TIAA-CREF Institute

2015 Fellows Symposium: Retirement Benefits for a 21st Century Workforce

October 2, 2015

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Dear Colleagues:

Welcome to *Retirement Benefits for a 21st Century Workforce*, a Fellows Symposium sponsored by the TIAA-CREF Institute to promote the financial well-being and retirement security of U.S. workers. This unique event brings together academic researchers, TIAA-CREF business leaders and other financial security experts to discuss six innovative, Institute-supported research studies that address important aspects of retirement plan design and lifetime income:

- *Retirement Account Asset Allocations and Portfolio Holdings: A Cross Sectional Analysis with Traditional and Lifecycle Funds*
  Robert McDonald, Thomas Rietz, David Richardson and Tai Kam

- *Retiree Health Insurance and the Retirement Plans of College and University Faculty*
  Robert Clark

- *Determinants and Consequences of the Aging of the U.S. Scientific Workforce*
  David Blau, John Ham and Bruce Weinberg

- *The Performance of TIAA's Traditional Retirement Annuity for Selected Investment Cohorts, 1970 – 2005 Through 2013*
  David Babbel, Mark Myer and Miguel Herce

- *Trends in Distribution Choices of TIAA-CREF Participants: 2002-2014*
  Jeffrey Brown, James Poterba and David Richardson

- *Understanding the Distribution Choices of TIAA-CREF Participants*
  Paul Yakoboski

Executive summaries of these studies appear on the pages that follow. During the symposium, leaders of each study will discuss the findings with attendees.

The TIAA-CREF Institute is proud to support this work and its goal of strengthening the U.S. retirement system to meet the needs of today's workers. We are excited about this event and look forward to a lively and thought-provoking discussion!

Sincerely,

Stephanie Bell-Rose

Stephanie Bell-Rose
TIAA-CREF Senior Managing Director and Head of the TIAA-CREF Institute

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Executive Summaries

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Retirement Account Asset Allocations and Portfolio Holdings: A Cross Sectional Analysis with Traditional and Lifecycle Funds

Robert McDonald, Thomas Rietz, David Richardson and Tai Kam

In the past 15 years, the number of investment options typically available in a defined contribution retirement plan has increased. And over the past 10 years, life-cycle funds have become a common option and popular choice for use as a single "fund-of funds." Using a large cross-section of over 600,000 participants at 98 large institutions, we study how participants in the TIAA-CREF system allocate their contributions within this new investment menu environment. We find that participants typically invest in a handful of funds. Younger participants typically allocate more to equity than older workers and men allocate more to equity than women. There are significant menu effects. When more funds are available, participants invest in more funds. Further, when equity funds constitute a higher proportion of available funds, participants invest more in equity. Some participants invest exclusively in life-cycle funds; typically younger, lower income and less wealthy participants. These participants invest significantly more in equity overall, decrease their equity exposure faster with age and appear less affected by the number and mix of funds available.

Retiree Health Insurance and the Retirement Plans of College and University Faculty

Robert Clark

Retiree health insurance is a benefit that some employers provide to their employees. These plans are a form of deferred compensation that offers workers the option of remaining in an employer-sponsored health plan after they retire. Typically, employers subsidize participation in retiree insurance by paying some, or all, of the insurance premium. These plans are part of total compensation provided by employers to covered workers. Similar to pensions, workers earn credit toward a benefit that may be received in the future after the individual achieves certain age and service levels. Unlike pensions, the value of employer provided health insurance in retirement does not vary with earnings. The expectation that a worker will be covered by subsidized health insurance may influence the age of retirement and the level of saving for retirement. Employers should consider the cost of these plans and how they affect worker behavior in developing their retirement policies. This presentation examines how college and university faculty respond to coverage by employer-provided retiree health insurance.

Most private sector U.S. firms no longer offer post-retirement healthcare benefits. In contrast, most public sector employers continue to offer health insurance to retired employees; however, public employers have been reducing the generosity of these plans and increasing the number of years of service required to be eligible for subsidized health insurance in retirement (Clark and Morrill 2010). The recent modifications in public retiree health plans is in response to the rising annual cost of these plans and the change in reporting guidelines by the Governmental Accounting Standards Board that required states and localities to report the unfunded liabilities associated with these plans.

Economists have examined the retirement and saving incentives in pension plans for many years but rather little research has been conducted on how workers respond to the value and eligibility requirements for subsidized health insurance in retirement. Even less is known about how college faculty will respond to changes in pension and retiree health plans. One important question that concerns many university leaders is whether reductions in the value of retiree health plans or their elimination will result in faculty delaying retirement. While many institutions are reviewing retiree health plans due to their increasing annual costs and rising unfunded liabilities, academic administrators do not want to alter compensation in a manner that might entice faculty to further delay retirement. This study examines how older faculty respond to the expectation that they will continue to receive employer-provided health insurance in retirement. Specifically, do members of college and university faculties who believe their institution will provide subsidized health insurance to them retire earlier and save less than faculty who do not expect employer-provided retiree health insurance? Using a national survey of faculty age 50 and over, this report estimates how coverage by these plans influence the expected age of retirement and participation in supplemental retirement saving plans.

