

WORKING P A P E R

Exploring Alternative Ways to Present Estimated Future Social Security Benefits in the Social Security Statement

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“Exploring Alternative Ways to Present Estimated Future Social Security Benefits in the Social Security Statement”

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Abstract:

The Social Security Statement is sent annually to approximately 150 million Americans over age 25 and represents most individuals' key source of information regarding the Social Security program and the benefits to which they may be entitled. The Statement includes estimates of the future retirement, disability, and survivor benefits that may be payable based on an individual's earnings record. In many cases, of course, the worker will not be eligible to receive the benefits for many years or even decades into the future. Accordingly, it is important to translate these future nominal benefits into values that are useful and understandable to Americans reading the Statement today. At present, projected future benefits are effectively discounted to the present at the rate of nominal wage growth in the economy. This produces a lower value than would be the result of indexing benefits to inflation. In this project we evaluate first evaluate whether current methods produce reasonably accurate projections of future nominal benefits, then consider alternative ways of presenting estimated Social Security benefits to covered workers. Given the declining share of retirement income provided by Social Security and traditional defined benefit pensions, individuals must take a more active role in their retirement saving decisions. The potential for confusion regarding the presentation of estimated Social Security benefits could complicate this process, making it important that Social Security clarify or alter the way nominal benefits are expressed to current users of the Statement.

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Introduction

The Social Security Statement is a document sent annually to each working American age 25 and over, totaling over 149 million individuals in 2008.¹ The Statement includes information regarding the Social Security program, a record of the individual's covered earnings and contributions to the program, and estimates of the individuals' future benefit entitlement.

The Social Security benefit formula is complex, and there is good reason to suspect that most individuals could not estimate their benefits independent of outside assistance. Liebman and Luttmer (2008) find that some aspects of the Social Security benefit formula are reasonably well understood, but others are not. Likewise, Biggs (2009) shows that many near retirees have difficulty estimating their future retirement benefits. Thus, assisting individuals with benefit estimation appears to be a useful task and the Social Security Administration is better placed to produce estimates accurately and at low cost than other potential providers.

The Social Security Statement represents most individuals' principal source of information regarding the Social Security program and the benefits to which they may be entitled. In addition to other information on the program, the Statement includes estimates of the future social security retirement, disability, and survivor benefits that may be payable based on an individual's earnings record. Given that the Statement is distributed to workers beginning at age 25, in many cases the worker will not be eligible to receive the benefits for years or even decades into the future, during which time most individuals will continue to work and accrue benefit entitlements. Accordingly, it is important to accurately estimate future benefits and to translate these estimated nominal benefits into values that are useful and understandable to Americans reading the Statement today. At

¹ Social Security Advisory Board. "The Social Security Statement: How It Can Be Improved." August 2009.

present, projected future benefits are effectively discounted to the present at the rate of nominal wage growth in the economy. This produces a lower value than would be the result of indexing benefits to inflation. The difference is approximately equal to the rate of real wage growth compounded for the number of years between the time the estimate is calculated and the time of benefit claiming. The effect would be to understate benefits by approximately 12 percent for an individual 10 years from retirement; 24 percent for an individual 20 years from retirement; and 39 percent for an individual 30 years from retirement.

In this project we evaluate alternative ways to present estimated Social Security benefits to covered workers, to determine more consistent ways to reach the intended audience. This issue is of particular importance given the need for Americans to save for retirement outside Social Security. Given rising retirement ages and life expectancies, in conjunction with the gradual disappearance of defined benefit pensions for most workers, individuals must take on additional responsibility for planning personal saving rates that, in conjunction with Social Security benefits, will provide for adequate retirement income. If individuals misconstrue the value of their projected Social Security benefits based on the Social Security Statement, this would complicate their personal saving decisions.

The paper begins with background on the history and content of the Social Security Statement, followed by an overview of how future nominal benefits are estimate. Next, we assess the accuracy of the estimation method using the SSA's public use data file on earnings and benefits. We then analyze the Statement's method for presenting future nominal benefit amounts in wage-indexed terms, followed by an overview of how several retirement planning tools treat these issues. Finally, we consider alternative presentation approaches that might assist individuals in retirement planning and reduce the potential for confusion.

Background on the Social Security Statement

The Social Security Statement was originally designated as the Personal Earnings and Benefit Estimate Statement (PEBES) and was made available to individuals upon request from the Social Security Administration. Workers under Social Security have the right to review their earnings records to check that their wages were accurately credited toward retirement or other benefits. In 1988, the SSA began offering such a service on a widespread basis via a toll-free telephone, and in 1989 Congress passed legislation mandating that the SSA mail an earnings statement and benefit estimate to each worker aged 25 and over. The current Statement is produced under the rubric of that legislation, sponsored by the late Sen. Daniel Patrick Moynihan (D-NY). These mailings were phased in over time, with the Statement first being sent to all near-retirees in February 1995, with coverage of younger ages continuing through late 1999, by which time the phase-in was complete.

The Statement is mailed each year to every worker over age 25 who is not yet collecting benefits. Of the approximately 166 million individuals in the workforce as of 2008, around 149 million were mailed Statements, arriving around three months before the individual's birthday each year.

Currently, individuals aged 55 and over receive a revised insert on factors to consider when deciding when to leave the workforce and/or claim Social Security benefits. Individuals aged 25-35 receive an insert describing the need to save for retirement outside of Social Security. Given the vast reach of the Statement, and that it now contains additional age-specific inserts information on individual retirement saving and the retirement decision, it is produced at a modest per-unit cost. SSA estimates the annual cost of producing the Statement as of 2008 was \$53 million, including

labor, printing and mailing costs.² While a significant sum of money, unit costs average approximately 35 cents per Statement, which appears very reasonable given the scope and personalization of the Statement. Certainly, it does not seem clear that non-governmental financial education campaigns could achieve similar results at a comparable cost.

