The Best Retirement Research of 2011

By Kerry Pechter *Tue, Feb 7, 2012*

What were the most significant decumulation research papers published last year? These ten articles can certainly claim to be among them.

The recent convergence of the global aging crisis and the global financial crisis has sparked the publication of hundreds if not thousands of significant academic studies related to retirement income financing.

As basic research, this work won't necessarily have immediate business or public policy applications. But it will undoubtedly provide the intellectual foundation from which new financial products and new policies eventually spring.

We asked academics in the field to identify significant work that they read in 2011, and these were some of the studies they recommended. Some of these pieces appeared earlier in different form—as they evolved from briefs to working papers to journal articles.

Two dominant themes run through these papers. The first involves the optimal use of annuities in personal retirement income strategies. The second involves the role of behavioral finance in personal financial decision-making. There's also an article on the size of public pension debt and one that questions the social payoff from investment in financial education.

The output of some of the most prominent thinkers in the retirement income field is represented here. We could name a dozen other men and women who published significant articles or books in this area last year. We'll try to report on their work in the future.

With that disclaimer, here are ten noteworthy retirement research studies from 2011:

Optimal Portfolio Choice over the Life-Cycle with Flexible Work, Endogenous Retirement, and Lifetime Payouts, *Review of Finance*, Jingjing Chai, Wolfram Horneff, Raimond Maurer, and Olivia S. Mitchell, May 2011.

In this paper, the director of the Boettner Center on Pensions and Retirement Research at Penn (Mitchell) and collaborators from Goethe University in Germany demonstrate a new mathematical model designed to help public policymakers predict how people of different ages and economic circumstances will react to employment disruptions and financial market crashes.

"Some will be able to hedge adverse capital market developments they face in the crisis, not only by altering their asset allocations, but also by altering their work hours and retirement ages," they write.

Near-retirees, in general, will save more, work harder and retire later. "In particular, we find that when hit by a financial and economic crisis, households near-retirement must cut their consumption both in the short-term and also over the long-term. Moreover, they will have to increase their work effort and postpone

retirement."

Younger people will adapt differently. "During the first five years after the onset of the crisis, young households will reduce work hours, savings, and equity exposure and suffer from a drop in consumption. In the long run, however, they will work more, retire later, invest more in stocks, consume less, save more, and spend less on private annuities."

The authors speculate that variable payout income annuities, which are currently rarely used, could play a bigger role. "Though fixed payout annuities have been prevalent in the marketplace to date," they write, "we anticipate that investment-linked payout annuities will become more popular as Baby Boomers age and Social Security benefits will fail to grow."

When to Commence Income Annuities, Jeffrey K. Dellinger, Retirement Income Solutions Enterprise, Inc., 2011.

The author of this paper wrote *The Handbook of Variable Income Annuities* (Wiley, 2006), and was a key product developer at Lincoln Financial Group. Here he argues in favor variable income annuities and against the practice of delaying their purchase, except as a way to offset the higher costs of a buying an annuity relative to other decumulation strategies.

"A variable income annuity will produce more income than a fixed income annuity, because (1) the insurance company does not bear the investment risk in the former and thus does not have to introduce a margin for asset depreciation risk, (2) the insurance company does not bear interest rate risk in the former and thus does not have to introduce a margin for interest rate risk, and (3) the contract owner can choose to have his annuity income benefits based on a collection of assets with a higher mean return than that associated with the collection of typically high-quality, fixed-income securities held by the insurer to back fixed immediate annuity obligations."

Regarding the best time to buy an immediate annuity, Dellinger argues that it depends on when the mortality credit (which increases with the age of the purchaser) offsets the added costs of the annuity. Otherwise, "the income annuity should commence immediately—assuming one needs incremental income at that point in life," he writes.

"This paper… quashes the misconceptions that one should take withdrawals from mutual funds or deferred annuities for a number of years and then purchase an income annuity later or purchase income annuities on a staggered basis merely because a given amount of premium translates into higher periodic income with advancing age."

Good Strategies for Wealth Management and Income Production in Retirement, Mark Warshawsky and Gaobo Pang, published in *Retirement Income: Risks and Strategies* (MIT Press, 2012) pp 163-178.

In this chapter from a just-published book, two Towers Watson consultants suggest that retirees can best balance their need for liquidity and their need for protection from longevity risk and create a secure retirement through the gradual annuitization of their savings over a period of 20 to 25 years following

retirement.

