University of Michigan Retirement Research Center

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Director's Corner

With the Nation's eyes focused oversees, it is easy to forget that troubles remain here at home. With no shortage of ideas about what can be done to improve the stability of the Social Security system, little action has yet been taken. The briefs featured in this issue of the newsletter both address specific reform ideas and their practical consequences. Gustman and Steinmeier explore a model of retirement that examines the effects of an increase in the Social Security early entitlement age from 62 to 64. In short, they find that about 3/5 of the clustering of retirement we see at 62 would move to 64. As the authors note, there could be substantial financial effects on the Social Security system of increasing the early entitlement age. In the second brief, the authors use the rate of return as an indicator to understand the different welfare effects of reform across several birth cohorts. Considering a gradual increase in the normal retirement age and an immediate increase to the payroll tax, they find that a delay in reform tends to further shift its costs to younger cohorts.

This May, members of the staff of the Social Security Administration will gather with members of the academic, policy, and legislative communities at the National Press Club to engage topics that are relevant in the reform debate. The theme this year focuses on income maintenance for tomorrow's retirees. With private Social Security retirement accounts still very much on the agenda, a panel will be convened to discuss the "nuts and bolts" of these accounts. The presentations promise to be interesting and timely. The discussions will be no less. The full agenda is included in this issue, and conference registration is still open. We look forward to seeing you in May.

Director MRRC

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Issue in Brief

Stochastic Rates of Return for Social Security Under Various Policy Scenarios

by Michael Anderson, Hisashi Yamagata, and Shripad Tuljapurkar

Executive Summary

One measure that summarizes welfare effects of a pension system on its participants is the "internal rate of return" (ROR), which equates the present value of Social Security payroll tax payments to the present value of benefit payments. Calculating the ROR for a range of birth cohorts allows us to compare welfare effects across these cohorts. Therefore it is particularly useful when analyzing the impact of any reforms, because reform plans appear to have very different effects across cohorts.

In this *Issue in Brief*, we summarize a method of estimating the ROR for each cohort born between 1941 and 1999, and discuss our estimation results for the Old-Age and Survivors Insurance (OASI) trust fund under three different scenarios. The first scenario is a benchmark**:** we estimate the ROR assuming that both tax and benefit schedules will be kept as currently legislated. Given our forecast that the trust fund without any changes in tax or benefit schedule is likely to become empty, or insolvent, in 2038, this is an implausible scenario. We thus also estimate the ROR under two alternative scenarios, under

which we project that the trust fund will remain solvent until 2074 with a 50% degree of certainty; these reforms are an immediate increase in the payroll tax rate from 12.4% to 14.4% and a gradual increase in the Normal Retirement Age (NRA) to age 69 by 2024.

Estimating the rates of return under these different scenarios, we first point out that a decrease in the ROR following each reform is usually larger for younger cohorts; this indicates that costs of reform tend to fall on younger cohorts. Comparing the different ROR estimates under the two reform plans, we also point out that changes in the rates of return for younger cohorts are consistently greater in the scenario that increases the NRA than in the scenario that increases the payroll tax, while the opposite is true for older cohorts. This illustrates that a delay in reform tends to further shift its costs to younger cohorts.

Methods

Estimating tax and benefit payments in the future is the main challenge we face in calculating the ROR for cohorts born between 1941 and 1999. For example, for the cohort born in 1941, just about to retire, we can draw the tax profiles from data but must estimate benefit payments. For the youngest cohort born in 1999, however, we have to estimate both tax and benefit payments.

In our estimation, we used both historical data and forecasts in the future. The historical data came from two sources: age- and sex-specific tax profiles from 1941 to 1999 were based on the Continuous Work History Sample provided by the Social Security Administration; age- and sex-specific benefit figures were taken from the Annual Statistical Supplements to the Social Security Bulletin. In forecasting tax and benefit profiles in the future, we started with the known age- and sex-specific Old-Age, Survivors, and Disability Insurance (OASDI) tax and benefit profiles for 1999 and updated these profiles according to the stochastic forecasts of productivity growth. Other things also incorporated in estimation are shifts in the composition of workers, the Normal Retirement Age, and disability recipients.

