SOCIETY OF ACTUARIES®

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Securing Future Retirements

Innovations in Planning Strategies, Financial Products and Employee Benefit Plan Structure

Contents

Introduction

Andrea Sellars and John Cutler

In recent years, there has been increased attention paid to the concepts of financial literacy, financial wellness and retirement preparedness. Employers, professionals and the market have responded with new approaches to retirement planning and the development of new tools. The primary motivation of this year's call for essays was to identify potential solutions and new innovations being developed to assist workers and retirees better prepare for retirement. The current call drew 13 authors who submitted 18 excellent essays. The full essay collection is found in this publication and sets forth ideas that can be further developed or that will spur thinking for new products, planning tools and employee benefit plan strategies. It should be noted upfront that the essays are deliberately intended to be solely the views, ideas and opinions of the authors. They do not represent any formal position or opinion of the Society of Actuaries. They are meant to contribute to the wide range of thinking on these topics.

Essay Topics

The essays cover four primary areas of interest:

- Better individual planning in (or leading up to) retirement
- Financial planning advice, products and services
- Employer strategies for assisting employees/retirees
- Econometric and/or policy-focused solutions

A panel of judges did a blind review of the essays for publication and awards. The judges selected five essays for awards with $2,000 awarded per author. Consideration was given to creativity, originality and the extent to which an idea could contribute to the further development of solutions.

WINNING ESSAYS

- John Cutler, "An Enhanced Social Security Annuity"
- Jonathan Forman, "Workers and Retirees Could Pool Risk with Tontine Annuities, Tontine Pensions and Survivor Funds"
- Tim Driver and Anna Rappaport, "Working Longer to Improve Retirement Security: Improving Public Policy"
- Joe Tomlinson, "We Can Build Better Retirement Products, But Will Anyone Buy Them?"
- Jill Fisch, Marion Labouré and John Turner, "Automated Advice"

The judging panel also selected a series of essays for honorable mention that were ineligible for awards. These essays were written by Steven Vernon and expand on research sponsored by the SOA with Stanford University:

- "A Smart Way to Develop Retirement Income Strategies"
- "Smart Decisions Older Workers Can Make for Retirement"
- "Smart Steps Employers Can Take to Help Older Workers Transition Into Retirement"

What's Next?

Some of the essays include ideas that can be easily implemented and are focused on more immediate solutions. Others provide ideas that would need further development to come to fruition. Regardless of the individual essay's stage of development, the ultimate aim is for this collection of essays to be the springboard for further research in this area with the Society of Actuaries and other organizations.

The PRNR Project Oversight Group

The SOA established the Committee on Post-Retirement Needs and Risks, chaired by Anna Rappaport in 1999. The committee seeks to further knowledge, research and understanding of the risks encountered during retirement through a variety of activities. The committee has hosted an annual series of call for papers or essays since 2014. The Project Oversight Group (POG) for this call for essays was co-chaired by Andrea Sellars and John Cutler. They would like to thank the rest of the members of the POG for their participation and contributions to this collection:

Vickie Bajtelsmit	David Rogofsky
Joe Barrera	Julie Stich
Carol Bogosian	Ken Tacchino
Ted Goldman	Nevenka Vrdoljak
Barb Hogg	Steven Siegel, SOA research actuary
Cindy Levering	Barbara Scott, SOA senior research administrator
David Manuszak	
Anna Rappaport	
Stuart Ritter	

An Enhanced Social Security Annuity

John Cutler

Social Security provides what most actuaries like to see in terms of how to address retirement, meaning individuals are best protected by annuitizing retirement. What is desired is a steady flow of income on which people can depend. That Social Security is a government program instead of a private insurer also means the benefit is from a trusted source. That gives an assurance it will be there when needed. It also helps that Social Security is structured as a benefit one cannot outlive. Imagine you had bought a private annuity guaranteed to a certain age, even 100. For many, that source of funds would dry up.

Having said that Social Security is wonderful—and not even getting into how it also is wonderful because it tends to aid poorer individuals more than the rich—it is not enough for many. My proposal does not address how to help the lowest income individuals. It would, however, help those who do not have enough quarters of work to qualify for Social Security.

Right now, tens of millions of people put money aside to protect themselves in retirement. In many cases, they tap it before they wish. In other cases, they could have saved/invested but did not. My proposal pushes—nudges—individuals in the direction they should be going, namely putting more money away in a vehicle that best maximizes their savings dollars.

As we know from Nobel laureate Richard Thaler, people do not act completely rationally. As reported in the *New York Times* when he won the Nobel Prize in Economics, Thaler "did not simply argue that humans are irrational, which has always been obvious but is not particularly helpful. Rather, he showed that people depart from rationality in consistent ways, so their behavior can still be anticipated and modeled."[1]

Why This and Not Something Else?

What is envisioned here is the creation of a right to buy additional annuity protection through the Social Security system, in essence to leverage the idea that Thaler had to nudge people toward better decision-making.[2]

Now someone will point out that people can already buy annuities. My reply is they can but they don't. Part of this is likely due to companies and brokers that sell annuities not making a compelling case. Another part is the funding requirement. Most annuities are paid (bought) in a lump sum. But that is not the only way to do it. All an annuity really amounts to is money at the front end (either a lump sum or a monthly flow) that triggers a promise to pay a lump sum or flow of money in the future. The Appendix demonstrates what it might cost to create such protection through the private market rather than Social Security.

To achieve more widespread adoption of annuities, the government could wage an educational campaign. Or employers could provide annuities instead of life insurance. None of the various ideas will likely alter the fact that private sector annuities are, in my opinion, simply not constructed or delivered well to expand coverage for the great mass of the public.

An analogy would be how extensive term life insurance is versus whole or universal life. If the annuity industry could have created a term life equivalent, they would have done so and sales would presumably have been as robust as term life, at least if employer interest had been as great as with term life.

Established Models

This brings up the question as to what might be the best method for delivering such a product. The model

1 Roger Lowenstein, "Exuberance is Rational," New York Times Magazine, Feb. 11, 2001, *http://www.nytimes.com/library/magazine/home/20010211mag-econ.html.*

2 From Lowenstein: "Along with Shlomo Benartzi, a collaborator at UCLA, Thaler cooked up a plan called Save More Tomorrow. The idea is to persuade employees to commit a big share of future salary increases to their retirement accounts. People find it less painful to make future concessions because pain deferred is, to an extent, pain denied. Therein lies the logic for New Year's resolutions. Save More Tomorrow was tried with a Chicago company, and workers tripled their savings within a year and a half—an astounding result." Ibid.

I would propose is the Federal Employees' Group Life Insurance (FEGLI) Program, established in 1954. It is the largest group life insurance program in the world, covering more than 4 million federal employees and retirees, as well as many of their family members.

FEGLI provides group term life insurance. A private entity—the Office of Federal Employees' Group Life Insurance—was created to pay claims under FEGLI. Well over 100 life insurance companies participate in the program. They originally split the risk but since there is essentially no longer any risk with a program this large, there is no longer an insurance charge. MetLife receives a management fee to run the program.

Another model is the federal retiree program known as the Thrift Savings Program (TSP). TSP is a defined contribution retirement savings and investment plan for federal employees and members of the uniformed services. It was established in 1986 and offers the same types of savings and tax benefits many private corporations offer under 401(k) plans. What is interesting about this model is that the federal government is the administrator. No brokerage firm is hired to run the program.

How It Would Work

There is no reason FEGLI (or TSP) administrators could not be brought into the picture for identifying annuity companies that would offer their products to Social Security beneficiaries. These insurance products would not be identified by carrier. More important, the rules for how the carriers price and reserve for the annuities would all be the same. There are certainly reasons why competition is good. But for this kind of product approach, it is better we treat it as a commodity product and reduce competition and differentiation to make it accessible and more desirable to Social Security beneficiaries.

If we go back to earlier in this essay, you'll recall that an annuity can be a flow of money at the front end. For this proposal to work, we have to envision a system where people move small bits of change forward over time. A 20-year-old can easily divert $5 to 10 or so a month into a retirement account … or a Social Security annuity.

Social Security actually uses percentages, not dollar figures: You pay 6.2% and the employer pays 6.2% (which is not the same as the Federal Insurance Contributions Act, or FICA, rate since that includes Medicare). That approach would probably be adopted to make it easier. In fact, here is where Thaler comes into play. If you had to grit your teeth and lock down some money you couldn't touch for 40 years, which is psychologically better, $10 or .3%? Some people will like the idea of a set amount of cash. Others would say setting aside, say, another .3% of income into Social Security makes it an "even" savings of 6.5% of salary. Either works and it is not the final amount that is important but the fact that people default to one or the other and put money away.

One departure from Social Security is that the person can turn the savings on or off but they cannot withdraw the funds prematurely. Whatever they do put into the system goes into a dedicated account they keep for life. They can add to it or not as time goes by. Individual retirement accounts and 401(k) plans can be accessed ahead of time, with a penalty. These could not be accessed early.

A parenthetical note here. If we were in a world where there was only the Social Security system, you might need to build in a way to access the money ahead of time. But with the ability to tap into these other retirement accounts in case of emergency, there is less need to go after the Social Security annuity. This also prevents what has happened politically to retirement accounts. The law now allows people to access their retirement accounts for education or to buy a first home. These are laudable provisions but if anyone thinks they were added because of the hue and cry of the public, they are missing how things work in Washington. These came from the industries that benefit from letting people tap their retirement accounts for those other, nonretirement uses.

Triggering Provisions

The system cannot be kept so pure that there is not an exit plan for some hardships, specifically, in the event of a permanent disability. In that case, it makes sense to allow a diversion of retirement savings.

In essence, there would be only two triggering events. One trigger allows access earlier for permanent disability. The main one is the date you set after retirement for when you want the money to flow. This probably should be no earlier than age 66, the current age for

Social Security distributions for those born before 1954. As is scheduled for Social Security itself, the distribution age could be moved to 67 for those born after 1960. As with longevity annuities, the idea is to protect people at older ages. What might be nice is not to require this be a permanent election when they start putting the money away. Frankly, the closer to retirement, the more likely the person would know their financial situation.

One matter open for discussion is whether to make this an auto-enrollment option. We know auto-enrollment works. I would suggest we do that here. But the amount we would want to tap becomes an issue. Too low and people sign on but it does not amount to that much when they retire. Too large and they reject the enrollment altogether. We could make it a sliding scale with larger salaries getting a larger percentage put aside.

But I tend to think we should start out simple—and relatively small—until we have more real-world experience. While a lot of the organizational matters have been set out, there is still a lot missing. For instance, whether to introduce a difference in pricing between males and females, which exists in the private annuity market but not in Social Security. Other issues include indexing for inflation, survivor benefits and so forth.

Concluding Thoughts

Since this is a thought exercise and not in-depth research, the next step would seem to be to flesh this out more. One way to do this is built on work already done by the Social Security Administration, especially that of Dale Kintzel and his colleagues.[3] I'd also suggest that while much has been discussed about better structuring 401(k) plans now that we have moved from a defined benefit world to one of defined contributions, we are missing the larger picture: There are other tools we can employ to protect and help people secure their future retirement. A new Social Security annuity would help do so.

3 While it is slightly off-topic, the Social Security Administration has a very detailed analysis of what it would take to create Social Security-like benefits via private annuities. See Dale Kintzel, "Social Security Retirement Benefits and Private Annuities: A Comparative Analysis," Social Security Administration issue paper no. 2017-01 (May 2017), *https://www.ssa.gov/policy/docs/issuepapers/ip2017-01.html.*

Appendix

Table 1 illustrates a pretty devastating picture of what it would take to duplicate Social Security, as you can see from a 2015 Social Security Administration publication.[1] My proposal is not an attempt to displace Social Security but rather a way to augment it.

Table 1 Premiums for Annuities With Monthly Payments Equal to the Average Social Security Retirement Benefit, December 2014 (in Dollars)

		SPIA Premiums		100% JS Annuity Premiums	
Sex	Average Monthly Social Security Benefit at Age 65	For a Nominal Fixed Monthly Payment	With 3% Inflation Protection	For a Nominal Fixed Monthly Payment	With 3% Inflation Protection
Men	1,317	263,043	359,045	359,045	471,066
Women	1,033	229,262	321,954	321,594	367,338

Sources: Social Security Administration, "Annual Statistical Supplement to the Social Security Bulletin, 2015," SSA Publication No. 13-11700 (April 2016): Table 5.A1.1, *https://www.socialsecurity.gov/policy/docs/statcomps/supplement/2015/index.html*, "Get Your Best Annuity Quotes Instantly Online!" accessed 2016, *https://www.immediateannuities.com/*.

Notes: While Social Security benefits are gender neutral, annuity premiums and monthly payments are based on the differences in life expectancy between men and women. Equivalent annuity amounts were imputed from these data.

SPIA stands for single premium income annuity; JS stands for joint survivor.

John Cutler, J.D., is an attorney and consultant in the field of aging and long-term care. He consults for the state of Minnesota and volunteers for the Society of Actuaries Post Retirement Needs and Risks Committee and LTC Section, as well as other groups such as AcademyHealth where he is chair of the Long-Term Services and Support Interest Group. He can be reached at *johncutler@yahoo.com*.

1 Dale Kintzel, "Social Security Retirement Benefits."

Workers and Retirees Could Pool Risk With Tontine Annuities, Tontine Pensions and Survivor Funds

Jonathan Barry Forman

Tontines are investment vehicles that combine features of an annuity and a lottery. In a simple tontine, a group of investors pools their money to buy a portfolio of investments, and, as investors die, their shares are forfeited, often with the entire fund going to the last survivor. Over the years, this last-survivor-takes-all approach has made for some great fiction. For example, in an episode of the popular television series "M*A*S*H," Col. Sherman T. Potter, as the last survivor of his World War I unit, got to open the bottle of cognac he and his fellow doughboys brought back from France (and share it with his Korean War pals).

Of course, the survivor principle—that the share of each, at death, is enjoyed by the survivors—can be used to design a variety of financial products which would benefit multiple survivors, not just the last survivor. For example, as more fully explained below, the survivor principle could be used to create a variety of retirement products including tontine annuities, tontine pensions and survivor funds.[1]

The History of Tontines and Similar Financial Products

Tontines are named after Lorenzo de Tonti, the 17th-century Italian banker who came up with the idea.[2] Historically, governments issued tontines instead of regular bonds. In those tontines, the government would keep the tontine investors' contributions but make high annual dividend payments to the tontine, with those payments being divided among the surviving investors. When the last survivor died, the government had no further debt obligation. For example, in 1693, the English government issued a tontine as a way to raise 1 million British pounds to help pay for its war against France. At a time when the regular bond interest rate was capped at 6%, King William's 1693 tontine, as it is known, entitled the surviving investors to share in 10% dividend payments to the tontine for the first seven years and to 7% dividend payments thereafter. While government tontines played an important role in government finances for several centuries, they have since largely disappeared.[3]

After the U.S. Civil War ended in 1865, tontines emerged as a popular investment for individuals in the United States, but they fell out of favor at the beginning of the 20th century.[4] The problem was not with the tontine form but with embezzlement and fraud by the holders of the funds. Investigations of the insurance industry in New York led to the enactment of legislation in 1906 that all but banned tontines.

Current Retirement Programs and Products in the United States

Social Security, annuities, defined benefit pension plans and even defined contribution pension plans have largely filled the lifetime income gap left by the demise of tontines in the United States.

SOCIAL SECURITY

The United States established its Social Security program in 1935.[5] Elderly Americans can generally count on Social Security benefits to cover at least a portion of their

1 See Michael J. Sabin, "Fair Tontine Annuity" (March 26, 2010), *http://ssrn.com/abstract=1579932*; Jonathan Barry Forman and Michael J. Sabin, "Tontine Pensions," *University of Pennsylvania Law Review* 163, no. 3 (2015): 757–831; and Jonathan Barry Forman and Michael J. Sabin, "Survivor Funds" *Pace Law Review* 37, no. 1 (Fall 2016): 204–91.

2 See, e.g., Moshe Milevsky, *King William's Tontine: Why the Retirement Annuity of the Future Should Resemble its Past* (New York, NY: Cambridge University Press, 2015).

3 Robert W. Cooper, *An Historical Analysis of the Tontine Principle* (S.S. Huebner Foundation Monograph Series, no. 1, Homewood, IL: Richard D. Irwin, 1972).

4 Kent McKeever, "A Short History of Tontines," *Fordham Journal of Corporate & Financial Law* 15, no. 2 (2009): 491–521.

5 Social Security Act of 1935, Pub. L. No. 74-271.

retirement income needs. For example, in January 2018, Social Security paid retirement benefits to more than 42.6 million retired workers; the average monthly benefit paid to a retired worker was $1,406.91.[6]

ANNUITIES

Like tontines, lifetime annuities offer a way to incorporate survivorship principles into a financial product. For example, for a 65-year-old man who purchased a $100,000 immediate fixed (lifetime) annuity without inflation protection on Dec. 1, 2016, the annual payment would be about $6,300.[7] The market for annuities is well developed in the U.S., but the penetration rate is fairly low—annuities represented just 8% of retirement assets in 2016.[8] When given the choice, people rarely choose to buy annuities.[9]

PENSION PLANS

The United States has a "voluntary" private pension system, and employers can decide whether and how to provide pension benefits for employees.[10] In March 2017, just 66% of U.S. private-sector workers had access to pension plans; only 50% participated.[11] Pension plans generally fall into two broad categories based on the nature of the benefits provided: defined benefit plans and defined contribution plans.

Defined Benefit Plans

The default benefit for defined benefit plans is a retirement income stream in the form of a lifetime annuity.[12] For example, a plan might provide that a worker's annual retirement benefit (B) is equal to 2% times the number of years of service (yos) times final average compensation (fac) (B = 2% × yos × fac). Under that formula, a worker who retired after 30 years of service with final average compensation of $50,000 would receive a pension of $30,000 a year for life ($30,000 = 2% × 30 yos × $50,000 fac).

Defined benefit pension plans operate a lot like tontines, as contributions are pooled, and lifetime pensions are paid to those who survive until retirement and then for as long as they live in retirement. However, over the past few decades, there has been a major shift from traditional defined benefit plans to defined contribution plans.[13]

Defined Contribution Plans

Unlike defined benefit plans, defined contribution plans usually make lump-sum or periodic distributions. Rather than having participants pool their investments, each defined contribution plan participant has an individual account, and, at retirement, she typically takes a lump-sum distribution rather than a lifetime pension. Moreover, when she dies, the balance in her account goes to her designated beneficiaries rather than to bolster the lifetime pensions of surviving plan participants. To be sure, defined contribution plans can offer annuities; however, relatively few plans do,

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6 *Social Security Administration*, "Monthly Statistical Snapshot, January 2018," released February 2018, *https://www.ssa.gov/policy/docs/quickfacts/stat_snapshot/2018-01.pdf*.

7 Immediate Annuities, "Table 5. Single Life Annuities," *Annuity Shopper Buyer's Guide* 32, no. 1 (January 2017): 17, *https://www.immediateannuities.com/annuity-shopper/as-archive.html* ($6,300 per year = 12 × an average payment of $525 per month).

8 At the end of 2016, there were $2.4 trillion in annuities out of a total of $28.9 trillion in household retirement assets, or approximately 8% (0.0807 = $2.3995 trillion/$289834 trillion). Board of Governors of the Federal Reserve System, *Financial Accounts of the United States: Flow of Funds, Balance Sheets, and Integrated Macroeconomic Accounts: Second Quarter 2017* (Sept. 21, 2017): table L.117, *https://www.federalreserve.gov/releases/z1/20170921/z1.pdf*.

9 See, e.g., Shlomo Benartzi, Alessandro Previtero and Richard H. Thaler, "Annuitization Puzzles," *Journal of Economic Perspectives* 25, no. 4 (Fall 2011): 143–64.

10 See, e.g., Jonathan Barry Forman and George A. "Sandy" Mackenzie, "The Cost of 'Choice' in a Voluntary Pension System," in *2013 New York University Review of Employee Benefits & Executive Compensation*, ed. Alvin D. Lurie (New York: LexisNexis Matthew Bender, 2013): 6-1–6-55.

11 U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in the United States—March 2017," news release no. USDL-17-1013 (July 21, 2017): 6, table 1, *http://www.bls.gov/news.release/pdf/ebs2.pdf*.

12 Defined benefit plans are generally required to provide "definitely determinable benefits … over a period of years, usually for life after retirement." 26 Code of Federal Regulations § 1.401-1(b)(1).

13 See, e.g., Staff of the Joint Committee on Taxation, "Present Law And Background Relating to Tax-Favored Retirement Saving and Certain Related Legislative Proposals," JCX-3-16 (Jan. 26, 2016): 54–57, *https://www.jct.gov/publications.html?func=download&id=4865&chk=4865&no_html=1at*.

and, in any event, relatively few participants elect those annuity options.[14]

New Possibilities for Tontines

With the decline of defined benefit plans, new lifetime income products are needed to take their place.[15] In particular, this section explains how tontine annuities, tontine pensions and survivor funds could be used to provide reliable pension-like income.

TONTINE ANNUITIES

In a simple tontine, members contribute equally to buy a portfolio of investments that is awarded entirely to the last surviving member. Alternatively, each time a member of a tontine pool dies, her account balance could be divided among the surviving members of the pool. This latter type of tontine could be used to develop new financial products that would provide reliable pension-like income.

For example, in a "tontine annuity," the mortality gains that would arise as members of the pool die would not be divided among the survivors immediately. Instead, the mortality gains would be allocated to the individual accounts of the survivors. If a pool member is alive at the end of the month, she would be paid the accrued mortality gains in her account as a monthly "mortality-gain distribution." On the other hand, if she is not alive at the end of the month, she would receive nothing, as the balance in her account, including any mortality gains accrued earlier in that month, would have been distributed to the accounts of the surviving members when she died.

In addition to receiving a monthly mortality-gain distribution, each survivor would also receive a portion of her original contribution at the end of each month she is alive. The resulting tontine annuities could be designed to have monthly benefits that are level throughout retirement (like an immediate, level-payment annuity) or, alternatively, that increase gradually throughout retirement (like an immediate, inflation-adjusted annuity).

In theory, a tontine annuity could be managed by a discount broker, and no money would have to be set aside for insurance agent commissions or for insurance company reserves, risk-taking or profits. All in all, with such low fees, the benefits from a tontine annuity would closely approximate those of an actuarially fair annuity.

Moreover, unlike traditional tontines, tontine annuities could solicit new investors to replace those members who have died. Structured in this way, a tontine annuity could operate in perpetuity.

TONTINE PENSIONS

While tontine annuities would be attractive investments in their own right, they are likely to be as underutilized as traditional retail annuities. Individual investors generally underestimate their life expectancies, and they shy away from lifetime annuities. That is where tontine pensions could be especially beneficial.

For example, an employer who wanted to provide a lifetime retirement income for its employees might set up a defined-contribution-style "tontine pension," only instead of investing the employer contributions in stocks and bonds, the employer would invest in a tontine annuity for its employees. Each year, the employer could make contributions of, say, 10% of its employees' salaries. Those contributions would be invested in a tontine annuity and allocated to the individual tontine pension accounts of the participants. At retirement, the balance in each participant's tontine pension account would be paid out to her in the same manner as if she had purchased her very own tontine annuity with the employer contributions made on her behalf.

In effect, a tontine pension would be like a defined contribution plan that only pays benefits in the form of a lifetime annuity. Rather than getting lump-sum or periodic distributions, participants in this plan could

14 In 2010, for example, just 18% of private industry workers in defined contribution plans had annuities available to them. U.S. Department of Labor, Bureau of Labor Statistics, "National Compensation Survey: Health and Retirement Plan Provisions in Private Industry in the United States, 2010," Bulletin No. 2770 (August 2011): table 21, *http://www.bls.gov/ncs/ebs/detailedprovisions/2010/ebbl0047.pdf.*

15 To be sure, defined contribution plan sponsors could be encouraged to offer more annuity options and encourage plan participants to elect those options. See, e.g., Jonathan Barry Forman, "Removing the Legal Impediments to Offering Lifetime Annuities in Pension Plans," *Connecticut Insurance Law Journal*, 22, no. 1 (2016): 31–141.

only get benefits based on the survivor principle. That is, the employer contributions for each participant and the investment earnings on those contributions would be held in the tontine pension and monthly tontine-pension distributions for life would be the only distributions retirees could ever receive.

SURVIVOR FUNDS

Survivor funds would work like short-term tontines. Basically, survivor funds would be short-term investment funds that would favor investors who live until the end of the fund's term over those who die before then. For example, imagine that 10 65-year-old male participants each invest $8,000 in a pool that buys 10-year Treasury bonds. At the current Treasury interest rate, that $80,000 investment would return about $100,000 in 10 years, and each participant (or his heirs) would get $10,000, reflecting a pitiful 2.3% yield. But what if we instead divided that $100,000 only among the participants who survived 10 years to reach age 75? Say eight of our 10 participants lived to 75. With a survivor fund, those eight survivors would divide the $100,000, and the two participants who died would get nothing. In short, each survivor would get $12,500 on his $8,000 investment—and that works out to be a 4.6% return, double the meager 2.3% return on the underlying zero-coupon bond.[16]

Survivor funds would be attractive investments because the survivors would get a greater return on their investments, while the decedents, for obvious reasons, would not care. And even if no other investors died during the term of the fund, the survivors would never get less than the return on the underlying investment. Administrative fees would be low, and the returns for survivors would be high; that would deliver exactly what today's retirees want.

Conclusion

Tontines were popular in the United States in the latter part of the 19th century, but they have since disappeared. To a certain extent, lifetime annuities and traditional defined benefit pension plans took the place of tontines. Unfortunately, traditional pensions have also all but disappeared, and annuities have never really been very popular. At the same time, with increasing longevity, there is an even greater need for low-cost lifetime income products, and I believe that new low-cost, tontine-style products will soon find popularity where high-premium retail annuities have not.

Jonathan Barry Forman, J.D., is the Alfred P. Murrah Professor of Law at the University of Oklahoma College of Law. He can be reached at *jforman@ou.edu.*

16 Moreover, the returns could be even higher if the survivor fund invests in stocks instead of bonds. For example, if our hypothetical survivor fund had instead invested in a Standard & Poor's 500 index fund that earned, say, 7%, the survivors would get 9.4%. If that S&P 500 index fund earned 10%, the survivors would get 12.5%.

Working Longer to Improve Retirement Security:

Improving Public Policy[1]

Anna M. Rappaport and Tim Driver

Industrialized countries provide basic retirement benefits through social insurance and other programs to support seniors, as their populations live much longer and their retirement periods grow as well. This often results in a strain on public resources. Working longer improves retirement security and can reduce the cost of public and private retirement programs, but policymakers have often not focused on how to facilitate and support older retirement ages.

Those in the policy community are lagging behind other professionals such as gerontologists, actuaries, economists and retirement planners in talking about the societal importance of longer work. They are not doing much to address barriers to longer work or ways to enable phased retirement.

This essay discusses policy issues. We strongly encourage policymakers to focus on increasing retirement security by encouraging and making it easier for people to work longer. A separate essay, "Working Longer to Improve Retirement Security: Addressing Workplace Issues," discusses issues for employers.

The Situation in 2017

Longer work is not a focus of the current public policy agenda. The main issue related to later work that gets attention is raising the Social Security retirement age, but there are many additional issues. This essay focuses on a broad range of benefit and legal issues that create barriers to phased retirement and longer work.

The Government Accountability Office conducted a study in 2017[2] during which they interviewed both employers and experts; they found little formal phased retirement. They present evidence that many people work as part of retirement, in effect creating their own phased retirement. They identified both advantages of phased retirement and obstacles; legal issues were found to be particularly important.

There have been years of discussion about phased retirement, and the rules were partly clarified and liberalized by the Pension Protection Act of 2006. Under this legislation, defined benefit (DB) plans are allowed to pay benefits to participants who are phasing out starting at age 62. But there has been little use of these provisions, possibly because they are still complex to implement and there remain unanswered questions, and possibly because most of the DB focus has been on freezing or terminating the plans.

Issues related to later retirement and longer work are concerns in many countries. The Melbourne Mercer Global Pension Index [3] is a study of pension systems in 27 countries. The 2016 report[4] identified several challenges, including "the need to:

- "Increase the state pension age and/or retirement age to reflecting increasing life expectancy, both now and into the future, and thereby reduce the level of costs of the publicly financed pension benefits [and]
- "Promote higher labour force participation at older ages, which will increase the savings available for

1 This essay reflects research discussions with a number of experts on legal issues related to longer work and phased retirement and an extensive interest in later work as an important response to an aging society. The combined experience of the authors includes more than 20 years in different phases of retirement, more than 10 years in facilitating jobs for older workers and many years of pension consulting.