Nevertheless, where possible we should check to see how well the Statement accomplishes its goals. One 2004 survey, for instance, showed that many individuals either did not consult the Statement or could not easily recall its contents.³ The Social Security Advisory Board (2009) stated

it is imperative that the Social Security Statement provide the most accurate information possible and that information be communicated in a clear and objective manner.

This project will briefly analyze the accuracy of Social Security benefit estimates, then discuss the clarity with which these estimates are communicated.

How future Social Security benefits are estimated

The Social Security Statement provides three principal types of estimated benefits:

- Retirement benefits: at the Full Retirement Age; at the Earliest Eligibility Age of 62, and at age 70, after which Delayed Retirement Benefits are no longer payable;
- Disability benefits: the benefit that would be payable immediately upon qualification for Disability Insurance; and
- Survivors benefits: payable to children and/or a spouse, up to a family maximum.

² Social Security Advisory Board (2009).

³ Social Security Administration. "Public Understanding Measurement System Survey." 2004. Cited in SSAB (2009).

When retirement benefit estimates are generated for a younger or middle-aged worker, certain assumptions must be made about what the worker will earn in the future. This section outlines the method by which future Social Security retirement benefits are projected for use in the Social Security Statement.

However, it first makes sense to review how Social Security benefits are calculated under current law, as the Statements' estimates are based upon a modified version of the statutory benefit formula.⁴ Under current law, an individual's past earnings are first indexed to the growth of wages through age sixty. This involves multiplying nominal earnings in the past year by the ratio of the average economy-wide wage in that year to the economy-wide wage in the year the worker turned sixty. (Put another way, it is equivalent to compounding the nominal earnings by the average rate of nominal wage growth between the year in which earnings took place and the year the individual turned 60.) For instance, an individual who earned half the average wage in a prior year would have those earnings indexed to equal half the average wage as of the year he turned 60. Earnings past age sixty are not indexed, but instead are entered in nominal form.

Social Security averages the highest thirty-five years of indexed earnings, then divides by 12 to calculate the individual's Average Indexed Monthly Earnings (AIME).

The AIME is then run through a progressive benefit formula to produce the Primary Insurance Amount (PIA), the basic retirement benefit payable at the full retirement age, currently sixty-six. For example, the PIA formula for a worker who first becomes eligible to receive benefits in 2010 is:

- (a) 90 percent of the first \$761 of average indexed monthly earnings; plus

⁴ For more information see Social Security Administration (2010).

(b) 32 percent of average indexed monthly earnings between \$761 and \$4,586; plus

(c) 15 percent of average indexed monthly earnings over \$4,586.⁵

These dollar amounts are indexed annually to the growth of average wages.

Benefits are adjusted upward or downward based on the age of claiming relative to the Full Retirement Age. After claiming, benefits are increased annually along with the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

The estimates in the Social Security Statement are computed based upon assumptions applied to a variation in the above formula.

- The individual's most recent nominal annual earnings are assumed to remain constant from the time of calculation through retirement. If earnings in the prior year were zero, earnings from two years prior are used.⁶
- Economy-wide average earnings are assumed to remain constant in nominal terms. This implies that the dollar amounts assigned to each of the bend points in the PIA formula remain unchanged from the time the Statement benefit estimate is calculated.
- Both actual and projected earnings are wage-indexed to age 60. Because no future economy-wide wage growth is assumed, this is equivalent to entering future earnings into the AIME formula in nominal form. Based on these earnings, an AIME and a PIA are calculated.

⁵ Only earnings up to the maximum taxable amount in each year are used in the basic benefit formula. In 2010, the maximum taxable amount is \$106,800 and the maximum benefit for a worker retiring at the full retirement age is \$2,346 per month.

⁶ If both the prior year and the year preceding it had zero earnings, the individual is assumed to have zero earnings continuing through retirement.

The PIA is then adjusted using the program's Actuarial Reduction Factors and Delayed Retirement Credits to express retirement benefits at the Earliest Eligibility Age (62), the Full Retirement Age, and age 70.

Disability and survivors benefits are also calculated based on the estimated PIA. These estimates involve no projected earnings, as they are the benefits that would be payable immediately in the case of the disability or death of the covered individual.

The assumptions used in estimating benefits appear unrealistic on several counts. First, the Social Security Trustees project that economy-wide nominal wages will grow at approximately 3.9 percent annually, while the average inflation rate will be 2.8 percent; the Statement's methodology assumes that economy-wide wages remain constant in nominal terms, implying a real annual decline in earnings of 2.8 percent.⁷ There have been few individual years in which average earnings have declined at this rate and no prolonged periods of real declines in earning income.

Second, the assumption that individual earnings will remain constant in nominal terms through retirement conflicts with evidence on actual earnings paths. Earnings tend to rise through individuals' mid-50s, at which point reduced hours worked tend to produce a leveling off or small decline in nominal earnings.⁹ Thus, at first glance the Statement's methodology would not give participants a clear understanding of what their future benefits might be..

In fact, though, the existing method for estimating future benefits is equivalent to the following process, which appears more plausible.

⁷ See 2009 Social Security Trustees Report.

⁹ For instance, see Clingman and Nichols (2005).

