Evaluating Lump Sum Incentives for Delayed Social Security Claiming

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To better understand why so many Americans claim their Social Security benefits early and to determine what might be done to incentivize longer work lives, we have developed a theoretical economic model of life-cycle behavior that takes into account many realistic aspects of the labor market and benefit rules (Maurer, Mitchell, Rogalla, & Schimetschek, 2017). We have also calibrated this model with a purpose-built empirical survey examining whether providing incentives to workers to delay claiming their Social Security benefits would be attractive (Maurer, Mitchell, Rogalla, & Schimetschek, Forthcoming). Our work to date has shown that many people, particularly those who indicated that they would claim early under the current set of Social Security rules, would delay claiming and work longer if they were offered an incentive to do so.

Here, we report on the potential distributional and solvency consequences of our proposed Social Security reform. To this end, we have provided behavioral estimates derived from our research to the Urban Institute, which in turn implemented them in its large microsimulation model, called the Dynamic Simulation of Income Model (DYNASIM).1 Specifically, we provided parameters that could be used to simulate potential outcomes under a proposed Social Security reform that gives workers a lump sum incentive to delay their claiming age and work longer. The Institute experts used this information to simulate possible distributional and solvency outcomes of such a reform. They also compared the outcomes with two benchmarks: namely, scheduled benefits and taxes and payable benefits and taxes. Scheduled refers to benefit formulas and tax revenues computed under current law formulas. We note that scheduled benefits cannot actually be paid when the system runs short of money, anticipated to occur in about 2032, unless some additional revenue sources are found. By contrast, the payable benchmark refers to benefit amounts reduced to the levels that can be paid under current tax rules. Under the status quo, benefits paid to all current and future retirees will need to be reduced by about 25–30%, starting around 2032 (Social Security Trustees, 2016).

Current Social Security Policy and the Lump Sum Policy Alternative

Under the current Social Security rules, an eligible individual can claim retirement benefits as early as age 62 or defer them as late as age 70. The individual’s monthly benefit, paid for life, depends on his or her earnings history and claiming age, with either a reduction if claimed before his or her full retirement age (FRA) or an increment

1 A detailed discussion of DYNASIM is available in Favreault, Smith, and Johnson (2015), and a similar version, used to evaluate Social Security reforms and known as MINT, is described in Smith, Favreault, Butrica, and Issa (2010).
for deferring claiming after the FRA. For someone born in 1960 or later, for example, deferring the benefit from age 62 to the FRA of 67 would entitle him or her to an increase in monthly benefits of around 43% (see Table 1).2 In particular, delaying claiming to age 70 implies a 77% increase in lifetime monthly benefits.

The lump sum policy we explored involves a policy innovation for Social Security that induces later claiming among some large fraction of the population. Rather than cutting benefits, however, our reform offers people an incentive to delay claiming their Social Security benefits. Specifically, someone who was willing to defer claiming beyond the early retirement age would receive—at the time of the eventual claim—the age-62 monthly benefit for the remainder of his or her life, plus a lump sum reflective of the additional benefit that would otherwise have been gained by delaying claiming. In other words, retirees would still receive their age-62 (reduced) benefit at the delayed claiming age but, in addition, would get from Social Security a substantial immediate payout to encourage them to claim later. Moreover, at least some older individuals would work longer, which would delay the date when they start withdrawing money from their savings, thus preserving more income for later in retirement.

In view of peoples’ preference for lump sums over annuities, we anticipate that this innovation would incentivize delayed claiming (Maurer et al., 2017). The fact that people would still receive their age-62 benefit at the later claiming date helps protect people against running out of money. The additional lump sum payout could help them reduce mortgage and other debt, as well as highlight the potential benefits from working longer (Brown, Kapteyn, & Mitchell, 2016).

The particular alternative considered in the simulation analysis allowed people to claim their early Social Security benefits at age 62, with the early retirement reduction factor applied as under current rules, or else to delay claiming by a year or up to age 70. For later claiming ages, the retiree would be entitled to his or her age-62 benefit from the later age, plus a lump sum. Assuming a monthly $1,500 benefit at age 62, the (roughly) actuarially neutral lump sums, which would leave the system no better off from a solvency perspective, are provided in Table 2.

In the Urban Institute simulations, the entire lump sum amounts were assumed to be deposited into nontaxable Roth accounts which, after retirement, were invested in 10-year Treasury bonds earning a 3% real return. After retirement, households were assumed to spend down their retirement assets (including the Roth accounts) using the DYNASIM approach to spenddowns. The Roth investment earnings and withdrawals were excluded from taxable income, but were assessed for Supplemental Security Income eligibility. Any remaining lump sums at the retiree’s death would be made available to the surviving spouse, if any, on the death of the retiree.