2 U.S. Government Accountability Office, "Older Workers: Phased Retirement Programs, Although Uncommon, Provide Flexibility for Workers and Employers," report to the Special Committee on Aging, U.S. Senate, GOA 17-536 (June 2017), *https://www.gao.gov/assets/690/685324.pdf.*

3 Mercer, *Melbourne Mercer Global Pension Index*, reports are issued annually, *https://www.globalpensionindex.com/.*

4 Mercer, *2016 Melbourne Mercer Global Pension Index*, October 2016, *https://www.globalpensionindex.com/wp-content/uploads/MMGPI2016-Report.pdf.*

retirement and limit the continuing increase in the length of retirement."

In the United States, expectations about work in retirement and actual retirement age do not match. According to our observations, about half of retirees work after retirement or phase out in some way and about three-quarters say they want to work after retirement. The 2017 SOA Post-Retirement Risk and Process of Retirement survey found that pre-retirees expected to retire at a mean age of 65, but retirees had actually retired from their main occupation at a mean age of 58.[5]

Focus on Rehire of Retirees

Much of the phased retirement today is in the form of hire or rehire of retirees, either by their prior employer or by a new employer. But it is not easy. Some modest policy changes would ease barriers to rehiring retirees and probably not be costly to anyone.

There are complexities involved in the rehire of retirees because of provisions in pension and employment laws and employee benefit plans. Also, these retirees may often want to have creative work arrangements. Rehire by the same employer where there are pensions being paid requires a bona fide termination of employment or the pension plan will be in legal trouble. However, there is no definition of bona fide termination in the law or regulations.

Current employer options with regard to rehire of retirees include:

- Avoid rehire entirely
- Make people wait a period to be rehired
- Limit work of rehires to less than 1,000 hours annually, usually done in connection with a waiting period
- Use a retiree pool
- Engage retirees as consultants
- Use independent contractor arrangements
- Work through third parties, like a temp agency or specialized consulting firm

Pools and third-party arrangements can be limited to a firm's own retirees or they can offer access to a broader pool of individuals. The different methods of handling rehires can be used in combination. For example, a rehired retiree might be an independent contractor, not allowed to work more than a certain number of hours, and not be able to be hired as a contractor until six months have elapsed from termination of employment.

Employers seeking to rehire retirees are faced with a tangle of legal complexities and ill-defined rules. It would be a great help to clarify and define what a bona fide termination of employment is and offer safe harbors so that employers could know what approaches are safe and choose the best ones for them. Ideally, safe harbors should deal with the combination of issues related to termination of employment and age discrimination and serve to keep independent contractor status issues from raising added roadblocks.

For example, an arrangement that does not include a regular ongoing job and involves less than 750 hours of work per year could meet a safe harbor test. Participation in a pool with a limit on total hours worked could also qualify.

Issues When DB Pensions are Provided

When DB plans are offered, phased retirement can mean partial pension payments or payment of pensions while someone is still working, leading to a number of questions. For example, will reduced benefits be paid to phased retirees, and how will they be calculated? Will pension credit continue for the additional work? When will benefits be recalculated? How will early retirement adjustments be applied if phasing occurs during the early retirement period?

When phasing occurs through rehire of retirees, there are also DB pension issues. Under what circumstances can retirees work and collect benefits? If benefits are suspended or partly suspended, how are benefits recalculated for the added service? These are a few of the technical issues. While the plan sponsor chooses exactly what they wish to do, the statute and regulations define what requirements and limitations apply.

When benefits are provided only through defined contribution (DC) plans, there is no issue of partial

5 Society of Actuaries, *2017 Risks and Process Retirement Survey: Report of Findings,* January 2018, *https://www.soa.org/research-reports/2018/retirement-risk-survey/*.

pension payments. However, there may be issues of when the employee is allowed to receive plan benefits—at phased retirement or only at full retirement. DC issues are much simpler.

Phased Retirement for Federal Employees

Federal employee benefits provide an example to the private sector and also may offer ideas for legislation that can encourage or enable private sector practice. Legislation[6] enabled phased retirement for federal employees, a program that allows full-time federal employees to work part-time schedules while starting to draw retirement benefits. The program was first implemented in 2014. Agencies were required to sign up for the program. Employees who are eligible for phased retirement and want to continue working on a part-time basis may do so with the agreement of their agencies. During phased retirement, the employee receives a partial pension and will keep accruing additional service credit for their final pension. Employees participating in this program are required to spend 20 percent of their time mentoring other employees.

Take-up of the program has been disappointing. As of June 27, 2017, 252 people had applied and an additional 79 were retired under the program.[7] But many agencies had not offered the program to employees or had started only recently. The lower-than-expected take-up has also been attributed to lack of flexibility in the program and the need for individual approvals.

When Congress enacted the legislation, it was hoped it would encourage more private sector organizations to offer phased retirement. However, with the experience to date, it is unlikely to do this, and it could have the opposite effect.

Policy Updates to Facilitate Longer Work

We have suggestions about a number of policy areas[8] that can be used to facilitate and encourage longer work.

- **Revisit Social Security retirement ages.** This is the issue most commonly cited in discussions of later retirement and phased retirement. Social Security retirement ages strongly influence when people retire and also public expectations about reasonable retirement ages. It is important to integrate discussion of disability benefits into the conversation. While many people are able to work longer, many others are not. The situation also varies by education. Appropriate social benefit eligibility ages are an issue in many countries.
- **Develop safe harbors for creative work arrangements and rehire of retirees with focus on bona fide termination of employment.** Under current pension law, bona fide termination of employment is important but there is no specific definition of what that means. That has long been a barrier to rehire of retirees, even on a limited basis. Defining it better or offering safe harbors would enable more of the people seeking work in retirement to return to prior employers and make it easier for employers to know what is acceptable. Safe harbors that work well may cross several legal areas.
- **Consider a new classification of worker tailored to encore careers.** Some employers work extensively with independent contractors. That can be a way to avoid offering individuals benefits and the legal protections extended to employees. The regulations can serve as an inadvertent barrier to using phased retirees as independent contractors. Whether the best way to provide for a range of options for encore careers and rehire of retirees is to provide a special worker category should be explored. Such an effort would be a major step to advancing access to more creative job options.
- **Expand public job training to help people move to encore careers.** Some government agencies currently are involved with identifying training needs, offering and encouraging job training. There

6 Federal phased retirement for federal employees is authorized under Moving Ahead for Progress in the 21st Century Act of 2012, or MAP-21, Pub. L. No. 112-141, 126 Stat. 405, § 100121.

7 Nicole Ogrysko, "Is Phased Retirement Starting to Take Off?" Federal News Radio, June 28, 2017, *https://federalnewsradio.com/retirement/2017/06/is-phased-retirement-starting-to-take-off/*.

8 The policy issues discussed are based on the U.S. environment, except where noted otherwise. The general issues related to phased retirement apply in many countries.

are some situations where training would be very helpful in connection with encore careers.

- **Provide education for employers and model documentation around encore careers and retiree contracts.** Model documents could help both the worker and the organization engaging them to handle the transaction efficiently and smoothly. Contracts can be a major barrier to retiree rehire. A government agency could provide such documents or encourage them in the private sector.
- **Revisit Medicare primary/secondary rules.** These rules require Medicare be secondary to employer-sponsored coverage when an individual has coverage under an employer plan as an active employee or a dependent of an active employee. Medicare is primary for most Americans when they reach 65, and health care costs tend to rise with age. This rule is a barrier to hiring and retaining people over age 65.
- **Revisit age discrimination requirements.** The GAO study lists the age and disability discrimination regulations as a barrier to phased retirement. Age discrimination is a problem, but this type of regulation can have unintended consequences. It appears quite likely that these requirements are a barrier to innovation and hiring older workers. Barriers can be created by the actual provisions of the law, by actual or feared outcomes in court, and by perceptions. It is a time for a thorough study to understand how effective this legislation is, what, if any, unintended consequences it produces and whether fine tuning is needed.
- **Revisit employee benefit plan laws and regulations, including the phased retirement provisions of the Pension Protection Act.** Employee benefits law includes provisions that regulate normal retirement ages, discrimination in the provision of benefits, suspension of benefits on return to work, permit payments of benefits to employee working after age 62, and so on. The age requirement set forth in the Pension Protection Act is a problem. A big question is whether these rules can be simplified and which are a barrier to phased retirement. The GAO report discusses barriers related to nondiscrimination requirements and also challenges related to the calculation of benefits.

Note that phased retirement and improvement in the policy environment surrounding it was a topic studied by the 2008 Department of Labor's Advisory Council on the Employee Retirement Income Security Act of 1974.[9] Barriers to phased retirement and perceptions about barriers were topics of the more recent GAO report.

Multiple federal and probably some state agencies have roles in some of these matters or other employment regulation. It is important they work together to resolve these issues and encourage later employment.

In closing, phased retirement, which allows people to gradually move from full-time work to labor force exit, makes a great deal of sense to us. Longer work lives are important to many stakeholders in our society.

For more information

ON PUBLIC POLICY AND EMPLOYER PRACTICES

Rappaport, Anna M. "It Is Time to Revisit Public Policy and Options for Older-Worker Employment," *Journal of Retirement 2*, no. 3 (Winter 2015): 94–103. *http://jor.iijournals.com/content/2/3/94.*

ON EMPLOYER ISSUES AND PRACTICES

Rappaport, Anna M., and Mary B. Young. "Phased Retirement after the Pension Protection Act," Conference Board report, 2007.

ON INDIVIDUALS

Society of Actuaries. "The Decision to Retire and Post-Retirement Financial Strategies: A Report on Eight Focus Groups," research project, 2013. *https://www.soa.org/research-reports/2013/The-Decision-to-Retire-and-Post-Retirement-Financial-Strategies--A-Report-on-Eight-Focus-Groups/.*

Anna M. Rappaport, FSA, MAAA, is the founder of Anna Rappaport Consulting. She can be reached at *anna.rappaport@gmail.com.*

Tim Driver is the founder and CEO of RetirementJobs.com Inc. He can be reached at *tim@retirementjobs.com*.

9 U.S. Department of Labor, 2008 Advisory Council on Employee Welfare and Pension Benefit Plans, "Advisory Council Report on Phased Retirement," 2008, *https://www.dol.gov/agencies/ebsa/about-ebsa/about-us/erisa-advisory-council/2008-phased-retirement-2.*

We Can Build Better Retirement Products, But Will Anyone Buy Them?

Joseph A. Tomlinson

Those planning for retirement face an overwhelming array of choices of investment and insurance products. What they actually need are fewer and simpler products that better meet retirement-planning needs. There's a dilemma, however, because the products that best meet consumer needs are not necessarily the ones desired by the distribution intermediaries (e.g., investment companies, insurers or financial salespeople).

This is a two-part essay in which I'll first describe three products I believe are well suited to meet retirement needs. Then I'll address the distribution barriers such products will face and whether there might be a way to overcome these obstacles.

Social Security Delay Product

In the past few years there has been considerable financial planning research highlighting the importance of optimizing the claiming strategy for Social Security benefits. For reasonably healthy individuals, this typically involves delaying the commencement of benefits to age 70, and for couples involves somewhat more complicated coordination strategies. For example, the high earner in a couple may delay to 70, and the other member of the couple may start worker benefits earlier. Much has been written on the subject, and a comprehensive treatment can be found in "Maximizing Social Security Retirement Benefits," by Mary Beth Franklin.[1] There are also a number of software products that can be utilized to recommend optimal claiming strategies, an example being "Social Security Solutions" developed by William Meyer and Baylor professor William Reichenstein.[2]

What is missing is an investment product that could be used to implement the optimization. Here's an example of how such a product could work:

Let's say a 66-year-old individual with $750,000 in a 401(k) wants to retire immediately but delay Social Security claiming to age 70. Further, we'll assume her age-66 benefit would be $24,000 per year and delayed claiming would increase this benefit by 32% to an annual $31,680. Where the product idea comes in is that an investment company could offer a ladder of Treasury Inflation Protected Securities (TIPS) at age 66 that would provide inflation-adjusted income beginning immediately that would transition into inflation-adjusted Social Security income at age 70. Rather than recommending the individual delay Social Security until age 70 and somehow use retirement withdrawals from savings in the meantime, this product would provide an enhanced inflation-adjusted income stream immediately.

This would be straightforward for an individual. For couples, the software utilized for recommending coordinated strategies that might start benefits at different times could be enhanced to design the complementing TIPS investment strategy. This would build an inflation-adjusted mix of a TIPS ladder and Social Security benefits to provide a smooth inflation-adjusted income stream beginning at retirement.

For our example of a 66-year-old individual, the product funding would work in this way. Yields after inflation on short-term TIPS were close to zero as of late October 2017, so the individual would need to set aside roughly four times the age-70 Social Security of $31,680 (approximately $127,000) to fund the TIPS ladder. This would generate an income stream of $31,680 that would increase with inflation each year. The first four years would come from the TIPS ladder and the remaining payments would be the Social Security benefits enhanced by the credits for delayed claiming. This product's major advantage is that it makes Social Security optimization much easier to manage and, therefore, more appealing.

1 Mary Beth Franklin, *Maximizing Social Security Retirement Benefits* (Detroit: Crain Communications Inc., 2017).

2 *http://www.socialsecuritysolutions.com/index.php.*

Improved Inflation-Adjusted SPIA

An inflation-adjusted single premium immediate annuity (SPIA) pays a lifetime income with annual inflation increases and, therefore, is a natural add-on to Social Security. Continuing our previous example, let's assume the individual has estimated her retirement budget for basic living expenses at $45,000 per year, increasing with inflation. She'll receive $31,680 by utilizing the Social Security delay product but will require an additional inflation-adjusted $13,320 to match her basic living expenses.

Based on rates from the pricing service CANNEX as of October 2017, it would cost about $298,000 to purchase an inflation-adjusted SPIA paying an initial $13,320 per year in monthly installments. The total cost for the Social Security delay product and the SPIA would be about $425,000 for this example, leaving $325,000 in liquid funds. The individual would have the peace of mind of having lifetime income to cover basic living expenses plus additional funds for discretionary spending.

Although the product structure of the inflation-adjusted SPIA is a natural fit for generating retirement income, the product pricing could be improved. We can gain some pricing insights by comparing inflation-adjusted SPIAs to SPIAs that offer fixed percentage increases in payouts each year. Expected future inflation, based on the difference between yields on regular Treasury bonds and TIPS, is about 1.9% as of October 2017. Again, based on CANNEX pricing, we could construct a SPIA that provides annual increases of 1.9%. The cost of such a SPIA to produce an initial $13,320 of annual income increasing at 1.9% per year would be $260,156, about $38,000 less than the cost of a SPIA with adjustments for actual inflation. However, this product would carry the risk of not keeping up with inflation if price changes were to average more than 1.9%.

There could be a way to have both better pricing and full inflation protection. Insurers could set up an investment segment to support inflation-adjusted SPIAs by investing in their usual fixed-income investments without inflation adjustments and executing swap transactions that would involve substituting TIPS for regular Treasury bonds. The effect would be to create synthetic inflation-adjusted bonds with the same credit spreads insurers achieve on their regular fixed-income investing. A conversation with an investment professional familiar with such swaps indicated the swap cost would be about 2% of the SPIA price, so in the example, the $260,156 price would be raised to about $265,000. This would still represent a price reduction of 11% compared to current pricing, while offering the same guarantees, and freeing up an additional $33,000 for discretionary spending.

Life Care Annuity

Dealing with the potential need for long-term care is perhaps the most vexing issue retirees face. The potential costs are substantial, but insurers have had a difficult time providing products that effectively address the needs. However, SPIA products could be enhanced to at least partially mitigate the risk.

About a dozen years ago, economist Mark Warshawsky proposed the Life Care Annuity.[3] This would be a standard SPIA but would pay an additional pop-up monthly income if the annuitant needed LTC as defined by claim criteria (e.g., at least 90 days lacking two or more activities of daily living or suffering significant cognitive impairment). The pop-up income could be set to double or triple the basic SPIA payouts, and the product could be offered with minimal underwriting because of the close correlation between potential LTC need and diminished longevity.

I did a rough pricing of a three-times pop-up for this example that would increase the annual SPIA payments from $13,320 annually to $39,960 (both with inflation increases) when there was an LTC claim. Total income to cover essential expenses would increase from an annual $45,000 to $71,640. This would likely not be enough to provide full LTC coverage but could make a substantial contribution before tapping other funds or relying on LTC insurance.

I estimated the present value of the projected LTC payments to be about 8% of the SPIA price. If we added some margin for risk and profit, the cost might

3 Mark J. Warshawsky, "The Life Care Annuity," in *The Future of Life-Cycle Saving and Investing*, 2nd ed., eds. Zvi Bodie, Dennis McLeavey and Laurence B. Siegel (Charlottesville, VA: The CFA Institute, 2008).

be similar to the 11% benefit shown above for the enhanced SPIA. It might well be feasible to build a product that would be competitive with today's inflation-adjusted SPIA pricing and provide the significant addition of an LTC pop-up benefit.

Obstacles

The biggest challenge in getting these types of products to the public will likely not be in product development but in distribution. If all those planning for retirement were actuaries and economists, we might expect products like these to be instantly popular. However, we are dealing with entities that recent Nobel laureate Richard Thaler refers to as "humans" as opposed to "econs," and behavioral economics has taught us that people often don't make the most sensible financial choices.

Since all three of these products incorporate guaranteed lifetime income, what is known as the "annuity puzzle" comes into play. Briefly stated, economic theory based on rational choice would expect retirees to annuitize much more of their wealth than they do in practice. Consider that annual SPIA sales in the U.S. run about $10 billion annually, and this amount has remained at that level for many years. A very rough calculation based on the number of retiring Americans, and assuming "rational" annuitization, would place the expected sales at 50 to 100 times this amount.

One possible response to these product ideas might be, "Nice try, but it's clear from past experience people won't want these products." Behavioral economics has reared its head.

But there is another lesson we can learn from behavioral economics, which is that the way people respond to choices is heavily influenced by the way choices are framed. Related to annuitization, economist Jeffrey Brown, who has done considerable research on annuities, has led studies using surveys of individuals to demonstrate that annuitization holds much more appeal when presented in a "consumption" framework rather than as an "investment."[4] Other survey research led by economist John Beshears has demonstrated that framing SPIAs in terms of total lifetime income tilts choices heavily in favor of inflation-adjusted SPIAs over level-pay versions.[5] This result contrasts sharply with actual sales where level-pay SPIAs dominate. So we should not necessarily accept the lack of appeal for SPIAs as inevitable.

My personal view is that the annuity puzzle is more a reflection of the aversion of those responsible for selling or distributing the products than buyer aversion and that attempts by economists to explain the puzzle have focused too much on consumers and not enough on the intermediaries. When it comes to annuities, most people buy what they are sold; the corollary is that they don't buy what they aren't sold. For the particular products ideas I have presented above, we need to focus on distribution barriers and how they might be overcome.

Brief comments on distribution channel barriers follow:

- **Investment companies such as Vanguard, Fidelity Investments or Charles Schwab** typically have a bias against products that reduce assets under management, characteristic of both Social Security delay and SPIA purchase.
- **Retail financial professionals including insurance agents and stock brokers** generally prefer more complex products with sales pizzazz like variable annuities and indexed annuities, or active investment solutions that generate more broker income.
- **Financial planners** tend to rely purely on strategies involving systematic withdrawals from savings rather than utilizing annuities.
- **Employers and plan sponsors,** with a few exceptions, are concerned with any offerings that could create legal liability or add complexity to a basic 401(k) approach.
- **The United States' strong bias against government programs that compete with or**

4 Jeffrey R. Brown, Jeffrey R. Kling, Sendhil Mullainathan and Marian V. Wrobel, "Framing Lifetime Income," National Bureau of Economic Research working paper no. 19063 (May 2013), *http://www.nber.org/papers/w19063*.

5 John Beshears, James J. Choi, David Laibson, Brigitte C. Madrain and Stephen P. Zeldes, "What Makes Annuitization More Appealing?" NBER working paper no. 18575 (June 2013), *http://www.nber.org/papers/w18575*.

supplant private market activities prevents implementation of pension plans such as the UK's National Employment Savings Trust (NEST) retirement system.

- **Robo-advisers like Betterment or Personal Capital** have so far focused on accumulation rather than retirement and lack the financial resources to build strong name recognition through advertising and promotion.

- **Direct distribution,** through a do-it-yourself approach, should be feasible with simplified product choices; however, it will be difficult to overcome the pervasive belief that financial stuff is too complicated for DIY.

Is there any hope? The obstacles are certainly daunting.

I can foresee several possible ways to break through the challenges. One would be if a major, well-recognized investment company made a strategic decision to shed its investment bias and adopt a broader focus to incorporate products like those discussed above. (There are, indeed, major investment companies that offer annuities—a first step—but these companies heavily favor investment solutions.)

Another possibility would be an entrepreneurial venture to build a major company focused exclusively on retirement. This would likely require support from a player with considerable financial resources, for example, a foundation associated with a prominent name like Buffett, Bloomberg or Gates.

Under either approach, the basic idea would be to greatly simplify things for people planning for retirement and to offer both products and planning services. This would be getting away from all the complexity and confusion of today's services, the bulk of which provides no real value. A simplified menu of products and options, including the products highlighted above, would mean advice could be delivered much more efficiently and less expensively than today.

Sometimes things that should happen simply take a long time. Index funds offer an example from the investment world. These funds were introduced over 40 years ago, supported by numerous studies in the ensuing years demonstrating their performance advantage. However, it has only been in the past few years that indexing has really caught on with the general public. Success with better products for retirement planning may require not only good ideas and lots of effort but also lots of patience.

Joseph A. Tomlinson, FSA, MAAA, CFP®, is a principal at Tomlinson Financial Planning LLC in Maine. He can be reached at *joet1349@gmail.com.*

Automated Advice

Jill E. Fisch, Marion Labouré and John A. Turner

Planning for retirement is difficult for many people. Retirement income calculators are one way they can receive assistance in determining how much they need to save for retirement. These calculators are a form of automated advice, where the individual has no interaction with another person but only interacts with a computer program.[1]

Beyond knowing how much they need to save, a problem many people encounter in planning for retirement is difficulty in managing the investment of their retirement savings. This problem could be resolved by hiring a financial adviser, but financial advisers generally charge fees based on their client's assets and for this reason have minimum asset requirements to guarantee sufficient fees. Financial advisers often charge 100 basis points (1%) of assets, but some charge as much as 200 basis points. Only about a third of the U.S. population seeks financial advice.[2] Although researchers have documented widespread evidence of low financial literacy,[3] for which financial advice could be an effective substitute,[4] financial advice is not available to many people, either because they view it as too expensive or because they have too few assets to make it worthwhile for a financial adviser.

A recent innovation that goes beyond retirement planning calculators and addresses issues in investing is automated financial advisers, commonly known as robo-advisers. Robo-advisers are automated online services that use computer algorithms to provide financial advice on investments and manage clients' investment portfolios.

What Are Robo-advisers?

Robo-advisers provide financial advice to clients through the internet without human contact. The client begins by creating an online account in response to a questionnaire. Computer algorithms match that information to an appropriate asset allocation. Robo-advisers use quantifiable factors such as wealth, income, tax situation, investment goals and risk tolerance to provide portfolio recommendations tailored to that client's needs. They construct a portfolio that typically consists of low-cost exchange-traded funds (ETFs) or mutual funds. Robo-advisers also manage their clients' portfolios on an ongoing basis—they reinvest dividends, redemptions and interest payments.

The first robo-advisers—Wealthfront and Betterment—began providing financial advice to public investors in 2010. Wealthfront began as a mutual fund company, KaChing, and originally used human advisers.[5] The original objective of Wealthfront's founders, Andy Rachleff and Dan Carroll, was to provide financial advice to the tech community.[6] Wealthfront's founders shifted the company's focus when they identified the potential that computer software offered for making investment advice accessible to more people at a lower cost.[7]

A variety of other firms have begun to offer robo-advisory services. A BlackRock study[8] describes the launch of 22 new robo-advisory firms in the U.S. in 2014 and 44 new

1 Anna M. Rappaport and John A. Turner, "How Does Retirement Planning Software Handle Postretirement Realities?" in *Reorienting Retirement Risk Management*, ed. Robert L. Clark and Olivia S. Mitchell (Oxford University Press: Oxford, England, 2010): 66–85.

2 J. Michael Collins, "Financial Advice: A Substitute for Financial Literacy?" *Financial Services Review* 21, no. 4 (2012): 307–22.

3 Annamaria Lusardi and Olivia S. Mitchell, "The Economic Importance of Financial Literacy: Theory and Evidence," *Journal of Economic Literature* 52, no. 1 (2014): 5–44, *http://www.aeaweb.org/articles.php?doi=10.1257/jel.52.1.5.*

4 Jill E. Fisch, Tess Wilkinson-Ryan and Kristin Firth, "The Knowledge Gap in Workplace Retirement Investing and the Role of Professional Advisors," *Duke Law Review* 66 (2016): 633–72, *http://dlj.law.duke.edu/article/the-knowledge-gap-in-workplace-retirement-investing-and-the-role-of-professional-advisors-fisch-vol66-iss3/.*

5 Anthony Ha, "Investing Site KaChing gets Classier as Wealthfront," Venture Beat, Oct. 19, 2010, *https://venturebeat.com/2010/10/19/kaching-wealthfront/.*

6 Tom Taulli, "Interview: Wealthfront CEO and Founder Andy Rachleff," *IPO Playbook* (blog), InvestorPlace.com, Feb. 7, 2012, *https://investorplace.com/ipo-playbook/interview-wealthfront-ceo-and-founder-andy-rachleff/#.Wpxj6JPwZqd.*

7 Wealthfront, "The Financial Industry Wasn't Designed to be Fair," accessed March 21, 2018, *https://www.wealthfront.com/origin.*

8 BlackRock, "Digital Investment Advice: Robo Advisers Come of Age," white paper, September 2016, *https://www.blackrock.com/corporate/en-mx/literature/whitepaper/viewpoint-digital-investment-advice-september-2016.pdf.*

firms in 2015. While the first robo-advisers were stand-alone firms, with their growing popularity, various types of incumbent financial firms now provide robo-advisers, including banks, broker-dealers, technology firms and asset managers.

The amount of assets managed by robo-advisors has continued to grow. At the end of 2014, Corporate Insight reported that U.S. robo-advisers managed $19 billion in assets.[9] In 2016, that number had grown to $126 billion.[10]

Young people are more likely to use robo-advisers than older people. A survey of people with investments outside of a pension plan[11] finds that 38% of individuals age 18 to 34 have used a robo-adviser, compared to 4% of individuals ages 55+.

SERVICES

Robo-advisers generally rebalance the client's portfolio so that changes in the stock market do not affect the portfolio allocation. Wealthfront rebalances its clients' portfolios by reinvesting dividends and new contributions in underweighted asset classes so that no tax is generated in taxable accounts by selling assets to rebalance. Wealthfront argues that rebalancing is one of the advantages it offers over many human advisers.[12] However, target date funds also provide rebalancing. Some robo-advisers also offer tax loss harvesting for taxable accounts, which involves selling investments that have had losses to offset the taxes on investments with realized capital gains.[13]

One type of robo-adviser that has received little attention is online advice programs provided to pension participants through their 401(k) plans. TIAA Institute research[14] investigates the use of online advice by participants in plans where TIAA is the sole record keeper. In 2012 and 2013, 6.5% of participants in their sample sought asset allocation advice using an online tool made available to TIAA participants. The demand for advice increased fourfold with the introduction of online advice tools.

The quality of advice robo-advisers provide is more transparent than for human financial advisers. While it is not possible to monitor the private conversations financial advisers have with their clients, it is possible to evaluate the advice provided by computer models.[15] This greater transparency may lead robo-advisers to adhere more closely to regulatory requirements than some human advisers.

FEES

Robo-advisers typically charge substantially lower fees than human advisers. The cost ranges from free to 50 basis points. Betterment and Wealthfront charge a flat fee of 25 basis points. T. Rowe Price does not charge a fee for its robo-adviser, but instead is paid solely through the fees for the investment products it manages for its clients.

Most robo-advisers use passive, index-fund approaches to investing,[16] while financial advisers are more likely to recommend higher-fee actively managed approaches. Thus, robo-advisers not only have lower advisory fees,

9 Angela Scott-Briggs, "What is a Robo-Adviser, Origin and History," *Fintech News* (blog), TechBullion, Nov. 24, 2016, *http://www.techbullion.com/robo-advisor-origin-history*.

10 Statista, "Forecast of Assets Under Management of Robo-Advisors in the United States from 2016 to 2020 (in billion U.S. dollars)," report, February 2016, *https://www.statista.com/statistics/520623/projected-assets-under-management-us-robo-advisors/*.