- First, assume that economy-wide nominal earnings rise at the 3.9 percent rate consistent with the Trustees' assumptions. Index the PIA bend point dollar amounts upwards at the rate of wage growth.
- Second, assume that the individual's future nominal earnings increase along with economy-wide earnings growth. Thus, nominal earnings will increase by approximately 3.9 percent annually.
- Third, calculate nominal benefits using the bend points appropriate to the year of benefit claiming;
- Fourth, discount the estimated nominal benefit to the present using the rate of economy-wide earnings. This is equivalent to multiplying the estimated nominal benefit by the ratio of current average economy-wide earnings to average earnings at the time of benefit claiming. Put another way, divide the nominal benefit by a factor equal to $(1 + g)^n$, where g equals the projected rate of nominal economy-wide wage growth and n equals the number of years between the time the Statement estimate is calculated and the year of retirement. This produces an estimate of future benefits in dollars adjusted for the rate of economy-wide wage growth.

This fourth step will be a principal focus of this analysis. However, before continuing we examine whether this basic method of estimation produces roughly accurate projections of future nominal benefits.

How accurate are benefit estimates?

The estimated retirement benefit presented in the Statement is a function of two factors: the benefit projection methods and the manner in which the projected benefit is discounted to the present. This section assesses the benefit projection method. It is important to first assess the

accuracy of benefit projections, as a systematic methodological skew in projected benefits could be compensated for (or exacerbated by) a skew in how nominal benefits are discounted to the present.

Using the Social Security Administration's Benefits and Earnings Public-Use File (2004),⁸ we replicate the process of estimating future benefit amounts for a sample of 961 individuals born in 1940. We use actual earnings from the Public-Use File through age 45, then project earnings through age 64. We then calculate the Primary Insurance Amount (PIA), which is the basic benefit paid at the Full Retirement Age to an individual claiming benefits based upon his own earnings record. These estimated PIAs are then compared to the PIA derived from the Public-Use File to determine the degree of over- or underestimation of actual PIAs.

These projections show a mean error of 1.6 percent, implying that Statement projections tend to overestimate actual nominal PIAs by this amount. The standard deviation of errors was 28.5 percent, indicating a large range of estimates, though this is not surprising given the process of estimating earnings over a 20 year period. In 61 percent of cases the Statement estimate overstates the actual PIA (by an average of 14.9 percent) while in 39 percent of cases the Statement estimate understates the actual PIA (by an average of 20.7 percent). In a linear regression, the Statement's estimating model accounts for 89 percent of differences in actual PIAs.

Figure 1 illustrates the results of these simulations. The only systematic pattern exhibited in Figure 1 may be to underestimate PIAs for very low earners, those with PIAs up to approximately \$650 per month. Beyond that, errors appear more or less symmetrical between over and

⁸ Information on this dataset is available at the Social Security Administration's website: <http://www.ssa.gov/policy/docs/microdata/earn/index.html>

underestimates. The process is not perfect, but with the exception of very low earners it appears to be relatively unbiased.

Figure 1: Projected PIA versus Statement PIA

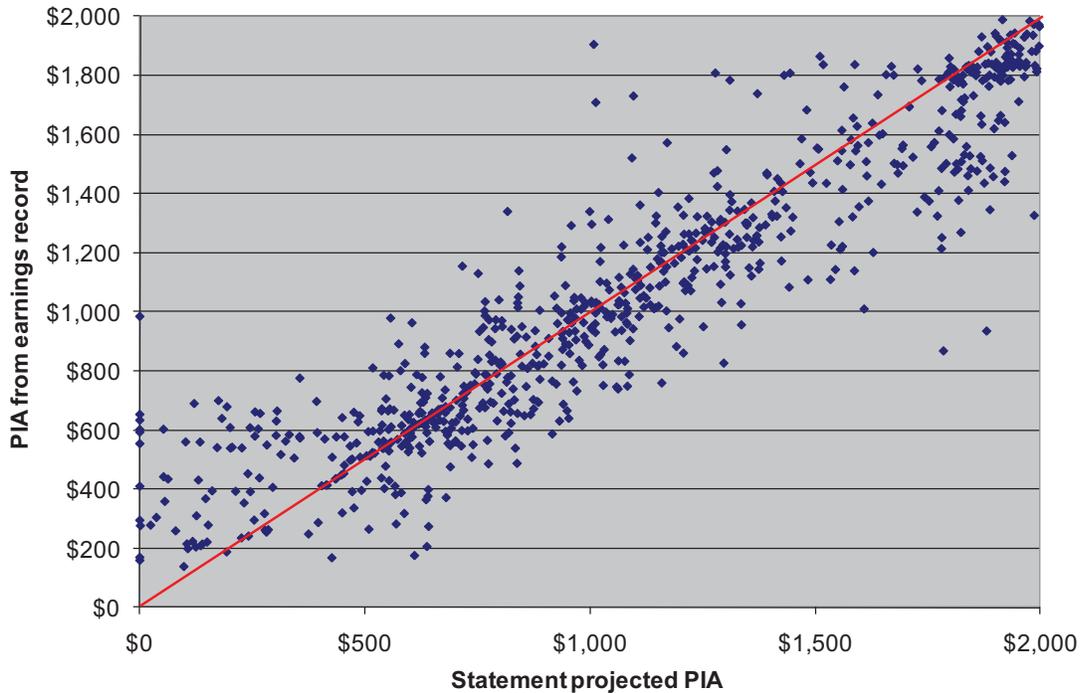
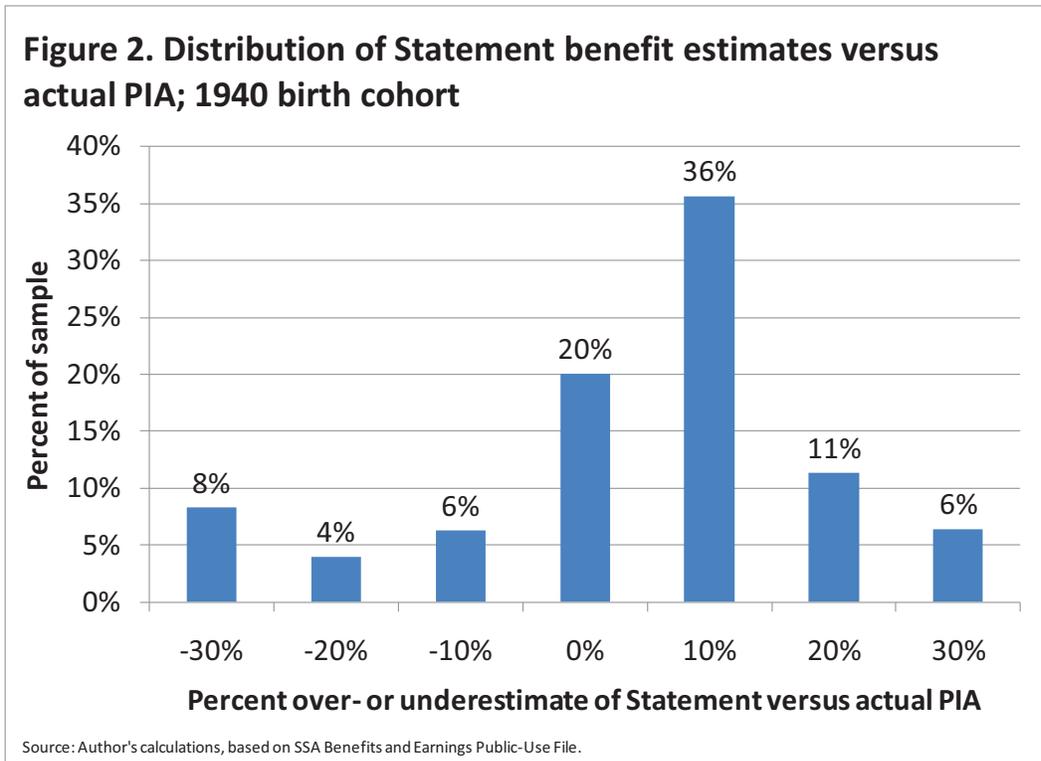


