earnings; those who do not choose either rate will automatically be assigned a 4 percent contribution rate. Workers may increase their contribution up to the 8 percent rate at any time. KiwiSaver account holders who contribute to their account will receive a tax credit of up to NZ\$20 (US\$16) a week and NZ\$1,040 (US\$836) a year that will be deposited directly into their KiwiSaver account.

Until April 1, 2008, employers had the option of paying part or all of an employee's KiwiSaver contribution. The employer's contribution of up to 4 percent of the employee's gross earnings was tax-exempt to the employer.<sup>11</sup> Because this is not a matching contribution, the total employer/employee contribution was either 4 percent or 8 percent.

Beginning April 1, 2008, all employers are required to contribute to an employee's KiwiSaver account: starting with 1 percent of the employee's gross salary in 2008 and adding 1 percent each year until the mandatory employer contribution reaches 4 percent of gross salary by April 1, 2011. Employers receive a tax credit of up to NZ \$20 (US\$16) per week per employee (Cullen 2007).

Another arrangement is possible between April 2008 and March 2011. If both the employer and the employee agree, they are permitted to divide the employee's contribution: in 2008, each would contribute 2 percent of the employee's gross earnings; by 2010, each would contribute 3 percent; and by 2011, they both would contribute 4 percent.<sup>12</sup>

Employers must withhold contributions beginning with a new employee's first paycheck, unless the employee opts out of the program (between the second and eighth week of employment). Those who opt out of the program will receive a refund of their contributions. The government tax authority, Inland Revenue, collects the contributions from employers and distributes them to the employees' KiwiSaver plans.

The New Zealand government provides two other subsidies (in addition to the tax credit): a one-time tax-free payment of NZ\$1,000 (US\$804) to each KiwiSaver account after the individual plan receives the first contribution to that account; and, a NZ\$40 (US\$32) annual fee subsidy to each account holder to defray administrative costs. The fee subsidy is payable up to age 65, or 5 years after a worker older than age 60 first sets up a KiwiSaver account. The government has not set a limit on how much providers may charge account holders for administrative fees.

### **"Contribution Holiday" and Early Withdrawals**

After the first 12 months of membership, automatically enrolled workers may take a "contribution holiday" for a minimum of 3 months, up to 5 years at a time for any reason. However, workers with a serious illness or experiencing a financial hardship may take the "contribution holiday" before the end of the first year of membership. Details of the "contribution holiday" provision for those who contract directly with a plan (the self-employed, those who are not in the labor force, and workers younger than age 65 who choose a KiwiSaver plan that is not sponsored by their employer) are dependent on the particular plan provider. Also, some plans and mortgage providers may allow account holders to divert up to one-half of their contribution to pay for a mortgage after contributing to a KiwiSaver account for 12 months.

After the opt-out period expires, KiwiSaver participants may withdraw all of their funds at age 65 or 5 years after they opened their account, whichever is later, and at any time in the event of serious illness.<sup>13</sup> Participants may withdraw all of their contributions and any vested employer contributions if they:

- face significant financial hardship such as the member's or dependent's medical care, a dependent's education, or the member's inability to meet minimum living expenses according to normal community standards determined by law;
- leave the country permanently; or,

- make a down payment on the purchase of a first home after at least 3 years of saving in a KiwiSaver account. Beginning in 2011, the government plans to provide an eligible first-time home buyer who has a KiwiSaver account (subject to income and housing cost limits) with a home ownership subsidy of NZ\$1,000 (US\$804) per year, up to a maximum of NZ\$5,000 (US\$4,018) per person (Treasury 2007).

### **Providers**

Workers who have been automatically enrolled and do not choose a registered provider are assigned to a default provider.<sup>14</sup> The Ministry of Economic Development approves all KiwiSaver providers including a limited number of default providers selected through a tender process.<sup>15</sup> It is also responsible for supervising KiwiSaver plans, issuing provider and plan regulations, and negotiating fees with the default providers. Although the default providers offer only plans with a conservative investment portfolio, other registered providers are permitted to provide a variety of investment portfolios such as conservative, balanced, or growth. KiwiSaver accounts are portable and members may change plans and investment risk portfolios at any time. The government provides no guarantees for the funds in KiwiSaver accounts.

Employers must provide access to a KiwiSaver plan to all employees although workers may choose any registered KiwiSaver plan. Employers may convert their existing employer-sponsored superannuation plan to a KiwiSaver; they may also request an exemption from the government from providing their employees with access to a KiwiSaver plan, if their registered superannuation plan meets certain criteria such as limiting employees' access to their retirement savings and requiring them to contribute at least 4 percent of earnings to their employer's superannuation plan.