11 Financial Industry Regulatory Authority, "Report on Digital Investment Advice," report, March 2016, *https://www.finra.org/sites/default/files/digital-investment-advice-report.pdf*.

12 Wealthfront, "The Financial Industry."

13 Wealthfront, "How Does Tax-Loss Harvesting Relate to Rebalancing?" updated Nov. 13, 2017, *https://support.wealthfront.com/hc/en-us/articles/209348586-How-does-tax-loss-harvesting-relate-to-rebalancing-*.

14 Jonathan Reuter and David Richardson, "New Evidence on the Demand for Advice within Retirement Plans," *Trends and Issues*, TIAA Institute research, April 2017, *https://www.tiaainstitute.org/sites/default/files/presentations/2017-04/New%20Evidence%20on%20the%20Demand%20for%20Advice%20within%20Retirement%20Plans_Insights_April%202017.pdf*.

15 Government Accountability Office, "401(k) Plans: Improved Regulation Could Better Protect Participants from Conflicts of Interest," GAO-11-119 (Jan. 28, 2011), *http://www.gao.gov/products/GAO-11-119*.

16 Jonathan Walter Lam, "Robo-Advisers: A Portfolio Management Perspective" (senior thesis, Yale College, April 4, 2016), *https://economics.yale.edu/sites/default/files/files/Undergraduate/Nominated%20Senior%20Essays/2015-16/Jonathan_Lam_Senior%20Essay%20Revised.pdf*.

they generally also spend less on trades and charge lower fees on their investments. The fees on the investment options for Betterment clients range from 7 to 15 basis points.[17]

In addition, human advisers may have minimum assets requirements of $100,000 or more, making them inaccessible to lower and middle-income clients.[18] In contrast, robo-advisers offer far lower minimum account balances. Wealthfront requires a minimum balance of $500, and Betterment does not require any minimum balance. These lower minimums make robo-advisers particularly well-suited for young people just starting to save.

Robo-advisers offer their clients convenience. Clients can access robo-advisers at any time and from any location. For some clients, the procedure of providing information through a website platform is also more convenient than filling out paper documents or meeting with a human adviser. Some clients, however, prefer a human interaction.

Limitations

There are some limitations to robo-advice.

QUALITY OF ADVICE

Robo-advice differs considerably across advisers, which suggests the quality of advice may also differ considerably. One study[19] compares the advice of seven robo-advisers for a hypothetical 27-year-old. It finds the portfolio allocation to equities varied from 51% to 90%.

SCOPE OF ADVICE

When advising clients on portfolio allocation, not all robo-advisers consider the client's other investments, in particular their 401(k) investments.[20] The robo-adviser may not know about all the pension accounts the client has, and may not consider the assets of the client's spouse. However, similar issues apply for human financial advisers. For instance, when both spouses have their own assets, a human adviser will not necessarily know about the financial assets of the spouse.

One issue is whether robo-advisers do less well than financial advisers in preventing clients from selling low and buying high. Betterment has researched this issue with its own clients and has found it helps to contact its actively engaged clients during a market downturn, but that contacting clients not actively engaged may backfire because some of those clients do not pay attention to the fluctuations of the stock market.[21]

CONFLICTS OF INTEREST

Conflicts of interest are inherent in financial transactions. When robo-advisers have different levels of service with different fees, they have a conflict of interest to recommend the service that provides them the highest income. In addition, they have a potential conflict of interest concerning encouraging pension rollovers because a rollover would enable them to manage the investments in a client's pension account.

Future Trends

This section considers trends in robo-advisers.

THE MOVE TO HYBRIDS

In the past few years, some financial advisory companies have begun to combine the features of robo-advisers and human advisers, creating a hybrid financial adviser. The key features of the hybrid model are that hybrids charge lower fees than human advisers by automating part of the investment process but still offer the possibility of talking with a financial adviser.

The stand-alone robo-adviser movement is slowly declining in relative importance. Some of the major financial management companies, such as Vanguard and Charles Schwab, have incorporated robo-advisers into their business model, using the hybrid model.

17 Betterment, "Is Your Old 401(k) Costing You?" accessed March 8, 2018, *https://www.betterment.com/401k-and-ira-rollover/?gclid=CjwKEAjwja_JBRD8idHpxaz0t3wSJAB4rXW55KvrzvjgmvpQLWhL_4Hzz2De3RXD-tAsyx88We8XiBoC_zzw_wcB*.

18 Larry Ludwig, "The Rise of the Robo Advisors—Should You Use One?" InvestorJunkie, last updated Dec. 16, 2017, *https://investorjunkie.com/35919/robo-advisors/*.

19 FINRA, "Report on Digital Investment Advice."

20 Cybele Weisser, "The Rise of the Robo-Adviser," *Consumer Reports*, July 28, 2016.

21 Dan Egan, "Our Evidence-Based Approach to Improving Investor Behavior," Betterment, Oct. 12, 2017, *https://www.betterment.com/resources/investment-strategy/behavioral-finance-investing-strategy/behavioral-testing/*.

Vanguard's Personal Advisor Services charges 30 basis points and requires an account minimum of $50,000, while Schwab Intelligent Advisory charges 28 basis points with an account minimum of $25,000. Schwab Intelligent Advisory combines Schwab Intelligent Portfolios and the availability of human advisers. It provides comprehensive financial planning services, not just portfolio management, which it implements with the Schwab robo model.[22] The Schwab service offers unlimited contact with a certified financial planner 24/7. Raymond James Financial has announced that its 7,100 advisers will have access to a robo-adviser by the end of 2017.[23] The advisers will use the robo-adviser as a tool for advising clients.

GREATER PRODUCT DIVERSIFICATION

The growing number of robo-advisers has led to greater product diversification. In 2016, Ellevest started as a robo-adviser catering to women. The premise is that because women have longer life expectancies than men, they need to have different portfolios from men the same age.[24] The Ellevest clientele are also well educated. Ellevest reports that more than 40% of its clients have master's degree or doctorates.[25]

True Link focuses on older investors and retirees.[26] OpenInvest and Earthfolio offer investors the opportunity to combine socially responsible investing with a robo platform. The fees of these specialized firms are higher than those of the original robo-advisers.

In 2017, Betterment began offering three new options:

- A fund that takes into account criteria of socially responsible investing
- A low-risk alternative to its standard fund
- A high-risk alternative, which is its Goldman Sachs Smart Beta portfolio; this fund invests based on factors such as the momentum or the quality of a stock

FEES

Robo-advisers have the advantage of economies of scale in that one adviser (one computer algorithm) advises many clients. Betterment, for example, has more than 150,000 clients.[27] Thus, over time, as the robo-advisers acquire more clients and their clients accumulate more assets, their fees should fall even further. The lower fees may make financial advice accessible to a larger market of people who would not be willing to pay the fees associated with human financial advisers.

SOPHISTICATION

Because robo-advisers are relatively new, it is expected that they will increase in sophistication. A Penn Wharton issue brief[28] identifies four core components of robo-advisers:

- The investment algorithms
- The customer and financial product data to which the algorithms are applied
- The choice architecture through which the advice is delivered
- The information technology infrastructure

It is likely robo-advisers will increase in sophistication in each of these areas.

Conclusion

The development of robo-advisers is a major new innovation in helping people prepare for retirement. Robo-advisers are a type of automated advice that helps people choose and manage their financial

22 Michael Kitces, "Is Schwab Intelligent Advisory a Threat to Independent Financial Advisors?" *The Nerd's Eye View* (blog), Pinnacle Advisor Solutions, Dec. 22, 2016, *http://www.pinnacleadvisorsolutions.com/2016/12/22/is-schwab-intelligent-advisory-a-threat-to-independent-financial-advisors/.*

23 Liz Skinner, "Raymond James to Deliver Robo Service for Advisers by Year End," *Investment News*, Jan. 30, 2017, *http://www.investmentnews.com/article/20170130/FREE/170139992/raymond-james-to-deliver-robo-service-for-advisers-by-year-end.*

24 Weisser, "The Rise of the Robo-Adviser."

25 Ellevest, "We've Rounded Up the Biggest Ellevest Trends," email dated Sept. 2, 2017.

26 True Link, "How It Works: True Link's Investment Planning Process," accessed March 21, 2018, *https://www.truelinkfinancial.com/how-it-works.*

27 Egan, "Our Evidence-Based Approach."

28 Tom Baker and Benedict Dellaert, "Regulating Robo Advisors: Old Policy Goals, New Challenges," Penn Wharton Public Policy Initiative issue brief vol. 5, no. 7 (July 2017), *https://publicpolicy.wharton.upenn.edu/issue-brief/v5n7.php.*

investment portfolios. They charge lower fees and have lower minimum account balances than do human advisers. They provide low-fee portfolios. They provide automatic rebalancing, and some provide tax-loss harvesting. They offer the promise of extending affordable financial advice to people with smaller portfolios who in the past have generally not received financial advice.

Jill E. Fisch is Perry Golkin Professor of Law at University of Pennsylvania Law School and co-director, Institute for Law and Economics. She can be reached at *jfisch@law.upenn.edu.*

Marion Labouré is Associate of the Economics Department at Harvard University. She can be reached at *marion_laboure@fas.harvard.edu.*

John A. Turner, Ph.D., is director of the Pension Policy Center in Washington, D.C. He can be reached at *jaturner49@aol.com.*

A Smart Way to Develop Retirement Income Strategies

Steve Vernon

How can actuaries apply their expertise and methods to help workers retire in a world where traditional defined benefit (DB) pension plans are mostly a thing of the past? I've been pondering this question throughout my encore career as a retirement educator and researcher, following a 30-year career as a consulting actuary working in the private sector.

I believe the techniques actuaries use to help large DB plans devise funding and investment strategies could also be used to develop viable retirement income strategies that could be implemented in individual retirement accounts and 401(k) plans. I've had the opportunity to test my belief on a recent collaboration between the Stanford Center on Longevity (SCL) and the Society of Actuaries (SOA). The research team included myself; another actuary, Joe Tomlinson, FSA; and retirement researcher Wade Pfau, Ph.D.

This project applies modern portfolio theory to the retirement, or decumulation, phase to help sort out the many retirement planning tradeoffs necessary to navigate the diverse landscape of retirement income solutions.

For details on how older workers and employers can use the strategy outlined in this essay, see these accompanying pieces:

- "Smart Decisions Older Workers Can Make for Retirement"
- "Smart Steps Employers Can Take to Help Older Workers Transition into Retirement"

The full report[1] contains details on the analyses and conclusions in this group of essays; other results, graphs and tables that present our analyses; and details on our assumptions and methods.

Let's first look at these tradeoffs and landscape, then we'll summarize our analyses and their results.

Retirement Planning Involves Tradeoffs

Choosing a specific solution that will help workers generate retirement income requires them to make informed tradeoffs between potentially competing goals:

- Maximizing lifetime income
- Providing access to savings (liquidity)
- Planning for bequests
- Minimizing implementation complexity and costs
- Minimizing income taxes
- Protecting against common risks, such as
    - Longevity
    - Inflation
    - Investment volatility
    - Death of their spouse
    - Cognitive decline and mistakes
    - Fraud
    - Political/regulatory issues (changes in laws or regulations on retirement plans or Social Security, or the taxation of these benefits)

It should surprise no one that the average American worker isn't adequately trained to make informed decisions regarding retirement income strategies that effectively balance these goals. And while there's no perfect retirement income generator (RIG) that meets all these goals, one comes close, as we'll see.

The Retirement Income Landscape

There are many viable retirement income generators, each with their own advantages and disadvantages:

- Social Security
- Pensions
- Investing savings and using a systematic withdrawal plan (SWP) to generate a retirement paycheck
- A guaranteed lifetime annuity from an insurance company (think of this as akin to a personal pension)

1 Wade Pfau, Joe Tomlinson and Steve Vernon, *Optimizing Retirement Income by Integrating Retirement Plans, IRAs, and Home Equity: A Framework for Evaluating Retirement Income Decisions* (Stanford, CA: Stanford Center on Longevity/Society of Actuaries, November 2017), *http://longevity.stanford.edu/2017/11/29/optimizing-retirement-income-by-integrating-retirement-plans-iras-and-home-equity-a-framework-for-evaluating-retirement-income-decisions/*.

- Working
- Real estate rental income or income from a business
- A reverse mortgage

It's important to realize that each of these RIGs produces a different amount of retirement income. In addition, the advantages and disadvantages of some RIGs tend to complement others, which is one reason retirees should diversify their sources of retirement income to satisfy their unique goals and circumstances.

A Systematic Comparison of Retirement Income Strategies

Many analyses of retirement strategies contain significant limitations. For example, they might:

- Analyze only a few retirement income strategies, perhaps limiting the analysis to solutions their financial institution offers
- Analyze solutions to deploy retirement savings in isolation, without considering how the solution interacts with valuable Social Security benefits
- Not address the various goals that might be important to older workers and the tradeoffs these workers face

To address these limitations, the SCL/SOA project examined 292 retirement income strategies, including various combinations of:

- Starting Social Security at age 65
- Starting Social Security at age 70
- Single premium immediate annuities (SPIA)
- Systematic withdrawal plans, including the IRS required minimum distribution (RMD)
- Guaranteed lifetime withdrawal benefits (GLWB)
- Fixed index annuities (FIA)
- SPIA/SWP combinations
- FIA/SWP combinations
- Tenure payment from a reverse mortgage

For three hypothetical retirees, we prepared the following analyses:

- Stochastic forecasts of income and accessible wealth (liquidity) throughout retirement for each retirement solution
- An efficient frontier that compares the tradeoff between expected amount of income and liquidity for the solutions we analyzed
- Patterns of income during the retirement period to determine if income is expected to keep up with inflation and to estimate the potential volatility

Stochastic forecasts and efficient frontiers are analytical techniques that many large pension plans use to devise funding and investment strategies.

Our economic assumptions reflect the low-interest environment prevalent in 2017. We compared high-performing and low-performing solutions to illustrate the impact of net investment performance and institutional vs. retail pricing on retirement outcomes. For the cost of annuities, we used actual annuity purchase rates prevalent at the beginning of 2017.

Figure 1 shows one example from our efficient frontier analyses for a hypothetical 65-year-old single female with $250,000 in retirement savings. Each symbol represents a retirement income strategy for our subject.

Figure 1 Retirement Income Frontier

Reprinted from *Optimizing Retirement Income by Integrating Retirement Plans, IRAs, and Home Equity: A Framework for Evaluating Retirement Income Decisions,* by Wade Pfau, Joe Tomlinson and Steve Vernon.

We used these efficient frontier analyses to narrow the number of solutions—from 292 to 21—that we examined in more detail, as discussed next.

The Retirement Income Dashboard

To help retirees and their advisers make informed tradeoffs regarding the potentially competing goals described previously, we developed eight metrics to help retirees and planners compare different retirement income solutions:

1. Average annual real retirement income expected during retirement
2. Increase or decrease in real income expected during retirement (inflation protection)
3. Average accessible wealth expected throughout retirement (liquidity)
4. Rate that wealth is spent down
5. Average bequest expected upon death
6. Downside volatility (the estimated magnitude of potential future reductions in income)
7. Probability of shortfall relative to a specified minimum threshold of income
8. Magnitude of shortfall

We used these metrics to prepare detailed comparisons of the 21 retirement income solutions. For these solutions, we created a dashboard to compare the results of our analyses. Figure 2 shows one dashboard example from our report for a married couple, each age 65, with $400,000 in retirement savings.

Social Security is Close to the Perfect Retirement Income Generator

Our analyses demonstrate that Social Security meets more retirement planning goals than any other RIG:

- It helps maximize the amount of expected retirement income through a thoughtful optimization strategy
- It helps minimize taxes by excluding part or all of income from taxation
- It protects against most common risks, such as
  - Longevity
  - Inflation
  - Investment volatility
  - Death of a spouse through the survivor's benefit
  - Cognitive decline and mistakes
  - Fraud
- It's simple to implement and there are no transaction costs

As such, it makes sense for workers to maximize the value of this important benefit, usually by delaying the start of benefits for the primary wage-earner. The optimal strategy for a married couple often depends on their specific circumstances, so it may be desirable to use commonly available software or consult a financial adviser who specializes in Social Security optimization.

Many reputable researchers have confirmed the general advantages of delaying Social Security.[2] These studies typically scrutinize Social Security benefits in isolation without considering income from other sources. By using a total retirement portfolio approach, including income generated by savings, our analyses amplify the importance of these researchers' findings.

Our analyses show that for many middle-income retirees (those with between $100,000 and $1 million in savings), Social Security benefits will represent one-half to two-thirds of total retirement income if workers start Social Security at age 65, and from three-fourths to more than 85% of total retirement income if they optimize Social Security by delaying until age 70.

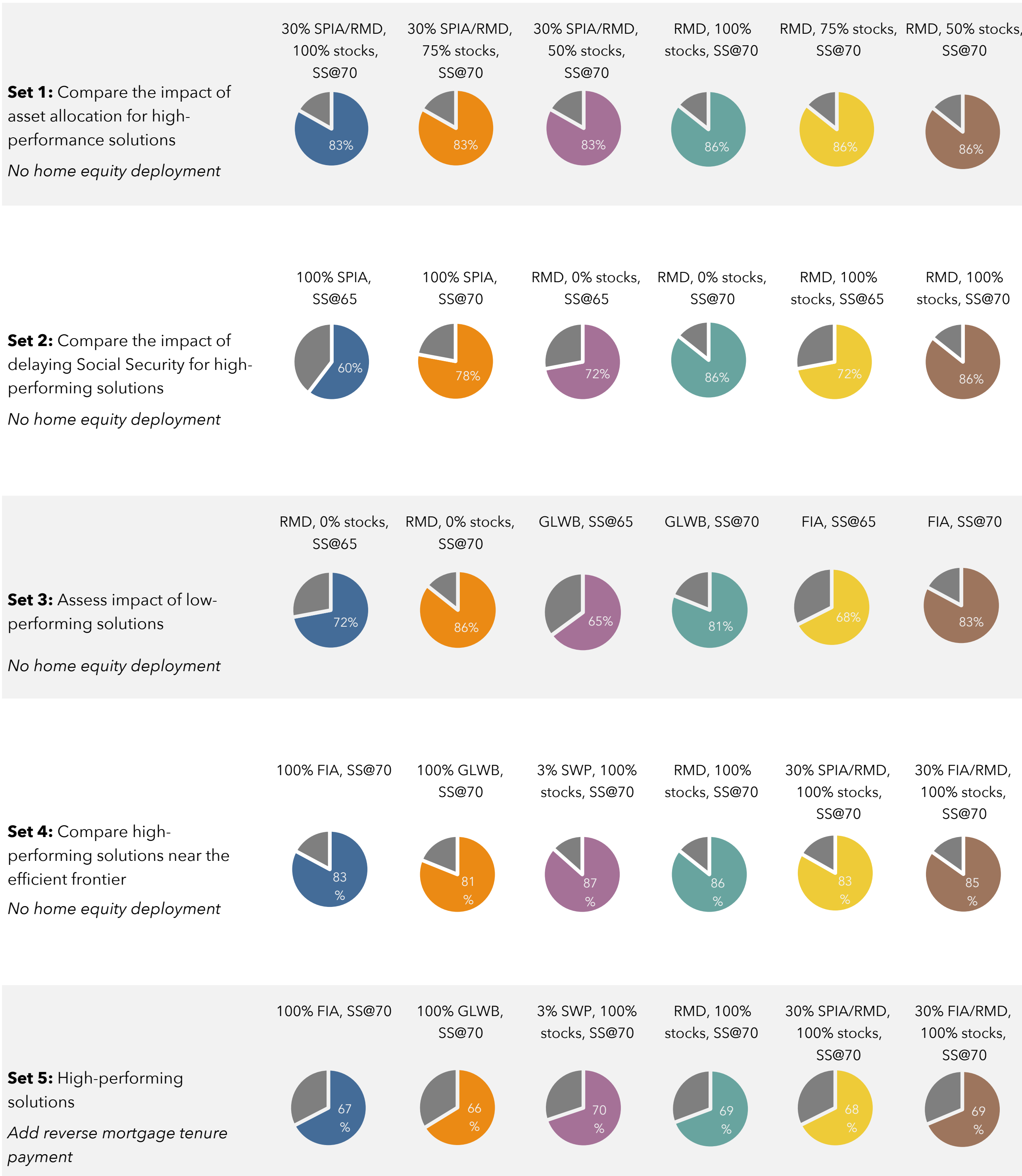
As a result, for many middle-income retirees, the total retirement income portfolio reflects the desirable features of Social Security. In other words, if Social Security benefits represent 80% of the total retirement income portfolio, then at least 80% of the total portfolio will enjoy Social Security's advantages. In this case, *Social Security may be the only annuity income that many middle-income retirees will need*, given Social Security's dominance of their total retirement income portfolio.

Figure 3 provides an example of our analyses showing the portion of total retirement income represented by Social Security for the 65-year-old married couple with $400,000 in savings for various retirement income solutions. For various retirement income solutions, Social Security (the nongray portion of each graph) delivers 60% to 86% of the total retirement income.

2 Wade Pfau, *When Should You Claim Social Security* (McLean, VA: Retirement Researcher, 2015); William F. Sharpe, *Retirement Income Scenario Matrices* (Stanford, CA: Stanford University, 2017), *https://web.stanford.edu/~wfsharpe/RISMAT/*; John Shoven and Sita Slavov, "The Decision to Delay Social Security Benefits: Theory and Evidence," National Bureau of Economic Research working paper no. 17866 (February 2012), *http://www.nber.org/papers/w17866*; James Mahaney, "Innovative Strategies to Help Maximize Social Security Benefits," Prudential research, updated 2017 edition, *http://research.prudential.com/documents/rp/InnovativeSocialSecurityNov2012.pdf?doc=innovativestrategies1112&bu=ret&ref=PDF&cid=MEP*; Laurence J. Kotlikoff, Phillip Moeller and Paul Selman, *Get What's Yours: The Secrets to Maxing Out Your Social Security* (New York, NY: Simon & Schuster, 2016).

Figure 2 Retirement Income Dashboard: No Deployment of Home Equity

Figure 3 Retirement Income Dashboard: Percent of Initial Retirement Income Provided by Social Security



Pessimists might point out that Social Security is subject to political risk; our leaders can change the amount of benefits paid to current retirees or older workers, possibly making significant reductions. When deciding on a Social Security claiming strategy, older workers must weigh this risk against Social Security's other desirable features.

Introducing the Spend Safely in Retirement Strategy

Our analyses identified a straightforward strategy that produces a reasonable tradeoff among various goals for middle-income retirees. This strategy delays Social Security until age 70 for the primary wage-earner and uses the IRS required minimum distribution to calculate income from savings. We call this the "Spend Safely in Retirement Strategy."

The best way for an older worker to implement this strategy is to work just enough to pay for living expenses until age 70 to enable delaying Social Security benefits. To make this method work, retirees may also need to significantly reduce their living expenses.

If a worker isn't willing or able to delay retirement, the next best way to implement the Spend Safely in Retirement Strategy is to use a portion of savings to enable delaying Social Security benefits as long as possible but no later than age 70. They would then invest their remaining savings and use the RMD to calculate the lifetime retirement income generated by their savings. While analyzing this latter approach, we assumed the worker retires at age 65 but uses a portion of savings to enable delaying Social Security until age 70.

With remaining savings (after optimizing Social Security), we assumed retirees would use the RMD to calculate retirement income, starting at age 65. The IRS rules dictate the minimum withdrawal starting at age 70 1/2; at that age, the account balance in taxable retirement accounts (such as traditional IRAs and 401(k) accounts) is divided by the participant's life expectancy to determine the minimum required withdrawal amount for the coming year. The RMD requires this amount be withdrawn from the account and included in taxable income for the year. Between ages 65 and 70, we assumed the retiree would withdraw 3.5% of the portfolio value at the beginning of each year.

The purpose of the RMD is for the federal government to capture taxable income from retirement accounts. It wasn't devised as a spend-down strategy, although our analyses show that it happens to meet common retirement planning goals. The RMD life expectancy tables can be translated into a series of withdrawal percentages, which are shown in the Appendix.

For married couples, the optimal strategy for claiming Social Security for the spouse who isn't the primary wage earner typically depends on individual circumstances. Often, the optimal strategy for this spouse calls for starting benefits somewhere between their full retirement age (FRA) and age 70. For our analyses of the 65-year-old married couple, we assumed the spouse who isn't the primary wage earner would start Social Security at age 66, their FRA.

The primary disadvantage of using savings to enable delaying Social Security benefits is that it can substantially reduce the amount of remaining assets and liquidity throughout retirement. This disadvantage must be weighed against the potential for permanently increased, guaranteed retirement income from a delay strategy.

Advantages of the Strategy

Our analyses show the Spend Safely in Retirement Strategy has many key advantages:

- It produces higher average total retirement income throughout retirement compared to most solutions we analyzed.
- The RMD portion automatically adjusts the withdrawal amounts to recognize investment gains or losses. Withdrawals are increased after years with favorable returns, and vice versa.
- It provides a lifetime income, no matter how long the participant lives. The RMD portion automatically adjusts the withdrawal each year for remaining life expectancy.
- It projects total income that increases moderately in real terms, while many other solutions aren't projected to keep up with inflation. The strategy produced projected real income increases of up to 10% during the retirement period.
- It produces a moderate level of accessible wealth for flexibility and the ability to make future changes as well as a higher accessible wealth compared

to strategies that use annuities. It provides less accessible wealth than strategies that maximize flexibility, such as SWPs with low withdrawal rates and/or strategies that don't use savings to enable the delay of Social Security benefits.

- It provides a moderate level of bequests, for the same reasons.
- It produces low measures of downside volatility, with potential future annual reductions in spending typically well under 3%, which is hopefully a manageable amount.

The Spend Safely in Retirement Strategy has another significant advantage: It can be readily implemented from virtually any IRA or 401(k) plan without purchasing an annuity, something many retirees are reluctant to do and many 401(k) plans don't want to offer. Many administrators can calculate the RMD and automatically pay it according to the frequency elected by the retiree.

Several analysts have studied the RMD as a drawdown strategy and have concluded it's a viable way to produce a stream of lifetime retirement income.[3] These studies typically analyzed the RMD solution in isolation, without considering the value of Social Security benefits. Once again, by using a total retirement portfolio approach that includes Social Security income, our analyses amplify the importance of the analyses prepared by these researchers.

This project has given me a chance to apply my actuarial skills and expertise in new ways to help workers, employers and society at large.

Appendix Withdrawal Percentages Under the IRS Required Minimum Distribution

Age	Distribution Period in Years	Minimum Payout Rate[1]
70	27.4	3.65%
71	26.5	3.77%
72	25.6	3.91%
73	24.7	4.05%
74	23.8	4.20%
75	22.9	4.37%
76	22.0	4.55%
77	21.2	4.72%
78	20.3	4.93%
79	19.5	5.13%
80	18.7	5.35%
81	17.9	5.59%
82	17.1	5.85%
83	16.3	6.13%
84	15.5	6.45%
85	14.8	6.76%
86	14.1	7.09%
87	13.4	7.46%
88	12.7	7.87%
89	12.0	8.33%
90	11.4	8.77%

1 Calculated from instructions at *https://www.irs.gov/retirement-plans/plan-participant-employee/retirement-topics-required-minimum-distributions-rmds* using data from *https://www.irs.gov/publications/p590b#en_US_2014_publink1000231236%3EJoint%20Life%20and%20Last%20Survivor%20Expectancy%20Table%3C/a%3E%20%E2%80%93%20if%20your%20spouse%20is%20the%20sole%20beneficiary%20and%20is%20more%20than%2010%20years%20younger%20%3Cnobr%3Ethan%20you%3C/nobr%3E%3C/li%3E%3Cli%3E%3Ca%20href=*

Notes:

The RMD table continues beyond age 90.

Use the account holder's age on their birthday during the calendar year.

If the account holder is married and their spouse is more than 10 years younger, a different table with payout rates that are lower than these rates applies.

Steve Vernon, FSA, MAAA, is a research scholar at the Stanford Center on Longevity in Stanford, Calif. He can be reached at *svernon@stanford.edu*.