Figure 2 shows the distribution of estimation errors. In 20 percent of the outcomes the difference between the estimated and actual PIA was between zero percent and positive 10 percent, with an error of positive 10 to 20 percent in an additional 36 percent of outcomes. In 6 percent of the cases the estimated PIA lay between -10 percent and zero percent of the actual PIA.

A similar, but more exhaustive, analysis by the Social Security Administration using the agency's Modeling Income in the Near-Term (MINT) microsimulation model, which consists of earnings records matched to data from the Census Bureau's Survey of Income and Program Participation (SIPP), found very similar results.⁹ For members of the 1940-46 birth cohorts,

⁹ Springstead, Weaver, and Fichtner (2008).

projected PIAs as of age 45 were, at the median, only \$6 different from actual PIAs; in percentage terms this typical error is around 1.8 percent.



That said, both these simulations and those undertaken by SSA compare estimated PIAs to actual PIAs, not to actual *benefits*. In the case of benefit differences due to claiming ages this is inconsequential, as the Statement estimates benefits at a variety of ages and one of the purposes of the Statement is to inform recipients of how benefit levels change based on the age of claiming. However, other differences can arise based on Social Security's payment of auxiliary benefits. In most cases, married women receive at least part of their benefit based upon their husband's earnings record. Around 15 percent of women receive spouse-only benefits, meaning that they qualify for benefits based solely on their husband's earnings, while around 36 percent of women

are dually-entitled, meaning that they receive a spousal benefit in addition to a benefit based upon their own earnings.¹⁰

In cases where auxiliary benefits are received, the actual benefit received would exceed the individual's PIA and therefore the Statement's estimation method would tend to understate true benefits received. Thus, in practice there should be a skew in estimates for married women with low earnings relative to their spouses, with Statement benefits estimates tending to understate actual benefits received.¹¹ At present the Statement does not link spouse's earnings, in part because SSA does not track marriages until the time that benefits are claimed.

Notwithstanding issues with auxiliary benefits, given the simplicity of the estimation methodology, which must be reasonably understandable to readers of the Statement, these overall results are encouraging. The Statement's methods provide reasonably close estimates on average and do not exhibit a strong skew toward over- or underestimates.

Effects of wage-adjusting of nominal benefits to present

As noted above, in effective terms the nominal dollar benefit estimated by the Statement is discounted to the year of calculation at the projected rate of economy-wide wage growth. As wages are projected to grow around 1.1 percentage point faster than prices, the effect of wage-adjustment of nominal benefit amounts is a difference between the wage-adjusted and inflation-adjusted values of approximately 1.1 percent compounded for each year between the time the benefit is estimated and the time of benefit claiming.

