TIAA Institute Fellows Symposium
Achieving Better Retirement Outcomes: Solutions for a Modern Workforce
A research forum co-hosted by the TIAA Institute and the Pension Research Council

Research Study Executive Summaries
June 22, 2017
TIAA Institute Fellows Symposium

Dear Colleagues:

Welcome to Achieving Better Retirement Outcomes: Solutions for a Modern Workforce, a Fellows Symposium co-hosted by the TIAA Institute and the Wharton School’s Pension Research Council, which have joined forces to conduct research on key issues in retirement security.

During the course of the day, we will hear keynote addresses from thought leaders in retirement planning and research presentations on the following studies:

- **Putting the Pension Back in 401(k) Plans: Optimal versus Default Longevity Income Annuities**
  Olivia S. Mitchell, Raimond Maurer, Vanya Horneff

- **How Do Distributions from Retirement Accounts Respond to Early Withdrawal Penalties?**
  Evidence from Administrative Tax Returns
  Gopi Shah Goda, Damon Jones and Shanthi Ramnath

- **Removing the Legal Impediments to Offering Lifetime Annuities in Pension Plans**
  Jonathan B. Forman

- **Older Women’s Labor Market Attachment, Retirement Planning, and Household Debt**
  Annamaria Lusardi and Olivia S. Mitchell

- **Financial Communications and Asset Allocation Decisions: The Effects of Reading Style, Financial Knowledge, and Individual Differences**
  J. Wesley Hutchinson, Gal Zauberman, Robert Botto

- **Target-Date Funds, Annuitization, and Retirement Investment**
  Chester S. Spatt

The TIAA Institute and PRC are proud to support this new research on topics of concern to plan sponsors, academic leaders and policymakers. We hope you glean new insights from these studies and look forward to hearing your thoughts on the findings and implications.

Sincerely,

Dave
David P. Richardson
Senior Economist
TIAA Institute

Olivia
Olivia S. Mitchell
Executive Director
Pension Research Council
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Putting the Pension Back in 401(k) Plans: Optimal versus Default Longevity Income Annuities

Olivia S. Mitchell, Raimond Maurer, Vanya Horneff

Many defined contribution pension plans pay benefits at retirement as a lump sum, thus imposing on retirees the risk of outliving their assets. Nevertheless, the US Treasury has recently sought to encourage employers to protect their retirees from outliving their assets by converting a portion of their plan balances into longevity income annuities (LIA). These are deferred annuities which initiate payouts not later than age 85 and continue for life, and they provide an effective way to hedge an individual’s risk of running out of assets in later retirement for a relatively low price. Our paper builds a life cycle portfolio framework to evaluate the welfare improvements of including LIAs in the menu of plan payout choices, accounting for differences in mortality conditional on an individual’s education and sex.

In this setting, we show that introducing a LIA to the plan menu is attractive for most DC plan participants who will optimally commit 8-15% of their plan balances at age 65 to a LIA that starts paying out at age 85. Optimal annuitization boosts welfare by 5-20% of average retirement plan accruals at age 66 (assuming average mortality rates), compared to not having access to the LIA. We also compare the optimal LIA allocation with two default options that plan sponsors could implement. We conclude that an approach where a fixed fraction over a dollar threshold is invested in LIAs will be preferred by most to the status quo, while also enhancing welfare for the majority of workers. These implications also apply to Individual Retirement Accounts.

Key Findings:

- We evaluate the impact of “putting the pension back” in 401(k) plans via deferred income annuities.
- Our life cycle model helps us measure how much peoples’ wellbeing is enhanced by including LIA deferred annuities in the retirement plan menu. The model accounts for uncertain capital market returns, labor income streams, and mortality, and we also realistically model taxes, Social Security benefits, and 401(k) rules.
- We show that both women and men can expect to benefit from these products, as can the less-educated and lower-paid subpopulations.
- Plan sponsors wishing to integrate deferred lifetime annuities as defaults in their plans can do so, to a meaningful extent, by converting as little as 10% or 15% of retiree plan assets, particularly if the default is implemented for workers having plan assets over a reasonable threshold.
How Do Distributions from Retirement Accounts Respond to Early Withdrawal Penalties? Evidence from Administrative Tax Returns