The lump sum/delayed benefit plan was simulated by incorporating the delayed claiming patterns we reported using the survey evidence (Maurer et al., Forthcoming). Estimated changes in claiming and work behavior are illustrated in Table 3. Inasmuch as we found that similar changes in work and claiming patterns resulted when lump sum payments were reduced by 13%, the actual simulations implemented that version of the reform.

### An Overview of the Simulation Results from the DYNASIM

We report a variety of results taken from the Urban Institute report on its simulation exercise (Smith, 2017a, 2017b). Because DYNASIM is such a rich and complex model, specific questions about the program code and how the inter-generational results are generated should be directed to the model’s creators. Nonetheless, after reviewing the results, we concluded that the model is extremely rich, faithful to very detailed U.S. tax and transfer rules, and a very powerful and detailed tool that provides a perspective on distributional and cross-generational outcomes of policy interest. Two caveats are worth noting. First, DYNASIM does not generate optimal life-cycle profiles for the millions of observations it tracks. Second, it does not feed its micro results into an overall macro model, which would then solve endogenously for the next period’s interest rates.

#### Table 1. Delayed Claiming Boosts Monthly Social Security Benefits: Status Quo Scenario

<table>
<thead>
<tr>
<th>Claiming Age</th>
<th>Monthly Benefit (+% of PIA)</th>
<th>Boost with 1 year delay (%)</th>
<th>Cumulative boost compared to age 62 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>62</td>
<td>70</td>
<td>7.14</td>
<td>7.14</td>
</tr>
<tr>
<td>63</td>
<td>75</td>
<td>6.67</td>
<td>14.29</td>
</tr>
<tr>
<td>64</td>
<td>80</td>
<td>8.34</td>
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<tr>
<td>65</td>
<td>86.67</td>
<td>7.70</td>
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<tr>
<td>66</td>
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<td>7.15</td>
<td>42.86</td>
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</tr>
<tr>
<td>70</td>
<td>124</td>
<td>7.40</td>
<td>77.14</td>
</tr>
</tbody>
</table>

**Note.** Full retirement age: 67. PIA = primary insurance amount. Source: [www.ssa.gov](http://www.ssa.gov).

2 When these rules were legislated (in the mid-1980s), the Social Security delayed retirement credit was intended to be actuarially fair. Hence, the benefit increment was consistent with average mortality tables at the time, as well as a 2.9% real assumed interest rate; our work assumes the same real interest rate. Current, low interest rates imply that the delayed retirement credit is actually better than fair for most people at present, thus embodying additional incentives to defer retirement (see Shoven & Slavov, 2014). For additional information on the status quo benefit formula, see [http://www.ssa.gov/retirement/retirement.htm](http://www.ssa.gov/retirement/retirement.htm).
and prices. Accordingly, while the results are informative and realistically nuanced, they must be interpreted as partial equilibrium in spirit, and they are also not necessarily identical to what people behaving optimally would do. To outline our presentation of results, in what follows we first report how solvency estimates for the Social Security system compare under both the scheduled and the payable benchmarks, over both shorter-term (25 years) and longer-term (75 years) periods. Second, we provide some distributional outcomes comparing our reform to the benchmarks by age, education, sex, and marital status. We also report changes in the fraction of persons with incomes below poverty, as well as changes in assets for people aged 62 and older, by income quintile in different years. Last, we show how asset accumulation patterns compare under our lump sum/delayed benefit reform versus the key benchmarks.

Regarding System Solvency

Figure 1 indicates the projected actuarial balance in the Social Security system under our reform, compared with both the scheduled and payable benchmarks (the results follow the format in Smith, 2017b). In all cases, the actuarial deficit is reported as a percentage of payroll, as is conventional in the literature, and results for both the 25-year and 75-year horizons are reported. On the left side of the figure, we see that the actuarial shortfall under our policy is roughly identical to the payable benchmark over both the 25- and 75-year horizons. In other words, benefits must be reduced by about the same amount under the status quo and the lump sum/delayed benefit plan, and the difference is negligible between the two in terms of solvency results. For the scheduled benefit scenario represented on the right, the 25-year shortfall is a bit larger under our reform, 0.39% of payroll, while the lump sum/delayed benefit plan shortfall is slightly smaller, by 0.06%, over the 75-year period. In our view, the similarities between the projections confirm the fact that the lump sum reform does not dramatically change solvency projections compared with the two conventional benchmarks.