3 Joe Tomlinson, "Coping with Sequence Risk: How Variable Withdrawal and Annuitization Improve Retirement Outcomes," Advisor Perspectives, Sept. 25, 2017, *https://www.advisorperspectives.com/articles/2017/09/25/coping-with-sequence-risk-how-variable-withdrawal-and-annuitization-improve-retirement-outcomes*; Wade Pfau, "Retirement Spending and Required Minimum Distributions," Retirement Researcher, Nov. 22, 2016, *https://retirementresearcher.com/retirement-spending-required-minimum-distributions/*; Wei Sun and Anthony Webb, "Can Retirees Base Wealth Withdrawals on the IRS' Required Minimum Distribution," Center for Retirement Research at Boston College issue brief no. 12-19 (October 2012), *http://crr.bc.edu/wp-content/uploads/2012/10/IB_12-19-508.pdf*; David Blanchett, Maciej Kowara and Peng Chen, "Optimal Withdrawal Strategy for Retirement Income Portfolios," Morningstar Investment Management research paper, May 22, 2012, *https://corporate.morningstar.com/US/documents/ResearchPapers/OptimalWithdrawalStrategyRetirementIncomePortfolios.pdf.*

Smart Decisions Older Workers Can Make for Retirement

Steve Vernon

How will ordinary workers retire in a defined contribution (DC) world? How will they decide if they have enough savings to afford retirement? How can they generate reliable periodic retirement income?

These questions began to nag at me when I started replacing defined benefit (DB) pension plans with DC plans in the late 1980s in my role as a consulting actuary working in the private sector. During the next two decades, I transitioned more than 20 DB plans. All that time, the questions continued to haunt me.

I didn't think it was a good idea to ask American workers to be their own investment managers and actuaries. This thought led me on a 30-year quest to help older workers and retirees find viable retirement income solutions—that's been a primary focus of my current encore career as a retirement researcher and educator.

Most Workers Don't Plan Like Actuaries and Investment Managers

To address the opening questions, employers often suggest workers consult a financial planner. But only about one-third of workers contact financial advisers for any purpose.[1] And finding an adviser who's both skilled with retirement income planning and isn't conflicted by how they're paid can be a roadblock for workers.

Without anyone to consult, only about half of older workers attempt to calculate how much money they need to retire.[2] In fact, the "planning" most older workers do is to estimate their monthly retirement income, then reduce their living expenses to that level.[3] But most workers don't have the skills to successfully convert their savings into a reliable, lifetime retirement income.

Retirees tend to exhibit two distinct strategies for deploying retirement savings:

- Conserving savings for a rainy day by minimizing their withdrawals and treating savings as an emergency fund,[4] or
- "Winging it" by treating their savings like a checking account to pay for current living expenses, often withdrawing too rapidly at an unsustainable rate.[5]

Neither strategy seems optimal in a DC world.

We Need Straightforward Retirement Income Solutions

There's a clear need for older workers to be able to "pensionize" their individual retirement and DC accounts. This would enable middle-income workers to plan for their retirements more effectively and make the most of the savings they've so carefully set aside.

The good news? Recent research by the Stanford Center on Longevity (SCL), collaborating with the Society of Actuaries (SOA), identifies a straightforward retirement strategy that can work for most middle-income retirees and be implemented in virtually any traditional IRA or

1 Transamerica Center for Retirement Studies, "17th Annual Transamerica Retirement Survey: A Compendium of Findings About American Workers," TCRS 1335-1216 (December 2016), *https://www.transamericacenter.org/retirement-research/17th-annual-retirement-survey/retirement-survey-of-workers-full-survey-results.*

2 Employee Benefit Research Institute, "2017 Retirement Confidence Survey," March 21, 2017, *https://www.ebri.org/surveys/rcs/2017/.*

3 Society of Actuaries, "Society of Actuaries 2015 Risks and Processes of Retirement Survey," January 2016, *https://www.soa.org/Files/Research/Projects/research-2015-full-risk-report-final.pdf.*

4 James M. Poterba, Steven F. Venti and David A. Wise, "The Drawdown of Personal Retirement Assets," National Bureau of Economic Research working paper no. 16675 (revised January 2013), *http://www.nber.org/papers/w16675.*

5 Steve Vernon, "A Retirement Literacy Quiz You Need to Pass," *MoneyWatch*, CBS, May 4, 2017, *https://www.cbsnews.com/news/a-retirement-literacy-quiz-you-need-to-pass/.*

401(k) plan.[6] This research provides a framework for assessing different retirement income generators (RIGs) and navigating the tradeoffs older workers face when making retirement income decisions. The research team included myself; another actuary, Joe Tomlinson, FSA; and retirement researcher Wade Pfau, Ph.D.

To learn more about the analyses that support the strategy and how employers can help their older workers, see these essays:

- "A Smart Way to Develop Retirement Income Strategies"
- "Smart Steps Employers Can Take to Help Older Workers Transition Into Retirement"

A Systematic Comparison of Retirement Income Strategies

The SCL/SOA project examined 292 retirement income strategies, including various combinations of:

- Starting Social Security at age 65
- Starting Social Security at age 70
- Single premium immediate annuities (SPIA)
- Systematic withdrawal plans (SWPs), including the IRS required minimum distribution (RMD)
- Guaranteed lifetime withdrawal benefits (GLWB)
- Fixed index annuities (FIA)
- SPIA/SWP combinations
- FIA/SWP combinations
- Tenure payment from a reverse mortgage

To systematically compare these retirement income strategies, we used stochastic forecasts and efficient frontiers, analytical techniques that many large pension plans use to devise funding and investment strategies.

Introducing the Spend Safely in Retirement Strategy

Our analyses identified a straightforward strategy that produces a reasonable tradeoff among various retirement planning goals for middle-income retirees. This strategy delays Social Security until age 70 for the primary wage-earner and uses the IRS required minimum distribution to calculate income from savings. We call this the "Spend Safely in Retirement Strategy."

The strategy has a significant advantage: It can be readily implemented from virtually any IRA or 401(k) plan without purchasing an annuity, something many retirees are reluctant to do and many 401(k) plans don't want to offer. Many administrators can calculate the RMD and automatically pay it according to the frequency elected by the retiree.

Implementing the Strategy

The best way for an older worker to implement the Spend Safely in Retirement Strategy is to design a thoughtful transition from full-time work to part-time work to full retirement. This would entail working just enough to pay for living expenses until age 70 to enable delaying Social Security benefits. In essence, "age 70 is the new 65." To make this method work, retirees may also need to significantly reduce their living expenses.

If a worker isn't willing or able to delay retirement, the next best way to implement the strategy is to use a portion of savings to enable delaying Social Security benefits as long as possible but no later than age 70. While analyzing this latter approach, we assumed the worker retires at age 65 but uses a portion of savings to enable delaying Social Security until age 70.

With remaining savings (after optimizing Social Security), retirees would use the RMD to calculate retirement income. The RMD rules can be translated into a series of withdrawal percentages, which are shown in the Appendix of the accompanying essay "A Smart Way to Develop Retirement Income Strategies." At age 70, the initial withdrawal percentage is 3.65%, and it increases each year thereafter. For workers who retire before age 70, we assumed a withdrawal percentage of 3.5% from ages 65 to 70.

Building a "Retirement Transition Bucket"

In the years leading up to retirement, an older worker might want to use a portion of their retirement savings

6 Wade Pfau, Joe Tomlinson and Steve Vernon, *Optimizing Retirement Income by Integrating Retirement Plans, IRAs, and Home Equity: A Framework for Evaluating Retirement Income Decisions* (Stanford, CA: Stanford Center on Longevity/Society of Actuaries, November 2017), *http://longevity.stanford.edu/2017/11/29/optimizing-retirement-income-by-integrating-retirement-plans-iras-and-home-equity-a-framework-for-evaluating-retirement-income-decisions/*.

to build a "retirement transition bucket" of money that enables them to delay Social Security benefits. While there's some judgment involved with the size of this bucket, a starting point would be an estimate of the amount of Social Security benefits the retiree would forgo during the delay period. The retirement transition bucket could also provide a buffer if the older worker is uncertain about the timing of retirement and could protect the worker against stock market crashes in the period leading up to retirement.

The primary disadvantage of using savings to enable delaying Social Security benefits is that it can substantially reduce the amount of remaining assets and liquidity throughout retirement. This disadvantage must be weighed against the potential for permanently increased, guaranteed retirement income from a delay strategy.

Investing With the Strategy

The retirement transition bucket could be invested in a liquid fund with minimal volatility in principal, such as a money market fund, a short-term bond fund or a stable value fund in a 401(k) plan. This type of fund could protect a substantial amount of retirement income from investment risk as the worker approaches retirement since the retirement transition bucket would be invested in stable investments and Social Security isn't impacted by investment returns.

Our analyses support investing the RMD portion significantly in stocks—up to 100%—if the retiree can tolerate the volatility. The resulting volatility in the total retirement income portfolio is dampened considerably by the high proportion of income produced by Social Security, which doesn't drop if the stock market drops. However, our analyses project reasonable results with a typical target date fund for retirees (often a 50% stock allocation) or balanced fund (often a 60% stock allocation); these funds are commonly available in IRA and 401(k) platforms. These lower stock allocations would reduce expected income but would also produce lower downside volatility, compared to a 100% stock allocation.

These results can significantly simplify retirement investing; to implement this strategy, a retiree could select a low-cost index fund, either a target date, balanced or stock fund. Many 401(k) plans, as well as many IRA providers, offer low-cost index funds as part of their investment choices.

Refinements to the Strategy

The Spend Safely in Retirement Strategy can be a starting point for devising effective retirement income strategies, with refinements to meet other retirement planning goals and personalize the solution to individual circumstances.

First, it's recommended retirees maintain an emergency fund that wouldn't be used to generate retirement income. Such a fund could be used to pay for planned large, one-time purchases or for large unforeseen expenses, such as house repairs.

Some retirees express a desire to spend more money in the early years of their retirement while they're active and healthy, often for travel expenses. In this case, they could dedicate a portion of their retirement savings to a special bucket for these purposes; this bucket would not be used to generate retirement income. For example, if a retiree plans to spend an extra $5,000 per year on travel for each of 10 years, they could set aside $50,000 that's not used to generate retirement income. Instead, they would withdraw from this savings bucket to pay for their travel expenses.

Another refinement might be appropriate for retirees who desire more guaranteed income than what's produced by the strategy. In this case, they could use a portion of savings to purchase a low-cost single premium immediate annuity, guaranteed lifetime withdrawal benefit or fixed index annuity. Another possibility, if the retiree has significant home equity, could be to use a tenure payment reverse mortgage to generate additional monthly income.

If a worker is unable or unwilling to work longer to postpone drawing Social Security benefits, one possible financial strategy would be to use a reverse mortgage line of credit as a pool of funds to help cover living expenses while delaying Social Security benefits.

Finally, the Spend Safely in Retirement Strategy works best when a retiree delays Social Security until age 70, but delays until earlier ages, such as 67, 68 or 69, still provide significant advantages.

Communicating the Strategy

Older workers and retirees should think of Social Security as a secure monthly "retirement paycheck" that can be used to pay for basic living expenses. They should consider the RMD withdrawals as a variable annual "retirement bonus" that can fluctuate in value, which can be used to pay for discretionary living expenses. Many middle-income workers are accustomed to managing their finances with secure paychecks and variable bonuses, so it's natural to continue this financial discipline in retirement.

The Spend Safely in Retirement Strategy helps underscore that it's smart for retirees to:

- Delay drawing down Social Security and retirement savings; for workers with modest retirement savings, it's essential to squeeze every dollar from available retirement resources
- Automate the payment of retirement income, which will be very helpful for older retirees when they reach their 80s and 90s and are less interested in managing their finances
- Use low-cost index funds for invested savings
- Phase from full-time work to part-time work to full retirement; the right transition will be unique to each retiree's circumstances and goals
- Adjust withdrawals from savings for investment gains and losses throughout retirement
- Maintain some accessible savings to respond to changes in circumstances throughout retirement

The strategy can be characterized as a navigational guide to help older workers decide when to retire and how to best deploy their retirement savings.

Strategy Won't Compensate for Inadequate Savings, Other Risks

By itself, the Spend Safely in Retirement Strategy won't compensate for inadequate retirement savings. However, that's not a criticism of the strategy, since our comparisons show that other retirement income solutions will deliver equal or less retirement income.

Our analyses show that the strategy helps address modest savings by squeezing as much income as possible from existing resources. Furthermore, our analyses show that many older American workers may fall short of typical retirement income goals commonly advocated by planners, such as targeting a retirement income that equals 70% to 90% of preretirement pay. This goal may be unattainable, given the prevalent levels of savings for older workers. Such retirees may need to live on incomes that fall short of these goals.

Also, the Spend Safely in Retirement Strategy won't address other retirement planning risks, such as the cost of high medical expenses or long-term care (LTC). Once again, this isn't a shortcoming of the strategy since most other retirement income solutions don't address these risks either. One smart risk management strategy is to convert large, unpredictable medical costs into predictable monthly premiums through Medicare and Medicare supplement policies, which can then be budgeted from retirement income.

An expensive LTC event can overwhelm most retirement income strategies and rapidly drain savings. Addressing this risk calls for separate strategies, such as purchasing long-term care insurance, holding home equity in reserve, and/or dedicating a separate investment account solely to LTC expenses and not using it to generate retirement income.

Minimizing Taxes Should Take a Lower Priority

Our analyses show that most middle-income retirees will experience significant decreases in their marginal federal income tax bracket in retirement, commonly falling from a 22% bracket to a 12%, 10% or even a 0% bracket. This results from:

- Low levels of taxable income generated by modest retirement savings
- The extra federal income tax deduction for taxpayers age 65 and older
- Part or all of Social Security benefits being excluded from taxable income

As a result, strategies to minimize income taxes should take a lower priority compared to maximizing expected income and liquidity. Since Social Security benefits enjoy unique tax benefits, maximizing Social Security benefits will help reduce retirees' income taxes.

The Strategy Helps With Important Life Decisions

The Spend Safely in Retirement Strategy represents a straightforward way for middle-income workers with between $100,000 and $1 million in savings to generate a stream of lifetime retirement income without purchasing an annuity and without significant involvement from financial advisers. This group might represent as many as half of all workers age 55 and older.[7]

The strategy can also help older workers make important life decisions, such as how long they should continue to work full time, whether they should transition into retirement with part-time work, when they can fully retire and how much money they can spend in retirement.

I've been studying retirement for my entire professional career, and, at age 64, I've been seriously thinking about my own retirement. This actuary will be using a version of the Spend Safely in Retirement Strategy, based on my 30+ years of study.

My life-long quest for answers may be finally coming to an end!

Steve Vernon, FSA, MAAA, is a research scholar at the Stanford Center on Longevity in Stanford, Calif. He can be reached at *svernon@stanford.edu.*

7 Employee Benefit Research Institute, "2017 Retirement Confidence Survey," March 21, 2017, *https://www.ebri.org/surveys/rcs/2017/*; Stephen A. Sass, "Is Home Equity an Underutilized Retirement Asset?" Boston College Center for Retirement Research, Center for Retirement Research at Boston College issue brief no. 17-6 (March 2017), *http://crr.bc.edu/wp-content/uploads/2017/02/IB_17-6.pdf.*

Smart Steps Employers Can Take to Help Older Workers Transition Into Retirement

Steve Vernon

When they eliminated traditional defined benefit (DB) and retiree medical plans, many employers discarded powerful succession planning tools for their workforce. So how will they manage their baby boomer employees' transition into retirement, given the modest level of retirement savings this demographic cohort has accumulated? And will boomers hang on past their "expiration date," afraid they can't afford to retire? Is "working longer" the default election for older workers uncertain about their financial security? Or can employers and older workers band together to find a graceful and productive transition into retirement?

I've wrestled with these questions for the last five years in my current encore career as a retirement researcher and educator, following more than 30 years as a consulting actuary working in the private sector. I've been exploring new tools that employers can use to help manage an aging workforce in a defined contribution (DC) world.

DC World Challenges

American workers face three challenges in a DC world:

1. **Inadequate savings.** Various studies show that roughly half of all older American workers (age 55+) have less than $100,000 in retirement savings, a number that's not close to adequate for a traditional retirement of "not working."[1] Roughly one-fourth of workers have between $100,000 and $500,000, and another one-fourth have more than $500,000.

2. **Leakage.** According to one study, an estimated one-fourth of DC accounts experience an outstanding loan, hardship withdrawal or early withdrawal upon job separation.[2]

3. **Generating retirement income.** Only half of all DC plans offer any options for converting balances into periodic retirement income, and typically fewer than one in five plans offer guaranteed lifetime payouts.[3]

This essay describes one useful solution to the third challenge—generating retirement income—while acknowledging the importance of the first two challenges.[4] This essay also describes other tools that employers can use to help manage the succession of their older workforce.

We Need Straightforward Retirement Income Solutions

There's a clear need for DC plan sponsors and financial institutions to help their older workers and customers generate reliable, lifetime retirement income—to "pensionize" their individual retirement and DC accounts, so to speak. This can help reduce their older workers' uncertainty about financial security in retirement.

Annuities are one viable method to deliver guaranteed lifetime income to retirees, but not many older workers buy annuities on their own. And many employers are reluctant to offer annuities in their DC plans.

1 Transamerica Center for Retirement Studies, "17th Annual Transamerica Retirement Survey: A Compendium of Findings About American Workers," TCRS 1335-1216 (December 2016), *https://www.transamericacenter.org/retirement-research/17th-annual-retirement-survey/retirement-survey-of-workers-full-survey-results*; Employee Benefit Research Institute, "2017 Retirement Confidence Survey," March 21, 2017, *https://www.ebri.org/surveys/rcs/2017/*.

2 Transamerica Center for Retirement Studies, "17th Annual Transamerica Retirement Survey."

3 Callan Institute, "2017 Defined Contribution Trends," survey, 10th anniversary edition, Dec. 23, 2016, *https://www.callan.com/wp-content/uploads/2017/01/Callan-2017-DC-Survey.pdf*; Aon Hewitt, "2017 Hot Topics in Retirement and Financial Wellbeing," report, 2017, *http://www.aon.com/attachments/human-capital-consulting/2017-hot-topics-financialwellbeing-report-final-january.pdf*.

4 U.S. Bureau of Labor Statistics, "Automatic Enrollment, Employer Match Rates, and Employee Compensation in 401(k) Plans," *Monthly Labor Review*, May 2015, *https://www.bls.gov/opub/mlr/2015/article/automatic-enrollment-employer-match-rates-and-employee-compensation-in-401k-plans.htm#top*; Aon Hewitt, "Pulse Survey: The Impact of Automatic Enrollment," January 2015.

Furthermore, many employers worry about accepting fiduciary liability when designing and implementing any retirement income solution.

The Stanford Center on Longevity (SCL), collaborating with the Society of Actuaries (SOA), recently produced research that can help address these challenges.[5] This research provides a framework for systematically assessing and comparing different retirement income strategies. The research team included myself; another actuary, Joe Tomlinson, FSA; as well as retirement researcher Wade Pfau, Ph.D. One encouraging result of this research is a straightforward retirement strategy that can work for most middle-income retirees.

To learn more about the analyses that support the strategy and how older workers can implement this strategy, see these two essays:

- "A Smart Way to Develop Retirement Income Strategies"
- "Smart Decisions Older Workers Can Make for Retirement"

Introducing the Spend Safely in Retirement Strategy

The SCL/SOA research identified a strategy that produces a reasonable tradeoff among various goals for middle-income retirees (those with between $100,000 and $1 million in savings). We call this the "Spend Safely in Retirement Strategy."

This strategy begins with a recommendation to delay Social Security benefits until age 70 for the primary wage-earner. Married couples would use common Social Security optimization tools or advisers to help determine the best claiming strategy for the spouse who isn't the primary wage-earner.

This strategy then uses the IRS required minimum distribution (RMD) to calculate income from savings to supplement Social Security income. For this RMD portion of income, the retiree would use low-cost index funds in the DC plan, such as balanced, target date or stock funds.

The Spend Safely in Retirement Strategy offers a significant advantage to both retirees and employers: It can be readily implemented from virtually any IRA or 401(k) plan without having to purchase an annuity. Many administrators can calculate the RMD and automatically pay it according to the frequency elected by the retiree.

Working Longer—the Best Way to Implement the Strategy

The most effective way for an older worker to implement the Spend Safely in Retirement Strategy is to work just enough to pay for living expenses until age 70; this enables them to delay drawing Social Security benefits and their savings for as long as possible. In essence, "age 70 is the new 65" when it comes to retirement. To make this method work, retirees may also need to significantly reduce their living expenses.

We acknowledge there can be serious challenges for both workers and employers with this "working longer" solution. To address these challenges, employers may want to develop alternative career paths that enable older workers to work longer, by offering job-rotation programs or positions with fewer hours or reduced responsibilities. They can also offer training programs to help older workers maintain their job skills.

Older workers will need to maintain their health so they can continue working; participating in their employer's health wellness program can help. They'll also want to enroll in their employer's job-training programs.

In spite of these challenges, the working longer solution can provide benefits to both employers and their older workers. Provocative evidence supports the notion that workforces that mix older and younger workers are more productive than workforces composed primarily of just older or younger workers.[6] The same research supports the conclusion that working longer and

5 Wade Pfau, Joe Tomlinson and Steve Vernon, *Optimizing Retirement Income by Integrating Retirement Plans, IRAs, and Home Equity: A Framework for Evaluating Retirement Income Decisions* (Stanford, CA: Stanford Center on Longevity/Society of Actuaries, November 2017), *http://longevity.stanford.edu/2017/11/29/optimizing-retirement-income-by-integrating-retirement-plans-iras-and-home-equity-a-framework-for-evaluating-retirement-income-decisions/*.

6 Stanford Center on Longevity, "Working Longer and Retirement: Applying Research to Help Manage an Aging Workforce," post-conference report, April 2017, *http://longevity.stanford.edu/2018/03/14/working-longer-retirement-applying-research-help-manage-aging-workforce/*.

remaining engaged with life can help older workers maintain their health and keep their wits longer. Employers can also organize volunteer programs to help engage older workers and retirees, which also facilitates their transition into retirement.[7]

The Second-best Way to Implement the Strategy

If a worker isn't willing or able to delay full retirement until age 70, the next best way to implement the Spend Safely in Retirement Strategy is to use a portion of savings to enable delaying Social Security benefits for as long as possible but no later than age 70. This might require setting aside a "retirement transition bucket" of money that retirees could use to replace the Social Security benefits they're deferring. These funds could also help facilitate the transition from full-time work to part-time work to full retirement.

The retirement transition bucket could be invested in a safe, liquid investment in the DC plan, such as a stable value fund, a money market fund or a short-term bond fund. To help the older worker delay starting Social Security benefits, the DC plan could offer a period-certain payout option together with these funds.

RMD can be Default Retirement Income Option

Auto-enrollment and default investment options have demonstrated the power of default elections for accumulating savings. As a result, plan sponsors and their consultants have been seeking a default payout option that can be utilized for retiring workers to improve retirement outcomes.

The RMD, combined with the plan's qualified default investment alternative (QDIA), might be a viable default retirement solution that offers fiduciary protection to the plan sponsor.

Using the RMD as a payout strategy complies with IRS regulations; the retiree will incur substantial penalties if the minimum amounts aren't withdrawn from the plan. As a result, both retirees and plan sponsors have a significant incentive to comply with the RMD. In addition, our analyses show the RMD helps maximize expected retirement income.

As a refinement or alternative to the default solution, a retiree can make a positive election to meet various retirement planning goals, such as deploying a portion of retirement savings to build their retirement transition bucket, starting withdrawals before age 70-1/2 or electing another payout option offered by the plan.

Planning Tools Can Help

Plan sponsors and financial institutions could use the Spend Safely in Retirement Strategy to prepare retirement income statements for DC plan participants that don't involve making assumptions about interest rates or product features. Retirement income statements can help older workers understand their expected retirement income at various retirement ages that they would receive from Social Security and savings. Preparing these statements should be a straightforward task since the calculation rules for Social Security and the RMD are readily available. These statements can help older workers decide when they can afford to retire.

Plan sponsors and financial institutions could also arrange for qualified, unbiased advisers to help older workers implement the Spend Safely in Retirement Strategy. For example, advisers could:

- Develop a strategy to help older workers optimize Social Security
- Select a fund to implement the RMD portion of the strategy
- Help older workers build the retirement transition bucket with the plan's funds

This type of one-time help might be more efficient for retirees than the common arrangement of paying advisers an ongoing asset charge throughout retirement.

Future Research Can Provide Useful Insights

Future research could help employers and older workers understand:

7 Stanford Center on Longevity, *Hidden in Plain Sight: How Intergenerational Relationships Can Transform Our Future*, monograph, June 2016, *http://longevity.stanford.edu/wp-content/uploads/2017/04/Monograph_web_07_11_2016.pdf.*

- Circumstances when the Spend Safely in Retirement Strategy could be most helpful, by examining retirement ages different from age 65, Social Security start dates other than age 70 and various hypothetical employees
- How to refine the strategy for married couples
- How to modify the strategy to address common situations (for example, income from working that eventually stops) or future reductions in living expenses (for example, paying off a mortgage)
- The prevalence and number of older workers who could be helped by the strategy
- Communication strategies to encourage implementation among middle-income retirees

In addition, future research could explore considerations for building the retirement transition bucket to enable workers to delay Social Security benefits, as well as help with a smooth transition from full-time work to part-time work to full retirement.

New Tools to Manage an Aging Workforce

The Spend Safely in Retirement Strategy emphasizes that it's smart for employers to help their older workers develop retirement income strategies by adopting the following policies and DC plan features:

- Automating the RMD as a payment option in their DC plan
- Offering period-certain payouts in the DC plan to enable optimizing Social Security
- Adopting the RMD together with the DC plan's QDIA as the default payout option
- Offering low-cost index funds in the DC plan
- Providing education, tools and retirement income statements to help with retirement planning
- Shopping for qualified, unbiased assistance with retirement income planning
- Designing alternative career paths for older workers

Employers can further help their older workers transition into retirement by:

- Continuing health wellness programs for retirees
- Offering retiree medical plans before eligibility for Medicare at age 65
- Assisting older workers and retirees with navigating the Medicare maze
- Offering group purchase programs for long-term care insurance
- Providing volunteer opportunities to give older workers and retirees a sense of purpose and valuable social contacts

The Spend Safely in Retirement Strategy can be an important part of a new toolkit employers can use to help manage an aging workforce in a post-DB world.

The fact is, it's smart for employers to help allay the natural fears older workers have about outliving their savings and being hit with high medical bills in retirement. It's also smart to help their older workers make important life decisions, such as how long they should continue to work full time, whether they should transition into retirement with part-time work, when they can fully retire and how much money they can afford to spend in retirement.

Steve Vernon, FSA, MAAA, is a research scholar at the Stanford Center on Longevity in Stanford, Calif. He can be reached at *svernon@stanford.edu.*

A "My Plate" Retirement Planning Strategy

Elizabeth Bauer

How much should you save for retirement?

That's the question I asked blog readers and Facebook friends, specifying that the "you" could be taken either as referring to their own personal situation or the recommendation they believed was correct for Americans in general. The answers were along the lines of "aim for $1 million" or "try to get 25 times your annual pay." They cited their own savings percentages (including employer matches) as 0%, 14%, 16% and 30%, and a mandatory 9.5% from the Australian in the group. (Yes, it's a small sample size.)

I looked online. A recent Bloomberg article[1] seemed promising but ended up giving seven guidelines, among them save 12% to 15% of pay, follow your employer's match and escalation defaults, and save the maximum deductible amount. The Center for Retirement Research[2] calculates savings percentages ranging from 4%, for a full career starting at age 25 and assuming retirement at age 70, to 24%, assuming saving begins at age 35 and retirement at age 62, assuming a median income and a 70% replacement ratio. But even these percentages don't get at the real-world situation for individual savers. Some will have large pay increases during their working lifetime; others are in occupations where pay increases little over time. Some will have bouts of unemployment. Some will have children. They will need to ramp up their savings after the children leave home or become accustomed to a lower standard of living than the childless with the same income level so as to be able to move to a lower replacement rate without feeling a pinch. Due to the progressive nature of Social Security benefits, it's neither possible to specify an accurate savings rate that's appropriate across all income levels nor easy to provide a rule of thumb that takes it into account.

What do we conclude from this? That nobody knows the answer. Or, at least, that there is nothing even close to a universally accepted standard we all know to follow.

Which means, for most Americans, the only answer to the question of how much is "More than you're saving now."

For Many, a New Challenge

It strikes me that the American worker is being asked to do something rather unprecedented, in being called on to save for his or her own retirement to such a degree. Of course, for many workers, especially the self-employed, those working at small businesses and those who have experienced many job moves, this has always been the norm. But the fact remains, in 1979, 38% of private-sector American workers participated in defined benefit plans. In 2014, the corresponding figure was 13%.[3] Although access to defined contribution plans has increased, so that, in total, 47% of private-sector workers have access to some sort of retirement plan, nearly the same rate as in 1979 (45%), in nearly all such plans, employer contributions are entirely or partially contingent on employee contributions.[4]

It's all the more difficult for younger workers to identify an appropriate savings strategy. Do you wait until your credit cards are paid off? Focus on your student loans? Save for a down payment? More and more young adults don't even think of themselves as "real adults" in the first place, as evidenced by the rise in the term "adulting," used by millennials to express their own self-awareness at how late they are to the game of independent living.

