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Today's Choices, Tomorrow's Opportunity: Innovations in Retirement Policy and Practice

May 7, 2015

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The Pension Research Council, Wharton, University of Pennsylvania

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Dear Colleagues:

Welcome to *Today's Choices, Tomorrow's Opportunity: Innovations in Retirement Policy and Practice*, a research forum co-sponsored by the TIAA-CREF Institute and the Pension Research Council to promote the financial well-being and retirement security of U.S. workers.

As the U.S. pension structure has shifted over the past 30 years from defined benefit to defined contribution plans, the effect on workers has been significant. Defined contribution plans give covered workers substantial latitude in determining whether to participate, how much salary to contribute, how to invest assets and how to take distributions. Accordingly, as participation in such plans has grown, workers have shouldered increased responsibility for managing their retirement savings.

Meanwhile, a growing body of research shows that behavioral biases and a lack of financial literacy often lead people to make poor financial decisions, thus diminishing their odds of achieving a secure retirement. Today's forum, and the research leading up to it, is designed to address these issues head on. Among the topics we will address are:

- Save More Later and Particularly After Your Next Birthday: The Effect of Procrastination on Retirement Savings
- The Role of Exponential-Growth Bias and Present Bias in Retirement Savings
- Complexity of Choice and Defined Contribution Plan Design
- Defined Contributions Provider Networks
- Optimal Saving Behavior: Implications for Financial Education and Policy

Each of these topics is the subject of an innovative study that will be reviewed today by a leader of the research initiative. Executive summaries of the studies appear on the pages that follow. While the subjects may vary, the primary goal of each study is the same: enable Congressional staff, policy analysts, researchers and other interested parties to examine key aspects of retirement savings and planning, and determine the implications for policy and practice. We look forward to adding your perspective to the conversation!

Sincerely,

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Executive Summaries

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Evaluating the Impact of Workplace Financial Education Using a Life Cycle Model

Annamaria Lusardi, Pierre-Carl Michaud, and Olivia S. Mitchell

Our newest research study explores a new way to evaluate the impact of financial education programs on retirement saving and investment.[1] Specifically, we use a stochastic life cycle model featuring uncertainty in income, longevity, capital market returns, and medical expenditures, which also incorporates endogenous knowledge accumulation. Since knowledge is at the core of the model, our approach permits us to cleanly measure how financial education programs can influence saving and investment decisions. While some analysts have previously sought to conduct such evaluations, few have had the right sort of experimental data needed to carefully measure the impact of the interventions. Using our model, we evaluate the effectiveness of efforts to build workplace financial education using econometric methods commonly used to estimate the effect of such programs. Inasmuch as all counterfactuals are known in the context of our model, this allows us to compare ”true” outcomes with estimates commonly generated by more conventional evaluation methods.

We show that our model explains a number of important features of financial education programs. For example, we show that it is frequently optimal for individuals to fail to invest in knowledge, as it is expensive to acquire and will not benefit everyone. Nevertheless, providing employees with financial knowledge can be valuable, depending on when it is offered and how much follow up is undertaken. Using conventional program evaluation econometric techniques married with simulated data, we can explicitly take into account selection and treatment effects: this allows us to measure how such programs shape wealth accumulation, financial knowledge, and participation in sophisticated assets (e.g. stocks) across heterogeneous consumers. We show that more effective programs are those which embed follow-up (or are continued over time) so as to help employees retain knowledge acquired via the program. In this case, financial education delivered to employees around the age of 40 will optimally enhance savings at retirement by close to 10%. By contrast, a program that provides only a one-shot intervention can generate short-term but few long-term effects. Finally, we evaluate how important it is to account for selection in program participation. We conclude that comparing participants and non-participants, even in a difference-in-difference framework, can deliver misleading estimates of program effectiveness.

Highlights:

- We use our stochastic life cycle model with uncertainty in income, longevity, capital market returns, and medical expenditures, which also incorporates endogenous investment in financial knowledge.
- Our approach allows us to evaluate the effectiveness of efforts to build workplace financial education using econometric methods commonly used to estimate the effect of such programs. Prior approaches that do not account for selection in program participation deliver misleading estimates of program effectiveness.
- The most effective financial education programs embed follow-up (or are continued over time) to help employees retain acquired knowledge: in this case, financial education delivered to employees around the age of 40 will enhance savings by retirement age by almost 10%.

[1] Annamaria Lusardi, Pierre-Carl Michaud, and Olivia S. Mitchell. 2014. “Using a Life Cycle Model to Evaluate Financial Literacy Program Effectiveness.” Working Paper.