Gopi Shah Goda, Damon Jones, Shanthi Ramnath

Americans have an estimated $14.4 trillion invested in employer-sponsored defined contribution plans and Individual Retirement Accounts (IRAs). While the goal of conventional retirement savings accounts is to accumulate wealth available for retirement, the availability of pre-retirement withdrawals could potentially serve as a form of insurance against financial shocks. Yet pre-retirement withdrawals could also reduce wealth available for retirement. To preserve retirement wealth, IRAs and employer-sponsored defined contribution plans typically feature limited liquidity. While these accounts allow withdrawals for hardship, such as death or disability, they usually impose a penalty on early withdrawals. Specifically, IRAs impose a 10 percent penalty for withdrawals taken before the age of 59 ½.

There have been active policy debates regarding the trade-off between liquidity and retirement wealth accrual. Nevertheless, there have been few studies seeking to understand implications for potential policies, such as adjusting the age threshold or the amount of the penalty. In this study, we examine withdrawal behavior of individuals with IRAs as they cross the age 59 ½ threshold. We use data from a full sample of tax returns to investigate this question. While tax data has several advantages, one large disadvantage is that it does not allow us to observe the exact date of withdrawal. Instead, we can only see annual distributions over different calendar years. Without high-frequency data on withdrawal behavior, it is difficult to observe sharp changes occurring exactly when someone turns age 59 ½. To overcome this problem, we make use of peoples’ birthdates to determine how long the early withdrawal penalty applies to those in the year in which they attain age 59 ½. For instance, someone who turns 59 ½ on March 1 of a given calendar year has six more months during the year to make withdrawals without a penalty, compared to someone who turns 59 ½ on September 1 of that same year.

Key Findings:

- Our estimates show that crossing the age 59 ½ threshold leads to a $1,600 increase in annual distributions from IRAs.
- Results suggest that this increase is primarily due to additional people taking withdrawals after the penalty is lifted, rather than higher distributions among those who were already withdrawing prior to age 59 ½.
- People with birthdays that result in fewer months of penalty-free withdrawal in the calendar year in which they turn 59 ½ have a much smaller increase in annual distributions between the time they turn 58 ½ and 59 ½. By contrast, those who turn 59 ½ early in the calendar year see much sharper increases over the same calendar years.
- The pattern is reversed going from the calendar year in which people turn 59 ½ to the calendar year in which they turn 60 ½.
Removing the Legal Impediments to Offering Lifetime Annuities in Pension Plans

Jonathan B. Forman

Longevity risk—the risk of outliving one’s retirement savings—is probably the greatest risk facing current and future retirees in the United States. At present, for example, a 65-year-old man has a 50 percent chance of living to age 82, and a 20 percent chance of living to age 89; a 65-year-old woman has a 50 percent chance of living to age 85, and a 20 percent chance of living to age 92. The joint life expectancy of a 65-year-old couple is even more remarkable: there is a 50 percent chance that at least one 65-year-old spouse will live to age 88 and a 30 percent chance that at least one will live to 92. In short, many individuals and couples will need to plan for the possibility of retirements that can last for 30 years or longer.

One of the best ways to protect against longevity risk is by securing a stream of lifetime income with a traditional defined benefit pension plan or a lifetime annuity. Over the years, however, there has been a shift away from traditional defined benefit plans, toward defined contribution plans. The latter typically distribute benefits as lump sums rather than as lifetime annuities, and few people buy annuities in the retail annuity market. All in all, Americans will have longer retirements, yet fewer retirees will have secure, lifetime income streams.