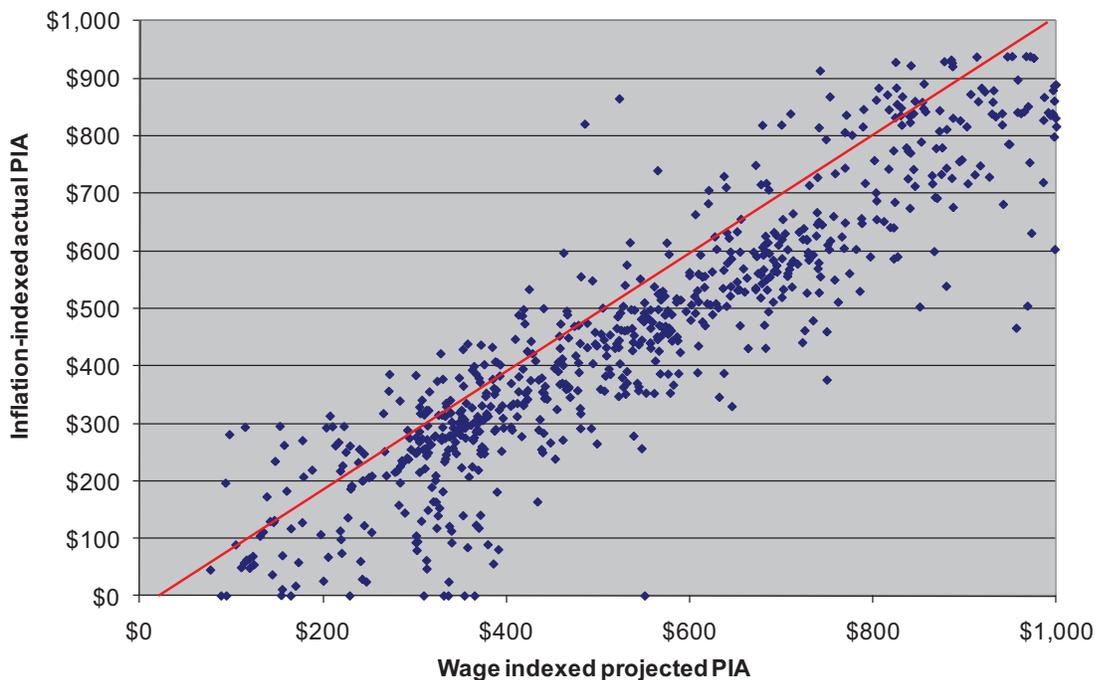
¹⁰ Institute for Women's Policy Research (2005).

¹¹ This skew can just as easily apply to a husband with low lifetime earning relative to his spouse, as Social Security's benefit formula is gender-neutral. However, these cases are rare.

To illustrate, imagine a 45-year old individual whose estimated nominal benefit as of the Full Retirement Age (age 67) is \$3,000 per month. The estimated benefit expressed on his Social Security Statement would be \$1,293 per month, which is equal to $\frac{\$3,000}{(1+0.039)^{22}}$. Were a \$3,000 nominal benefit in 2032 adjusted for the projected annual inflation rate of 2.8 percent, the figure expressed for 2010 would be \$1,634, 26 percent higher than the value expressed on the Statement.

Figure 3 illustrates by drawing on the analysis in the prior section using SSA’s Benefits and Earnings Public-Use File. The vertical axis represents the inflation-adjusted value as of age 45 of the actual PIA derived from the public use file. The horizontal axis represents the wage-indexed estimated benefit as would be presented in a Social Security Statement received by such individuals. To the degree that recipients interpret the Statement’s benefit estimates to be in inflation-adjusted dollars – and there is reason to believe many will do so – the Statement will underestimate the true-inflation adjusted benefit the individual is likely to receive.

Figure 3: Statement PIA AWI adjusted



For individuals who are near retirement, differences in benefits due to indexing methods are relatively small. An individual aged 60 with a Full Retirement Age of 67, for instance, would see a difference of around 8 percent between the wage-indexed benefit value in the Statement relative to the inflation-adjusted equivalent of the future nominal benefit. At younger ages, however, these differences would grow larger: for a 50-year old the gap between the wage- and inflation-adjusted values is 34 percent while for a 40-year old the gap is 50 percent.

An analogy to Social Security reform policy may illustrate the point. As a means to balance the program's finances, some have recommended shifting Social Security from "wage indexing" to "price indexing," which implies that initial benefits for succeeding cohorts of retirees would rise with prices rather than wages. That is, the average benefit for new retirees would remain roughly constant in inflation-adjusted terms, rather than rising by around 1.1 percent above inflation. This policy, by itself, would be sufficient to restore Social Security to long-term solvency, albeit at the cost of declining replacement rates for succeeding cohorts of beneficiaries.¹² The difference between the wage-adjusted benefit presented in the Statement and the inflation-adjusted adjusted value of the same nominal benefit is equivalent to an assumption that Social Security shifted from wage- to price-indexing of initial benefits in the year the Statement's benefit estimate was calculated.¹³

The upshot of this policy analogy is that, assuming individuals mistakenly interpret the Statement's benefit estimates to be in inflation-adjusted dollars, there is almost no Social Security

¹² The Social Security Office of the Chief Actuary calculates that shifting from wage-indexing to price-indexing of initial benefits as of the year 2016 would increase the 75-year actuarial balance by 2.28 percent of taxable payroll, which is more than sufficient to address the actuarial deficit of 2 percent of payroll over that time frame. See http://www.ssa.gov/OACT/solvency/provisions/charts/chart_run120.html

¹³ For instance, if price indexing were instituted as of 2010, a new retiree in 2020 could expect benefits around 12 percent lower than those scheduled under the current wage-indexed benefit formula. Likewise, the difference between the wage-adjusted value of a 2020 benefit expressed in the Statement and the inflation-adjusted value of the same nominal benefit is 12 percent.

reform policy that would cause the inflation-adjusted value of their benefits to be lower than the estimate expressed in the Statement. In this sense, at least, it is possible for Social Security reform to exceed every person's expectations.