"A phased annuitization scheme over a number of years should be a sensible pillar for retirement wealth management," they write. "This gradual process works to smooth over fluctuations in annuity purchase prices and captures the benefits of risk pooling (i.e., mortality credit) and thus longevity insurance for advanced ages. The annuity payouts establish a consumption floor to cover basic living needs throughout an individual's life."

"The results also reveal the merits of a fixed percentage systematic withdrawal scheme from the remaining portfolios… Risk can never be eliminated entirely, and these strategies are good overall to achieve desirable outcomes and avoid bad ones." As more and more savings gets annuitized, up to 100% at age 80, for instance, the equity allocation of the liquid assets also goes up, eventually to 100% in late life—by which time the liquid assets are small. The exact pace of annuitization, how many years it is spread over, the amount annuitized each year, depends on age of retirement, equity/bond portfolio mix at time of retirement, whether the annuity is a single or joint-and-survivor contract.

What Makes a Better Annuity?, Jason Scott, Wei-Yin Hu, and John G. Watson. *Journal of Risk and Insurance*, 2011, Vol. 78, No. 1, 213-244.

Life annuities are expensive, thanks to adverse selection, marketing, and distribution costs, which hurts sales, this study explains. One way to make them cheaper and more attractive would be to delay the payouts until an age when the survivorship credit—the dividend from mortality pooling—offsets the costs.

In the views of these authors, all of whom work at Financial Engines, annuity product designers should create products where income doesn't begin until later ages, or products where longevity insurance is added to existing portfolios, or even ultra-cheap products where the payouts are contingent on both advanced age and financial ruin.

"We find that participation gains are most likely with new annuity products that concentrate on late-life payouts," they write. "Annuity innovation should focus on adding survival contingencies to assets commonly held by individuals…

"We find demand only for those annuity contracts with a significant time gap between purchase and payouts… [and envision] a robust financial market where individuals can purchase payouts contingent on any future market state, and a more limited insurance market where individuals can purchase payouts contingent on both the market state *and* a personal state—their survival."

Portfolios for Investors Who Want to Reach their Goals While Staying on the Mean-Variance Efficient Frontier, Sanjiv Das, Harry Markowitz, Meir Statman, and Jonathan Scheid. *The Journal of Wealth Management*, Fall 2011.

This paper reconciles the world of the efficient frontier (EF), where time horizons and goals other than investment returns are secondary or irrelevant, and the principles of behavioral finance. The writers include the Nobel laureate who co-fathered the EF (Markowitz) and the author (Statman) of *What Investors*

Really Want: Know What Drives Investor Behavior and Make Better Financial Decisions (McGraw-Hill, 2010).

"Investors want to reach their goals, not have portfolios only on the mean–variance efficient frontier," and allocate different amounts of money to separate "mental accounts" devoted to their major goals, the authors write. "Mean–variance investors have a single attitude toward risk, not a set of attitudes mental account by mental account. In contrast, behavioral investors have many attitudes toward risk, one for each mental account, so they might be willing to take a lot more risk with some of their money."

Practitioners of goal-based or time-segmented "bucketing" strategies may find this research reassuring. "The number of investors who were willing to take a lot more risk with some of their money exceeded the number of investors who were willing to take a little more risk with all their money by a ratio of approximately 10 to one," the authors write. "Yet taking a lot more risk with some of our money adds to our overall portfolio risk about the same as taking a little more risk with all our money."

Framing Effects and Expected Social Security Claiming Behavior, Jeffrey R. Brown, Arie Kapteyn, Olivia S. Mitchell. *NBER Working Paper 17018*, May 2011.

Deciding when to receive Social Security benefits is one of the most important retirement planning decisions that most Americans will make. Yet this decision is less often determined by careful reflection than by the way it is "framed." That leads many people to take benefits too early, the authors of this paper write.

In fact, the Social Security Administration's way of presenting the question in "break even" terms—by asking long someone needs to live to recoup the income lost by claiming at age 66 or 70 instead of at 62—encourages many people to take benefits too early.

"Individuals are more likely to report they will delay claiming when later claiming is framed as a gain, and when the information provides an anchoring point at older, rather than younger, ages," the authors write. "Females, individuals with credit card debt, and workers with lower expected benefits are more strongly influenced by framing. We conclude that some individuals may not make fully rational optimizing choices when it comes to choosing a claiming date."