There are a variety of ways that the federal government could promote greater annuitization of retirement savings. In particular, government policies could be designed to increase retirement savings, for example, by requiring employers without pension plans to at least offer automatic payroll-deduction IRAs to their employees. The government could also do more to promote annuitization. One approach would be to mandate that retirees use at least a portion of their retirement savings to purchase annuities or similar lifetime income guarantees. Alternatively, the government might only want to encourage annuitization. Finally, in addition to promoting annuities, it could make sense to broaden the range of permissible lifetime income products—especially low-cost products that pool risk among participants. In that regard, for example, TIAA’s College Retirement Equities Fund (CREF) offers a variety of low-cost variable annuities that pool risk among participants. So-called “defined-ambition plans,” like those in operation in the Netherlands, offer another way to share risk among plan participants. In sum, modest changes in the laws and regulations governing pensions and annuities could go a long way towards helping to promote secure lifetime retirement incomes.

Key Findings:

- Longevity risk—the risk of outliving one’s retirement savings—is probably the greatest risk facing current and future retirees in the United States.
- One of the best ways to protect against longevity risk is by securing a stream of lifetime income with a traditional defined benefit pension plan or a lifetime annuity.
- The federal government could promote and encourage annuitization:
  - Plan sponsors could be required to include annuities or other lifetime income mechanisms in their investment options and/or in their distribution options; and
  - The government could exempt lifetime income payments from income taxation or favor them with a reduced tax rate.
The government could also broaden the range of permissible lifetime income products—especially low-cost products that pool risk among participants, as opposed to products that necessitate high premiums to compensate insurance companies for their guarantees and profits.

- TIAA’s College Retirement Equities Fund (CREF) has been offering a variety of low-cost variable annuities that pool risk among participants for years.
- So-called “defined-ambition plans” like those in operation in the Netherlands, offer another way to share risk among plan participants.
Older Women’s Labor Market Attachment, Retirement Planning, and Household Debt

Annamaria Lusardi, Olivia S. Mitchell

Our research investigates whether and how older women’s current and anticipated future labor force patterns have changed over time, to evaluate the factors associated with longer work lives and plans to continue working at older ages. For our empirical investigation, we use data from two sources: the Health and Retirement Study (HRS), and the National Financial Capability Study (NFCS). We find that older women’s current and intended future labor force attachment patterns have changed markedly over time. Compared to the HRS baseline cohort (first interviewed in 1992), recent cohorts of women in their 50’s and 60’s work more and are more likely to say they will continue to be working at age 65. Explanations for older women’s longer work lives include having higher educational attainment, experiencing increased levels of marital disruption, and having had fewer children than prior cohorts.

Household finances also play a key role. Older women today have more debt than their earlier counterparts, and they are facing their 60’s in a more financially precarious position than in the past. We also use the 2012 National Financial Capability Study (NFCS) to assess the role of debt in motivating older women to remain in the labor force. To this end we evaluate how older women manage their debt and retirement planning. We find that factors correlated with retirement planning include having more income, education, and financial literacy. Conversely, those who are over-indebted and financially fragile are also those with lower financial literacy, those with more financially dependent children, and those who experienced large income declines. In this sense, shocks help explain peoples’ debt accumulations close to retirement. Yet we also find that having resources is not sufficient: women also need the capacity to manage those resources if they are to stay out of debt as they head into retirement.

Key Findings:

- Recent cohorts of women have worked more at older ages than the cohort first surveyed in 1992 at the same age. Thus, the probability of working has risen for older women over time.
- Women close to retirement today have more debt than their previous counterparts, and debt is positively associated with both older women being more likely to work and their planning to continue to work in the future. Among older women, total debt has more than doubled between 1992 and 2010, and the percentage of those having less than $25,000 in savings also increased sharply.
- Only about half of older women plan or have planned for retirement. Factors correlated with retirement planning include having more income, education, and financial literacy. Those who are over-indebted and financially fragile are also those with lower financial literacy and more financially dependent children, and who experienced large income shocks. Thus, shocks play a role, but women also must be able to manage resources in order to stay out of debt and be financially secure during retirement.
Financial Communications and Asset Allocation Decisions: The Effects of Reading Style, Financial Knowledge, and Individual Differences