Understating the perceived value of Social Security benefits might soften the blow of Social Security reform and encourage individuals to increase their personal saving. An individual who targets a given dollar level of retirement income will save several percent more of their earnings for retirement if they interpret the Statement's benefit estimate as inflation-adjusted rather than wage-adjusted. That said, many individuals already save adequately for retirement.¹⁴ If these individuals mistakenly underestimate their future Social Security benefits based upon a misunderstanding of how future nominal benefits are indexed to the present, they may over-save for retirement and therefore under-consume during their working years. Lost consumption during working years imposes a cost on individuals just as a lower income in retirement may.

Treatment of indexing in retirement planning tools

This section examines the treatment of estimated Social Security benefits in a small sample of retirement planning tools offered either in print, online, or as standalone software. We have no data on whether users of the Statement believe that estimated benefits are presented in inflation-adjusted dollars, wage-indexed dollars, nominal dollars or some other form. But if retirement planning books and software mistakenly assume that benefit estimates in the Statement are expressed in inflation-adjusted form, there is a greater probability that individuals in general may make that error.

¹⁴ Scholz and Seshadri (2008).

One reason this danger exists is that until recently the Statement denoted estimated benefits as being “in today’s dollars,” which both readers and experts would generally construe to mean being adjusted for inflation. An internet search on the phrase “in today’s dollars” produces a large number of results, all of which appear to address adjusting costs for inflation over time; none of those viewed reference adjusting costs for the growth of wages.

At present, the Statement does not note whether or how estimated benefits may be adjusted to account for the difference in time between the estimation of the benefit and when it might be claimed. Social Security’s online Retirement Estimator,¹⁵ which replicates the Statement’s benefit estimates by accessing the individual’s earning record (while allowing for alternate scenarios regarding assumptions of future earnings) also does not note whether any adjustment is made to the estimated benefit.

However, Social Security’s simpler Quick Calculator¹⁶ continues to provide a choice between benefits expressed “in today’s dollars” or in “inflated (future) dollars.” Social Security’s more detailed Online Calculator, which requires the individual to input his or her earnings history, offers a similar choice. The Online Calculator notes

If you choose future (inflated) dollars, the calculator bases the results on our estimates of how inflation could affect your benefit amount. (Use caution when using inflated dollar estimates to determine other retirement income sources you may need.)

This language is true if the implicit reference is to wage inflation rather than price inflation.

Nevertheless, it could easily lead a user to understand benefit estimates in online calculators and,

¹⁵ Available online at <http://www.socialsecurity.gov/estimator/>

¹⁶ Available online at <http://www.socialsecurity.gov/OACT/quickcalc/index.html>

by extension, the Social Security Statement to be adjusted for the more common measure of price inflation.

To the degree that the presentation of benefits in the Statement is discussed in financial planning books, most appear to assume that Statement benefit estimates are in inflation-adjusted dollars. Matthews and Berman (2010), a retirement planning book now in its fifteenth edition, states with regard to the Statement:

Social Security will adjust the figure for inflation and give you your benefit estimate in current dollars. ...You can judge what it would be like to live at today's cost of living on the amount Social Security estimates in today's dollars.

Likewise, Kiplinger's *Personal Finance* (2008) states

The report will show you how much you've paid in Social Security taxes and the monthly amounts you can expect when you begin drawing benefits. Your projected benefits will be in today's dollars, not inflation-adjusted dollars.

While Kiplinger's nomenclature is somewhat confusing – as is Matthews and Berman's reference to “current dollars” to denote an inflation-adjusted rather than a nominal figure – the inference to adjustments for purchasing power appears clear.¹⁷

Other financial planning books, including Gitman and Joehnk (2007), Hebel (2007) and Quinn (1997) make similar statements. None of the financial planning books reviewed correctly described the presentation of benefits in the Statement.

¹⁷ Clarifying further, Kiplinger points out that those who desire a benefit estimate in nominal dollars use an inflation-adjustment table contained in the book.

Many simple retirement planning programs, either offered online or for sale, do not incorporate user-inputted Social Security benefit levels. Many free online planners approximate a Social Security benefit from the individual's current earnings level, a process that is fraught with difficulty for a number of reasons.

However, a number of planning programs request that the user input their estimated Social Security benefit, with some programs referencing the Statement's estimate explicitly. With the exception of the Ballpark Estimate, which asks for a Social Security benefit estimate in nominal dollars, the planners reviewed here appear to interpret the Statement's estimated benefit as an inflation-adjusted figure.

- **Ballpark Estimate:**¹⁸ Sponsored by Choose to Save, a project of the American Savings Education Council (ASEC), the Ballpark calculator asks users to input their estimated benefit in nominal dollars. This nominal benefit value is not printed in the Social Security Statement, although (as the Ballpark Estimate points out) it is available through SSA's online calculator. However, because the Statement does not currently state in what terms benefits are represented, there is some risk that users might mistakenly enter the wage-indexed benefit amount.
- **AARP Retirement Income Calculator:**¹⁹ This calculator asks users to enter their annual Social Security benefit "in today's dollars." This inputted value is then inflation-adjusted to the date of retirement, where it is combined with assumed asset-based income to form an overall retirement income.