Based on the historical data and the stochastic forecasts of tax and benefit payments, we generated random full-lifetime trajectories and derived the distribution of the ROR for each cohort. To note, we used the full OASDI tax and benefit profiles in simulating the trust fund to determine the probability of solvency; however, only the OASI profiles are used in estimating the ROR.

Major Findings

To start with, we estimated the ROR keeping tax and benefit schedules as currently legislated. There were two findings. First, the median ROR, staring at 2.77% for the 1941 cohort, initially decreases with cohort (to 2.40% for the 1959 cohort) but then increases again for younger cohorts (to 2.62% for the 1999 cohort). This trend is different from previous studies, which found a consistent decrease in the estimated ROR with cohort; in Leimer (1994), for example, it decreases from 2.6% for the 1941 cohort to 1.7. This is likely due to the substantially higher forecasts of life expectancy used in our estimation (especially at retirement ages): this increases total benefits received by younger cohorts and therefore increases their rates of return. Second, as expected, the variance of the ROR estimates increases with cohort; this reflects greater uncertainty in estimating tax and benefit profiles for younger cohorts.

Increasing the Payroll Tax Rate

Next, we calculated the ROR, assuming an immediate increase in the payroll tax rate from 12.4% to 14.4%. Under this scenario, the trust fund is assumed to remain solvent until 2074 with 49% probability.

As expected, the oldest cohorts remain largely unaffected by the tax increase, because their taxpaying years have mostly passed; however, the ROR for younger cohorts (especially those born after 1950) decreases substantially. For example, the median ROR for the 1999 cohort is now equal to 2.19%, compared with 2.62% in the benchmark scenario.

Increasing the NRA

Finally, we calculated the ROR, assuming a gradual increase in the NRA to age 69 by 2024. (Currently, it is scheduled to increase to age 66 and age 67 staring in 2000 and 2017, each in the six-year time span.) Under this scenario, the trust fund is assumed to remain solvent until 2074 with 46% probability.

As in the previous scenario, the impact of this reform is greater on younger cohorts (especially those born after

the early 1960s); for example, the median ROR for the 1999 cohort is now equal to 1.54%, compared with 2.62% in the benchmark scenario. In particular, this trend seems more apparent in this scenario than the previous one; decreases in the rates of return for cohorts born after 1963 are consistently greater here than the previous scenario. For example, the median ROR for the 1969 cohort equals 2.61% in the first, benchmark scenario, 2.26% in the second scenario, and now 1.47% in this scenario. This is due to an additional effect coming from an extended reform delay in implementing an increase in the NRA. An immediate increase in the payroll taxes allows an accumulation of interest, which alleviates the need for Social Security reform in the future; without this additional resource, a gradual increase in the NRA induces a sharper decline in the trust fund in the future and thus a sharper decline in the benefit payments.

Conclusion

This study considered the ROR of the Social Security system. Estimating the ROR for each cohort born between 1941 and 1999 under different scenarios, we illustrated how useful the ROR is in understanding the different welfare effects of a reform plan across cohorts. In particular, from our own simulation results, we emphasized two patterns. First, both reform plans considered, that is, an immediate increase in the payroll taxes and a gradual increase in the NRA, affect younger cohorts more than older cohorts. Second, the burdens from a slow increase in the NRA are more on younger cohorts than those from an immediate increase in payroll taxes. This illustrates the shift of burden to younger cohorts due to a delay in reform.

Michael Anderson is a Research Demographer at Mountain View Research.

Hisashi Yamagata is a Senior Research Associate for the Association of American Medical Colleges.

Shripad Tuljapurkar is a Morrison Professor of Population Studies and Professor of Biological Sciences at Stanford University.