### **Financial Education**

The New Zealand Retirement Commission is charged with providing workplace financial education programs to help workers make informed decisions about establishing a KiwiSaver account. The Commission, established in 1993, has been conducting financial education programs around the country on a wide range of topics including saving, debt management, housing, and understanding net worth. Until now, workplace financial education focused solely on retirement seminars for workers nearing retirement. The new financial education program will help individuals

assess whether or not KiwiSaver is appropriate for them (Feslier 2006). The Commission's public information Web site, <http://www.sorted.org.nz>, provides free financial education information including online tools to help workers make an informed decision about KiwiSaver (MSD 2007).<sup>16</sup>

### **Recent Tax Incentives for Retirement Savings**

The original KiwiSaver bill submitted to Parliament in February 2006 did not contain any tax exemptions.<sup>17</sup> However, just before its passage by Parliament in August 2006, tax incentives for employer contributions to KiwiSaver plans were added to the bill. As a result, the Association of Superannuation Funds of New Zealand lobbied the government to extend the same tax breaks to these occupational pension plans so that KiwiSaver plans would not have what was perceived as an unfair advantage over superannuation plans. Thus, the December 2006 tax bill passed by Parliament contained a provision that allows the same tax breaks to superannuation plans with the same requirements as the KiwiSaver: fully portable, full vesting, and "lock-in until retirement." In May, Finance Minister Cullen announced in his "Budget 2007" speech some additional changes to KiwiSaver and qualified superannuation plans: a tax credit for employees and phased-in mandatory employer contributions. Legislation for the employee tax credit was enacted in May 2007 (Tax Policy 2007) and the provision for mandatory employer contributions was enacted in December 2007.

### **Take-up Rate**

Before the tax incentives for workers were added to the KiwiSaver bill, the government had predicted that 345,000 workers would have a KiwiSaver account in the first year and by 2013, that figure would reach 700,000—about 25 percent of all eligible individuals. When the KiwiSaver law was passed (with tax incentives), the government estimated that 50 percent of those eligible would have a KiwiSaver account no later than 2017. Based on the later estimates, the government predicted that its annual expenditures on KiwiSaver could be close to NZ\$2 billion (US\$1.6 billion) per year as early as 2012 (Cullen 2007b).

By the end of 2007, the take-up rate far exceeded government predictions—more than 300,000 workers were enrolled in a KiwiSaver plan.<sup>18</sup> According to the Retirement Commission's 2007 Review of Retirement Income Policy, based on the current rate

of enrollment, the government incentives could be much more costly than the most recent estimates. The Commission urged Treasury to estimate the likely future costs of KiwiSaver to the government including the sustainability of the current incentives (Retirement Commission 2007c).

### **Program Evaluation**

Researchers have pointed out a number of unresolved issues concerning KiwiSaver, which include the following:

- The government could negotiate such low administrative fees with the default providers that smaller, nondefault providers might not be able to compete.
- Saving for retirement and saving for a first home could be conflicting goals that could undermine the retirement savings aspect of KiwiSaver.
- An individual may contribute for only 12 months to qualify for the government subsidy and then take a “contribution holiday.” The potential for thousands of inactive accounts with very low balances could be very costly to administer.
- The choice between contribution rates of only 4 percent and 8 percent of salary can limit the amount an individual is able to contribute to an account. If there were more options, such as gradually increasing the rate from 4 percent to 8 percent of salary over a period of 4 years, a larger number of account holders might be able to afford to contribute more to their KiwiSaver account as their salaries rise.
- Many first-time home buyers would be excluded from a KiwiSaver housing subsidy because the limits on household income and the cost of the house are likely to be relatively low. (Because this aspect of KiwiSaver will not be introduced until 2011, the limits have yet to be established.)
- The KiwiSaver law does not address the issue of how to protect the value of the savings after withdrawal. A lump-sum withdrawal is permitted at retirement and there is no requirement to use these funds for retirement. Also, the law does not include measures to encourage the growth of the annuities market. Because only a few companies currently offer annuities, rates are not competitive and the types of annuities available are limited. (Toder and Khitatrakun 2006; St. John and Littlewood 2006a and 2006b).