¹⁸ Available online at <http://www.choosetosave.org/ballpark/>

¹⁹ Available online at http://sites.stockpoint.com/aarp_rc/wm/Retirement/Retirement.asp

- **Quicken (2010 Version):** Quicken is a popular budgeting and financial planning software package that includes retirement planning capabilities. Quicken can estimate a Social Security benefit based upon the user’s current income (not a comprehensive earnings history) or it allows users to input a benefit amount derived from their Social Security Statement. This amount is compounded by a rate of inflation (also inputted by the user) from the time of calculation through retirement. While users who were aware of the wage-indexing of the Statement’s benefit estimate could compensate by setting the inflation rate to the expected rate of economy-wide wage growth, this higher inflation rate also would be applied to other aspects of the retirement planning calculation. Thus, for Quicken users there does not appear to be an easy work-around for this issue.
- **ESPlanner:** ESPlanner is a commercial, economics-based financial planning program developed by Larry Kotlikoff and Jagadeesh Gokhale.²⁰ Based on inputs of historical earnings the program calculates a benefit using Social Security benefit rules. The resulting benefit is expressed in inflation-adjusted dollars. However, enough users have noted the difference between benefits as calculated by ESPlanner and those reported in their Social Security Statement that ESPlanner’s website contains an explanation of the differences in calculation.²¹

Most of these planning tools are intended for individual use. While some programs used by professional financial planners are capable of calculating Social Security benefits independently, the Financial Planning Association recommends that clients bring their Social Security Statement to an initial meeting with a planner.²² This indicates that professional planners may rely on these

²⁰ See www.ESPlanner.com

²¹ See “Why ESPlanner Projects Higher Benefits than Social Security.” <http://www.esplanner.com/faq-why-esplanner-projects-higher-benefits-social-security>

²² Financial Planning Association (2009).

figures, although it does not give any information regarding how planners may interpret the indexing used in the Statement's estimates.

Options for expressing estimated Social Security benefit amounts

According to Social Security Advisory Board (2009), "SSA believes the benefit projections provided in the Statement can be more easily understood, because they are expressed in terms of today's standard of living." This approach raises conceptual questions regarding how individuals view their future standard of living. Under the SSA's methods, the ratio of the Statement's benefit estimate to the current economy-wide average wage equals the ratio of the benefit at the time of claiming to average economy-wide wages at that time. Implicit in this assumption appears to be the view that individuals desire their personal consumption to rise along with average consumption in the population as a whole. This view, encompassed in Dusenberry's (1949) relative income hypothesis, might be summarized as "keeping up with the Joneses."

By contrast, expressing benefits in inflation-adjusted terms would be more consistent with the view that individuals gauge their consumption in retirement relative to their own consumption at other points of their lives, without regard to others' levels of consumption. This view, which might be summarized as "neither feast nor famine," assumes that individuals seek to equalize the expected marginal utility of consumption over time, which – in simplified form at least – translates to smoothed consumption from year to year. It is based on the life cycle hypotheses of Modigliani and Brumberg and Friedman's related permanent income hypothesis.²³ This general approach is clearly more dominant in economic theory, if not always fully confirmed by empirical data,²⁴ in part

²³ Modigliani and Brumberg (1954). Friedman (1957).

²⁴ E.g., see Browning and Lusardi (1996); Neumark and Postlewaite (1998).

due to borrowing constraints, uncertainty regarding income and mortality, precautionary saving, and other factors.

Nevertheless, to the degree that individuals tend to plan for retirement from a life cycle perspective – and rule-of-thumb measures such as replacement rates, which compare retirement income to pre-retirement income, indicate that Social Security itself broadly accepts that they do – then a wage-indexed benefit estimate may be difficult for individuals to interpret or use, even to the degree they are aware of the indexing methods used. As SSAB (2009) notes, “The dollar amounts are expressed in terms of the living standards at the time of the projection.” It is not clear whether a typical recipient – or, for that matter, even a typical financial advisor – would be capable of distinguishing the meaning of this statement from a perception that benefits were expressed in inflation-adjusted dollars.

For individuals seeking to plan their retirement saving, the correct interpretation and use of the benefit estimate in the Social Security Statement is important. One practical consideration is how other methods of comprehensive retirement planning treat Social Security benefit levels. If individuals typically plan their saving based around nominal or real projections of their future retirement income, then introducing a third measure of retirement income could complicate planning even if it were theoretically superior. Given the potential for confusion outlined above, it seems appropriate that the Statement no longer declares that estimated benefits are “in today’s dollars.”

The question for policymakers, however, is what to replace the phrase with. At present, the Statement makes no denotation regarding how benefits are expressed. It is left to individuals or their financial advisors to decide whether dollar figures are in nominal terms, adjusted for inflation,

or for some other factor. To this observer it appears unlikely any reader would correctly conclude that nominal benefit estimates are indexed to the present at the rate of economy-wide wage growth.

This ability to interpret benefit estimates is particularly important as Social Security benefits decline relative to pre-retirement earnings, both as a result of the gradual increase in the Full Retirement Age from 65 to 67 and to potential reforms to Social Security that could further reduce scheduled benefits. As a result, individuals will bear a greater responsibility for their own retirement planning and must accurately integrate their personal and workplace retirement saving with the benefit they expect to receive from Social Security. If the Social Security Statement's benefit estimates are likely to be interpreted incorrectly, this complicates an already-complex task.

One option is to retain the current wage-indexed benefit estimate, with no label attached. This might be the most attractive option if individuals tend to intuitively think in wage-indexed terms, but the explanation of the calculation – which must reference ratios of nominal and wage-indexed benefits to current and future economy-wide wages – would prove overly technical and potentially confusing. In other words, there is at least the possibility that users of the Statement may perceive the benefit estimate in more or less correct terms if not overburdened with technical explanations.