Issue in Brief

The Social Security Early Entitlement Age in a Structural Model of Retirement and Wealth

by Alan L. Gustman and Thomas L. Steinmeier

Executive Summary

Thirty years ago, the most common retirement age was 65. Today it is 62, with 65 as a secondary peak. While there are several good reasons why we see a decrease in retirement at age 65, explaining the new peak at 62 is more difficult. Although the fact that eligible workers can begin claiming Social Security retirement benefits at age 62 is a large part of the explanation, there are strong incentives to continue working. Workers can only claim partial benefits at age 62 but many would receive substantially higher benefits if they delayed claiming for a few years. Despite better than actuarially fair increases for many from postponing benefit claiming at 62, many workers retire at 62.

The difficulty in understanding retirement at age 62 makes the analysis of some Social Security reforms very difficult. Increasing the early entitlement age is one reform proposed to address the impending Social Security funding crisis. A serious problem is that we do not know how retirement ages will change given this reform. An important concept that has been over-looked as a possible candidate for understanding the retirement spike at 62 is people's desire to have what they want now rather than later, called a time preference. Moreover, time preference is not evenly distributed throughout the population. Some people are savers and others are not. That is, some people have a high taste for saving and would save for their old age even at very low interest rates, while others would require a much higher return if they are to forego current spending and increase saving. In this *Issue in Brief*, we demonstrate that to understand retirement behavior, and in particular the observed peak in retirement at 62, one must understand saving behavior. Contrary to the predictions of simple retirement models, many who retire at 62 instead of 65 have saved less than those who delay their retirement. Because we have no actual experience with changes to the early entitlement age, our analysis employs a policy experiment in which we explain the current peak with an econometric model, and then use that model to estimate what the effects might be of increasing the age

at early entitlement from 62 to 64. We find that this change will shift about 3/5 of the bunching of retirement ages from 62 to 64.

How Do Time Preferences Work?

Typically time preference is thought to be the same for all workers. More realistically, it varies from person to person. Moreover, a large group of workers may have high time preference while another significant group may have low time preference. Allowing it to vary across individuals resolves some problems and makes our model more realistic. First, workers who have a high time preference and are considering retiring at 62 will understand that their benefits would be increased substantially if they delayed their retirement, but because of their "I want it now" attitude, they will devalue the increase in benefits from delaying retirement. This helps us understand why so many people collect benefits at the earliest opportunity. Second, they are not likely to have saved much, and will not be able to retire before age 62. And third, difference in time preferences allows us to explain the huge differences we find in wealth among households with similar lifetime incomes. Those with a high time preference are more likely to spend as they earn and to save very little for the future.

Data

The data used in this study come from the Health and Retirement Study (HRS), a nationally representative sample of households that contains at least one person born between 1931 and 1941. The study was started in 1992 and conducts interviews every two years. The last year for which data are available is 2000. Because of the differences between men and women and married and single in retirement patterns, the present analysis is focused on married men only.

A portion of these data are linked with Social Security earnings records which allows us to calculate potential streams of earnings and benefits that a worker would accrue by working to different ages in order to predict retirement. We also have information on how much workers have saved, or their assets, which allows us to calculate a variable for time preference on the assumption that those with a high time preference will have lower assets at an older age than those with a low time preference. We also account for age, year of birth (cohort), health status, the value of other pension benefits, and how pension benefits vary with age of retirement.

Summary of Major Findings

- The majority of people value their future well-being sufficiently, so that they save enough for the future
- However, close to 30% of people seem to have an "earn-it-and-spend-it" mentality and have not saved any assets at all.
- Considering the effects of age on retirement decisions, we find that the value of leisure in retirement increases by almost 8% per year of age.
- Poor health has about the same effect on retirement as being four years older, but year of birth has almost no effect on retirement.
- Using the above results and the current retirement age of 62, we run our policy experiment by simulating data to see how well our model predicts the observed retirement ages.
- Our simulation produces two spikes in retirement at ages 62 and 65, which are the main features of the current pattern.
- Other models cannot explain the peak in retirements at 62 and the peak at 65. They can only explain one or the other.