Determinants and Consequences of the Aging of the U.S. Scientific Workforce

David Blau, John Ham and Bruce Weinberg

Supported by a grant from the National Institute on Aging

The U.S. scientific workforce is aging in part due to the lifting of mandatory retirement for university faculty. The aging of our scientific workforce poses issues for both research universities and policymakers because people are generally believed to be most innovative relatively early in their careers. Moreover, the large number of aging researchers reduces opportunities for the next generation of young researchers. We study how innovative output evolves in the late careers of scientists, with an eye to predicting:

1. How the innovative output of the U.S. will change as our research workforce ages;
2. How the design of retirement policies affects retirement and innovative output; and
3. How retirement policies can be adjusted to affect retirement decisions and increase research output and opportunities for younger researchers.

Because the timing of retirement is likely to be affected by as well as affect productivity, we use pension incentives to obtain quasi-experimental variation in the age at which people retire to estimate the effect of retirement on scientific output.

We use restricted-access data from the NSF's Survey of Doctorate Recipients to construct employment histories and output (publications and patents) of a sample of the U.S. scientific workforce. We have collected and coded key features of DB pension plans at major universities and university systems, and coded DC plans obtained from TIAA-CREF. We are matching the pension plans to individuals in the SDR, which (in the restricted-access version) contains the IPEDS code of each respondent's employer.

This talk will be in three parts. First, we present an overview of the project and a description of how we propose to identify the effects of pension incentives on retirement decisions and scientific output. The second part presents some descriptive findings on the aging of the scientific workforce and the association between age and scientific output. In the third part we describe the data on pensions, focusing on variation across plans in retirement incentives.

The Performance of TIAA's Traditional Retirement Annuity for Selected Investment Cohorts, 1970 – 2005 Through 2013

David Babbel, Mark Myer and Miguel Herce

This paper examines the role of an annuity as an investment option in the accumulation phase of a retirement income portfolio such as those found in defined contribution plans. More specifically, we analyze the historical return performance of TIAA's Traditional Retirement Annuity ("RA") relative to other asset classes often found as investment options in DC plans. The TIAA RA is a deferred annuity first introduced in 1918, making it one of the longest continuously offered annuity products in the world. We compare the performance of the TIAA RA to U.S. large and small stocks, long-term corporate and government bonds, intermediate-term government bonds, and money market instruments for several cohorts over the period 1970 - 2013.

Using three different measures of financial performance, (1) mean-variance analysis, (2) associated Sharpe and Sortino ratios, and (3) stochastic dominance analysis, we show that permitting a deferred annuity such as the TIAA RA into the set of investment options available in retirement savings plans, and then allocating a substantial portion of the funds contributed to the retirement savings plan to the deferred annuity, improve the overall financial performance of a retirement savings plan such as a 401(k), 403(b), 457, or IRA over the studied period. This comes about because, in a retirement savings program, the deferred annuity can prudently invest in longer dated, less liquid, higher yielding underlying securities than money market and short-term fixed income alternatives.

The empirical analyses presented in this paper demonstrate that, during the period studied, the TIAA RA had both a higher return and lower variability than money market instruments and intermediate term government bonds. The use of the TIAA RA as an investment option improved the efficient investment frontier in the mean-variance space and reduced downside risk (as quantified by the Sortino ratios), meaning that the investor can obtain higher returns for a given level of risk or lower risk for a given level of returns. In terms of stochastic dominance analysis, we obtain the remarkable result that TIAA RA stochastically dominated money market and intermediate-term government bond instruments, while not being stochastically dominated by any other asset class. Consequently, deferred annuities such as the TIAA RA offer a distinct and valuable investment option that should be considered for retirement income portfolios in the accumulation phase.

Trends in Distribution Choices of TIAA-CREF Participants: 2002-2014

Jeffrey Brown, James Poterba and David Richardson

Participants have a number of options for receiving income from the TIAA-CREF system, including systematic and lump-sum withdrawals, various types of annuity payouts, or simply taking their required minimum distribution (RMD). This paper examines long-term trends in retirement payout choices over the period from 2002 to 2014. The data presented here show a continuation of a trend documented by Ameriks (2002) of participants' movement away from the use of life annuities as a first payout option. Instead, a growing proportion of participants opted to take their RMD as a first payout. Among participants choosing an annuity payment, a growing fraction of both women and men selected a single life annuity. About 80% of these participants also chose to add a guaranteed period to their annuity payout. We discuss various reasons for these trends, including the changing nature of retirement in higher education, potential behavioral biases, and short-term macroeconomic factors.

Understanding the Distribution Choices of TIAA-CREF Participants

Paul Yakoboski

This research examines how retirees with significant assets in tax-qualified retirement accounts convert their savings to income during retirement and the factors that influence their decisions. In particular, the research examines the similarities and differences between those who annuitize any of their savings and those who do not. One-thousand retirees age 60 or older who retired with at least $400,000 in defined contribution or IRA assets and have no defined benefit pension income were surveyed; 500 receiving annuitized payments (annuitants) and 500 not receiving annuitized payments (non-annuitants).

Annuitants and non-annuitants share the same top financial priorities for their personal finances in retirement, each of which is consistent with annuitization. Furthermore, the most important reasons for retirees deciding to annuitize are consistent with these top financial priorities.

Why then do some retirees not annuitize? It is possible that non-annuitants do not understand that annuitization would address their top financial priorities. Eighty percent of non-annuitants were advised to not annuitize or did not receive advice regarding annuitization; by contrast, 60% of annuitants were advised to annuitize. In-plan deferred annuities present an opportunity for participants to become socialized with annuities and annuitization. For 75% of non-annuitants, either their plan(s) did not have a deferred annuity or they did not realize it, the latter likely being the case for many.

About TIAA-CREF

The TIAA-CREF Institute helps 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, please visit our website at www.tiaa-crefinstitute.org.

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