Alternately, the current wage-indexed estimation approach might be retained, but with a better explanation of how the benefit is indexed and what it might mean. While it is not clear that any explanatory language could convey the intuition of wage-indexing without undue technical jargon, one could potentially note that “These benefit estimates are adjusted for the growth of wages in the economy. The future dollar amounts that these estimates represent would provide the same standard of living relative to average earnings in the future that these dollar amounts would provide relative to average earnings today.”

Alternately, both the method of indexing benefits and the explanation of benefit amounts could be altered. One approach would be to express benefits in inflation-adjusted terms, with language specifying that the dollar amounts represent the amount of future purchasing power that benefits could be expected to provide. This approach would be most consistent with the existing perception that the Statement's benefit estimates are expressed "in today's dollars" while also being approximately consistent with prevailing views regarding how individuals tend to view consumption over time. One downside would be a significant increase in estimated benefit values in the Statement, which could generate temporary confusion as individuals and financial advisors process the change in methodology. Nevertheless, if an inflation-adjusted figure is deemed superior, this temporary confusion is unavoidable but worthwhile cost.

A third option would be to express benefit amounts in *both* nominal and inflation-adjusted terms. Thus, each benefit type and age of claiming would be represented by two dollar figures: the first representing the actual dollar amounts the individual could expect and the second expressing the current purchasing power of those dollar amounts. While this would introduce additional detail and complexity to the Statement, it would also reduce the potential for confusion over indexing methods and provide estimated benefit levels in the two forms most likely to be compatible with estimates of non-Social Security sources of retirement income. It might have a secondary benefit of illustrating clearly to recipients the effects of inflation on purchasing power. This could help individuals better understand, for instance, that a seemingly large 401(k) balance at the time of retirement could provide less purchasing power than they otherwise might believe.

A view of the current Statement's section showing estimated benefits (see Figure 4) illustrates that this could be accomplished without large changes to the Statement's format. Currently, the Statement expresses estimated benefit levels in a single column. To accommodate

both nominal and inflation-adjusted benefit estimates, a second column could be added to the right of the existing column. While a cramped presentation in the Statement has been criticized,²⁵ the well-understood difficulty individuals have in understanding the effects of inflation over time mean this may be an instance where additional information is warranted.

Figure 4. Benefit estimate section of Social Security Statement

Your Estimated Benefits	
*Retirement	You have earned enough credits to qualify for benefits. At your current earnings rate, if you stop working and start receiving benefits... At age 62, your payment would be about..... \$ 975 a month If you continue working until... your full retirement age (67 years), your payment would be about \$ 1,412 a month age 70, your payment would be about..... \$ 1,761 a month
*Disability	You have earned enough credits to qualify for benefits. If you became disabled right now, your payment would be about \$ 1,293 a month
*Family	If you get retirement or disability benefits, your spouse and children also may qualify for benefits.
*Survivors	You have earned enough credits for your family to receive survivors benefits. If you die this year, certain members of your family may qualify for the following benefits: Your child \$ 1,008 a month Your spouse who is caring for your child \$ 1,008 a month Your spouse, if benefits start at full retirement age \$ 1,344 a month Total family benefits cannot be more than..... \$ 2,473 a month Your spouse or minor child may be eligible for a special one-time death benefit of \$255.
Medicare	You have enough credits to qualify for Medicare at age 65. Even if you do not retire at age 65, be sure to contact Social Security three months before your 65th birthday to enroll in Medicare.
<p>* Your estimated benefits are based on current law. Congress has made changes to the law in the past and can do so at any time. The law governing benefit amounts may change because, by 2041, the payroll taxes collected will be enough to pay only about 75 percent of scheduled benefits.</p> <p>We based your benefit estimates on these facts: Your date of birth July 5, 1966 Your estimated taxable earnings per year after 2006 \$38,626 Your Social Security number (only the last four digits are shown to help prevent identity theft)..... XXX-XX-1234</p>	

Conclusions and Potential Future Research

This project analyzed a single aspect of the Social Security Statement: how nominal benefit amounts that may be paid years or decades in the future are estimated and then expressed so as to make them understandable to readers of the Statement today. The project showed that, while benefit estimates are reasonably accurate on average, there is a danger of confusion in how these estimates are expressed. Estimated benefits in the Statement are generally perceived to be

²⁵ Government Accountability Office (2005).

expressed in today's dollars - meaning, adjusted for the effects of inflation - while the actual method is to discount benefits at the rate of wage growth. As wages are projected to grow around one percent faster than inflation, the wage-indexed benefit estimate will understate the inflation-indexed estimate by around one percent compounded for each year between the time the Statement is issued and the time benefits would be claimed.

This method of indexing has some intuitive appeal, but could also complicate individuals' financial planning as it differs from the two most common methods of expressing future retirement income. Most simple financial planning tools calculate retirement income either in nominal or inflation-adjusted terms, meaning that a third mode of expression could cause an incorrect value to be entered and therefore incorrect conclusions regarding saving rates or retirement ages to be reached. Alternate approaches could either seek to more fully explain how benefit estimates in the Statement are indexed, or to substitute benefit estimates in inflation-adjusted and/or nominal terms.

While an important question, this is but one factor in the success of the Statement in educating American workers regarding their prospective benefits. As the GAO has pointed out in a number of reports, other factors of presentation must be considered. This is particularly so given recent insights from behavioral economics and finance on the manner in which individuals process and retain financial information. The Statement's goal should be to present accurate information that users can understand, retain and utilize in their own retirement planning decisions.

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