Because our model more accurately replicates the current retirement patterns than others, and in particular the spikes in retirements at both ages 62 and 65, our next simulation results are more credible than others.

We run the simulation again, increasing the early retirement age to 64.

- We find a decrease in the retirement at age 62 by almost 5% (from 8.1 to 3%)
- We now observe a significant spike in retirement at age 64.
- People with pension plans and working spouses, who would have enough money to retire at 62, also delay their retirements to 64

Some people simply cannot afford to retire until Social Security benefits become available. In addition, people

who face severe liquidity constraints would probably continue to work beyond age 64, because of future increases in the social security benefits (recall that the benefits increase as people postpone retirement). However, because we observe workers with other resources--who could afford to retire at 62-- shifting to 64, we attribute the changes in retirement ages to the differences in time preferences. People who value today's welfare relatively more than tomorrow's welfare likely retire when the Social Security benefits become available, because for them an increase in the future benefits from delaying retirement is not so important. After an increase in the early retirement age from age 62 to age 64, they simply choose to retire at age 64. Since people who value today's welfare relatively more tend to have low savings, it does make sense that these individuals now choose not to retire at age 62. The remaining peak we observe at age 62 is probably accounted for by effects of rules governing other pension plans.

Conclusion

Using the existing retirement models, we cannot explain the observed retirement peaks at both ages 62 and 65, and have greatest trouble explaining the retirement peak at 62. Without understanding this retirement pattern, we cannot credibly predict and discuss the effects of Social Security reform plans, for example, an increase in the early entitlement age. To solve this problem, we suggest analyzing retirement and saving together. Doing so, we have demonstrated that we can generate the retirement peaks at ages 62 and 65 in simulation. We also run simulations to study the effects of an increase in the early entitlement age to 64. In our experiment, when we change the early entitlement to 64, approximately 3/5 of the bunching at age 62 moves to age 64. This result indicates that the financial effects on the Social Security system of increasing the early entitlement age may be substantial.

Alan L. Gustman is a Loren Berry Professor of Economics at Dartmouth College.

Thomas L. Steinmeier is a Professor of Economics at Texas Tech University.

New Pension Calculator Now Available

Since its inception, the HRS project has been interested in estimating pension wealth and predicting future income from pensions, and has periodically collected data to obtain pension Summary Plan Descriptions (or SPDs) from the employers of the study respondents. These documents are then coded, and the plan description data, along with some specific data from the respondents, are fed into a stand-alone program, the Pension Calculator, that estimates the pension income based on the program's algorithms and user-defined parameters. The Pension Estimation program, first written in the 1980s, has been continuously improved over the years. One reason for the rewrite is that the program had been written in the now obsolete Borland PASCAL. Other goals of the project are to enhance overall design, programming logic, and data representation, and to provide a graphical user interface. The new application is implemented with advanced design and the object-oriented capabilities of the newly released Microsoft Visual Studio.NET.

An Alpha version of the new Pension Calculator is now available for testing purposes This version is distributed to gather comments only, and it is intended for researchers who have previously used the PASCAL version of the program. This version is not feature-complete but is designed to convey the look and feel of the new application. Visit our website at http://hrsonline.isr.umich.edu/rda/reslis.htm#pension for more information about this new version. Source: Pension Estimation Program Users Guide Alpha Release, January 2003 by Bob Peticolas and Helena Stolyarova

FYI

New Look for Social Security Website

The Social Security Administration has redesgined its website and has a new web address that is more easily associated with the agency. The new site is much easier to navigate and is, overall, more user-friendly. It is also more accessible to visitors with visual and other physical disabilities. A free, monthly electronic newsletter, eNews, is available at www.socialsecurity.gov/enews and can be received automatically with a simple online subscription. Workers and people nearing retirement can get estimates of their future Social Security benefits at www.socialsecurity.gov/planners by clicking on "calculators." Links at www.socialsecurity.gov/onlineservices cover the gamut of additional online services offered by Social Security. Visit the new site at www.socialsecurity.gov.

