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TIAA Institute Fellows Symposium

Putting Behavioral Finance to Work: Insights and Solutions for Better Retirement Outcomes

A research forum co-hosted with the Pension Research Council

Research Summaries Report

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TIAA Institute

Wharton UNIVERSITY of PENNSYLVANIA

Pension Research Council

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TIAA Institute Fellows Symposium

Dear Colleagues:

Welcome to **Putting Behavioral Finance to Work: Insights and Solutions for Better Retirement Outcomes**, a TIAA Institute Fellows Symposium co-hosted with the Pension Research Council/Boettner Center at Wharton School of the University of Pennsylvania. During the course of the day, we will explore these innovative studies examining behavioral factors and biases that affect retirement planning and other financial decisions:

- *Factors Affecting Temporal Discounting in Older Adults*
  Joseph W. Kable, Karolina Lempert, and David Wolk
- *Decision Making under Uncertainty: An Experimental Study in Market Settings*
  Federico Echenique, Taisuke Imai, and Kota Saito
- *Debt Close to Retirement and Its Implications for Retirement Well-being*
  Annamaria Lusardi, Olivia S. Mitchell, and Noemi Oggero
- *White-Labels, Brands, and Trust: How Mutual Fund Labels Affect Retirement Portfolios*
  Julie Agnew, Angela Hung, Nicole Montgomery, and Susan Thorp
- *The Effect of Default Target Date Funds on Retirement Savings Allocations*
  Robert L. McDonald, David P. Richardson, and Thomas A. Rietz
- *The Effect of Government Pensions on Financial Well-Being*
  William Skimmyhorn and Jialan Wang

You'll find brief summaries of this research in the pages that follow, including key findings. Biographies of the presenting scholars are provided in a separate document.

The TIAA Institute and Pension Research Council are proud to support original research on topics of interest to plan sponsors, academic leaders, and policymakers. We hope these studies help spur new ideas and insights on ways to promote financial security, and we look forward to a lively discussion on the findings and implications!

Sincerely,

David P. Richardson
Managing Director of Research
TIAA Institute

Olivia S. Mitchell
Executive Director
Pension Research Council

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Factors Affecting Temporal Discounting in Older Adults

Joseph W. Kable, Karolina M. Lempert, and David A. Wolk

Given the choice between a smaller immediate payout or a larger future payout, people generally prefer rewards sooner rather than later, a tendency known as temporal discounting. While most people discount future rewards and consequences to at least some extent, the degree of temporal discounting varies widely from person to person. These individual differences, in turn, are associated with a host of risky behaviors, such as smoking, overeating, gambling, borrowing excessively on credit cards, and texting while driving.

This paper looks at the cognitive and neural mechanisms underlying temporal discounting, so targeted interventions can be developed to minimize its harmful effects. Specifically, we investigate the association between temporal discounting, executive function, and declarative memory in 100 older adults, both cognitively normal and with mild cognitive impairment. Participants completed a neuropsychological testing battery, as well as an intertemporal choice task and a risky choice task.

Key findings:

- Memory ability in older adults is associated with temporal discounting, even when controlling for age, gender, and years of education.
- Executive function (e.g., the ability to keep rules in mind during a task) is not associated with temporal discounting, but it is associated with ability to maximize expected value in risky choices.
- People with mild cognitive impairment discount future outcomes to a greater degree than do cognitively normal individuals.

Decision Making under Uncertainty: An Experimental Study in Market Settings

Federico Echenique, Taisuke Imai, and Kota Saito

Subjective expected utility theory, or SEU, is the workhorse model of decision making under uncertainty, and economists tend to assume agents behave according to its precepts. To assess whether people actually behave as the theory predicts, we evaluate SEU's empirical validity in experimental settings in which subjects are asked to make decisions resembling portfolio allocations.

We conducted two studies with similar structures involving two different populations: undergraduate students in the laboratory, and a representative sample of the U.S. population drawn from a large-scale panel. The study design allowed us to quantify how far each individual subject's choices were from what the theory would suggest, compare results across subject populations, and gauge the relationship between subjects' choices and sociodemographic characteristics. In addition to studying SEU, we considered max-min expected utility, a common alternative to SEU.

Key findings:

- The vast majority of subjects do not conform with SEU theory.
- Subjects exhibit similar responses to uncertainty generated by simulated low- and high-volatility stock prices.
- The degree of compliance with SEU theory is very similar for undergraduate students, younger adults (20-39), middle-aged adults (40-59), and older subjects (60 or older).
- Subjects with a high degree of financial literacy behave significantly closer to the theory, based on one of two financial literacy measures tested; but there is no significant relation with the second measure.
- Subjects with more education are significantly closer to theory than less-educated subjects.
- Compared to SEU, max-min expected utility has no additional explanatory power.

Debt Close to Retirement and Its Implications for Retirement Well-being

Annamaria Lusardi, Olivia S. Mitchell, and Noemi Oggero

Older people (age 56-61) holding uncollateralized debt carrying high interest rates tend to be among those adults most subject to financial distress. Yet many Americans today carry such debt into retirement, as opportunities to borrow have increased significantly in recent decades.