Regarding Distributional Outcomes

Next, we compared a variety of distributional outcomes using the DYNASIM output for the lump sum reform,
as well as the two benchmarks. Figure 2 indicates the projected fraction of persons aged 62 and older with income below poverty in 2025, 2035, and 2045, under the lump sum scenario as well as the two benchmarks. Focusing first on payable benefits (the two left-hand sets of bars), we showed that the prevalence of poverty in 2025 under the lump sum scenario is slightly higher, at 0.03%, than projected under current law; the fraction is 0.04% higher in 2035; and identical in 2045. Turning to the scheduled benefits benchmark, the prevalence of poverty in 2025 is 0.03% higher in 2025 and 2035, and 0.02% higher in 2045. We believe that these differences are remarkably small and may be overestimated, insofar as the Roth account payout rates assumed by the DYNASIM are not the same as conventional annuity payout rates.

Additional information regarding our proposed reform’s impacts on income vis-à-vis the payable and the scheduled benchmarks by sex, age, marital status, and education is provided in Figure 3. Interestingly, the percentage income changes

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3 DYNASIM uses an annuity conversion that accounts for differential mortality by age, cohort, sex, race, and education, which differs from a market annuity calculation (Karen Smith, personal communication, March 10, 2017).
Figure 3. Percentage change in average per capita cash income of Mitchell/Maurer lump sum/delayed benefit reform for people aged 62 and older by selected sociodemographic characteristics: 2025, 2045, 2065. Current law payable on left and current law scheduled on right. Source: Derived from data supplied in Smith (2017b).
are positive—though relatively small—across all the figures. For instance, focusing on payable benefits on the left side of Figure 3A, the income increases under our lump sum reform are quite similar by sex. In Figure 3B, the youngest group experiences a 2.5–3.2% income increase under the payable scenario, while the oldest group would receive the smallest income boost, averaging 0–0.5%. Income increases by marital status (Figure 3C) average 1–2%. Income improvements by education (Figure 3D) are of the same order of magnitude, but it is worth noting that by 2045, the less-educated groups experience relatively larger income gains than the better-educated. Results by educational groups indicate income improvements of 0.8–2.6% under the payable scenario. While the direction of income changes is generally similar for the scheduled benchmark, the size of the changes tends to be smaller.

Regarding Asset Levels
Inasmuch as the lump sum/delayed benefit model provides retirees with an asset they receive on claiming their benefits after the earliest retirement age, it is of interest to evaluate how much these assets are worth. Naturally, having access to the lump sums is valuable, as this gives people an additional degree of freedom with which they can meet health concerns or other shocks. Figure 4 summarizes results for the lowest-, middle-, and highest-income quintiles in 2065. Once again, changes to payable benefits appear on the left, and changes to scheduled benefits appear on the right sides of the figures.

Regardless of whether one focuses on the scheduled or payable simulations, the lowest-paid group has a far larger increase in assets under the lump sum reform versus the status quo. The middle-income group has a bit more in assets under the lump sum versus the status quo, and the highest-income group accumulates only a small additional amount under the lump sum plan. In all, because lower-paid individuals are more likely to value the additional assets, it can be concluded that the lump sum/delayed benefit plan has positive distributional consequences overall.

The lump sum reform we have outlined has positive distributional consequences overall without costing the system more money.

Conclusions
The DYNASIM simulations of our lump sum model for delayed Social Security claiming suggest several key conclusions. First, the similarities between the projections confirm that the lump sum/delayed benefit reform does not dramatically change system solvency outcomes versus the payable or scheduled benchmarks. In other words, while the reform does not by any means rectify the solvency problem facing the system, it does not have a materially worse impact on it. Second, the differences in projected poverty fractions are remarkably small and may even be overestimated, since the Roth account payout rates assumed by the DYNASIM are not conventional annuity payout rates. Third, the other distributional analyses show income increases, but the changes are small relative to the payable benchmark. Changes are even smaller for the scheduled benchmark. Fourth, the asset projections show that the lowest- and middle-income groups accumulate higher nest eggs under the lump sum/delayed benefit reform. This is a positive result, inasmuch as lower-paid individuals are more likely to value the additional assets in retirement. Accordingly, the lump sum plan we have outlined here has positive distributional consequences overall without costing the system substantially more money.

We evaluate the potential impact of a lump sum reform for delayed Social Security claiming. Projections show that the lowest- and middle-income groups accumulate higher nest eggs under the lump sum delayed benefit plan.

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