The government is in the process of developing the KiwiSaver Evaluation Program to assess the strengths and weaknesses of KiwiSaver. The program could address some of the previously mentioned unresolved issues. Inland Revenue, Treasury, the Ministry of Economic Development, and the Ministry of Social Development are working on this policy initiative. The government intends to evaluate KiwiSaver from its inception to make program improvements quickly. Areas of study will include levels of participation, cost effectiveness, and public awareness of KiwiSaver. The New Zealand government hopes that the data they collect will help other countries that are considering automatic enrollment retirement savings programs (MSD 2007; Retirement Commission 2007a).

### **Notes**

<sup>1</sup> In New Zealand, the term “superannuation” means retirement.

<sup>2</sup> This figure has been raised to 66 percent during the term of the current government as a result of an agreement with a coalition party. The floor is set by law at 65 percent (MSD 2007); according to the New Zealand Superannuation Act 2001, average wage is determined by the last Quarterly Employment Survey published by the Department of Statistics before March 1 each year. For more information on the average wage, see Statistics (2007).

<sup>3</sup> For more information on the government’s contribution to the NZSF, see sections 42 and 43 of the New Zealand Superannuation Act 2001.

<sup>4</sup> A portion of NZS funding will continue to come from general revenues.

<sup>5</sup> For an evaluation of the NZSF, see Littlewood (2005) and St. John (2001).

<sup>6</sup> See Le and others (2007).

<sup>7</sup> The 2003 report was produced by the Periodic Report Group, a panel of public- and private-sector experts that reviewed New Zealand’s retirement income policy every 6 years. The review function was transferred to the Retirement Commissioner who presented her first report at the end of 2007. After that, the Commissioner is required to present a report every 3 years (Retirement Commission 2007a).

<sup>8</sup> As of 2005, about 50 percent of the U.S. labor force participated in some type of employer-sponsored retirement plan (Costo 2006).

<sup>9</sup> Unless otherwise noted, the source for the information on KiwiSaver in this section is <http://www.kiwisaver.govt.nz>.

<sup>10</sup> This includes new entrants to the labor force and workers who are starting a new job.

<sup>11</sup> For example, if the employer contributes 4 percent of the employee's earnings, the entire 4 percent is tax-exempt to the employer. If the employer and the employee each contribute 2 percent of the employee's earnings, the employer's 2 percent contribution was tax-exempt. Employers pay a special tax called specified superannuation contribution withholding tax (SSCWT) on the rest of their contributions to an employee's account.

<sup>12</sup> This measure was added in December 2007.

<sup>13</sup> According to the law, the definition of serious illness is either permanently or totally disabled or near death.

<sup>14</sup> Providers include banks, insurers, and management companies.

<sup>15</sup> The Ministry of Economic Development has selected six default providers (New Zealand Government 2007).

<sup>16</sup> Other functions of the Retirement Commission include collecting research on retirement planning behaviour and attitudes and providing information that aids development of national policies impacting on retirement. For more information go to [http://www.retirement.org.nz/retirement\\_commission\\_home.html](http://www.retirement.org.nz/retirement_commission_home.html).

<sup>17</sup> In New Zealand, investment earnings are taxed.

<sup>18</sup> Close to 20 percent of these workers are younger than age 25 and more than half are younger than age 45.

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## ***OASDI and SSI Snapshot and SSI Monthly Statistics***

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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 <http://www.socialsecurity.gov>. The statistics include the number of people who receive benefits, eligibility category, and average monthly payment. This issue presents SSI data for March 2007—March 2008.

The Monthly Statistical Snapshot summarizes information about Social Security and the SSI programs and provides a summary table on the trust funds. Data for March 2008 are given on pages 122–123. The more detailed SSI tables begin on page 125. Persons wanting detailed monthly OASDI information should visit the Office of the Actuary's Web site at <http://www.ssa.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 [http://www.socialsecurity.gov/policy/docs/quickfacts/stat\\_snapshot](http://www.socialsecurity.gov/policy/docs/quickfacts/stat_snapshot). The most current data for trust funds (Table 4) are available at <http://www.socialsecurity.gov/OACT/ProgData/funds.html>.

## *Monthly Statistical Snapshot, March 2008*

**Table 1.**  
**Number of people receiving Social Security, Supplemental Security Income, or both, March 2008**  
**(in thousands)**

Type of beneficiary	Total	Social Security only	SSI only	Both Social Security and SSI
All beneficiaries	55,034	47,634	4,800	2,600
Aged 65 or older	36,251	34,229	868	1,154
Disabled, under age 65 <sup>a</sup>	11,766	6,388	3,932	1,446
Other <sup>b</sup>	7,017	7,017	...	...