And this is outside the international norm as well. To be sure, many Western countries have simply historically

1 Ben Steverman, "How Much Should You Save for Retirement?" *Personal Finance, Bloomberg*, June 14, 2017, *https://www.bloomberg.com/news/articles/2017-06-14/how-much-should-you-save-for-retirement*.

2 Alicia H. Munnell, Anthony Webb and Wenliang Hou, "How Much Should People Save?" Center for Retirement Research at Boston College working paper no. 14011 (July 2014), *http://crr.bc.edu/wp-content/uploads/2014/07/IB_14-111.pdf*.

3 Employee Benefit Research Institute, "FAQs About Benefits—Retirement Issues," accessed Feb. 27, 2018, *https://www.ebri.org/publications/benfaq/index.cfm?fa=retfaq14*.

4 Ibid.

had high enough state benefits, or national collectively bargained benefits, as to not require retirement savings to nearly the same degree as in the United States. But consider that, among the countries nearest the United States in terms of culture and economy, Australia, in 1991, introduced the Superannuation Guarantee, mandatory 401(k) savings. Hong Kong introduced the Mandatory Provident Fund in 1995. The United Kingdom is in the process of phasing in a nationwide autoenrollment retirement savings plan, the National Employment Savings Trust, or NEST. And as I write, the Irish government is likewise preparing a proposal for a similar system.

In the United States, however, even new statewide efforts such as that of Oregon lack contribution mandates and are modest in their ambitions. We necessarily have a much more difficult task, that of making retirement savings the norm, without any such mandates, and against all the pressures Americans face to consume in the here-and-now. It’s an eat-your-vegetables, do-your-exercises sort of situation, except that, rather than being able to see the results of one’s efforts in the near term, in terms of better-fitting clothing and better stamina in physical activities, the fruits of one’s labors, or forgone consumption, are only visible once in retirement, many years removed.

A “My Plate” Approach

Consider the eat-your-vegetables dictum in another fashion. In my own childhood, the four food groups were how we learned about healthy eating. The food pyramid, released in 1992, was meant to illustrate that different types of food should be consumed in different amounts. In 2005, the government promulgated “MyPyramid,” which created color-coded slices of the pyramid dedicated to different groupings of food, with the exhortation to visit mypyramid.gov for individualized guidance. Perhaps in response to poor reception of this graphic, the current “My Plate” guideline is back to a more straightforward pie chart-like presentation, with fruits and vegetables taking up half the plate.

We need a My Plate plan for retirement—that is, a very simple set of standard guidelines provided with consistency across the spectrum of retirement advising, from individual financial planners to employer communications to financial advice columnists.

It’s true these guidelines will not be “right“ for anyone. There are variables that are simply unknown. What will average market returns look like? Will a health crisis or late-career job loss result in earlier-than-planned retirement? There are other variables that are predictable and, in principle, model-able for an individual. At what age did you enter the job market? What type of pay increases can you expect, given your occupation? Given your expected future salary progression and assuming benefit levels remain unchanged, what level of Social Security can you expect at retirement? In a perfect world, as wage-earners, we’d all access modelers to provide us customized guidance, in the same manner as mypyramid.gov was intended for us to customize our food intake based on weight and activity level.

But it is probably too much to ask of the average American to go online, find a modeler, research reasonable assumptions for your specific conditions, calculate your required savings percentage and review it on a regular basis to track your progress. It is a lot more difficult to internalize than, say, save 15% of pay for retirement, as a single norm that’s repeated starting in high school with your personal finance class, on through the advice from your workplace and newspaper columnists, and chats with family or dear old dad giving you guidance.

That being said, I would fine-tune this in one respect. It really doesn’t make sense for someone who’s earning a bare minimum wage at a part-time job to be told to save for retirement, but dictums such as “wait until you’re established in your career” don’t offer a tangible starting point. Instead, a better message, which also builds in a recognition of the impact of Social Security’s progressivity, might be save 15% of pay beyond the first $15,000—that is, once you get a job that pays more than $15,000 per year, save 15% of the excess, or, rounded, save 15% of your earnings above $300 per week. Perhaps the message should be save 15% over $15,000—unless your own research tells you otherwise. These figures are just placeholders because the key is agreement on a single standard percentage; the savings threshold would need to be re-set periodically due to inflation.

Getting From Here to There

How do we get from here to there? There are a large number of expert groups providing advice, and many of them benefit from complexity—a financial planner, for example, might not be keen on sharing a message of 15% over $15,000 because it diminishes the role of those professionals. Others, such as a professional group of actuaries who pride themselves on accuracy and precision, would struggle with the idea of dispensing “wrong” information. Interestingly, though, the popular adviser on budgeting and family finances Dave Ramsey advocates exactly this simpler-is-better approach and tells his readers[5] to save 15% in a combination of employer-provided 401(k)s and Roth IRAs.

And, to be sure, for many, if not most, Americans, saving 15% of income (or even 10% or any other such percentage) is a much greater challenge than simply internalizing this figure. Some have acquired spending habits that must be broken; others struggle to maintain even a basic standard of living given their income level and nondiscretionary expenses. These are issues that the simple counsel to “make your coffee at home instead of buying it at Starbucks” won’t remedy. In fact, employers are recognizing the fact that, for their employees to boost their retirement savings, they need help with their day-to-day financial management.

Employers are beginning to offer tools to provide this help, such as live or online seminars or access to financial health websites.

But, while acknowledging that retirement experts are not necessarily the best dispensers of advice on family budgeting, or prescribers of economic and social policy more generically, we can at least work together to set out a consensus on a goal.

Elizabeth Bauer, FSA, is a consultant at Aon specializing in international retirement issues. She can be reached at *elizabeth.bauer@aon.com*.

5 “The Truth About Retirement,” blog, daveramsey.com, accessed Feb. 27, 2018, *https://www.daveramsey.com/blog/the-truth-about-retirement*.

Changing the Retirement Advice Conversation[1]

Mark Chamberlain,
Marguerita Cheng, Martin Durbin
and Adam Sokolic

The retirement income crisis in America is compounded by a lack of objectivity in the financial advice industry. This may continue even with new fiduciary rules from government regulators. The problem stems from biases found not only in the business models of commission-based advisers but also those of many fee advisers. In short, ignoring ideas because they don't generate ongoing asset management revenues may result in failing the duty to place a client's interests first. Since this paradox is currently pervasive, achieving professional grade objectivity for individual retirement accounts may require more than regulators declaring a universal fiduciary standard; it may also take leadership from within the adviser industry itself.

One such effort is The Open Architecture 2020 Group, where the work is pro bono and new ideas for improving retirement advice for all Americans begins with the concept that best practices for managing the risk of outliving one's savings should not differ due to the business model of the person you happen to meet with. It's hard to dispute that a client is best served when all prudent ideas from academics and institutional thought leaders are inside their adviser's toolbox. But what's rarely acknowledged is that this kind of "open architecture" is not easily found. In fact, the closest thing we have to a personal pension plan—annuitization—is barely on the investment industry's radar screen. It's ironic, since many academics have pointed out for years that retirees without pensions may need at least 35% or more funds in 401(k) savings to achieve the kind of secure lifetime cash flows annuitization can provide (professors usually focus not on "index" and "variable-deferred" products with income riders, but instead on the more traditional vehicles used by pension plans that employ "mortality pooling" to enhance cash flow). The strategy may not be the best fit for everyone; as with pensions, lifetime income is prioritized over liquidity and leaving wealth to children is not the purpose. But the truth is most people are not wealthy at retirement, and many are not cut out to become successful investors in any of the risk-based capital markets. It's only rational to believe that a one-size-fits-all approach to satisfying a best interest standard is difficult to justify when, in the real world, people have different emotional reactions to bear markets.

Wanted: A New Value Proposition

We need a paradigm shift to redefine the level of "expert" advice for individuals in the post-retirement phase. The risk-return tradeoff could become less about modern portfolio theory and more about addressing different tolerances to longevity risk. Expected variability of income sources could be matched to expected variability of expenses. Retirement planning could look like the rigorous funding ratio work done by prudent institutional pension sponsors. Whatever the answer, new ideas should grow out of a historical perspective that understands the strengths and the weaknesses of the past. With so many baby boomers retiring in the coming decades, it's time to admit the best practices in place for the accumulation phase do not always translate well for average Americans at retirement. Behavioral finance studies show us this time and again and so does academic research, proving that many pension plan participants prefer the idea of annuitization instead of lump-sum distributions.

Here are five principles proposed as a new foundation for solving the problem.

- All major business channels in the investment industry have conflicts; clients won't fully understand them until advisers first agree on what the conflicts are and also admit to any ideas being excluded
- Disclosure alone is not enough; consumers deserve to fully understand the ramifications of what's being disclosed
- Academic thought leadership is well beyond asset allocation theory; best practices should stay

1 The information and ideas presented here are not intended to be investment or insurance advice. The Open Architecture 2020 Group has no sales, sponsors or revenue of any kind.

current with practical solutions for behavioral finance issues and longevity risk
- The industry won't evolve to true open architecture until advisers can justify fees for advice that are separate from portfolio implementation; both advisers and clients need to embrace the value added
- Average Americans often name longevity risk as their No. 1 concern; managing this risk in the institutional arena has evolved to include liability-driven investing (LDI)

What is the current attitude toward how advisers to IRAs should be paid? There are many points of view, but Department of Labor rules for retirement accounts are now clear that compensation differentials create the potential for conflicts of interest. However, when registered investment advisers (RIAs) can't justify billing for annuitized products in client accounts because they're not managing them, advisory outcomes could be driven as much by exclusion as inclusion. It's a different kind of conflict and is less well defined, but it's there. To say this won't change is to deny history's lesson that evolution takes place over time via the resolution of inherent contradictions.

A Missing Link to Pension Finance 101

Professors commonly use annuitized income streams to model the amounts needed to fund retirements and often question why the sales of lifetime income annuity products are so anemic. One clue to be found is that many financial advisers are unfamiliar with how mortality pooling works. Many who advise individual investors see themselves as following fiduciary best practices in the institutional arena, but corporate defined benefit pension plan trustees and their consultants do more than just understand mortality pooling; they use it to think about their liabilities in terms of properly matched funding ratios and consider annuities as possible solutions for de-risking their exposure. One benefit of mortality pooling with annuitized income is predictable cash flows. Another feature is that, if you and I buy into the same pool and you live longer than I do, then you, in effect, get to spend my money. That's an oversimplification since there are more than two people invested in any one annuity, but you get the idea. It means we need less capital saved to generate income guaranteed for life than what we could earn from most other predictable investment options.

Large pension plans employ truly objective professionals who aren't paid commissions by the products they sell or fees for assets under management (AUM). They add value by defining and managing risks in ways that are different from the asset management model of most RIAs, and charge in ways that maximize their objectivity. This gives them the professional luxury of considering all available solutions. Consultants are allowed compensation "offsets" from commissions, subject to safeguards against conflicts of interest from proprietary products, and this is a way the plan sponsor can direct revenue from their portfolio to offset the consultant's cost. What if individual retirees were similarly able to have a consultant capture and direct the fees and commissions generated by their accounts so that, over time, their advisers could be compensated in a transparent way? We would argue this could lead to more objectivity.

At a minimum, it seems appropriate that people should be able to at least consider all prudent ideas when they meet with their trusted advisers to discuss options. This is the spirit of open architecture in the investment business. However, many of today's financial advisers don't embrace the idea of annuitization for the wrong reasons; we have RIAs who want to manage the money in discretionary accounts, while commissioned brokers are incentivized to move assets to a different company in the future. Neither of these is possible with annuitization. Many still confuse the idea with variable deferred and index annuities, frequently criticized as overly complex and too expensive, and this provides an easy out for those who choose not to recommend it. But it's also true that most RIAs are paid more like money managers than like institutional retirement consultants, commissioned advisers are paid more like salespeople, and incentives have a way of driving outcomes.

In a perfect world, today's definition of "open architecture" would mean retirement advisers are compensated for a retirement process instead of an investment process. Advisers would tout their liability forecasting skills ahead of their asset management talent. RIAs would consider annuitization even though they're not actively managing that portion of the portfolio, and would bill for their total time spent advising a client minus any fees for AUM. Commission advisers would suggest it even with lower sales credits than other products, and their overall compensation might be calculated according to time spent advising minus any commissions generated. The academics would no longer have to preach to nearly deaf industry ears about the unique benefits derived from mortality pooling. Perhaps the best outcome would be lower stress and increased happiness for many retirees.

How Did We Get Here?

The sea change following the Employee Retirement Income Security Act of 1974 included retainer-based consultants who began operating as buffers between pension plans and their money managers. Billing was based on the scope of work performed. Then, in the retail segment, broker-dealers began to blur the lines between the way money managers are paid and the way advisers charge for providing the same consultative buffers the institutions have. The AUM fee “wrap accounts” were born, with compensation from retail clients removed from the products but tied to the platforms. Objectivity was defined as freedom from conflicts of interest. In truth, the idea of open architecture was compromised as managing the money became scalable via automation (and thus extremely profitable). Investments not on the platform due to custody or other constraints were excluded.

It’s also important to note that many independent “wealth managers” left broker-dealers so they could become fee-only RIAs and own their firms. Platform technology at companies like Charles Schwab and Fidelity Investments was developed to serve this business segment, at first through mutual funds and individual stocks and bonds, and later through separate accounts and exchange traded funds (ETFs). Over time, the concept of AUM fee advice in every channel evolved down-market to accommodate smaller asset sizes. Almost always left behind was the evolution of the institutional retainer model. It’s still used by the majority of today’s large pension plans and their consultants, but only a small percentage of private client advisers have adopted it (even fewer retail clients understand the differences between the industry’s many compensation models).

A casualty of the investment industry’s history is the objective process itself, still constrained by implementation conflicts. Most private client advisers, both fee-only and commission, make their wealth management businesses run on revenue from asset management. With the exception of a relatively small number of hourly and retainer-based practitioners, ideas that can’t be managed are not readily found in RIA client portfolios. Among commission advisers, sales of immediate annuities are not nearly as common as the more highly compensating deferred variable products with income riders. Today, immediately annuitized products average just 3–4% of total annuity sales in the United States (and coincidentally often pay a 3–4% commission as opposed to 5% or more for other types).

iShares: A Case Study in Disruption

A recent example of overcoming inertia in the investment industry is the iShares business, which launched well before ETFs reached their tipping point. Back in 2000, most consultant-advisers at the brokerage firms were against the idea of index funds, as they were taught their value came from identifying and monitoring active managers. They often articulated an ethical concern for justifying quarterly AUM fees while not even trying to beat a benchmark. Through a grass-roots effort, in conjunction with some visionary consultants at key firms like Smith Barney, a small group of pioneers inside the iShares business changed the mindset. By reinforcing a total portfolio process, and addressing the reality of active risk as a behavioral finance issue for individual investors, minds opened to the idea of index funds. Today, passive ETFs are fully embedded in the advisory and consulting platforms at every brokerage.

A similar grass-roots movement is now taking hold in the retirement income space. Our pro bono think tank, The Open Architecture 2020 Group, is comprised of seasoned financial advisers and industry veterans. It was founded to inspire positive change that can improve the golden years for all Americans, as opposed to focusing on just the wealthy, and to progress beyond fiduciary standards for IRAs. The focus is on creating a new definition of professional-grade objectivity for all silos of the investment industry, one that is pragmatic enough for every retiree, regardless of their net worth. Growth through word of mouth is slowly changing the conversation about best practices for retirement advice, with papers posted to *www.openarchitecture2020.com*.

Mark Chamberlain, co-founder of The Open Architecture 2020 Group, can be reached at *chamberlainmrc@yahoo.com*.

Marguerita Cheng, CFP®, Blue Ocean Global Wealth CEO, can be reached at *mcheng@blueoceanglobalwealth.com*.

Martin Durbin, CPA/PFS, AIF, CGMA, managing partner at Crawford, Carter & Durbin, LLC, can be reached at *martin.durbin@cct-cpa.com.*

Adam Sokolic, AIF, PPC, AMS Consulting CEO, can be reached at *asokolic@gmail.com.*

The Future of Retirement Planning is Already Here, It's Just Not Evenly Distributed[1]

Stephen Chen

The 28,000 members of the Society of Actuaries are good at quantitatively understanding risks and planning for the future. Unfortunately, most people aren't and avoid planning for retirement for several big reasons:

- It's off in the future and there are more pressing immediate problems to solve.
- It's scary to think about since it seems complicated and there's no fixed goal to achieve. Unlike saving for other financial goals like a house down payment, people planning for retirement are planning for the unknown and face big complex risks involving longevity, inflation, how to save, how to invest, how to be tax efficient and uncertainty surrounding the future of big social programs like Social Security and Medicare.
- They don't know who or which resources to trust.
- Most financial education and marketing is focused around accumulating assets vs. decumulating and generating lifetime income from assets.
- Across the population at large there is a very low financial literacy rate (even among wealthier cohorts); most people don't understand the components or goals of a holistic retirement plan.

There are 120 million Americans over age 45 and only a small segment of society takes advantage of all the latest product and techniques to plan for and achieve a secure and efficient retirement. It requires a lifetime of good decision-making, saving, wealth building and access to experts across financial planning, investing, insurance and tax planning. Consequently, only a very small percent of the population achieves an optimal outcome today. The components of an integrated solution that allow many more people to achieve a much better retirement outcome exist today, but they need to be brought together into an integrated solution.

Some historical context:

- The concept of "retirement" only came into being around the late 1800s;[2] before that, you just worked until you dropped. Social Security was introduced in 1935 with a retirement age of 65 when men lived until about 58—no one anticipated that life expectancies would climb by 25 years during the next eight decades.
- Pensions (defined benefit plans) were the primary retirement vehicle for several decades, but private company pensions have been in decline since the 1980s[3]—mainly because life expectancies have been increasing. (Side note: Underfunded public pensions are a looming financial crisis.)
- Since they were introduced in the late 1970s, 401(k)s (defined contribution plans) have been growing, effectively shifting the retirement funding risk to individuals. However, it turns out that asking everyone to act as their own personal CFO is hard and the outcomes aren't great (70% of people 55 to 64 have less than $100,000 saved for retirement[4]). Why is it hard?

1 This article presents my view that many of the innovations and methods required to significantly improve retirement security are here today but have not been effectively pulled together into an integrated solution at scale, which is why retirement security remains at risk for a majority of the population (See Center for Retirement Research at Boston College's National Retirement Risk Index at *http://crr.bc.edu/special-projects/national-retirement-risk-index/*). The title of this essay is a take on cyberpunk author William Gibson's quote "The future is already here, it's just not evenly distributed."

2 Sarah Laskow, "How Retirement was Invented," *The Atlantic*, Oct. 24, 2014, *https://www.theatlantic.com/business/archive/2014/10/how-retirement-was-invented/381802/*.

3 Barbara A. Butrica, Howard M. Iams, Karen E. Smith and Eric J. Toder, "The Disappearing Defined Benefit Pension and Its Potential Impact on the Retirement Incomes of Baby Boomers," *Social Security Bulletin* 69, no. 3 (2009), *https://www.ssa.gov/policy/docs/ssb/v69n3/v69n3p1.html*.

4 Stephen Chen, "NewRetirement: A Holistic Approach to Retirement Planning," Computerized Investing, Aug. 20, 2016, *http://www.aaii.com/computerized-investing/article/newretirement-a-holistic-approach-to-retirement-planning*.

- **Accumulation phase.** People need to budget, save and invest efficiently[5] and in a tax optimized way over their entire lifetime—while avoiding bad actors and ideas in the financial services market[6] bent on taking their money through high fees and poor investments.
- **Decumulation phase.** This is even harder. People need to solve for big risks like longevity, inflation, market volatility, health care, sequence of returns risk and tax optimization[7] (including required minimum distributions) and come up with a plan likely to generate enough income for themselves and their spouse.

Most of the financial services industry has been focused on helping people accumulate, or save and invest. Many of their business models are built on a foundation of assets under management, which may dis-incent them from thinking creatively about how to help their clients spend down those assets—creating a conflict of interest. How to decumulate or drawdown and generate retirement income tax efficiently is a complex topic starting to get more attention.

Overall, I believe we'll continue to see rapid increases in productivity and health care, which will enable people to work fewer hours per week and find work they are more passionate about. We may also see people working longer during the course of their careers to stay engaged during longer lifespans. It wouldn't surprise me to see some form of a universal basic income emerge during the next 10 years, but that is another essay.

Big Challenges and the Five Whys

Now let's dive into one of the major problems around retirement using the five whys[8] technique.

Core problem: Retirement outcomes aren't good. More than 25 million Americans age 60+ are economically insecure.[9] Based on recent Census data,[10] there are about 65 million people over age 60 in the U.S., so 38% of that population is financially insecure.

- **Why 1.** Many retirees don't have enough lifetime income to cover the necessities of life and be financially secure.
- **Why 2.** They didn't save enough and aren't making the most efficient use of the assets they do have. According to a 2015 Government Accountability Office study[11] of households approaching retirement, the breakdown of savings looks roughly like this for households age 55–64:
  - 70% have less than $100,000 saved
  - 10% have $100,000 to $200,000 saved
  - 10% have $200,000 to $500,000 saved
  - 10% have more than $500,000 saved

  Further products like reverse mortgage and annuities that could help people live more securely aren't that efficient or well understood and have poor adoption rates.
- **Why 3.** There aren't simple and easy solutions that default users into efficiently saving and investing, and decumulation is an immature industry.
- **Why 4.** Consumers don't push for solutions in their best interest across employer savings programs and direct-to-consumer solutions (for example,

5 Kathleen Coxwell, "How Much Should You Save for Retirement? Orman, Ramsey and Other Financial Gurus Answer," New Retirement, Nov. 10, 2016, *https://www.newretirement.com/retirement/how-much-should-you-save-for-retirement-financial-gurus-answer/.*

6 Bud Hebeler, "The Unlucky 13: Bad Investments for Your Retirement," New Retirement, March 28, 2017, *https://www.newretirement.com/retirement/bad-investments-for-your-retirement/.*

7 Kathleen Coxwell, "What are the New Rules of Retirement? 10 Guidelines for Financial Security," New Retirement, Sept. 6, 2017, *https://www.newretirement.com/retirement/10-Rules-for-a-New-Retirement-Guidelines-for-Financial-Security/.*

8 Wikipedia, s.v. "5 Whys," accessed March 11, 2018, *https://en.wikipedia.org/wiki/5_Whys.*

9 National Council on Aging, "Economic Security for Seniors Facts," accessed March 11, 2018, *https://www.ncoa.org/news/resources-for-reporters/get-the-facts/economic-security-facts/.*

10 Jennifer M. Ortman, Victoria A. Velkoff and Howard Hogan, "An Aging Nation: The Older Population in the Unites States," U.S. Census Bureau Current Population Reports, P25-1140 (May 2014), *https://www.census.gov/prod/2014pubs/p25-1140.pdf.*

11 U.S. Government Accountability Office, "Most Households Approaching Retirement Have Low Savings," report to the Ranking Member, Subcommittee on Primary Health and Retirement Security, Committee on Health, Education, Labor and Pensions, U.S. Senate, GAO-15-419 (May 2015), *https://www.gao.gov/assets/680/670153.pdf.*

many 401(k) programs have high fees and don't use good default options). Some parts of the financial services industry also lobby to slow down or kill things like the U.S. Department of Labor Fiduciary Rule[12] that are clearly helpful to consumers.

- **Why 5.** Financial literacy and education is very low[13] (about 65% of adults can't pass a basic financial literacy quiz), and the financial services industry has and continues to make a lot of money from uneducated consumers (although this is changing).

The components required to solve this problem exist today but aren't yet assembled into an integrated solution.

I bet that 10 years ago almost no one would have predicted we'd have self-driving cars on the road today. Big leaps in technology capability come about based on incremental improvements of underlying systems and the integration of those systems into a cohesive solution. We have self-driving cars on the road now because of improvements across sensing systems (lidar, radar), mapping and navigation systems, processing power, artificial intelligence and control systems, and regulatory changes.

I would posit that many of the components required to solve for much better retirement outcomes exist today but they haven't been assembled into a cohesive package that can be used by an average person. If you are wealthy and have a good team of advisers, you can take advantage of these elements. Most people don't have the wealth or financial literacy to efficiently address retirement planning.

These are the elements that need to come together into an integrated solution.

- **Education.** The core issue is one of basic financial literacy across the board—I recommend making a personal finance course a requirement to graduate high school. Today, only 16.4% of students are required to take a personal finance class in high school.[14] Further, it would be ideal if employers offered financial education as part of an overall financial wellness offering.

- **Fiduciary standard.** Embrace product and practice principles in line with a fiduciary standard—have all products be efficient, low fee, simple, transparent and designed to be in the best interest of users. Thankfully, many consumers have gotten this message as reflected by the movement toward low fee and index investing.

- **Increase access to savings and investing vehicles.** Incentivize employers to offer better retirement savings options and provide a government-supported alternative if there is not an employer option. (MyRA[15] was a good idea but is being phased out.)

- **Default best practices for retirement savings vehicles.** There is a lot of data that shows features such as setting appropriate defaults in retirement plans make a huge difference in outcomes.[16] Features like auto enrollment into a 401(k), defaulting the savings rate and defaulting an appropriate portfolio allocation can materially move people toward retirement security.

12 Investopedia, "DOL Fiduciary Rule Explained as of August 31, 2017," Aug. 31, 2017, *https://www.investopedia.com/updates/dol-fiduciary-rule/*.

13 Madeline Farber, "Nearly Two-Thirds of Americans Can't Pass a Basic Test of Financial Literacy," *Fortune*, July 12, 2016, *http://fortune.com/2016/07/12/financial-literacy/*.

14 Jeff Desjardins, "Most US High School Students Never Have to Take a Personal Finance Class," *Business Insider*, Oct. 2, 2017, *http://www.businessinsider.com/most-us-high-school-students-never-have-to-take-a-finance-class-2017-10*.

15 MyRA (my Retirement Account) was sponsored by the U.S. Treasury Department. It was a Roth IRA—an individual retirement account in which earnings and withdrawals are tax-free under certain circumstances—that invested in a U.S. Treasury retirement security which is guaranteed to never lose dollar value. These accounts were phased out at the end of 2017.

16 Lori Lucas and Marla Kriendler, "Best Practices When Implementing Auto Features in DC Plans," white paper, Defined Contribution Institutional Investment Association, June 2013, *http://c.ymcdn.com/sites/dciia.org/resource/collection/044CF8FF-07F1-4A52-8038-D778C0ECBED4/06-2013-_White_Paper%E2%80%93Best_Practices_Auto_Feature.pdf*.

- **Enable anyone to create and manage their own retirement financial plan,** a portable living plan owned by the consumer that can be reviewed and managed over time. Other experts and I think the key features of planning tools[17] should:
  - Be extremely simple and easy to use; the user should completely understand their plan
  - Help you get organized and feel in control of your future
  - Include educational content and tools
  - Be comprehensive and personalized and help users find the best way to use all of their retirement building blocks[18]
  - Be universally accessible; a core version should be free so that anyone can use it and it should be built on a scalable technology platform that brings together consumers, experts and solutions
  - Highlight opportunities and alert people to issues
  - Help you make good decisions through collaborative planning with an expert, "artificial intelligence" and/or "big data"
  - Enable budgeting and cash-flow planning
  - Support tax-efficient drawdown planning
  - Be a platform that includes the major rules and methods for planning and the ability to update them; for example, the system should help people make good decisions based on current tax law and help people easily update their plans as laws, regulations and major program like Social Security or Medicare change over time
  - Allow users to forecast what is likely to happen based on Monte Carlo simulations and enable users to stress test their plans and create multiple scenarios
  - Provide real time updates to the current value of all assets through account aggregation
  - Be open architecture and support a marketplace of vetted high quality third-party solutions
  - Be extensible to take advantage of emerging technologies like blockchain[19] and machine learning[20] that promise to bring significant future advances to the financial planning and products space

There is a big opportunity to enable collaborative planning between consumers and expert advisers who are fiduciaries and who can coach and support people and help them effectively take action—ideally a digital/human hybrid solution to maximize effectiveness while minimizing cost.

The good news is that many of the elements of a complete solution are known and consumers are pushing the financial planning industry to get more efficient and lower costs for many core products. The next phase of the evolution involves doing the same thing for guidance and advice.

Stephen Chen is the CEO and founder of NewRetirement.com. He can be reached at *stephen.chen@newretirement.com*.