"Securing Retirement Income for Tomorrow's Retirees"

Retirement Research Consortium
Fifth Annual Conference, National Press Club, Washington, DC
May 15-16, 2003

Thursday May 15

8:00-8:30 am **Registration/Breakfast**

8:30-8:40 am **Greetings from Center Directors**
John P. Laitner, Director, Michigan Retirement Research Center
Alicia H. Munnell, Director, Center for Retirement Research at Boston College

8:40-9:00 am **Introductory Remarks**
Jo Anne B. Barnhart, Commissioner of Social Security or
James B. Lockhart, Deputy Commissioner of Social Security

Session I **Social Security Reform: Participation and Impacts**
9:00–10:30 am Chair: Charles P. Blahous, Executive Office of the President

Labor Supply Responses to Social Security Reform
John P. Laitner, University of Michigan
Discussant: Jeffrey Liebman, Harvard University

Retirement Effects of Social Security Reform
Alan L. Gustman, Dartmouth College
Thomas L. Steinmeier, Texas Tech University
Discussant: Stephen Goss, Social Security Administration

Simulating Distributional Consequences of Personal Accounts: Sensitivity to Annuitization Options
Melissa Favreault, Urban Institute
Cori Uccello, Urban Institute
Karen Smith, Urban Institute
Larry Thompson, Urban Institute
Discussant: David Podoff, Social Security Advisory Board

10:30-10:45 am **Break**

Session II **Panel Discussion: Social Security Personal Accounts -- The Nuts & Bolts**
10:45-12:15 pm Chair: Deputy Commissioner Lockhart

Panel Members:
William Shipman, Carriage Oaks Partners: *Administrative Framework*
Richard Burkhauser, Cornell University: *Disability Benefits*
Jeffrey Brown, University of Illinois: *Annuitization*
Kent Smetters, University of Pennsylvania: *Unfunded Liabilities and Transition Costs*

12:15-12:30 pm **Break**

Lunch
12:30–1:30 pm Keynote Speaker: Stephen Friedman, Assistant to the President for Economic Policy and Director, National Economic Council

1:30-1:45 pm **Break**

Session III **Save for Your Future: Savings Decisions**
1:45-3:15 pm Chair: Don Blandin, American Savings Education Council (ASEC)

Valuing Assets in Retirement Saving Accounts
James Poterba, Massachusetts Institute of Technology
Discussant: Laurence Kotlikoff, Boston University

Subjective Probabilities and the Decision to Save
Robert J. Willis, University of Michigan
Gábor Kézdi, University of Michigan
Discussant: David Wilcox, Federal Reserve Board

Lifetime Earnings and Retirement Wealth
Olivia Mitchell, University of Pennsylvania
John Phillips, Social Security Administration
Discussant: Gary Engelhardt, Syracuse University

3:15-3:30 pm **Break**

Session IV **The Role of Earnings in Retirement Income**
3:30-5:15 pm Chair: Joseph Quinn, Boston College

Changes in the Distribution of Earnings and Retirement Incomes - Have Recent Cohorts Fallen Behind?
Peter Gottschalk, Boston College
Minh Huynh, Social Security Administration
Discussant: Gary Burtless, Brookings Institution

How Important Are Wages to the Elderly?
Steven Haider, RAND
David Loughran, RAND
Discussant: Phil Levine, Wellesley College

Social Security, Employment, and Retirement Outcomes for Single Mothers
Richard Johnson, Urban Institute
Melissa Favreault, Urban Institute
Joshua Goldwyn, Urban Institute
Discussant: Barbara Bovbjerg, General Accounting Office