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, March 2008**

Type of beneficiary	Beneficiaries		Total monthly benefits (millions of dollars)	Average monthly benefit (dollars)
	Number (thousands)	Percent		
All beneficiaries <sup>a</sup>	50,234	100.0	49,721	989.80
Old-Age Insurance				
Retired workers	31,803	63.3	34,420	1,082.30
Spouses	2,421	4.8	1,289	532.40
Children	509	1.0	275	541.10
Survivors Insurance				
Widow(er)s and parents <sup>b</sup>	4,418	8.8	4,519	1,023.00
Widowed mothers and fathers <sup>c</sup>	157	0.3	121	773.20
Children	1,920	3.8	1,358	707.00
Disability Insurance				
Disabled workers	7,162	14.3	7,192	1,004.20
Spouses	153	0.3	41	265.30
Children	1,693	3.4	507	299.70

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 special age-72 beneficiaries.

b. 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.

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

CONTACT: Kevin Kulzer (410) 965-5366 or oasdi.monthly@ssa.gov for further information.

## *Monthly Statistical Snapshot, March 2008*

**Table 3.  
Supplemental Security Income recipients, March 2008**

Age	Recipients		Total payments <sup>a</sup> (millions of dollars)	Average monthly payment <sup>b</sup> (dollars)
	Number (thousands)	Percent		
All recipients	7,400	100.0	3,770	476.90
Under 18	1,126	15.2	671	567.50
18–64	4,251	57.5	2,300	492.50
65 or older	2,022	27.3	799	393.50

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, March 2008  
(in millions of dollars)**

Component	OASI	DI	Combined OASI and DI
<b>Receipts</b>			
Total	50,563	8,589	59,152
Net contributions	50,503	8,576	59,079
Income from taxation of benefits	12	0	12
Net interest	48	13	61
Payments from the general fund	0	0	0
<b>Expenditures</b>			
Total	42,609	9,013	51,622
Benefit payments	42,365	8,801	51,167
Administrative expenses	243	212	455
Transfers to Railroad Retirement	0	0	0
<b>Assets</b>			
At start of month	2,045,812	214,848	2,260,660
Net increase during month	7,954	-424	7,530
At end of month	2,053,766	214,424	2,268,190

SOURCE: Data on the trust funds were accessed on May 9, 2007, on the Office of the Chief Actuary's Web site at <http://www.socialsecurity.gov/OACT/ProgData/funds.html>.

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



***Supplemental Security Income***  
***March 2007–March 2008***

**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 [http://www.socialsecurity.gov/policy/docs/statcomps/ssi\\_monthly/index.html](http://www.socialsecurity.gov/policy/docs/statcomps/ssi_monthly/index.html).

**SSI Federally Administered Payments**

**Table 1.**  
**Recipients (by type of payment), total payments, and average monthly payment,**  
**March 2007–March 2008**

Month	Number of recipients				Total payments <sup>a</sup> (thousands of dollars)	Average monthly payment <sup>b</sup> (dollars)
	Total	Federal payment only	Federal payment and state supplementation	State supplementation only		
2007						
March	7,286,345	5,007,291	1,984,953	294,101	3,591,053	468.00
April	7,324,892	5,035,947	1,994,253	294,692	3,654,231	467.80
May	7,312,686	5,026,449	1,990,699	295,538	3,599,541	466.60
June	7,314,027	5,025,486	1,992,529	296,012	3,625,876	467.70
July	7,346,122	5,048,420	2,000,801	296,901	3,665,925	466.70
August	7,335,942	5,039,337	1,999,139	297,466	3,645,801	466.70
September	7,355,596	5,053,437	2,004,028	298,131	3,647,862	467.10
October	7,383,815	5,074,012	2,011,161	298,642	3,713,167	465.80
November	7,350,382	5,048,638	2,002,851	298,893	3,586,332	467.60
December	7,359,525	5,057,395	2,003,839	298,291	3,735,792	468.40
2008						
January	7,386,859	5,078,577	2,011,353	296,929	3,742,315	475.70
February	7,382,806	5,076,113	2,010,168	296,525	3,741,089	476.40
March	7,399,632	5,089,646	2,013,465	296,521	3,769,599	476.90