Why Does the Law of One Price Fail? An Experiment on Index Mutual Funds, James J. Choi, David Laibson, Brigitte C. Madrian.

This paper, which won the 2011 TIAA-CREF Paul A. Samuelson Award for Outstanding Scholarly Writing on Lifelong Financial Security, is especially timely, given the advent of mandatory fee disclosure in 401(k) plans.

Originally published in 2006 as an NBER working paper, it claims that participants select high-fee index mutual funds over lower-cost options that can produce the same returns because they place greater emphasis on annualized returns since a fund's inception.

The paper concluded:

- Many people do not realize that mutual fund fees are important for making an index fund investment decision.
- Even investors who realize fees are important do not minimize index fund fees.
- Making fee information transparent and salient reduces allocations to high-cost funds.
- Even when fee information is transparent and salient, investors do not come close to minimizing index fund fees.
- Investors are strongly swayed by historical return information.
- Investors do not understand that without non-portfolio services, S&P 500 index funds are commodities.
- Investors in high-cost index funds have some sense that they are making a mistake.

Annuitization Puzzles, by Shlomo Benartzi, Alessandro Previtero, Richard H. Thaler, *Journal of Economic Perspectives*, (Published by Allianz Global Investors Center for Behavioral Finance, October 2011).

"Our central point is simply that drawing down assets is a hard problem, a problem with which some households appear to be struggling, and one that could be made easier with full or partial annuitization," write the well-known authors of this article, which non-academic annuity marketers should find useful.

Yet, as the paper points out, there are some significant obstacles to wider annuity ownership. Annuities are often presented as gambles ("Will I live long enough for this to pay off?") rather than as longevity risk reduction strategies. Nor is there a clear roadmap for former qualified plan participants who want to shop for annuities.

"We believe that many participants in defined contribution retirement plans would prefer to annuitize as well, but not if they have to do all the work of finding an annuity to buy, as well as bear the risk and responsibility for having picked the annuity supplier," the authors write.

"It is now time to consider making automatic decumulation features available in defined contribution plans. Such features could range from full annuitization to options that include a mix of investments and annuities—for example, perhaps including a deferred annuity component to handle the problem of tail risk in longevity and even long-term care coverage…"

Public Pension Promises: How Big Are They and What Are They Worth?, Robert Novy-Marx and Joshua Rauh. *Journal of Finance*, Vol. 66, Issue 4, August 2011.

Ten years ago, the discount rates used by public pension actuaries to calculate future liabilities and current contribution requirements weren't yet political hot potatoes. Now they are. This paper suggests using "the state's own zero-coupon bond yield corrected for the tax preference on municipal debt (which we call the 'taxable muni rate')" rather than the risk-free Treasury rate or the average historical returns of a balanced portfolio.

"We calculate the present value of state employee pension liabilities as of June 2009 using discount rates that reflect the risk of the payments from a taxpayer perspective. If benefits have the same default and recovery characteristics as state general obligation debt, the national total of promised liabilities based on current salary and service is $3.20 trillion," the authors write.

"If pensions have higher priority than state debt, the present value of liabilities is much larger. Using zero-coupon Treasury yields, which are default-free but contain other priced risks, promised liabilities are $4.43 trillion," they added. By contrast, "assets in state pension funds were worth approximately $1.94 trillion as of June 2009… total state non-pension debt was $1.00 trillion and total state tax revenues were $0.78 trillion in 2008."

The Financial Education Fallacy, Lauren E. Willis, *American Economic Review: Papers and Proceedings 2011, 101:3, 429–434*.

Millions of Americans, studies show, are too financially illiterate to navigate the investment world or plan effectively for their own retirement. In this paper, a Loyola Law School professor advises against assuming that more financial education is the answer. Regulation is cheaper and more effective than education, she argues.

"Effective financial education would need to be extensive, intensive, frequent, mandatory, and provided at the point of decision-making, in a one-on-one setting, with the content personalized for each consumer," writes Willis.

"The government money and time required would outstrip any ordinary public education campaign. A new highly skilled professional class of affordable, competent, independent financial educator-counselor-therapists would need to be created, regulated, and maintained.

"The price to individuals in time spent on education—rather than, for example, earning more income—would be enormous, such that financial education might decrease wealth. The psychological analyses needed to individualize de-biasing measures would be personally invasive. Are these costs we are willing to bear?"