5:15 pm **Reception**

Friday May 16

7:30-8:00 am **CRR Meeting with Outside Scholars**

8:00-8:30 am **Registration/Breakfast**

Session V **Current Issues in Private Pension Plans**
8:30–10:00 am Chair: James Klein, American Benefits Council

Social Security and the Private Pension System: The Significance of Integrated Plans
Pamela Perun, Urban Institute
Discussant: Constantijn Panis, RAND

Defined Benefit Plans and the Stock Market
Alicia H. Munnell, Boston College
Mauricio Soto, Boston College
Discussant: Robert Clark, North Carolina State

What Do We Do with our Pension Money? Recent Evidence from 401(k) Plans
Julie Agnew, Boston College
Pierluigi Balduzzi, Boston College
Discussant: William Gale, The Brookings Institution

10:00-10:15 pm **Break**

Session VI **The Impact of Unplanned Events on Retirement**
10:15–11:45 pm Chair: Richard Burkhauser, Cornell University

The Effect of Unplanned Events on Retirement
John B. Williamson, Boston College
Tay K. McNamara, Boston College
Discussant: Debra Dwyer, SUNY – Stony Brook

Saving for Retirement: Wage Growth and Unexpected Returns
Michael Hurd, RAND
Julie Zissimopoulos, RAND
Discussant: Eric Engen, American Enterprise Institute

Understanding Poverty among Elderly Divorced Women
Robert F. Schoeni, University of Michigan
Steven Haider, Michigan State University
Alison Jacknowitz, RAND
Discussant: Timothy Smeeding, Syracuse University

11:45 pm **Remarks**

12:00 pm **Lunch and Sandell Presentations**
(*MRRC Meeting with Outside Scholars*)

12:30-3:30 pm **Sandell Grantee Presentations**
Chair: Kevin Cahill, Center for Retirement Research at Boston College

12:30 pm ***The Impact of Marital Status Transitions on the Retirement Decision***
Regina M. Bures, SUNY Albany

12:45 pm ***Social Security Reform and the Exchange of Bequests for Elder Care***
Meta Brown, University of Wisconsin - Madison

1:00 pm ***What You Don't Know Can't Help You: Worker Knowledge and Retirement Decision-Making***
Ann Huff Stevens, Yale University
Sewin Chan, New York University

1:15 pm ***Retirement Expectations and the Retirement Savings Puzzle***
Melvin Stephens, Carnegie Mellon University

1:30 pm ***Defined Benefit Pension Plans: A Lifecycle Perspective***
David McCarthy, Institute of Ageing, Oxford University

1:45-2:00 pm **Break**

2:00 pm ***Annuitization: Keeping Your Options Open***
Irena Dushi and Anthony Webb, International Longevity Center

2:15 pm ***Macroeconomic Implications of Social Security Reform***
Francisco Gomes and Alexander Michaelides, London School of Economics

2:30 pm ***Elderly Households and Housing Wealth: Do They Use It or Lose It?***
Lina Walker, University of Michigan

2:45 pm ***Defined Benefit Pension Plan Liabilities and International Asset Allocation***
Tongxuan Yang, University of Pennsylvania

3:00 pm ***The Employment of Working Age People with Disabilities: A Comparison of PSID and CPS Results***
Mathis Schroeder, Cornell University

3:30 pm **CONFERENCE CLOSE**

University of Michigan Retirement Research Center

Institute For Social Research
University of Michigan
P.O. Box 1248
Ann Arbor, MI 48106-1248

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E-mail

mrrc@isr.umich.edu

Website

http://www.mrrc.isr.umich.edu/

Mailing Address

Michigan Retirement Research Center
Institute for Social Research
University of Michigan
P.O. Box 1248
Ann Arbor, MI 48106-1248

Location

Michigan Retirement Research Center
Institute for Social Research
University of Michigan
426 Thompson Street, Room 3026
Ann Arbor, MI 48104-2321

Phone

(734) 615-0422

Fax

(734) 615-2180