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, March 2007–March 2008**

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2007						
March	7,286,345	1,211,572	6,074,773	1,091,061	4,184,852	2,010,432
April	7,324,892	1,212,155	6,112,737	1,105,058	4,206,926	2,012,908
May	7,312,686	1,209,531	6,103,155	1,103,451	4,199,204	2,010,031
June	7,314,027	1,208,766	6,105,261	1,102,812	4,200,005	2,011,210
July	7,346,122	1,210,261	6,135,861	1,112,881	4,217,655	2,015,586
August	7,335,942	1,209,640	6,126,302	1,106,044	4,213,591	2,016,307
September	7,355,596	1,210,708	6,144,888	1,115,317	4,220,609	2,019,670
October	7,383,815	1,212,151	6,171,664	1,119,468	4,240,142	2,024,205
November	7,350,382	1,210,582	6,139,800	1,109,414	4,218,103	2,022,865
December	7,359,525	1,204,512	6,155,013	1,121,017	4,221,920	2,016,588
2008						
January	7,386,859	1,207,249	6,179,610	1,121,830	4,241,747	2,023,282
February	7,382,806	1,205,049	6,177,757	1,120,026	4,241,558	2,021,222
March	7,399,632	1,204,243	6,195,389	1,126,322	4,251,217	2,022,093

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.

**SSI Federally Administered Payments**

**Table 3.**  
**Recipients of federal payment only, by eligibility category and age, March 2007–March 2008**

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
<b>2007</b>						
March	5,007,291	620,032	4,387,259	869,362	3,016,061	1,121,868
April	5,035,947	619,544	4,416,403	880,820	3,032,833	1,122,294
May	5,026,449	617,410	4,409,039	879,684	3,027,104	1,119,661
June	5,025,486	616,075	4,409,411	879,074	3,027,082	1,119,330
July	5,048,420	616,218	4,432,202	887,162	3,040,043	1,121,215
August	5,039,337	615,064	4,424,273	881,580	3,037,019	1,120,738
September	5,053,437	614,705	4,438,732	889,387	3,042,388	1,121,662
October	5,074,012	614,708	4,459,304	893,023	3,057,468	1,123,521
November	5,048,638	613,372	4,435,266	885,284	3,041,160	1,122,194
December	5,057,395	608,957	4,448,438	895,007	3,045,176	1,117,212
<b>2008</b>						
January	5,078,577	610,816	4,467,761	895,654	3,061,087	1,121,836
February	5,076,113	609,282	4,466,831	894,205	3,061,706	1,120,202
March	5,089,646	608,122	4,481,524	899,489	3,070,057	1,120,100

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,**  
**March 2007–March 2008**

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2007						
March	1,984,953	490,150	1,494,803	219,375	1,021,950	743,628
April	1,994,253	491,065	1,503,188	222,006	1,026,855	745,392
May	1,990,699	490,614	1,500,085	221,421	1,024,130	745,148
June	1,992,529	491,001	1,501,528	221,409	1,024,834	746,286
July	2,000,801	492,067	1,508,734	223,385	1,029,047	748,369
August	1,999,139	492,359	1,506,780	222,026	1,027,961	749,152
September	2,004,028	493,533	1,510,495	223,619	1,029,251	751,158
October	2,011,161	494,892	1,516,269	224,036	1,033,537	753,588
November	2,002,851	494,588	1,508,263	221,670	1,027,751	753,430
December	2,003,839	492,483	1,511,356	223,626	1,028,547	751,666
2008						
January	2,011,353	494,940	1,516,413	223,660	1,032,325	755,368
February	2,010,168	494,345	1,515,823	223,466	1,031,723	754,979
March	2,013,465	494,626	1,518,839	224,507	1,033,195	755,763

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.

**SSI Federally Administered Payments**

**Table 5.**  
**Recipients of state supplementation only, by eligibility category and age, March 2007–March 2008**

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
<b>2007</b>						
March	294,101	101,390	192,711	2,324	146,841	144,936
April	294,692	101,546	193,146	2,232	147,238	145,222
May	295,538	101,507	194,031	2,346	147,970	145,222
June	296,012	101,690	194,322	2,329	148,089	145,594
July	296,901	101,976	194,925	2,334	148,565	146,002
August	297,466	102,217	195,249	2,438	148,611	146,417
September	298,131	102,470	195,661	2,311	148,970	146,850
October	298,642	102,551	196,091	2,409	149,137	147,096
November	298,893	102,622	196,271	2,460	149,192	147,241
December	298,291	103,072	195,219	2,384	148,197	147,710
<b>2008</b>						
January	296,929	101,493	195,436	2,516	148,335	146,078
February	296,525	101,422	195,103	2,355	148,129	146,041
March	296,521	101,495	195,026	2,326	147,965	146,230

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.