17 Michael Kitces, "Differentiation the Next Generation of Financial Planning Software," *Nerd's Eye View* (blog), Kitces.com, Sept. 28, 2017, *https://www.kitces.com/blog/differentiating-next-generation-financial-planning-software-advisor-fintech-differentiation-focus/*; Kathleen Coxwell, "8 Tips for Building a Useful Retirement Plan—Not One With Just a High Think Value," New Retirement, June 8, 2017, *https://www.newretirement.com/retirement/building-a-useful-retirement-plan/*.

18 Kathleen Coxwell, "The Building Blocks of a Secure Retirement Plan—How Tall Does Your Tower Need to Be? Will it Topple?" New Retirement, Aug. 12, 2017, *https://www.newretirement.com/retirement/the-building-blocks-of-a-secure-retirement-plan/*.

19 Investopedia, s.v. "blockchain," accessed March 11, 2018, *https://www.investopedia.com/terms/b/blockchain.asp*.

20 Investopedia, s.v. "machine learning," accessed March 11, 2018, *https://www.investopedia.com/terms/m/machine-learning.asp*.

Redesigning Defined Benefit Plans:

What Can State Pensions Learn From Social Security?

Paul V. Hamilton

The number of severely underfunded public pensions around the country suggests that not only are short-term fixes required but also that long-term fundamental redesigns are necessary. The median funding level for state pensions in 2016 was 71.1% with Kentucky pensions one of the worst funded at 31.4%.[1] If the shortfalls were just isolated cases due to a rogue investment manager or unexpected workforce shifts, these cases could be considered outliers in an otherwise workable system. The breadth and depth of the funding shortfalls suggests public defined benefit (DB) plans, as currently designed, are flawed.

Some commentators have suggested ending DB plans for public employees and moving them to a defined contribution (DC) fund "just like everyone else." This strategy is hindered by a couple of logistical and psychological barriers. First, most DB plans have some degree of pay-as-you-go component where current employee contributions are being paid out to retirees' pensions. An abrupt shift to all contributions going into a DC fund would create near-term shortfalls for the legacy DB fund. Secondly, public employees have been accustomed to the promise of a generous, early retirement in exchange for subpar current compensation. Even without having to define the terms "generous," "early" and "subpar," there is a general consensus to have a permanent retirement benefit.

This essay discusses the components of current DB plans that contribute to unsuccessful pension plans. The Social Security system, while not without its own solvency challenges, presents a model for how state public pensions can be redesigned. The Kentucky teachers' pension is used to illustrate the current challenges as well as how a redesigned system could improve sustainability and equity.

Set up to Fail

The challenges facing public pension systems provide an opportunity for the actuarial profession to reshape pension design going forward. The historical problems with pensions can be traced to several factors, some within the control of the designers and account managers, including politicians.

Four design features have made pension solvency particularly risky, using Kentucky as an example.[2]

- Public pensions typically have eligibility for full pension benefits at relatively young retirement ages. Often, a worker's career is less than the years they will spend in retirement drawing a pension. For example, public teachers in Kentucky can retire after 27 years of employment; a teacher who worked continuously from college could retire at around age 50 with a life expectancy into their 80s.

- The public pensions benefit formula typically relies on the average of the high three income years rather than being based on the full earnings history. This simplifies the information demands but also invites spiking of benefits by cashing in accumulated sick days in the last year, taking on extra paid work in the high years or occupying a much higher paid position for only a few years.

  Kentucky teachers are granted 10 sick days per year and can use up to 300 days of unused leave in the pension benefit calculation. A school year is defined as 189 days so even 100 days of unused leave would boost the final year pay by more than 50% and increase the three-year high income and pension benefit by about 17%.

  Within teaching, this could be a teacher moving to an administrative position. Within the legislature,

1 Laura Meisler, "Pension Fund Problems Worsen in 34 States," *Bloomberg*, last updated Aug. 29, 2017, *https://www.bloomberg.com/graphics/2017-state-pension-funding-ratios/*.

2 Teachers' Retirement System of the State of Kentucky, "Summary Plan Description," updated through 2011, *https://trs.ky.gov/wp-content/uploads/Publications/SPD.2011.pdf*.

a part-time politician could secure a highly paid judgeship or leadership role in government for a few years. Those teachers who exhaust sick days and choose or cannot move into a higher paying role for a few years are disadvantaged relative to those who spike their benefit (even if unintentionally).

- Upon reaching pension eligibility age, there is typically no incentive to continue working in that position. The pension benefit can be received only if the worker retires from their current position. If they continue to work in the same position, they must forgo their pension. While they will be accumulating more experience years, there is no actuarial bonus for delaying the inception of the pension benefits. Essentially, they are working for less than half pay.

  The eligible retiree can take a three-month work break and return to employment in the public sector in a different position and then draw a pension and salary. This may be a welcome career shift or an unwanted move out of their profession. Similarly, they can draw their full public pension and work full-time in a private sector job.

- The excess of employee and employer contributions to pension accounts is typically invested in a portfolio of risky and safe assets. Professional money managers run the portfolios with guidance from a review board. The pension benefit levels are typically calculated based on a formula independent of the trust fund performance. During several decades of work and retirement, even relatively small differences in average returns can swing a fund from solvency to insolvency. Furthermore, short-term volatility or market drops can be disruptive to funding current cash flows.

The actuarial demands are particularly steep for the second (spiking) and fourth (investment returns) issues. Historical "career shift" data can be utilized to model these patterns but the trends tend to be hard to document and can shift over time. Importantly, even if sufficient reserve funds can be built in to cover spiked benefits, the equity issue remains for those who did not benefit from a handful of irregularly high years of income. Investment returns can be modeled using Monte Carlo simulations but these results illustrate the challenges rather than solving them.

Social Security: A Model of How to Build a Robust DB Plan

Social Security, which has its own set of solvency challenges, does not have to deal with these design flaws—retirement benefits cannot commence until age 62, benefits are based on the full earnings history, and delaying the benefits up to age 70 will result in higher benefits (see Table 1). Social Security benefits are progressive in that higher earners receive less than proportionate benefits.

A workable pension redesign must meet the expectations of public employees in the following areas: keep a DB plan, allow for flexible retirement dates with actuarially fair benefit adjustments, and receive a good retirement benefit with cost of living adjustments (COLAs). The public employer (state) could

Table 1 Comparison of Kentucky State Pensions and Social Security

	State Pension	Social Security
Retirement age(s)	Age 50 if 27-year career; age 60 with 5-year career	Ages 62 to 70 with 10 years of earnings minimum
Benefit base	High 3 (or 5) income years; not indexed	35 years of earnings indexed by nominal wages
Benefit timing	No actuarial adjustment for delaying past earliest eligibility age	5% to 8% annual adjustment for postponing Social Security after age 66
Progressive benefits	Flat percentage of high 3 income; long-duration workers receive proportionally higher benefits	Three benefit brackets (90%, 32% and 15%) with lower career earners receiving higher proportion of average indexed monthly earnings (AIME)
Investment return	Subject to market volatility and swings	Earnings indexed to relatively stable national wage index; trust fund implicitly linked to government bond rate

also expect to base benefits on the employee's full career contributions to the public sector and have the benefit levels tied to the state's economic performance.

These revised criteria would benefit public employees in that their pension is not artificially tied to an age 50 retirement date and COLAs are guaranteed. Furthermore, with a pension tied to career earnings, a more equitable distribution of benefits can be established. The employer gains by having good employees stay in their jobs up to a normal retirement age. Furthermore, they shed market risk with benefits tied to the state's economic growth—something public workers have a direct impact on.

A major challenge with long-term plans that stretch over several decades is that the solvency of the system is highly sensitive to investment returns. By basing the formula on one of the state's economic metrics, long-range investment risk is shed and aligned with state tax revenues. The state's ability to fund pensions is directly coupled with the state's gross product or total income. Nominal values will then include real and inflationary growth that can become inputs in the DB benefit formula. COLAs in retirement can also be tied to the inflation rate rather than set by a fixed-rate formula.

Case Study: Kentucky Teachers' Pension

To illustrate these issues, consider again the case of the Kentucky Teacher's Retirement System (KTRS).

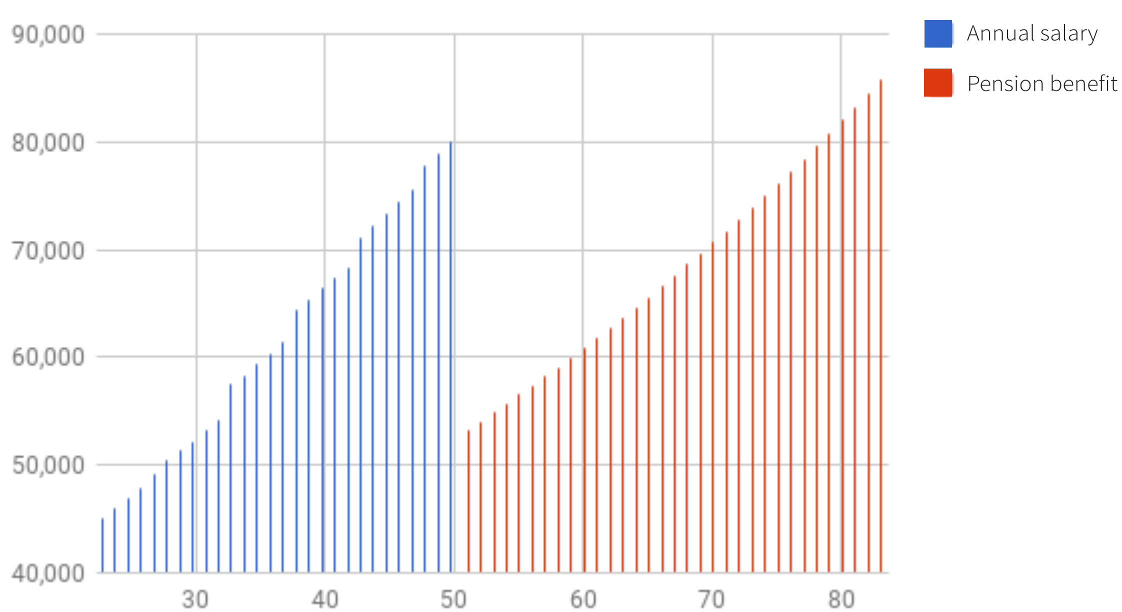
Status quo projections (see Figure 1):[3]

- 27-year career using Fayette County salary scale; initial and final salaries are $45,189 and $80,092, respectively
- The initial pension based on the three highest annual salaries is $53,251 with a 1.5% COLA through age a life expectancy of age 83
- Investment returns are assumed at 5.75% (nominal) through her career and retirement; employee and employer contributions are 9% and 16% of salary, respectively
- The "trust fund" reaches $939,610 upon her retirement—an amount few workers attain—and is nearly exhausted at her death at age 83

Redesigned DB projections (see Figure 2):

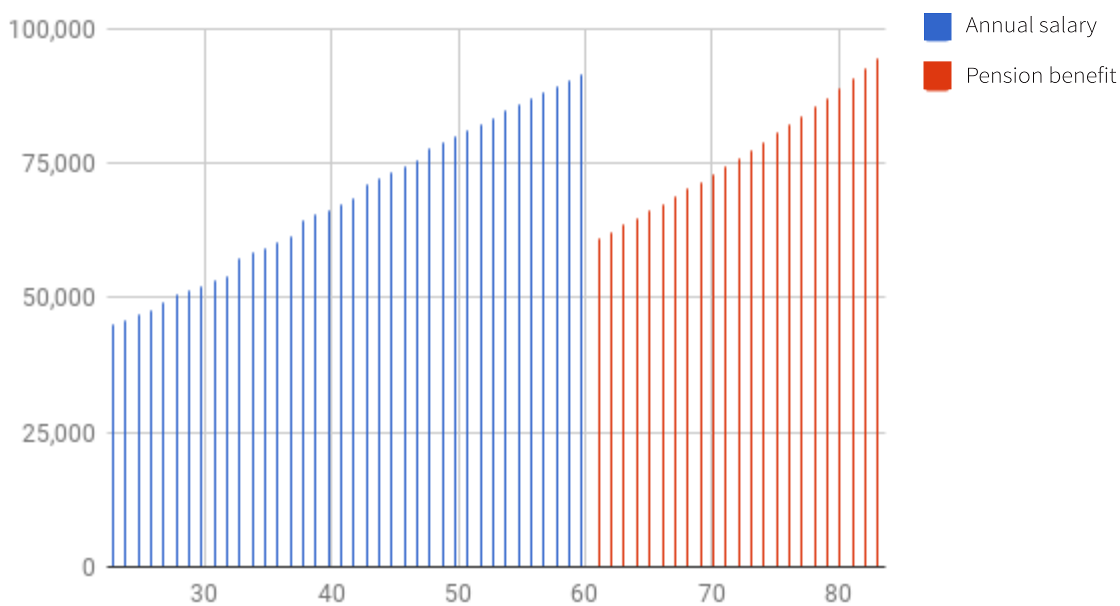
- Same starting salary at age 23 of $45,189 but works until age 60 with final salary of $91,752
- Employee and employer contributions are same as the status quo (25% of salary)

Figure 1 Current KTRS Pension Benefit



3 Cavanaugh MacDonald Consulting, LLC, "GASB Statement no. 67 for the Teachers' Retirement System of the State of Kentucky," prepared June 30, 2016, *https://trs.ky.gov/wp-content/uploads/2016/11/TRS-GASB-67-Report-2016.FINAL_.pdf*.

Figure 2 KTRS Pension Redesign



- Investment returns are assumed to be 4%: 2% steady real economic growth in Kentucky and 2% inflation
- The age 60 trust fund is $729,722
- The initial pension of $61,146 is set to exhaust the funds contributed during her career by age 83; a COLA of 2% is included in the pension benefit

The graphs of her income and benefit paths in Figures 1 and 2 differ primarily in the 10 years she continues to work and build up her pension. Her initial pension is then about $8,000 higher than the status quo. The key to the reform is that the redesigned DB is robust to economic conditions and sustainable, whereas the status quo plan hinges on uncertain investment returns and a COLA that may be too low or even suspended by the state.

Concluding Thoughts

The public pension crisis will call upon the actuarial profession and others to design improved plans containing a combination of tax hikes and benefit cuts. This redesign affords plan providers the opportunity to assess how to avoid future scenarios where pensions have to be rescued. Common features of public pension plans have made their sustainability and equity suspect by design. Transitioning to plan features similar to those found in Social Security will ensure more robust public pensions in the future.

Paul V. Hamilton, CFP®, Ph.D., is the Associate Professor of Economics at Asbury University in Wilmore, Ky. He can be reached at *paul.hamilton@asbury.edu*.

When Life Happens: Financial Literacy is Necessary to Optimize Access to Aging Resources

Cindy Hounsell

Decades ago there was a lack of available financial information, while today there is a glut of user-friendly websites—as evidenced by a retirement expert searching the internet for retirement planning checklists. Surprisingly, he found more than 77 million results.[1] So how do we help older individuals with the multi-layered systems that make up retirement preparedness and not blame them for having low or no financial expertise? How do we help stem the tide of senior financial abuse and the loss of the estimated minimum amount of $2.9 billion in reported cases, and how do we encourage reporting? It has been estimated that only one in 44 cases are ever reported to authorities.

The Role of Financial Programs

Financial counseling programs are needed in communities but attitudes about financial literacy range from those who find it does not work well or make any difference, to those who think the impact is positive and substantial. But like so many of the nation's complex problems, people are dealing with the real-life consequences of not being financially prepared with basic knowledge while the debate continues. Along the way, they are getting scammed or penalized or worse—they become financial victims, lose their independence and have to rely on government poverty programs.

Take one example of what seems like a simple thing to do—signing up for Medicare at age 65. It seems easy enough but it has actually inspired a reintroduced Congressional bill to help people with the process.[2] While there is a wealth of information for people already enrolled, there are more people than ever being penalized for not knowing when they should have signed up. These late enrollees are not aware that signing up for Part B is only automatic if you are collecting your Social Security benefit at age 65. The penalty is 10% a year for each year of not enrolling and it's for life.[3] If you are planning to work until the Social Security full retirement age or beyond and are not sure of the complex rules that apply, you could wind up making costly mistakes.

Protecting Seniors and Families

Today, many aging individuals also need help managing finances while their families and those holding their power of attorney need similar guidance.[4] Most people do not know what they need to know until a "shock" event occurs. This is an event defined as a momentous and surprising disruption[5] that generally requires specific knowledge and a team of resource experts.[6] Recently, a colleague (armed with a doctorate focused on assessing and validating all the retirement preparation tasks identified in the academic literature) recounted his own harrowing experience with a series of shock events involving his nonagenarian parents.[7] This expert thought he had helped his parents plan for every eventuality. He has revised his thinking after realizing one of the most important aspects of planning is knowing where to find help in an unexpected worst-case scenario.

1 John N. Migliaccio, "Planning for the Utterly Unexpected: Advice for the Retirement Advisors," *Journal of Financial Service Professionals* 71, no. 6 (November 2017): 32¬–37.

2 Beneficiary Enrollment Notification and Eligibility Act of 2017, S. 1909, H.R. 2575, 115th Cong. (2017).

3 Ibid.

4 "Managing Someone Else's Money," Consumer Financial Protection Bureau, guides, April 2015, *https://www.consumerfinance.gov/consumer-tools/managing-someone-elses-money/*. The CFPB provides fiduciary guides for four different fiduciary capacities: agents under powers of attorney, court-appointed guardians, trustees and government fiduciaries (Social Security representative payees and Veterans Affairs fiduciaries).

5 Society of Actuaries, "Shocks and Unexpected Expenses in Retirement," 2015 Retirement Survey Report: Key Findings and Issues, October 2016, *https://www.soa.org/Files/Research/Projects/research-2016-shocks-unexpected-expenses.pdf*.

6 Migliaccio, "Planning for the Utterly Unexpected."

7 Ibid.

The need for financial education for older adults has been recognized in research for decades as a way to help avoid financial abuse, but the enormity of the financial exploitation problem should make it a national priority.[8] A large concentration of the nation's wealth is held by the senior population, which attracts scammers.[9] Financial exploitation cuts across every demographic—income, ethnicity, age, health, gender and geography. The issue is so pervasive that the FBI, along with several other government agencies, maintains a dedicated website on the topic.

The exploitation issue is multiplied by the shift to 401(k) account plans that, for many, produce a single lump sum of money that individuals have to manage on their own. The availability of reverse mortgages may also make seniors more vulnerable and appealing to bad actors. Seniors report that financial exploitation is the most frequent type of abuse they experience. Older women are increasingly victimized, leaving them with little or no assets and no protection against poverty.

Identifying and Reporting

While financial exploitation is often thought of in the context of wealthy elders, the majority of victims are moderate and lower-income wage earners. This is the population that has the most to gain from financial education initiatives, yet this demographic has seldom been the subject of studies examining the effect of elder financial abuse. This is particularly true among the minority populations of Latinos and African-Americans. In 2010, the National Academy of Sciences and the National Institute on Aging's state-of-the-art science research meeting on elder abuse and financial fraud identified cultural diversity as a major gap for the field of elder abuse.[10] Evidence shows that the prevalence of financial exploitation is almost three times higher among African-American older adults than white older adults.[11] Among Latinos, elder abuse may be as high as 40% among those over age 65, yet these communities do not report the abuse—only 1.5% of those cases were reported to Adult Protective Services (APS) or other aging service networks.[12] For many families, particularly in multicultural communities, the financial pressures of daily life create an environment ripe for abuse of an older adult, often by a family member. Research has suggested that African-Americans may be more vulnerable to third-party scams, affinity scams or other financially related fraud than non-African-Americans.[13] This may be due, in part, to the availability of low-wage jobs with fewer options for advancement. The promise of easy fixes or quick riches, even from a family member, may prove too tempting to resist. Familial norms of sharing resources can lead a family member or caregiver to use monies without permission or benefit to the older adult. Close-knit family structures also act as barriers to reporting the abuse. Across all demographics, a reported 55% of financial abuse is committed by family members and friends. A general lack of cultural competency has made it difficult for aging and victim services to engage these communities, while the need to involve aging adults and families in multicultural communities is paramount.

Innovative financial literacy programs are needed to directly address the gap in the field of victims' rights and affect reporting outcomes by delivering straightforward, actionable, financial information and solutions. This includes multicultural programs tailored for caregivers, elders and families. But programs that combine basic financial literacy training with financial exploitation and elder abuse

8 Lois A. Vitt, Carol Anderson, Jamie Kent, Deanna M. Lyter, Jurg K. Siegenthaler and Jeremy Ward, "Personal Finance and the Rush to Competence: Financial Literacy Education in the U.S.," Institute for Socio-Financial Studies' national field study, 2000, *http://www.isfs.org/documents-pdfs/rep-finliteracy.pdf.*

9 Ibid.

10 Scott R. Beach, Richard Schulz, Nicholas G. Castle and Jules Rosen, "Financial Exploitation and Psychological Mistreatment Among Older Adults: Differences Between African Americans and Non-African American in a Population-Based Survey," *Gerontologist* 50, no. 6 (2010): 744–57.

11 XinQi Dong, "Building the Foundation to Prevent Elder Abuse: Cultural Diversity and the Role of Community," Elder Justice Coordinating Council white paper, Oct. 11, 2012, *https://www.acl.gov/sites/default/files/programs/2016-09/Dong_White_Paper.pdf.*

12 Marguerite DeLiema, Zachary Gassoumis, Diana Homeier and Kathleen Wilber, "Determining Prevalence and Correlates of Elder Abuse Using *Promotores*, Low-Income Immigrant Latinos Report High Rates of Abuse and Neglect," *Journal of the American Geriatrics Society* 60, no. 7 (2012): 1333–39.

13 Beach et al., "Financial Exploitation."

training for multicultural communities and caregivers are scarce. Considerable research confirms that financial education yields positive results and that "estimated effects are sizeable for the least wealthy."[14]

The Approach

Providing access to culturally competent resources to address the trauma of elder financial abuse is sorely needed to empower caregivers to use victim counseling and other critical services that address the devastation and loss. These programs work but they need delivery on a much larger national scale. Volunteers are needed in every community.

Since its inception in 1996, the Women's Institute for a Secure Retirement (WISER) has been providing basic retirement education for multicultural communities and family caregivers and has developed model programs and materials for these populations. WISER programs include the "Savvy Saving Seniors: Steps to Avoiding Scams" curriculum with the National Council on Aging; "Financial Steps for Caregivers," a guide and a curriculum for family caregivers; a series of financial fraud briefs with the National Adult Protective Services Association; and a toolkit and a series of financial fraud briefs for financial advisers through the Securities Industry and Financial Markets Association (SIFMA).

University of Southern California research[15] has examined scams and fraud in old age in its Finance, Cognition and Health in Elders Study (FINCHES). According to Dr. S. Duke Han, a clinical neuropsychologist associated with the study, while there are likely many reasons why an older person may fall for scams or fraud (including depression and anxiety), impaired or cognitive abilities may be an issue, as well as social isolation or loneliness and a reduced ability to assess trustworthiness. He reports that he frequently gets asked what can be done to help protect against scams and fraud in old age. His answer: "It seems that increasing financial literacy may help. In fact, our work has found that financial literacy is associated with stronger connectivity of important brain regions over and above the effects of age, education, gender and cognitive ability. This is encouraging news since we can always become more financially literate at any age."[16]

The Financial Industry

Another important step in helping to contain this problem is the involvement of the financial services industry and its work developing tools and training materials to combat senior financial exploitation. Among its many activities to train financial advisers, SIFMA has a formalized Senior Investors Working Group representing more than 50 diverse member firms to identify problems and develop workable solutions. Financial advisers are increasingly finding themselves confronting potential senior financial fraud or cognitive issues with their clients. They are often on the frontlines identifying suspect behavior or noticing signs of cognitive issues; yet, because of the rules and laws governing the relationship between adviser and client, if the client exhibits unusual behavior such as transferring funds in response to an obvious phishing scam or to a new acquaintance, the firm must execute the transaction or be sanctioned by state and federal regulators. While catching the perpetrator is beyond the professional scope of work of the financial adviser, there needs to be rules and protocols in place that allow advisers to take preventive action when warning signs appear.

The industry has also shown a willingness to join with academic experts, neuropsychologists, gerontologists and key stakeholders such as Adult Protective Services to better understand the risks to seniors and how to strengthen the role that firms and financial advisers should play. They are also working with state and federal policymakers, regulators and advocates to enact laws that allow advisers to report suspicious activities to the appropriate state agencies investigating financial exploitation, put a temporary hold on exploitative transactions before they occur, and

14 AnnaMaria Lusardi, "Saving and the Effectiveness of Financial Education," in *Pensions Design and Structure: New Lessons from Behavioral Finance*, ed. Olivia S. Mitchell and Stephen P. Utkus (Oxford: Oxford University Press, 2004).

15 S. Duke Han, "Financial Fraud in Later Life: A Growing Epidemic," blog, Center for Digital Aging, March 7, 2017, *http://gero.usc.edu/cda_blog/financialfraud.html*.

16 Ibid.

allow financial firms to share client financial records with the agencies investigating financial exploitation without violating privacy laws. In addition, they have worked with the Financial Industry Regulatory Authority (FINRA) on the need for reporting and allowing firms to contact other financial institutions about an account transfer when fraud or exploitation is suspected.

The North American Securities Administrators Association (NASAA) has designed and adopted a model act to protect vulnerable adults from financial exploitation by allowing broker dealers or advisers to impose an initial delay of up to 15 days of disbursements from an account of an eligible adult if there is suspicion of fraud. They have also mandated reporting to state regulators and to Adult Protective Services. FINRA has issued a similar rule[17] for broker dealers and the Securities and Exchange Commission Investor Advocate notes "financial firms should have the ability to pause disbursement of funds, contrary to the instructions of a customer. … If [the suspicion] is strong enough … it should trigger an obligation to report the suspicious activity to adult protective services."[18]

Adult Protective Services is charged with the enormous task of responding to elder abuse and financial exploitation and protecting thousands of senior victims across the country. Unfortunately, the cases continue to increase as the older population multiplies. Ten thousand Americans turn 65 every day. Also, APS is vastly underfunded and relies on state block grants for many of its services. Congress needs to address the critical problem of senior financial abuse, and invest in stopping and preventing it. In this way, incidence rates can be reduced as they have been for other victims of family violence. This will not only protect the lives and assets of the elderly, but reducing financial exploitation over the long term will also reduce the demands on Medicare, Medicaid and other publicly funded programs. Almost one in 10 financial abuse victims turn to Medicaid as a direct result of their savings being stolen.[19]

Solution

Protecting seniors from financial shocks including financial fraud and abuse is an enormous challenge that requires a large, coordinated, national response. The good news is that there are organizations, companies and coalitions already working to combat this issue, and there are numerous financial education tools and resources available to help educate seniors and train leaders on these topics. What is needed now is a massive national campaign and model financial literacy program, delivered by a broad coalition of the major players. This program would address the multicultural community and the nation's caregivers, and engage and train community leaders. The Frameworks Institute has provided a communications strategy to advance the national conversation about aging, which will help address the issue of elder abuse.[20] There needs to be a broad coalition that will foster long-term relations among financial services professionals, nonprofits and others who can spot the red flags of elder abuse and help victims and their families report it. The leaders can provide access to aging services to address the traumas associated with exploitation and encourage intergenerational support for elder abuse victims. Meeting the victims in the communities where they live with the support of a coalition of trusted community leaders is worth the effort to protect the senior population.

Cindy Hounsell is president of the Women's Institute for a Secure Retirement (WISER), a nonprofit organization that works to improve opportunities for women to secure retirement income and to educate the public about the inequities affecting women in retirement. She can be reached at *chounsell@wiserwomen.org*.

17 Financial Industry Regulatory Authority, "Financial Explanation of Seniors," FINRA Regulatory Notice 17-11 (March 2017), *http://www.finra.org/sites/default/files/Regulatory-Notice-17-11.pdf*.

18 U.S. Securities and Exchange Commission, comment letter from the investor advocate re: File No. SR-FINRA-2016-039: Notice of Filing of a Proposed Rule Change to Amend Rule 4512 (Customer Account Information) and Adopt FINRA Rule 2165 (Financial Exploitation of Specified Adults), Dec. 28, 2016, *https://www.sec.gov/comments/sr-finra-2016-039/finra2016039-1447952-130092.pdf*.

19 Matt Bush, "The Uphill Battle to End Elderly Abuse," WAMU, May 5, 2013, *https://wamu.org/story/13/05/05/the_uphill_battle_to_end_elderly_abuse/*.

20 Marissa Fond and Daniel Busso, "Strengthening the Support: How to Talk about Elder Abuse," FrameWorks Institute Message Memo (January 2016), *http://frameworksinstitute.org/assets/files/aging_elder_abuse/Elder_Abuse_MessageMemo_Jan2017.pdf*.