J. Wesley Hutchinson, Gal Zauberman, Robert Botto

This research assessed the ability of working adults to comprehend financial communications about retirement saving plans, and how comprehension, along with other factors, affects asset mix decisions. Although financial consultants are often available to workers in large organizations for face-to-face communication, self-education and self-assessment of knowledge are the dominant inputs to retirement decisions. Financial information is complex and unfamiliar compared to information about other types of consumer products, and this makes miscomprehension more likely. This research used eye-tracking technologies and procedures to collect detailed, individual level data about consumer information processing of financial communications. Experimental manipulations of the medium of communication (print vs. online) and information format (graphical vs. text) were used to assess the impact of these factors on reading style, comprehension (i.e., increases in financial knowledge), and personal asset mix decisions.

Reading style emerged as the measure most affected by our manipulations. Print encouraged a more systematic, deeper reading style compared to an online format. Charts attracted more visual attention. Reading style was found to affect comprehension, which in turn affected personal asset allocation decisions. Financial knowledge was found to have two components: conceptual knowledge (e.g., financial literacy) and procedural knowledge about how to make financial decisions. Conceptual and procedural knowledge had different antecedents, but similar and fairly strong effects on personal asset mix decisions. Higher knowledge individuals allocated more to equities compared to fixed income and guaranteed assets. Several other individual difference variables (especially risk tolerance and financial self-confidence) also had large effects on personal asset mix decisions.

Key Findings:

- Financial knowledge was found to have two components: conceptual knowledge (e.g., financial literacy) and procedural knowledge about how to make financial decisions.
- Generally speaking, communications media and formats had large effects on reading style and small effects (“nudges”) on financial knowledge and personal asset mix decisions. Print encouraged a more systematic, deeper reading style compared to an online format. Charts attracted more visual attention.
- Reading style was found to have small effects on both conceptual and procedural knowledge and larger effects on personal asset mix decisions.
- Both conceptual and procedural knowledge had large effects on personal asset mix decisions.
- Individual differences (especially risk tolerance and financial self-confidence) had large effects on personal asset mix decisions.
Target-Date Funds, Annuitization, and Retirement Investing

Chester S. Spatt

This project explores the interplay between target-date funds and annuitization. Target-date funds, which represent age-dependent combinations of equity and bonds, span the asset allocation space without annuitized investing. The target-date approach highlights the dependence of the optimal asset allocation between risky and riskless assets on the investor's age. Furthermore, if the Capital Asset Pricing Model (CAPM) holds, then all target-date funds are on the mean-variance efficient frontier.

Target-date funds can be introduced into annuitized investing. An individual or couple can own variable annuities whose notional value adjusts with market movements, so the purchaser can hedge financial market risk and fully insure idiosyncratic mortality risk. Financial/portfolio risks and mortality risks are independent and separable, leading to a “separation theorem.” Thus the structure of the holdings (including annuities) can capture completely both market risks and idiosyncratic mortality risk—rather than distorting the asset allocation in order to address more fully idiosyncratic mortality risk. In contrast, a target-date framework without annuities would not allow an individual with a limited bequest motive to maximize expected utility, because of an inability to insure mortality risk. Indeed, the spanning and separation results can be interpreted as supporting the use of target-date fund products within annuitized vehicles. The optimal location of annuitized investing also is explored, as is asset location (where to locate equity and bonds) within this context.

Key Findings:

- Target-date funds, which represent age-dependent combinations of equity and bonds, span the asset allocation space without annuitized investing.
- Financial/portfolio risks and mortality risks are independent and separable, leading to a “separation theorem” so that the structure of the holdings (including annuities) can capture completely both market risks and idiosyncratic mortality risk—rather than distorting the asset allocation in order to address more fully idiosyncratic mortality risk.
- The target-date framework without annuities would not allow an individual with a limited bequest motive to maximize expected utility because of an inability to insure mortality risk.
- The spanning and separation results can be interpreted as supporting the use of target-date fund products within annuitized vehicles.