SSI Federally Administered Payments

**Table 6.**  
**Total payments, by eligibility category, age, and source of payment, March 2007–March 2008**  
**(in thousands of dollars)**

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
<b>All sources</b>						
2007						
March	3,591,053	464,588	3,126,465	633,981	2,180,788	776,284
April	3,654,231	465,465	3,188,766	646,540	2,229,592	778,099
May	3,599,541	463,653	3,135,888	632,874	2,190,607	776,060
June	3,625,876	463,582	3,162,294	640,116	2,208,751	777,009
July	3,665,925	464,155	3,201,770	647,979	2,239,112	778,834
August	3,645,801	463,747	3,182,055	639,088	2,227,682	779,031
September	3,647,862	464,238	3,183,624	645,054	2,222,415	780,394
October	3,713,167	465,917	3,247,250	649,895	2,279,476	783,796
November	3,586,332	463,971	3,122,362	636,647	2,168,620	781,065
December	3,735,792	465,272	3,270,520	660,768	2,290,670	784,354
2008						
January	3,742,315	472,645	3,269,669	661,309	2,282,644	798,361
February	3,741,089	471,094	3,269,995	664,604	2,279,637	796,848
March	3,769,599	472,120	3,297,479	670,708	2,299,885	799,006
<b>Federal payments</b>						
2007						
March	3,220,577	362,448	2,858,129	615,963	1,982,334	622,281
April	3,279,825	363,048	2,916,777	628,175	2,028,018	623,632
May	3,228,738	361,547	2,867,191	614,754	1,992,028	621,956
June	3,253,877	361,379	2,892,498	621,978	2,009,269	622,630
July	3,291,113	361,617	2,929,496	629,561	2,037,639	623,913
August	3,271,808	361,166	2,910,642	620,948	2,026,925	623,935
September	3,273,668	361,412	2,912,256	626,806	2,021,979	624,884
October	3,334,497	362,565	2,971,931	631,480	2,075,609	627,407
November	3,215,652	361,041	2,854,611	618,801	1,971,532	625,319
December	3,357,680	362,064	2,995,615	642,355	2,087,346	627,979
2008						
January	3,366,810	369,611	2,997,198	642,967	2,081,735	642,107
February	3,366,130	368,255	2,997,875	646,373	2,079,036	640,721
March	3,392,883	369,029	3,023,854	652,280	2,098,149	642,455

(Continued)

**SSI Federally Administered Payments**

**Table 6.  
Continued**

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18-64	65 or older
<b><i>State supplementation</i></b>						
2007						
March	370,476	102,140	268,336	18,018	198,455	154,004
April	374,406	102,417	271,989	18,364	201,574	154,467
May	370,803	102,106	268,698	18,120	198,580	154,103
June	371,999	102,203	269,796	18,138	199,482	154,379
July	374,812	102,538	272,273	18,418	201,473	154,921
August	373,994	102,581	271,413	18,140	200,758	155,096
September	374,194	102,826	271,368	18,248	200,436	155,510
October	378,670	103,352	275,319	18,414	203,867	156,389
November	370,680	102,930	267,750	17,846	197,088	155,746
December	378,112	103,208	274,905	18,413	203,324	156,376
2008						
January	375,505	103,034	272,471	18,343	200,908	156,254
February	374,958	102,839	272,119	18,231	200,600	156,127
March	376,716	103,091	273,625	18,428	201,737	156,551

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.

SSI Federally Administered Payments

**Table 7.**  
**Average monthly payment, by eligibility category, age, and source of payment,**  
**March 2007–March 2008 (in dollars)**