Employers Should Consider a Single Plan Document With Pension Benefits and Employee Salary Deferrals

Barry Kozak

In 2006, Congress provided certain employers with the ability to establish and administer a single plan that contains both a defined benefit and a cash or deferred arrangement component. These combined plans have become even more attractive through subsequent Treasury regulations on other aspects of qualified plans. However, a quick Google search of "employers that offer 414(x) eligible combined plans" yields a shocking lack of articles on the success of this exciting program design. I only found a few blog posts trying to explain why no benefits consultants are discussing these programs with their clients and why employers are afraid to take up this retirement plan design.

After a quick history refresher, I will explain how an "eligible combined plan," in its current statutory form, can be a great idea for many employers and how that, if a simple barrier is eliminated by Congress, it can be a great idea for all employers.

First, There Were Defined Benefit Pension Plans

Before 1974, when the Employee Retirement Income Security Act was simply the proverbial gleam in Sen. Jacob K. Javits' eyes, employers offered, for a variety of reasons, pension plans. The employees received a promise of a specified benefit, under circumstances such as "when old age overtakes you," and the employers controlled the incentives to its workforce on how a successful career with the employer would be rewarded. Life was simple before ERISA was enacted, but simplicity came at a cost. The pre-ERISA world of pension plans allowed employers to make promises that could be easily broken or simply withdrawn, or that would evaporate along with all other employer assets upon bankruptcy, change in control or when they otherwise closed down their business operations. State laws regulated these plans and offered the legal options available to employees to redress any complaints they might have had with this important piece of their compensation packages.

During that time, employers could also provide, usually as an additional benefit but seldom as the exclusive benefit, a profit-sharing plan. The concept of a profit-sharing plan revolved around actual profits borne by the employer, which, in a high income tax regime, were better off shared among the employees through tax-deferred accounts than distributed to individual shareholders who might have already hit the 90% income tax bracket.

Before ERISA, employees were allowed to voluntarily contribute part of their compensation, strictly on an after-tax basis, to purchase additional annuity benefits in the pension plan or to accumulate additional savings through a thrift savings plan.

Then There was ERISA

The first major legislation signed by President Gerald Ford, on Labor Day in 1974, was ERISA, which ostensibly provides security to employees promised retirement benefits by their employers. ERISA bifurcated the world of employer retirement plans into those that fit the definition of an individual account plan (where the benefit at retirement is based solely on the accumulation of contributions, forfeitures and fund earnings, without any guarantees) and those plans that were not individual retirement account plans (i.e., defined benefit plans). ERISA also allowed for combined plans, under the ominous rules of Internal Revenue Code §414(k). ERISA first introduced the concept of traditional IRAs as tax-advantaged savings vehicles for employees not covered by an employer plan or for some lower income individuals, as a vehicle to accumulate personal savings and as a retirement nest egg in addition to their employer-promised benefits.

When ERISA became effective, the predominate plan design was some variation on a defined benefit plan. While some employers only offered a defined contribution plan, the more common practice was to sponsor both: a defined benefit plan as the retirement floor and then some sort of an individual account plan as a supplement. Originally, there were combined limits for employees who participated in both an employer's defined benefit and defined contribution plans, but those combined plan limits under IRC §415(e) have since been repealed.

Congress only added the concept of elective pre-tax salary deferrals in 1978. From the start, there were a lot of restrictions on amounts that any individual plan participant could elect to defer into a 401(k) plan (hence, the term cash or deferred arrangement), and the group of higher-paid employees could be limited in their desired salary deferrals by the average amount deferred by the lower-paid group. From the labor side of ERISA, employers could continue with the patriarchal practice of investing the participants' salary deferrals under their fiduciary duties or, after jumping through a few hoops, could pass along the investment decisions to the participants themselves.

Next Came Computer Technology

Yes, my millennial brethren, there was a time when there was a thing called a computer in some large back room, where computer-science techs guarded the input cards with their lives, and where a simple report might take a week to arrive in your in-box. But through the 1980s and 1990s, computer technology allowed

- Financial institutions to develop business models for extracting profits off these smaller account balances in 401(k) plans
- Third-party administrators and benefits consultants to develop business models for performing frequent, and eventually daily and instantaneous, valuations of the accounts
- Many higher-paid employees access to the internet through their desk computers and the ability to make their own investment choices in their 401(k) accounts; many of them became self-educated, self-accredited and self-satisfying "day traders"

There is not enough space in this essay to provide all of the reasons that during the 40+ years since ERISA was enacted, individual account plans, especially in the form of 401(k) plans, have become more popular than defined benefit plans, both among employers and employees. The Economic Growth and Tax Relief Reconciliation Act, or "Bush tax cuts," of 2001 introduced the concept of Roth IRAs and Roth 401(k) after-tax contributions to a 401(k) plan, which seemed to further support this paradigm shift. Many experts in the early 2000s opined about how to swing the pendulum back—the so-called renaissance of defined benefit plans (me among them).

Next up: Pension Protection Act

According to Congress, one of the major purposes of enacting the Pension Protection Act of 2006 was to revitalize the importance of defined benefit plans (however, a more cynical interpretation is that they wanted to place more burdens on employers to properly fund pension plans, thus lessening the risk on the Pension Benefit Guaranty Corp. insurance program). For purposes of this essay, however, there are two other provisions of PPA that are extremely important:

- Congress specifically blessed "applicable defined benefit plans" (hybrid plan designs that had been developed in actual practice, which were colloquially referred to as cash-balance plans)
- Congress allowed for in-service distributions after age 62 from defined benefit plans (although the unintended consequence of this provision was to stifle Treasury's analysis of bona fide phased retirement programs, which had by that time been published in proposed regulation format, and which I hope will be revisited soon)

As to defined contribution plans, PPA made 401(k) plans seemingly even more attractive with the addition of automatic enrollment and automatic escalation concepts.

PPA also added a new definition. Under IRC §414(x) and ERISA §210, beginning in 2010, "small" employers could adopt an "eligible combined plan"—a single plan document (and therefore a single form 5500 filing requirement, and a single summary plan description and participant benefit statement disclosure) that has a defined benefit component and a defined contribution component. Of course, to take advantage of this program, which allows the plan to automatically meet the annual tests that many plan sponsors find onerous, there are certain minimum benefits the employer needs to provide to plan participants, and all participants need to be treated uniformly. These plans can only be adopted by "small" employers—this particular definition only requires that as of the date of adoption, the employer is deemed to have not employed more than 500 employees in the prior year.

Two major sets of Treasury regulations have been promulgated since 2006 that bolster my appreciation of these eligible combined plan designs:

- The larger discussion of lifetime income options in defined contribution plans that led to the definition of qualified longevity annuity contracts (i.e., letting a plan participant purchase a deeply deferred annuity to protect against the risk of large long-term care costs in old age)
- The mechanics of operating an applicable defined benefit plan (i.e., a cash-balance plan), especially for those plan designs that seek to credit interest at an appropriate and reasonable market rate

What Can an Eligible Combined Plan Look Like in 2018?

The proposal here is for a small employer (up to 500 employees) to adopt an eligible combined plan or to convert their existing 401(k) and/or defined benefit plan into an eligible combined plan. But the plan itself is not enough. Sponsoring employers also should offer qualified retirement planning services (a true fringe benefit described at IRC §132(a)(7)) and other financial wellness education (which can be designed to not trigger fiduciary duties, even under the currently in-limbo Labor regulations). With these additions, a plan participant might truly understand and appreciate the value of an annuity stream and of the spend-down of an account through retirement, and can plan appropriately as she ages through her career. She then can hopefully make appropriate distribution choices upon retirement.

The following discussion applies to employers with less than 500 employees as the statute now stands, but the universe of employers who could embrace this concept would increase significantly if Congress simply eliminated the small employer requirement.

The 401(k) portion of the plan must:

- Meet the requirements of an "automatic contribution arrangement" (where the default, with proper notice, is 4% of compensation unless the participant affirmatively changes that amount)
- Require the employer to make minimum matching contributions (at least 50% of the first 4% of compensation deferred by each participant)
- Meet vesting minimums (employee deferrals are always 100% vested and employer contributions are fully vested within three years)
- Otherwise be uniform as to all plan participants

The defined benefit portion of the plan must:

- Meet minimum benefit accrual rules (if a traditional defined benefit plan, then at least 20% of compensation after 20 years of service, but if an applicable defined benefit plan, then service credits based on age bands need to be at least as favorable as those shown in the chart in the statute)
- Meet vesting minimums (fully vested within three years)
- Otherwise be uniform as to all plan participants

The uniformity and otherwise minimum requirements seem to stifle modern practices where employers stretch the limits of nondiscrimination testing to provide maximum benefits, rights and features to higher-paid and other favored employees and then lesser benefits, rights and features to the rest of the plan participants. This strategy leads to expensive and time-consuming annual testing for nondiscrimination, minimum coverage and top-heaviness. A uniform eligible combined plan eliminates favoring some participants over others but also eliminates the time, money and energy needed to perform the annual tests (by definition, eligible combined plans automatically comply with all of those annual testing requirements). Employers that adopt an eligible combined plan and save some of their time, money and energy on the program administration can re-direct their time, money and energy on developing better-suited nonqualified plans of deferred compensation for favored employees.

In my opinion, during the accumulation period, all other aspects of normal qualified cash or deferred arrangements can be included in the 401(k) portion of the eligible combined plan, which includes, among other things, plan loans, hardship distributions for employee deferrals, in-service distributions after five years of service, Roth after-tax contributions, automatic escalation features and even the welcoming of additional profit-sharing contributions from time to time by the employer if they are allocated to all eligible participant accounts. Therefore, as costly life events happen before retirement, such as unexpected medical expenses, unexpected funeral expenses, wedding gifts, the purchase of a primary residence, higher education expenses, and retrofitting the home for chronic illnesses and long-term care, the plan participant can receive distributions from the 401(k) account, without having any impact on the accrued benefits in the defined benefit plan portion of the combined plan (obviously, the more in-service distributions any individual participant takes will leave a lower-than-desirable 401(k) account at retirement).

For the defined benefit portion of the plan, employers should consider a market-rate cash-balance plan design (yes, there are currently many experts out there to advise on this design), so that each participant's 401(k) account and the balance of her hypothetical account in the defined benefit plan can be communicated, side by side. In essence, the communication is comparing apples to apples (other than, for the 401(k) account, there is no preservation of capital requirement, there are no spousal rights and there is no PBGC insurance coverage). However, since defined benefit plans require the communication of retirement benefits as annuities under the disclosure of relative value rules, the whole idea of annuitization for both accounts can be properly communicated to plan participants during the accumulation phase, especially if the employer also provides qualified retirement planning services to the plan participants and their spouses, and other forms of financial wellness programs.

Upon retirement, the plan can allow, within reasonable administrative parameters, each plan participant to transfer assets between their 401(k) account and their hypothetical cash-balance account—all lump-sum distributions needed in retirement can come from the 401(k) account and all annuities can be "purchased" through the defined benefit account (the plan can pay out the annuities, or at least find favorably priced annuities in the market, and can allow immediate annuities, deferred annuities, temporary annuities and other features that make sense to their particular workforce).

Call to Action for Benefits Consultants

Bottom line, Congress has already provided an updated retirement program that assists workers and retirees better prepare for retirement (at least for those employers considered to employ no more than 500 employees on the date of adoption). The fact that few employers have actually embraced an eligible combined plan since IRC §414(x) was added should not suppress the discussion.

This combined plan design, the recent discussions about lifetime income options in defined contribution plans, the allowance of cash-balance plans in general (and market-rate cash-balance plans, specifically), the qualified retirement planning services (considered to be a fringe benefit) and the current conversations (and yes, essays) about financial readiness, all seem to justify a current conversation with our clients about "eligible combined plans."

Barry Kozak, J.D., ChFC®, is an attorney and consultant at October Three Consulting LLC in Chicago. He can be reached at *bkozak@octoberthree.com.*

Working Longer to Improve Retirement Security: Addressing Workplace Issues[1]

Anna M. Rappaport and Tim Driver

People are living much longer than when the Social Security system was established in the 1930s, and periods of retirement are also expanding. Many people are reaching common retirement ages without adequate retirement savings. Working longer improves retirement security because retirement assets are needed for fewer years, assets have a longer time to grow and the individual has a longer period to be covered by applicable employee benefits. In addition, monthly income from Social Security is increased if claiming is delayed beyond age 62 up until 70. Phased retirement, which allows people to gradually move from full-time work to labor force exit, make a great deal of sense to us.

While many professionals, including gerontologists, actuaries, economists and retirement planners, talk about the societal importance of longer work, neither the business nor the policy community is doing much to address barriers to protracted employment or to enable or encourage phased retirement. Many individuals are building their own phased retirement solutions; a few private organizations are capitalizing on opportunities to support longer work. This essay discusses issues for employers. A separate essay, “Working Longer to Improve Retirement Security: Improving Public Policy,” discusses policy issues.

Approaches to Phased Retirement

From the viewpoint of the retiree, any arrangement that permits gradual exit from the labor force is a form of phased retirement. Such arrangements include when employees scale down hours with the same employer, retire from one employer and find work elsewhere, or retire and get rehired, often on a limited basis, from the same employer.

Rehire of retirees may be for specific projects, in a job similar to the position left, as a temporary through the use of a temporary pool, working through a third party such as a temporary agency or as a contractor. For employers who offer defined benefit pensions, the employer has to decide whether to continue pension benefits during rehire. This is normally handled by limiting the person rehired to working less than 1,000 hours and by requiring a period of separation prior to rehire.

Moving to new employment includes traditional employment, working as a temporary employee and working as an independent contractor. Employers who utilize part-time employees where people can change their schedule are offering phased retirement whether they recognize it or not.

The Situation in 2017

A 2017 Government Accountability Office study[2] found little formal phased retirement. Both employers and experts were interviewed. They present evidence that many people are working as part of retirement, creating their own phased retirement. These findings are similar to our research and observations.

The GAO describes eight case studies. All eight protect health care coverage, usually with a minimum work requirement, usually increasing the employer provided health benefit. Most require supervisor approval for the individual to participate, as does the federal phased retirement program, and most focus on a work arrangement with specific duties and possibly an explicit agreement. Only two organizations had defined benefit plans; most had defined contribution plans. The defined contribution plans were not affected by the arrangement. Some had age requirements and/or limits on the period of phased retirement.

1 This essay reflects a variety of personal experiences, business experience and research including extensive interest in later work as an important response to an aging society. The combined experience of the authors includes more than 20 years in different phases of retirement, more than 10 years in facilitating jobs for older workers and many years of pension consulting.

2 U.S. Government Accountability Office, “Older Workers: Phased Retirement Programs, Although Uncommon, Provide Flexibility for Workers and Employers,” report to the Special Committee on Aging, U.S. Senate, GOA 17-536 (June 2017), *https://www.gao.gov/assets/690/685324.pdf*.

Uncertainty about legal issues creates confusion for employers. It is our view that some of the legal requirements designed to protect older workers can have unintended consequences. We believe that hiring of older workers and innovative work options are often discouraged because of fears of age discrimination complaints.

As we have seen in much of our research, about five in 10 people work after retirement or phase out in some way. More than seven in 10 people say they want to work after retirement.

In the 2017 Society of Actuaries Post-Retirement Risk Survey,[3] pre-retirees said they expect to work to a mean age of 65, but retirees had actually retired from their main occupation at a mean age of 58.

The 2013 Society of Actuaries focus group research[4] indicated that many people who retired voluntarily were pushed out because of work-related pressures, family needs or health problems.

Time spent in retirement has increased markedly as life spans have increased, without corresponding increases in retirement ages. In one example, expected work life went from 46 to 38 years over 39 years, while expected periods of retirement went from 13 to 23 years.[5]

The Affordable Care Act enabled new options when it made it possible for people who leave jobs before age 65 to get health insurance at a fair price in the marketplace. But today, the future of the ACA is unclear, creating a new round of uncertainty about health insurance coverage and what will happen to those with health challenges if they need individual coverage. Fear of loss of health benefits is again a problem.

Practical Examples

RetirementJobs.com[6] is an organization that assists more than 1 million registered job seekers over age 50 to find jobs. It also helps employers find employees. It provides opportunities for regular jobs, but with many different schedules, and provides information to individuals about more than 100 age-friendly employers. Since 2006, the company has used a process to certify age-friendly employers.

Since 2016, the organization has conducted research to find the top 10 industries for employing people over age 50 by percentage of workers. Those fields have consistently been airlines, utilities, insurance, retail, chemicals, aerospace and defense, packaging and containers, forest and paper products, food production and beverages.[7] Some frequently posted jobs are bank tellers, bank managers, personal bankers, caregivers, retail positions, customer service representatives, drivers, field and inside sales personnel, financial executives, nurses, health care professionals, nonprofit staff, security personnel and tax preparers. Experience indicates that employers use RetirementJobs.com because it helps them fill hard-to-fill jobs quickly and attracts good workers. In our experience, more mature workers improve customer satisfaction, relate well to mature customers and have lower turnover than younger groups. The company found a very big unfilled need for caregivers and established Mature Caregivers[8] in 2012.

YourEncore[9] provides expert assistance in life sciences and consumer goods, and works with higher level professional and technical people. Eighty large companies work with YourEncore and 11,000 experts are registered on its site. Two-thirds of the experts have advanced degrees, and they work on projects or specific assignments.

3 Society of Actuaries, *2017 Risks and Process Retirement Survey: Report of Findings*, January 2018, *https://www.soa.org/research-reports/2018/retirement-risk-survey/*.

4 Society of Actuaries, "The Decision to Retire and Post-Retirement Financial Strategies: A Report on Eight Focus Groups," research project, 2013, *https://www.soa.org/research-reports/2013/The-Decision-to-Retire-and-Post-Retirement-Financial-Strategies--A-Report-on-Eight-Focus-Groups/*.

5 Expert Committee on the Future of the Quebec Retirement System, "Innovating for a Sustainable Retirement System: A Social Contract to Strengthen the Financial Security of all Quebec Workers," report to the Quebec government, 2013, *https://www.rrq.gouv.qc.ca/SiteCollectionDocuments/www.rrq.gouv.qc/Anglais/publications/rapport_comite/rapport.pdf*.

6 *https://www.retirementjobs.com/*.

7 RetirementJobs.com, "Fortune 500 Companies: Rankings by Prevalence of Workers age 50+," report, 2018.

8 *http://maturecaregivers.com/*.

9 *https://www.yourencore.com/*.

YourEncore provides solutions to the clients, functioning as a consulting company, and secures projects and temporary assignments for the experts.

Temp agencies also place many phased retirees, and some manage temporary pools, such as substitute teacher pools.

Expectations

Within the business community, there seems to be a general expectation that older workers cost more and are less productive. The experience at RetirementJobs.com indicates some older workers do very well but others do not. Table 1 shows the characteristics of workers who it is believed often do well and those who do not.

There are very different expectations about retirement for different types of employment. Table 2 is a summary of societal practices and expectations for some very different types of workers. According to our analysis, both the age at labor-force exit and the process of phasing down varies greatly by group.

The Contracting Problem

Experience with contracting has surfaced problems in some cases. Quite a lot of phased retirement or continued work at later ages is as an independent contractor. It is very important for the individual and employer to have a clear written agreement defining the scope of work and compensation, as well as intellectual property and other rights, but the process of contracting is often not fitted well to the individual phased retiree. Our experience is that there is usually no trouble when the contract is limited to what is needed for the situation, but that it can get very troublesome when there is a generalized contract. Where contracting departments are active, the contracts often seem to be designed to work with larger contractors and with contractors who will be involved with technology. They may include important provisions that make contracting difficult or impossible for a phased retiree. These comments are based on personal observation and not research.

Supporting Innovation

Innovation is generally viewed very positively in technology and other products. Most Americans use products that did not exist (and were not imagined by most people) 50 years ago. Personal computers, cell phones, tablets, self-driving cars and GPS devices as just a few examples. While innovation is viewed very positively by the marketer, it is important to know the market and get the timing right. The situation is very different when it comes to the management of human resources and creation of job options. Innovation may be good in some cases, but in others it creates risks of violating nondiscrimination rules and the potential for personnel problems. For example, offering a new job option to older workers with a particular skill but not to those with other skills might invite claims of discrimination. This is particularly risky if these are higher paid workers.

Employers would benefit from white papers on how to deal with some of these issues and potentially policy changes, including safe harbors. Safe harbors could set some limits on options that could be offered without fears of discrimination or other legal challenges. An easy example would be a safe harbor for people working under 500 hours per year.

Table 1 Characteristics of Older Workers Who Do Well and Those Who Do Not

Workers Who Do Well	Workers Who Do Not Do Well
Hopeful and optimistic	Stubborn and set in their ways
Interested in learning new skills	Living in the 1970s
Ready for a new experience	Unable to take direction from younger people
Excited to be socially engaged	Not up-to-date on technologies
Accepting of a younger manager	Grumpy and entitled
Behaving as a team player	Overpaid
Living in the new millennium	
Embracing the future	

Source: RetirementJobs.com

Table 2 Retirement Expectations for Selected Occupations, United States in 2017

Occupational Group	Retirement Expectations	Comments
Corporate employees	Common to retire at ages 60–65; retirement plans vary, but most larger corporations include retirement plans in their benefit programs. Benefits may cover only salaried employees, or both salaried and hourly employees.	Buyouts may be used to encourage retirement; there are few formal phased retirement programs. Some companies rehire a few retirees. Some employees will move to part-time before leaving job. Some have bridge jobs before leaving labor force. Practices and part-time opportunities vary greatly by industry.
Tenured university professors	Common to work past age 70; many have generous benefit plans.	Universities offer formal phased retirement programs more often than businesses; professors may also do consulting.
Nurses employed by hospitals	Most hospitals include retirement plans in their benefit packages, so longer-term employees are likely to be eligible for retirement benefits. Ages 60–65 probably common retirement ages.	There are a variety of schedule options available to nurses throughout their careers. It is possible to move from more strenuous to less strenuous jobs. Nurses have many options in designing personal career paths and labor force exit paths.
Police, firefighters and military	Generally have good benefits and very early retirement ages.	Common to have an additional career after first retirement.
Teachers	Tend to have good benefits and may be able to retire in mid-50s with longer service.	Many will have additional work after retiring.
Family business participants (including farms)	No set practice, some work to very high ages.	Business may gradually be turned over to children or other family members; in some cases, it is sold.
Judges and members of Congress	May work to very high ages; no particular expected retirement age; generally have generous benefit plans.	Supreme Court justices generally work as long as they can; judges would be unlikely to have any additional jobs, but members of Congress often move to other jobs.

Building Solutions

A 2007 Conference Board report[10] lays out many of the issues in structuring work arrangements and offers illustrations how they may apply to different jobs. Some of the key issues and questions for the employer include:

- Will hiring retirees create business advantages and opportunities for us?
- Will a program be offered to all employees, to all in specific groups or only on individual approval? It seems the latter is more common.
- How can the business define a range of acceptable work arrangements and make the information available to the employee and supervisor so they can structure something that works? Hospital systems are examples of organizations that offer a range of work options.
- Will phased retirement be in an employees' same job, something that uses the same skills and organizational knowledge, or something different? Retiree pools are an example of an arrangement that has no set schedule and where the employee could move into a variety of different roles.
- Will pay be based on the old or the new role, and how will it be defined?
- How will retirement, health, life insurance and disability benefits be managed? What is the minimum amount of work commitment needed for benefit eligibility?
- Will phasing include a reduction in schedule before retirement and/or some work after retirement? If there is a pension plan, how will the plan be adjusted?
- What, if any, time limit is there on phasing?
- If we want to work with independent contractors, how can we streamline the contracting process for both parties?

10 Anna M. Rappaport and Mary B. Young, "Phased Retirement after the Pension Protection Act," Conference Board report, 2007.

Moving Forward

There are several suggestions for employer options and support for employers to facilitate and encourage longer work:

- It can be difficult for older workers to find work. Financial wellness programs can include information or coaching to help employees prepare to be employable longer, either by their current employer or in a new job. Keeping skills and contacts up-to-date are important.
- Consider a phased retirement health benefit programs, where employees who meet the eligibility requirements, both service and amount to be worked, can continue to be covered by the employers' health insurance program, possibility with an additional subsidy.
- Consider expanding part-time work options and consider whether seasonal job options will work for the business.
- Consider establishing a retiree pool, so that retirees can be used for temporary assignments, for special projects and to fill in when people are ill or on vacation. Some organizations have done this for many years.
- Make sure job-training opportunities are extended to older employees.
- Evaluate whether contract work is feasible for the organization and whether contracting with retirees would work for special assignments. If so, establish model contracts and an effective procedure to implement.

There are also several ideas for support services and white papers to make it easier for employers who want to do some sort of phased retirement:

- Produce a guide on phased retirement and related issues.
- Produce model contracts for use with phased retirees, with variations depending on whether there are issues such as intellectual property and noncompete provisions.
- Produce a white paper on what would be needed to encourage innovative work options, while at the same time retaining enough employee protection.

These materials could be produced by a nonprofit organization or a government agency.

For More Information on Employer Practices

U.S. Department of Labor, 2008 Advisory Council on Employee Welfare and Pension Benefit Plans, "Advisory Council Report on Phased Retirement," 2008, *https://www.dol.gov/agencies/ebsa/about-ebsa/about-us/erisa-advisory-council/2008-phased-retirement-2.*

Anna M. Rappaport, FSA, MAAA, is the founder of Anna Rappaport Consulting. She can be reached at *anna.rappaport@gmail.com.*

Tim Driver is the founder and CEO of RetirementJobs.com Inc. He can be reached at *tim@retirementjobs.com.*

The Risks of Driverless Investing

Max J. Rudolph

Driverless cars are close enough to start thinking about ramifications and unintended consequences. Driverless investing, using passive strategies by individuals and institutions, is already here. Should we be worried? Should we take ownership of our decision-making process, consider contrarian viewpoints and build scenarios? The answer to both of these questions is yes.

The financial ecosystem is a complex adaptive system, evolving and reacting over time in a Darwinian way. Incentives matter, leading practices in ways that pay handsomely until efficiencies and new market competitors arrive to reduce compensation or until the practice blows up, often helped along by excessive leverage.

How does an individual stay one step ahead of the game when thinking about their retirement? By taking ownership of the process. It is their retirement, and their life choices determine the outcome. Advisers can be brought in to help, and many are able to do the heavy lifting. Recognizing the roll of cycles and human behavior is useful. Market timing is hard, if not impossible. Interest rates rise, interest rates fall. Stocks go up, stocks go down. Momentum works until it doesn't. Growth investing may outperform for a time, attract assets and then do poorly. A fund is rewarded with a "five-star" rating, with investors only later realizing that past results really were not predictive. The same happens with value stocks, high yield bonds, real estate or gold. No asset class is immune from financial cycles.

The next phase of the cycle generally starts when it's least expected. Trigger points can be obvious, like when a natural disaster occurs or war breaks out, but more frequently markets turn quietly. This is the nature of a complex adaptive system, where reality is nonlinear. An example is a sand dune, where avalanche risk builds up until movement on one piece of the hill triggers the weaknesses of the system that have built up and the dune collapses. Bubbles build, with pressure increasing, until the system can stand it no more. There are many unintended consequences during a crisis; for example, as illiquid assets bought on margin require the most liquid assets to be sold. Even those who have invested conservatively will be impacted. Those without leverage (debt) have a greater ability to ride it out. This is called time arbitrage, having a longer time horizon than others, and is typical of value investors.

Emerging risks are always lurking, just out of our reach. If you know which ones to worry about, you are clairvoyant. That does not describe me or anyone I know. Listening to people with long time horizons can help an investor prepare for the future.

Active Investing

Active investors believe they can generate higher returns than a pre-selected benchmark without adding commensurate risk (as opposed to beta returns). The sources vary but include creating additional returns through sector allocation, individual stock selection or investing differently than a target duration bond. By definition, you have added basis risk, diverging from the benchmark and challenging the academic concepts associated with the efficient market hypothesis. Many active investors incorporate leverage in their strategies, either borrowing on margin or using derivatives to build their portfolios. When they do, it is important for the saver to consider tail scenarios where the portfolio performs poorly.

There are many reasons active investors believe they can "beat the market." An experienced investor may think they have learned from previous cycles and will be better situated to take advantage of the next one. They may assume common sense and judgment will allow them to navigate the markets better than competitors. The investor may have developed, and have confidence in, a specific strategy they believe outperforms.

Traditional benchmarks often use market weighted indices, where the assets are weighted based on market capitalization. An S&P 500 index fund, for example, ranks all 500 companies in the index by market cap and invests proportionally among them. This concentrates the investment in overvalued stocks. A recent strategy used by some active investors is to create what they believe is a better benchmark, altering the scheme by making it equal weighted or using alternative weightings based on dividends or volatility. I view this as part passive and part active since the investor is still following a defined benchmark, just not the one commonly used. They still set up rules-based benchmarks and follow them, rather than doing fundamental research to identify assets to purchase.