The Role of Exponential-Growth Bias and Present Bias in Retirement Savings

Gopi Shah Goda , Matthew R. Levy, Colleen F. Manchester, Aaron J. Sojourner, and Joshua Tasoff

We investigate a cognitive barrier and a motivational barrier to retirement saving. The cognitive barrier is neglecting compound interest when assessing returns to saving, known as exponential-growth bias (EG bias), which leads individuals to underestimate the future value of saving today. The motivational barrier is present bias, which is the tendency for individuals to act patient when considering decisions involving the long term, but act impatient when decisions involve the near term, such as continually putting off retirement plan enrollment or making changes to contribution amounts.

Using an online representative sample of the US, we find that EG bias and present bias are prevalent. We find that the incidence of these two biases is unrelated; in other words, individuals with greater EG bias are not more likely to be more present biased and vice versa. Importantly, we find that both biases are associated with lower levels of retirement savings.

To determine the causal effects of these biases as well as present a “proof of concept” for overcoming them, we develop two types of interventions and assess how they affect individuals’ responses to a hypothetical saving scenario in the context of an employer-provided retirement savings plan. We find that the increase in contributions when presented with a higher ($1.00) relative to lower employer match ($0.50) is greater among subjects with better understanding of exponential growth, indicating that EG bias influences how individuals respond to saving opportunities. Second, we find that providing individuals with information on how the employer match would translate into income in retirement results in a significant increase in contributions among individuals with the most EG bias. We also find a significant increase in contributions among those with the least EG bias, suggesting that response to this type of information may depend on more than just knowledge of exponential growth. Third, we find that individuals with more present bias respond more to immediate “limited time only” financial incentives for filling out contribution change forms. The evidence suggests that both biases play an important role in limiting retirement savings of Americans, and that interventions exist that can mitigate the effects of these biases.

Highlights:

- We find that exponential-growth bias and present bias are prevalent in a representative sample from the U.S.
- Exponential-growth bias and present bias are negatively related to levels of retirement savings.
- Interventions exist that can mitigate the effects of these biases on retirement saving decisions.

Save More Later? The Effect of the Option to Choose Delayed Savings Rate Increases on Retirement Wealth

John Beshears, Hengchen Dai, Katherine L. Milkman, and Shlomo Benartzi

Past research has shown that when considering an action with immediate costs but greater net future benefits, people often prefer to take that action later rather than now. Since savings plan enrollment reduces current consumption (an immediate cost) in exchange for financial stability later (a net future benefit), the evidence suggests that individuals may be more likely to save for retirement if they can choose to begin saving later. In addition, past research on "the fresh start effect" suggests that people are particularly motivated to engage in future-oriented behaviors (like saving for retirement) following salient calendar markers such as birthdays and holidays. We conducted a field experiment to test whether (a) the option to increase retirement savings contributions at a delay boosts savings and (b) this time delay option is more attractive if the delay is associated with a "fresh start" moment (e.g., a birthday or holiday). Collaborating with several universities and a plan record keeper, we randomized mailings sent to university employees encouraging increased retirement savings. Some recipients were encouraged to increase savings immediately. Others could choose whether to increase savings immediately or at a time delay (e.g., "in three months"). A third group received mailings identical to those in the second group, except the time delay option corresponded to increasing savings on a meaningful future date (e.g., "on your next birthday"). We find that relative to employees prompted to increase savings immediately, employees given a choice between an immediate increase and a delayed increase are no more likely to increase savings. In fact, the latter group exhibits lower savings rates over the eight-month follow-up period, as the delayed option attracts some employees. However, when the delayed option is framed as being implemented after a meaningful future moment, the negative effect of offering a delayed option is undone.

Highlights:

- In a between-subjects field experiment, we find that relative to employees who are offered a convenient mechanism for increasing their contribution rates immediately, employees who are offered a convenient mechanism for increasing their contribution rates immediately *or at a delay* are no more likely to agree to an increase.
- In fact, employees who are able to choose between an immediate savings increase and a savings increase at a delay exhibit lower savings rates over the following eight months compared with those who are only given the option to increase savings immediately.
- However, when a delayed savings option is labeled as corresponding to an employee's next birthday, the negative effect of offering a delayed option is undone.

Simplifying Choices in Defined Contribution Retirement Plan Design

Donald B. Keim and Olivia S. Mitchell[1]

A distinguishing feature of the U.S. defined contribution (DC) system is that participants must decide how much to contribute and where to invest their retirement plan contributions. Yet plan sponsors retain the responsibility to design their fund menu, either adding or subtracting funds from the lineup based on their fiduciary duty to benefit participants. After many years of adding funds, some employers of late are *streamlining* their offerings to simplify fund menus.