This study investigates three potential reasons for this troubling behavior: low financial literacy, lack of information, and behavioral biases. Using data from the 2015 wave of the National Financial Capability Study, we examine the various types of debt people hold close to retirement and the rationale for people's financial decisions, explaining how each studied factor can lead older persons to hold excessive debt and the implications for their retirement well-being.

Key findings:

- Older people with higher incomes and more education tend to hold long-term debt such as mortgages, while those with lower incomes and less education tend to carry high-cost debt such as payday loans.
- Short-term uncollateralized debt is strongly indicative of financial distress for older persons nearing retirement.
- Older women and people with more dependent children are significantly more likely to report being over-indebted and unable to face financial emergencies.
- The most financially-knowledgeable older adults are the least likely to report that they hold too much debt or that they are financially fragile.
- Near-retirees who use one source of high-cost debt are also likely to use additional types of expensive debt.

White-Labels, Brands, and Trust: How Mutual Fund Labels Affect Retirement Portfolios

Julie Agnew, Angela Hung, Nicole Montgomery, and Susan Thorp

Retirement plan menus have been changing as sponsors adopt new generic, or “white-label,” funds. In 2014, twenty-five percent of retirement plans offered these fund options. This study explores how plan participants react to white-label and branded investment options; specifically, we ask how brand trust alters participants’ investment allocations. We also examine the impact of brand trust on expected returns and risk perceptions.

To gauge the influence of brand trust, we designed and fielded two online experiments with 940 currently employed retirement plan participants from the University of Southern California’s Understanding America Study panel. Participants made incentivized investment allocations—choosing among white-label funds, branded funds, and funds labelled with an employer’s name—and predicted investment returns using a distribution builder.

Key findings:

- Participants allocate significantly more to trusted brands when choosing between otherwise equivalent investment options.
- Options showing the names of highly trusted employers are more attractive to plan participants than equivalent white-label options.
- Participants expect higher risk-adjusted returns and lower risk from options that display the name of a highly trusted brand or highly trusted employer.

The Effect of Default Target Date Funds on Retirement Savings Allocations

Robert L. McDonald, David P. Richardson, and Thomas A. Rietz

Defined contribution retirement plans are the primary retirement savings vehicle for most American workers, and many of these plans now use target date funds as their default investments. Previously, money market funds were the most common default. Today's plans also tend to offer more investment options than were available in the past.

This study examines how these changes have affected plan participants' contribution allocations and equity exposure, based on a 2012 cross section of TIAA participants. To determine how investment defaults and the number of fund options affect participant behaviors, we analyzed data from a 2012 cross section of more than 600,000 TIAA participants working at 98 institutions. As part of the analysis, we separated participants into those who joined before and after target date funds became the default investment.

Key findings:

- Participants who had joined plans with a money market default largely switched out of the default option, had substantial variation in the equity exposure for their contributions, and, in 2012, allocated contributions to a median of three funds.
- Those who had joined plans with target date defaults held a median of one fund, generally the default option, and had increased equity exposure relative to participants who joined plans with a money market default.
- Target date defaults raised the amount participants contributed to equity by 13 percentage points on average and reduced or eliminated most allocation differences attributable to demographic variables.
- With a money market default, the size of the investment menu had a slight effect on the number of funds in which participants invested; this effect vanished under target date defaults.

The Effect of Government Pensions on Financial Well-Being

William Skimmyhorn and Jialan Wang

In 1986, the Federal Employees' Retirement System Act created a new three-tiered system (FERS) to replace the existing Civil Service Retirement System (CSRS) which had provided a traditional annuity benefit for federal government workers since 1920. The new system's benefits include annuity payments from FERS and Social Security that are lower in total than the annuity under CSRS, as well as a defined-contribution component in the Thrift Savings Plan. Accordingly, the 1986 reform affected the financial choices of millions of federal employees.

This study examines the reform's effects on civilian personnel in the Department of the Army, based on administrative personnel data from the Army and payroll data from the Department of Defense for all federal civilian employees hired by the Army between January 1, 1981, and December 31, 1987. To gauge how the reform affected these employees' financial outcomes, we combined the administrative data with individual-level data from a national credit bureau.

Key findings:

- There has been significant compliance with the regulation, which specified that employees hired before 1984 would remain in CSRS, while those hired subsequently would be enrolled in FERS.
- Besides pension plan enrollment, other employee characteristics do not differ sharply pre versus post the 1984 threshold.
- Very few employees opted in to FERS during the initial open season in 1987; instead, they elected to stay with the traditional CSRS pension.
- FERS coverage reduced consumer indebtedness by more than $11,000 in the long run, primarily via less mortgage debt.
- FERS coverage had little effect on consumer credit scores.

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About the TIAA Institute

For more than 20 years, the TIAA Institute has helped advance the ways individuals and institutions plan for financial security and organizational effectiveness. The Institute conducts in-depth research, provides access to a network of thought leaders, and enables those it serves to anticipate trends, plan future strategies and maximize opportunities for success. To learn more, visit www.tiaainstitute.org

About the Pension Research Council

For 65 years, the Pension Research Council/Boettner Center at Wharton School of the University of Pennsylvania has sponsored research on the entire range of private pension and Social Security programs, as well as related benefit plans in the U.S. and worldwide. Learn more at www.pensionresearchcouncil.wharton.upenn.edu