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
<b>All sources</b>						
2007						
March	468.00	382.40	485.00	561.10	483.60	385.00
April	467.80	382.60	484.70	559.80	483.10	385.20
May	466.60	382.60	483.30	554.20	482.60	385.30
June	467.70	382.70	484.50	560.10	482.90	385.40
July	466.70	382.50	483.30	555.90	482.10	385.20
August	466.70	382.70	483.40	556.10	482.30	385.40
September	467.10	382.70	483.70	557.00	482.40	385.50
October	465.80	382.60	482.20	551.70	481.60	385.30
November	467.60	382.80	484.30	558.90	482.90	385.60
December	468.40	384.10	484.90	555.30	484.20	386.90
2008						
January	475.70	390.00	492.40	563.00	492.00	393.00
February	476.40	389.40	493.40	568.20	492.20	392.60
March	476.90	390.50	493.70	567.50	492.50	393.50
<b>Federal payments</b>						
2007						
March	436.50	325.80	457.40	546.60	454.80	332.80
April	436.30	325.90	457.10	545.20	454.40	332.90
May	435.20	325.80	455.70	539.70	453.90	333.00
June	436.30	325.90	457.00	545.60	454.20	333.10
July	435.20	325.60	455.70	541.40	453.40	332.90
August	435.30	325.70	455.80	541.70	453.60	333.00
September	435.70	325.70	456.20	542.60	453.80	333.00
October	434.40	325.40	454.70	537.40	453.00	332.80
November	436.20	325.60	456.80	544.60	454.40	333.00
December	437.10	327.10	457.40	541.10	455.70	334.50
2008						
January	444.60	333.00	465.20	548.80	463.70	340.80
February	445.40	332.50	466.30	554.00	463.90	340.40
March	445.80	333.40	466.50	553.20	464.30	341.20

(Continued)

**SSI Federally Administered Payments**

**Table 7.  
Continued**

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18-64	65 or older
<b><i>State supplementation</i></b>						
2007						
March	156.70	171.30	151.50	77.00	160.10	172.00
April	156.50	171.20	151.30	76.80	160.00	171.90
May	156.50	171.30	151.30	76.90	160.00	172.00
June	156.50	171.30	151.30	76.80	160.00	172.00
July	156.40	171.30	151.20	76.60	159.90	172.00
August	156.50	171.40	151.30	76.70	159.90	172.00
September	156.40	171.40	151.20	76.60	159.80	172.00
October	156.40	171.40	151.10	76.50	159.70	172.00
November	156.60	171.50	151.30	76.60	159.90	172.10
December	156.60	171.70	151.30	76.40	159.90	172.30
2008						
January	156.30	171.50	151.10	76.40	159.60	172.10
February	156.30	171.30	151.00	76.40	159.60	172.00
March	156.30	171.50	151.10	76.40	159.60	172.20

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.



**Awards of SSI Federally Administered Payments**

**Table 8.**  
**All awards, by eligibility category and age of awardee, March 2007–March 2008**

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
<b>2007</b>						
March	66,217	7,828	58,389	13,593	44,664	7,960
April	79,277	9,019	70,258	16,293	53,812	9,172
May	69,940	8,553	61,387	14,191	47,071	8,678
June	65,342	8,489	56,853	13,366	43,362	8,614
July	75,000	8,638	66,362	15,935	50,285	8,780
August	69,927	8,822	61,105	13,822	47,149	8,956
September	68,181	9,054	59,127	13,164	45,843	9,174
October	79,714	8,658	71,056	15,985	54,907	8,822
November	55,429	8,646	46,783	10,452	36,236	8,741
December	77,842	8,198	69,644	15,990	53,520	8,332
<b>2008</b>						
January	67,580	7,531	60,049	13,763	46,159	7,658
February <sup>a</sup>	68,942	8,909	60,033	13,887	46,011	9,044
March <sup>a</sup>	71,460	8,370	63,090	14,562	48,415	8,483

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.



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**Synopsis.** On page 2, reprint the title of the manuscript along with a synopsis (1–3 sentences) of the research question.

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**Text.** The actual text of the article should begin on a new page. The text should be prepared in Microsoft Word, printed in 12-point type, and double-spaced. Account for all table, chart, and graphic citations, but do not include actual placement within the text.

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If you have other questions, please contact Michael Leonesio, “Perspectives” Editor, at [perspectives@ssa.gov](mailto:perspectives@ssa.gov) or [REDACTED].

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### **Authors**

Mitra, Sophie:

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Kritzer, Barbara E.:

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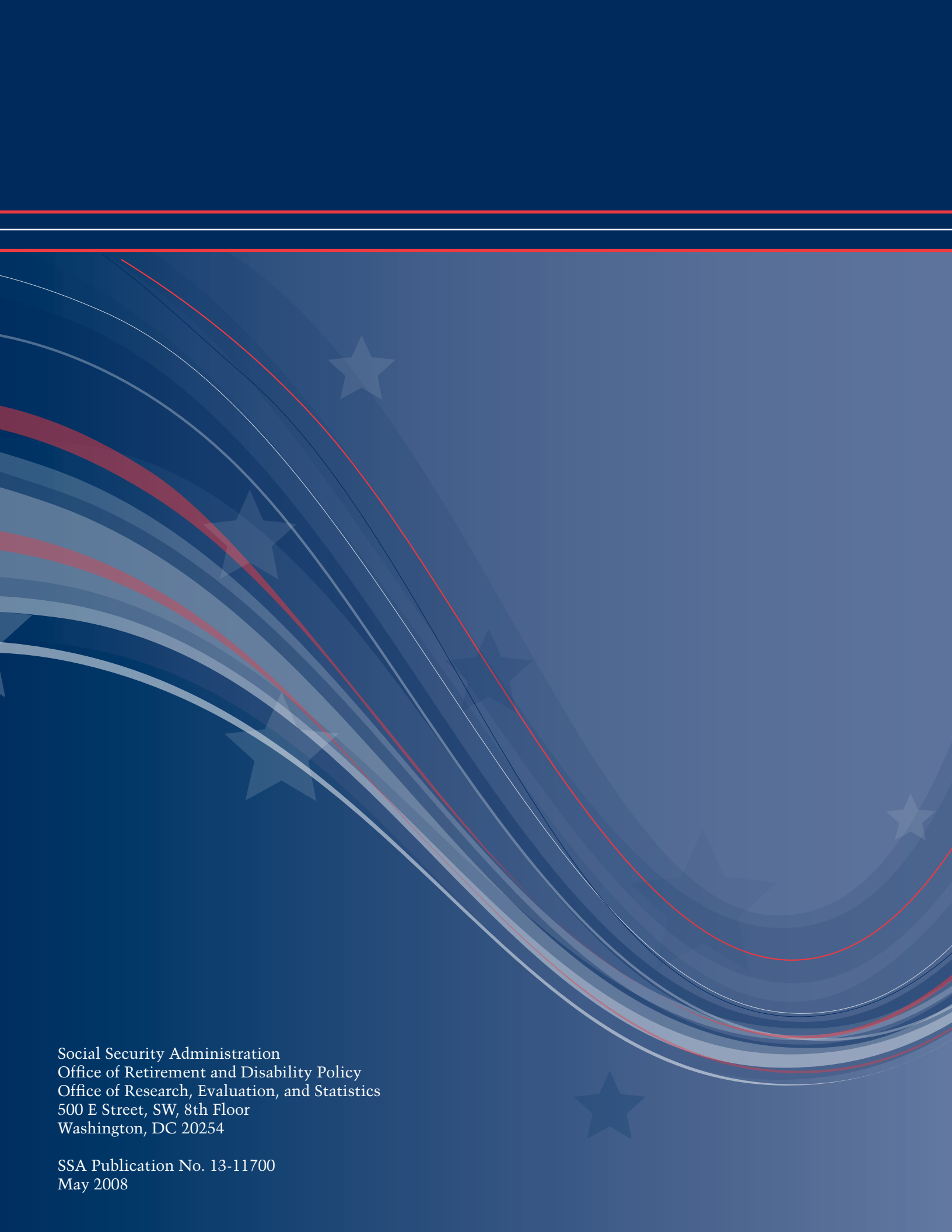
## Program Highlights, 2007

### Old-Age, Survivors, and Disability Insurance

Tax Rates for Employers and Employees, Each <sup>a</sup> (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	97,500	
Medicare (Hospital Insurance)	No limit	
Earnings Required for Work Credits (dollars)		
One Work Credit (One Quarter of Coverage)	1,000	
Maximum of Four Credits a Year	4,000	
Earnings Test Annual Exempt Amount (dollars)		
Under Full Retirement Age for Entire Year	12,960	
For Months Before Reaching Full Retirement Age in Given Year	34,440	
Beginning with Month Reaching Full Retirement Age	No limit	
Maximum Monthly Social Security Benefit for Workers Retiring at Full Retirement Age (dollars)		2,116
Full Retirement Age for Those Who Turn 65 in 2007	65 and 10 months	
Cost-of-Living Adjustment (percent)	3.3	
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	623	
Couple	934	
Cost-of-Living Adjustment (percent)	3.3	
Resource Limits (dollars)		
Individual	2,000	
Couple	3,000	
Monthly Income Exclusions (dollars)		
Earned Income <sup>a</sup>	65	
Unearned Income	20	
Substantial Gainful Activity (SGA) Level for the Nonblind Disabled (dollars)		900
a. The earned income exclusion consists of the first \$65 of monthly earnings, plus one-half of remaining earnings.		



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