To study the impact of fund streamlining, we have used administrative data from a large non-profit educational/research firm to examine saving, investment, and fund allocation patterns as a result. In all, the plan menu was cut by about half with those funds retained in the lineup chosen by the employer's investment committee with consultation from finance specialists. We then compare participant investment choices prior to and after the streamlining event and evaluate what happened to members' risk exposure as a result of the employer's decision.

We show that participants subject to the streamlining were older, more likely to be male, and higher-income than their counterparts; they also held higher balances in riskier funds and less in safer/balanced/target date funds. Initially, under the new lineup, these participants transferred to safer assets and only 2% of the assets moved into the new brokerage window. Post-streamlining, streamlined participants' accounts exhibited significantly lower turnover rates and expense ratios; based on reasonable assumptions, this could lead to additional aggregate savings for these participants over a 20-year period of $20.2M, or in excess of $9,400 per participant. Moreover, after the reform, streamlined participants held significantly less equity and exhibited significantly lower risks by way of reduced exposures to most systematic risk factors, compared to their non-streamlined counterparts.

Our results should be of substantial interest to those seeking to improve defined contribution retirement plan design, including employers, fund providers, consultants, and regulators. In particular, the length and complexity of the plan investment menu matters.

Highlights:

- Simplifying the retirement plan menu led streamlined participants to hold significantly fewer funds, invest less in equity, and be subject to significantly less risk in their retirement accounts, compared to their non-streamlined counterparts. Few moved to the brokerage window.
- Streamlined participants experienced significantly lower expense ratios than before.
- Over a 20-year period, we estimate that additional aggregate savings for these participants could be expected to amount to $20.2M, or more than $9,400 per participant.

1 This summary draws from Donald B. Keim and Olivia S. Mitchell (2015) "Simplifying Choices in Defined Contribution Retirement Plan Design." Pension Research Council Working Paper, The Wharton School.

Plan Architecture and Fees

Veronika K. Pool, Clemens Sialm, and Irina Stefanescu

Employer-sponsored defined contribution (DC) accounts have gained significant importance around the world. In the United States, the value of 401(k) assets reached $4.2 trillion in 2013. The growth represents important business opportunities for mutual funds as they manage approximately half of the 401(k) investment pool. Moreover, mutual fund families often play an active role in creating the menu of investment options as -in addition to asset management services- they also provide administrative services in these employee benefit plans.

However, mutual fund families involved in the plan's design often face conflicting incentives. While they have an incentive to include their own proprietary funds on the menu even when more suitable options are available from other fund families, they are also pressured by plan sponsors to create menus that serve the interests of plan participants.

We investigate whether mutual fund families acting as service providers of 401(k) plans display favoritism toward their own funds. Using a hand-collected dataset on retirement investment options, we show that poorly-performing funds are less likely to be removed from and more likely to be added to a 401(k) menu if they are affiliated with the plan trustee. We find no evidence that plan participants undo this affiliation bias through their investment choices. Finally, the subsequent performance of poorly-performing affiliated funds indicates that these trustee decisions are not information driven.

We also investigate the fees charged in DC pension plans and study whether these fees depend on the structure of the plans. We find that in the 401(k) space average fund level fees are higher for plans whose menu includes fund offerings from many different mutual fund families. We also show that affiliated funds charge lower fees and that the degree of openness has an impact on the cost participants face in DC plans. Moreover, we find that plans with higher average account sizes, which might proxy for investor sophistication or economies of scale, exhibit lower fees.

Highlights:

- Mutual fund families acting as service providers of 401(k) plans display favoritism toward their own funds.
- Plan participants are inert and do not undo this affiliation bias through their investment choices.
- The subsequent performance of poorly-performing affiliated funds indicates that trustee favoritism is not information driven.
- Plans whose menu includes fund offerings from many different mutual fund families tend to charge higher fees.
- Plans with higher average account sizes, which may proxy for investor sophistication or economies of scale, exhibit lower fees.

About the TIAA-CREF Institute

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.

About the Pension Research Council

The Pension Research Council of the Wharton School of the University of Pennsylvania is committed to generating debate on key policy issues affecting pensions and other employee benefits. We sponsor interdisciplinary research on the entire range of private pension and social security programs, as well as related benefit plans in the United States and around the world. Visit us on the web at www.pensionresearchcouncil.org.

About TIAA-CREF

TIAA-CREF (tiaa-cref.org) is a national financial services organization with $851 billion in assets under management (as of 12/31/2014) and is the leading provider of retirement services in the academic, research, medical and cultural fields.

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