The active investor often is overflowing with confidence, but sometimes that confidence is hard to see. A value investor, always trying to "invert," will constantly be trying to understand what was missed or what the other side of the trade is thinking. They hold a humble confidence and present a humility that is often mistakenly interpreted as a lack of confidence.

Passive Investing

Passive investing has become quite popular of late, due mainly to the lower fees charged and the recent inability for active investors to outperform their benchmark. Many savers have at least a portion of their assets in a passive strategy. They argue that active investors have not earned their fees, so are not smarter than the wisdom of markets as personified by an index.

Successful savers create their own personal investment policy statement, determining their goals and objectives along with any constraints. Those on track to meet their goals can argue they have no need for alpha, preferring to take less risk instead. Many lottery winners forget this strategy, feeling obligated to "do something" with their money like start a restaurant or buy the current hot stock.

Many athletes forget their top earning years are limited and either spend at unsustainable rates or become involved in money pit projects. Samuel Clemens, who wrote under the nautical pseudonym Mark Twain, is a stellar example of this behavior. He continued working late in life to secure his family's future (and helped Ulysses S. Grant, former general and president, do the same).[1]

A benefit of passive investing is that the saver sticks to their benchmark, limiting the basis risk accepted. This is a simple strategy and, for many, more likely to be successful. The problem is that it is not exciting, and some are drawn into a contest against their neighbor as they try to "keep up with the Joneses." Few, with notable exceptions like noted value investor Warren Buffett, talk about their mistakes at a cocktail party. No matter their overall results, the conversation always turns to the big winner in their portfolio, how they saw Amazon before anyone else or sold short General Motors before its reorganization. Buffett, in contrast, continually talks about errors of both commission and omission.

Some analysis has shown that many so-called active investors really don't vary much from passive index funds. They are referred to as closet indexers, and the concern is the higher fees they charge without adding value. Be wary of these charlatans.

Counters to Passive Investing

One risk not often associated with passive investing is concentration risk. While an active investor with a single position clearly has concentration risk, the recent popularity of passive investing adds a different form of concentration risk as something to consider. When everyone owns the same thing and has the same strategy, when investor confidence goes sour and selling begins, so do the questions. Will passive investors watch patiently from the sidelines or try not to be the last man out? A problem with getting out is knowing when it is time to get back in. Some investors who accurately exited the market in 2007 have yet to return and missed out on a record-breaking rally.

Passive investors do not always use index funds, but as more blindly accept whatever the market offers, it should be easier for active investors to exploit anomalies. Arbitrage is much harder when a majority of investors are looking for opportunities. Some have suggested that Buffett's comments encouraging his wife to invest in index funds are quite self-serving.[2] It would be a dream scenario for someone like Buffett to know that Mr. Market would have to accept whatever he offered since he would become the de facto market mover as the lone discriminating buyer and seller.

A recently introduced concern for investors is the growth of central bank balance sheets. This is happening in developed countries around the world, with Japan, the United States and the European Union leading the way.

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1 Mark Perry, *Grant and Twain: The Story of a Friendship That Changed America* (New York: Random House, 2004).

2 Druce Vertes, "Active Investing Versus Passive: What if Everyone Indexed, Except Warren Buffett?" *The Blog, HuffPost*, March 10, 2016, *https://www.huffingtonpost.com/druce-vertes-cfa/active-investing-versus-p_b_9256026.html*.

It is said that the Swiss National Bank owns $3 billion of Apple's market capitalization among its half trillion dollar portfolio.[3] Joining sovereign wealth funds, these public investment vehicles have grown beyond a place where countries invest the money made from oil or manage public pensions. How does this change the marketplace, both when accumulating stocks and when divesting them? These are questions, and risks, that have no clear answer. When liquidity is tight, these funds may cash out to limit losses. Or it may be a mix that goes beyond these two options. It is an unknown, creating uncertainty and risk. It's not even clear that these are passive investors. It is a hybrid mandate at times, giving money that must be invested but told to do it wisely. As these positions are unwound, they could trigger problems if they are unable to avoid large price discontinuities.

Every retail company in the world today worries about the impact of companies like Amazon and 3G Capital. Amazon's low-cost model that focuses on revenue causes stock prices to drop when rumors of its entry into an industry are heard (e.g., grocery stores and drug stores were both hit hard when Amazon bought Whole Foods in 2017). The zero-based budgeting methods favored by 3G Capital quickly lower costs as each expense must be defended every single year. Even companies not rumored to be takeover candidates introduce variations of these strategies to reduce expenses and increase intrinsic value. Investment flexibility may become valuable when merger speculation spikes.

A Bad Scenario

Passive investment strategies appear to have a positive impact on investors during healthy times, but do they create systemic risk when liquidity is tight? Probably not if only a small portion of investments utilize the approach, but the risk increases as fewer active investors remain to drive marginal supply and demand curves.

A prescient example to heed is portfolio insurance, which automatically bought and sold stocks to maintain proportionality relative to a liquid investment like Treasury bonds. This worked great when only a few investors used it, but the Mark Rubenstein-developed strategy called portfolio insurance led to a drop of more than 20% in the S&P 500 index during a 1987 pullback known as Black Monday.[4] When stocks fall, this requires rebalancing, leading to more sales pressure, falling prices and a downward price spiral. Some think passive investing could create similar results during a financial crisis. Where an active investor can jump in and be a buyer when the price becomes favorable, stabilizing markets, a market driven by passive strategies could be procyclical, extending losses during a crisis (and gains during a bubble).

Much like overuse of antibiotics, which are positive or neutral to individuals but detrimental to society as viruses have more opportunity to evolve, passive funds may in the short run increase investor returns but in the long term may be systemically risky. Minor pullbacks could cascade into major drops.

What Should an Individual Do?

Driverless investing seems reasonable, taking emotions and momentum out of the decision-making process, but an individual investor must always remain vigilant to changes in the marketplace and retain ownership of the decision-making process. Much as I described in an earlier essay in this series, a personalized approach to enterprise risk management encourages redundancy built with flexibility and awareness of the current environment. Relying on government policy is not the solution. Thinking about contrarian scenarios that consider incentives and tail scenarios are no guarantee but may provide resiliency that allows savers to meet their long-term objectives. Good luck to all!

Max J. Rudolph, FSA, CERA, CFA, MAAA, is a principal at Rudolph Financial Consulting LLC. He can be reached at *max.rudolph@rudolph-financial.com.*

3 Dave Edwards and Helen Edwards, "The Swiss Central Bank's $90 Billion Stocks Portfolio is Insane," *Quartz*, Nov. 20, 2017, *https://qz.com/1140322/check-out-the-swiss-central-banks-insane-90-billion-investment-portfolio/.*

4 Anora M. Gaudiano, "Here's One Key Factor That Amplified the 1987 Stock-Market Crash," *Market Watch*, Oct. 19, 2017, *https://www.marketwatch.com/story/heres-one-key-factor-that-amplified-the-1987-stock-market-crash-2017-10-16#false.*

Planning Today for Tomorrow's Retirement

Zenaida Samaniego

If only it were that easy. Yet many Americans realize too late that it takes long-term planning if one expects to enjoy a comfortable retirement.

As with most life events, planning for retirement is a necessary step for success in achieving desired results. For example, it takes months for a couple to prepare for a "dream wedding," as planning for it requires participation by others such as family and friends. Planning for a child's birth and schooling requires time and resources. Corporations must plan and monitor short- and long-term strategies to grow and remain competitive in the marketplace. Our nation's leaders must be guided by sound policy for economic growth and the public good.

The Changing Retirement System

Years ago, people worked until they died, thus no thought was given to retirement and planning for it. Traditional family structures and social programs emerged that provided old-age support where needed.

The U.S. retirement landscape has evolved over time. With increasing longevity, we saw the advent of employer-sponsored defined benefit (DB) plans aimed at making way for younger members in the workforce and enticing older workers to retire with guaranteed pensions. With increasing competition, employers used these plans to attract talent and benefits expanded as a result.

For some time, employee pensions were provided under these DB plans, which together with Social Security (SS) and personal savings formed the "three-legged stool" of retirement security. During this period, workers began to expect to retire at the planned retirement age. There was still not much thought to financing it; rather, they looked forward to a life of leisure, relying mainly on their plan and SS benefits.

Employers soon realized the impact of the same longevity gains on their retired worker population, which combined with tightening regulations and other factors to make DB plans very costly and onerous to continue. Capital and earnings growth became the corporate mantra. The inception of the 401(k) plan provided employers with an opportunity, not to supplement the DB plan as the 401(k) was intended, but instead to shift away from DB to defined contribution (DC) plans.

Thus, most or all employers have "frozen"[1] their DB plans and moved toward 401(k) plans, where younger workers can defer taxes on the portion of their paycheck they contribute to their 401(k) retirement account. Some employers may match the employee contributions up to a certain percentage.[2] Other vehicles of the DC type, such as IRAs, may also be used to accumulate retirement savings.

The Evolving View of Retirement

For today's workers, the three legs of the stool have changed. Their views of retirement are still evolving.

- For some, the experiences of their grandparents and parents who retired under the DB system lead them to regard retirement as a given, believing they too can enjoy a comfortable and secure retirement. Consequently, there is not much thought to retirement planning.
- Many older retirees, who relied mainly or solely on DC plans and saved little else, are living longer or facing unexpected, significant medical or other expenditures, and a real risk of outliving their personal savings. With little or no family support, such retirees rely mainly on SS and/or welfare.
- Recent retirees are also "waking up" to the realization that not only did they save too little or spend their DC "windfall" too fast but that it may be too late for other options. For example, returning to work may be hindered by poor health or lack of employable skills.

1 Current participants were grandfathered in but DB plans were closed to new entrants.

2 Hilery Z. Simpson, "How Does Your 401(k) Match Up?" Bureau of Labor Statistics release, May 26, 2010, *https://www.bls.gov/opub/mlr/cwc/how-does-your-401k-match-up.pdf.*

- Older workers nearing retirement now face a similarly uncertain outlook, even as their saving horizon has markedly shortened and options to continue working or delaying retirement are no longer viable.

These factors lead to an increasing number of younger workers facing a change in their retirement prospects.

Given the new retirement "norm," the question becomes how we (individuals, employers and policymakers) can work together to help workers realize the "American dream" of retirement.

Testing Retirement Adequacy

Recent trends show that most Americans are unprepared for retirement.[3] Research by the General Accountability Office found that "among the 48 percent of households age 55 and older with some retirement savings, the median amount is approximately $109,000."[4]

Yet there are those who will argue that the DC system, particularly 401(k) plans, have the "potential" to provide adequate retirement income.[5]

Considering the potential to address the current "retirement gap," I decided to test this argument. Using a hypothetical example, I looked retrospectively at how someone born in the baby boom generation would have fared upon retirement if she were starting out on her career path and only had access to 401(k) plans and/or individual retirement accounts (IRA). DB outcomes are estimated for comparison.

Basic assumptions:

- Individual born in 1948, employed from age 22 until retirement age
- Annual wage earnings match the maximum taxable Social Security earnings (Federal Insurance Contributions Act, or FICA)
- Annual rate of return is set equal to historical yield on 10-year U.S. Treasuries, with inflation adjustment, and used to accumulate DC savings during the contribution period, until time of retirement
- Applicable taxes are disregarded
- DB minimum benefit formula: 2% of final five-year average earnings times years of credited service (number of years employed)
- DC participant does not cash out accumulated savings at retirement; rather she has option to either apply such savings toward the purchase of a fixed guaranteed lifetime income[6] or draw down on her DC balance under required minimum distribution (RMD)[7] rules in effect

Table 1 shows the DC test scenarios. Details can be found in the Appendix.

Tables 2 and 3 present a summary of test results.

Based on these findings, here are some observations:

- Expressed as a percentage of the individual worker's wage earnings, employee contributions under DC average 20% (compared to 0% employee share under DB). Employer contributions under DC are optional (unlike DB, when they were automatic or scheduled). This highlights the shift of the responsibility for one's retirement from the employer under the DB system to the employee under the DC system. The employee now must also bear the increased weight of such responsibility.

3 "Retirement Readiness: A Comparative Analysis of Australia, the United Kingdom and the United States," joint report of American Academy of Actuaries, Australian Actuaries Institute and the Institute and Faculty of Actuaries in the United Kingdom, October 2017, *https://www.actuary.org/files/imce/Retirement-Readiness.pdf.*

4 U.S. Government Accountability Office, "Most Households Approaching Retirement Have Low Savings," report to the Ranking Member, Subcommittee on Primary Health and Retirement Security, Committee on Health, Education, Labor and Pensions, U.S. Senate, GAO-15-419 (May 2015), *https://www.gao.gov/assets/680/670153.pdf.*

5 "Historical 401k Contribution Limits: Employer Profit Sharing is Significant," *Financial Samurai* (blog), accessed March 12, 2018, *https://www.financialsamurai.com/historical-401k-contribution-limits/*.

6 The amount of annuity income will depend on the then current market annuity purchase rates and the form of payment, among others. Using a retirement calculator (such as the one on the Employee Benefits Security Administration's website, *https://www.askebsa.dol.gov/retirementcalculator/UI/general.aspx*), estimated life annuity income amounts shown are current as of Oct. 10, 2017.

7 Assumed age 70 RMD factor of 27.4 based on "Required Minimum IRA Distribution," The Money Alert, accessed March 12, 2018, *http://www.themoneyalert.com/RMD-Tables.html*.

Table 1 DC Test Scenarios

Test Scenario	Employment Period	Contributions	Contribution Period
1	Age 22–69	Up to the maximum employee (EE) and employer (ER) contribution limits	Every year since inception of 401(k) in 1978 and IRA in 1974
2		Up to the maximum EE contribution limits, plus 3% ER match	Same as scenario 1
3		Up to the maximum EE contribution limits; no ER contribution	Same as scenario 1, but starting only in 1986 for 401(k)
4	Age 22–65	Up to the maximum EE contribution limits; no ER contribution	Same as scenario 3

Table 2 DC Only: Estimated Annual Life Income vs. Initial RMD

Test Scenario	Accumulated 401(K) Contributions at Retirement	Accumulated Contributions at Retirement	Annual Life Annuity Income	Initial RMD Age 70
Employed Age 22–69				
1	$2,006,908	$2,270,345	$166,464	$84,773
2	$2,137,392	$2,400,828	$176,028	$89,645
3	$709,592	$973,029	$71,340	$36,332
Employed Age 22–65				
4	$587,761	$806,233	$51,468	$33,160

Table 3 DB Only: Estimated Annual Life Annuity Income

Test Scenario	Credited Service (Years)	Annual Life Annuity Income
Employed age 22–69	47	$111,842
Employed age 22–65	43	$93,602

- Under the DC system, accumulated savings at assumed retirement age vary under the three scenarios of assumed 401(k) contribution levels. They are significantly higher under the first and second scenarios, which include employer contributions (profit sharing, match), compared to the third and fourth scenarios, which represent employee contributions only. These results highlight the impact of employer contributions and 401(k) in general, as a major source of DC savings, as well as the length of the contribution period.
- A comparison of DC to DB income shows mixed results.
    - Expressed as a life annuity, DC income under the first and second scenarios appears to be significantly higher than corresponding DB income, but lower under the third and fourth scenarios. The former may be due to very high employer contributions prevailing in the early years of 401(k). The high income of DB also shows the beneficial effect of long-term service under DB.
    - The initial RMD under DC appears lower than DB income. Note that DB income is level for the lifetime of the annuitant, whereas the level of the RMD will fluctuate each year, depending on the applicable RMD factor and the investment performance of the remaining DC balance.
- Expressed in terms of a replacement ratio (RR)[8] and accounting for Social Security benefits[9] for workers

8 Aon Consulting, "Replacement Ratio Study: A Measurement Tool for Retirement Planning," 2008, *http://www.aon.com/about-aon/intellectual-capital/attachments/human-capital-consulting/RRStudy070308.pdf.*

9 Retirement benefits vary by year and age of retirement under Social Security, as illustrated for workers with maximum taxable earnings. See Social Security Administration, "Workers With Maximum Taxable Earnings," accessed March 12, 2018, *https://www.ssa.gov/OACT/COLA/examplemax.html.*

with maximum taxable earnings, a result upward of 70% under all DC scenario was obtained.

I do not profess to have solutions based on these tests. Rather I hope that by this simplified, idealized example, insights can be provided that help us to understand the current system better and optimize the tools available to employees under such system, and to encourage continued support from employers and society working toward a secure retirement for American workers.

Filling the Retirement Gap

Following are some ideas for research and policy consideration.

- **Financial literacy.** This has been a constant challenge, but a basic understanding of the need to save is a start toward changing one's view of today's complex retirement and regulatory landscape.
- **System platform.** The employer-based system is a major administrative and financial resource to facilitate and optimize a disciplined retirement savings plan for each employee. The Social Security system is a potential resource that can address coverage for many who may not have access to workplace tools and also address worker mobility and portability issues under an employer-based system. Social Security may also be considered for a nationalized retirement system to augment social insurance benefits. The pros and cons of either system will need to be explored.
- **Voluntary vs. mandatory.** New DC features, such as auto enrollment and default contribution rates, are promising. Perhaps similar automatic ways of maximizing savings can be developed that go beyond nudging. Any approach needs individual focus, accounting for gender and income differences and factoring in net disposable income.
- **Lump sum vs. RMD vs. annuity.** Restricting lump-sum withdrawals ensure that DC balances can remain as a resource during retirement.[10] While an annuity may be considered for basic spending needs, the RMD may be viewed as providing a safe and efficient way to draw down DC savings during the retirees' remaining lifetime. A DB-like deferred life annuity arrangement may also be considered.
- **Education.** Training for necessary and employable skills is key to a successful career, earnings growth and financial independence.
- **Planning tools.** There has been a plethora of such commercial tools alleged to help with one's saving plans. Regulating such tools and/or providing a noncommercial, transparent and standard tool for this purpose may be considered.[11]
- **Transitioning from work to retirement.** The changing work and retirement environment calls for new ways to phase into part or full retirement.
- **Tax policy.** There needs to be an equitable consideration and treatment of all Americans when allocating government resources for the long term. Encouraging Americans to save can help with sustainability of social insurance and welfare programs.

As an older baby boomer now retired, I count myself among the disappearing ranks of beneficiaries of the DB system. Like most Americans, especially as a parent and grandparent, I have concerns about the next and future generations of workers and retirees. However, I am optimistic we can all work together, as a nation, to come up with solutions.

10 Steve Vernon, "How to 'Pensionize' Any IRA or 401(k) Plan," Stanford Center on Longevity, research paper, November 2017, *http://longevity.stanford.edu/wp-content/uploads/2017/12/How-to-pensionize-any-IRA-401k-final.pdf.*

11 Employee Benefits Security Administration, "Lifetime Income Calculator," accessed March 12, 2018, *https://www.dol.gov/agencies/ebsa/laws-and-regulations/rules-and-regulations/advanced-notices-of-proposed-rulemaking/lifetime-income-calculator.*

Appendix

		DC Contribution Limits[1]					DC Contribution Scenarios					
Year	Age	401(k) EE Max	401(k) EE + ER Max	401(k) EE Catch-up 50+	IRA Limits Under Age 50	IRA Limits Age 50+	401(k) EE Max + Catch-up + ER max	401(k) EE Max + Catch-up + ER 3% Match	401(k) EE Max + Catch-up	IRA EE Max + Catch-up	Assumed Return[2]	Assumed Wage Earnings[3]
2017	69	$18,000	$54,000	$6,000	$5,500	$6,500	$60,000	$27,816	$27,885	$6,500	–0.07%	$127,200
2016	68	$18,000	$53,000	$6,000	$5,500	$6,500	$24,000	$27,555	$27,623	$6,500	0.68%	$118,500
2015	67	$18,000	$53,000	$6,000	$5,500	$6,500	$24,000	$27,555	$27,622	$6,500	1.98%	$118,500
2014	66	$17,500	$52,000	$5,500	$5,500	$6,500	$23,000	$26,510	$26,576	$6,500	1.24%	$117,000
2013	65	$17,500	$51,000	$5,500	$5,500	$6,500	$23,000	$26,411	$26,476	$6,500	0.31%	$113,700
2012	64	$17,000	$50,000	$5,500	$5,000	$6,000	$22,500	$25,803	$25,867	$6,000	–0.90%	$110,100
2011	63	$16,500	$49,000	$5,500	$5,000	$6,000	$22,000	$25,204	$25,267	$6,000	1.76%	$106,800
2010	62	$16,500	$49,000	$5,500	$5,000	$6,000	$22,000	$25,204	$25,266	$6,000	0.81%	$106,800
2009	61	$16,500	$49,000	$5,500	$5,000	$6,000	$22,000	$25,204	$25,265	$6,000	2.52%	$106,800
2008	60	$15,500	$46,000	$5,000	$5,000	$6,000	$20,500	$23,560	$23,620	$6,000	–0.54%	$102,000
2007	59	$15,500	$45,000	$5,000	$5,000	$5,000	$20,500	$23,425	$23,484	$5,000	2.61%	$97,500
2006	58	$15,000	$44,000	$5,000	$4,000	$5,000	$20,000	$22,826	$22,884	$5,000	0.40%	$94,200
2005	57	$14,000	$42,000	$4,000	$4,000	$4,500	$18,000	$20,700	$20,757	$4,500	1.18%	$90,000
2004	56	$13,000	$41,000	$3,000	$3,000	$3,500	$16,000	$18,637	$18,693	$3,500	2.21%	$87,900
2003	55	$12,000	$40,000	$2,000	$3,000	$3,500	$14,000	$16,610	$16,665	$3,500	1.41%	$87,000
2002	54	$11,000	$40,000	$1,000	$3,000	$3,500	$12,000	$14,547	$14,601	$3,500	3.90%	$84,900
2001	53	$10,500	$35,000		$2,000		$10,500	$12,912	$12,965	$2,000	1.41%	$80,400
2000	52	$10,500	$30,000		$2,000		$10,500	$12,786	$12,838	$2,000	3.86%	$76,200
1999	51	$10,000	$30,000		$2,000		$10,000	$12,178	$12,229	$2,000	2.97%	$72,600
1998	50	$10,000	$30,000		$2,000		$10,000	$12,052	$12,102	$2,000	3.88%	$68,400
1997	49	$9,500	$30,000		$2,000		$9,500	$11,462	$11,511	$2,000	3.48%	$65,400
1996	48	$9,500	$30,000		$2,000		$9,500	$11,381	$11,429	$2,000	2.87%	$62,700
1995	47	$9,240	$30,000		$2,000		$9,240	$11,076	$11,123	$2,000	4.84%	$61,200
1994	46	$9,240	$30,000		$2,000		$9,240	$11,058	$11,104	$2,000	3.17%	$60,600
1993	45	$8,994	$30,000		$2,000		$8,994	$10,722	$10,767	$2,000	3.19%	$57,600
1992	44	$8,728	$30,000		$2,000		$8,728	$10,393	$10,437	$2,000	4.32%	$55,500
1991	43	$8,475	$30,000		$2,000		$8,475	$10,077	$10,120	$2,000	2.26%	$53,400
1990	42	$7,979	$30,000		$2,000		$7,979	$9,518	$9,560	$2,000	2.86%	$51,300
1989	41	$7,627	$30,000		$2,000		$7,627	$9,067	$9,108	$2,000	4.19%	$48,000
1988	40	$7,313	$30,000		$2,000		$7,313	$8,663	$8,703	$2,000	4.49%	$45,000
1987	39	$7,000	$30,000		$2,000		$7,000	$8,314	$8,353	$2,000	5.50%	$43,800
1986	38	$7,000	$30,000		$2,000		$7,000	$8,260	$8,298	$2,000	5.09%	$42,000
1985	37	$30,000	$30,000		$2,000		$30,000	$31,188	$0	$2,000	7.61%	$39,600
1984	36	$30,000	$30,000		$2,000		$30,000	$31,134	$0	$2,000	7.17%	$37,800
1983	35	$30,000	$30,000		$2,000		$30,000	$31,071	$0	$2,000	6.52%	$35,700
1982	34	$30,000	$30,000		$2,000		$30,000	$30,972	$0	$2,000	5.71%	$32,400
1981	33	$45,475	$45,475		$2,000		$45,475	$46,366	$0	$2,000	0.69%	$29,700
1980	32	$45,475	$45,475		$1,500		$45,475	$46,252	$0	$1,500	–2.72%	$25,900

Continued on next page

Appendix (Continued)

Year	Age	DC Contribution Limits					DC Contribution Scenarios				Assumed Return	Assumed Wage Earnings
		401(k) EE Max	401(k) EE + ER Max	401(k) EE Catch-up 50+	IRA Limits Under Age 50	IRA Limits Age 50+	401(k) EE Max + Catch-up + ER max	401(k) EE Max + Catch-up + ER 3% Match	401(k) EE Max + Catch-up	IRA EE Max + Catch-up		
1979	31	$45,475	$45,475		$1,500		$45,475	$46,162	$0	$1,500	–0.18%	$22,900
1978	30	$45,475	$45,475		$1,500		$45,475	$46,006	$0	$1,500	1.09%	$17,700
1977	29				$1,500					$1,500	1.91%	$16,500
1976	28				$1,500					$1,500	0.97%	$15,300
1975	27				$1,500					$1,500	–3.85%	$14,100
1974	26				$1,500					$1,500	–2.20%	$13,200
1973	25											$10,800
1972	24											$9,000
1971	23											$7,800
1972	22											$7,800

1 Data from PK, "The Complete History for 401(k) Plans from 1978 Until Today," Don't Quit Your Day Job ..., *https://dqydj.com/the-complete-history-of-the-401k-contribution-limit/*, copyright © 2017, reprinted by permission; "What Were Traditional IRA and Roth IRA Contribution Limits in the Past?" eXtension, Feb. 7, 2017, *https://articles.extension.org/pages/44579/what-were-traditional-ira-and-roth-ira-contribution-limits-in-the-past*.

2 Data calculated as [{(1+10yTsy)/(1+inflationJanYr)}–1]. See "10 Year Treasury Rate by Year," multpl.com, accessed April 10, 2018, *http://www.multpl.com/10-year-treasury-rate/table/by-year*.

3 See Social Security Administration, "Contribution and Benefit Base," accessed April 10, 2018, *https://www.ssa.gov/OACT/COLA/cbb.html*.

Zenaida Samaniego, FSA, MAAA, is actively involved in Society of Actuaries and American Academy of Actuaries research. She is retired from her role as chief actuary, Employee Benefits Security Administration, at the U.S. Department of Labor. She can be reached at *zsamaniego70@gmail.com.*

Financial Life Planning at Work:

How Financial Mentorship of Younger Employees Leads to Improved Retirement Preparedness

Scott M. Spann and Cynthia Meyer

While the extent of the looming retirement crisis is debatable, most researchers and practitioners agree that the average American is not prepared for retirement. Younger workers that often fall into generational labels such as millennials and Gen Y or Z (those born in 1995 or later) have the longest time horizon to bridge the retirement preparedness gap. Yet, to really make long-lasting improvements, the focus shouldn't be on more retirement planning education. Younger employees need financial life planning guidance that addresses their overall financial health. That is the key to improving retirement outcomes.

Traditional retirement planning education techniques generally focus on telling early career employees that they need to save as much as possible in their employer-sponsored retirement plans, taking advantage of the time value of money and compound returns. While this may be true, if these messages are not connected to what preoccupies younger employees at this stage of their lives, they may not be listening. The increased usage of retirement plan design features such as auto-enrollment, contribution rate escalation and target-date retirement funds as default investment options can help encourage retirement savings behaviors, but behavioral finance initiatives can only accomplish so much to move the retirement preparedness needle in the right direction.

Employers need to change the conversation. Most younger employees aren't thinking about retirement. Instead, they're thinking about the competing financial priorities of early adulthood: moving out on their own, enjoying life, paying off student loans and, eventually, homeownership, marriage and parenthood.

Millennials want jobs that promote their well-being, so a new employer/employee relationship that goes beyond just a paycheck and expectation of future retirement benefits must emerge. According to a Gallup-Healthways well-being index survey, work/life balance is a crucial component of job and life satisfaction for millennials.[1] Financial well-being is defined in this survey as "managing your economic life to reduce stress and increase security," and is one of five metrics that comprise total well-being.

Early career employees also want coaching at work.[2] This is part of an overall generational trend toward seeking guidance, not direction. This is playing out in the economy with the proliferation of gourmet cooking subscriptions, basic how-to videos for home maintenance and online personal style services. Employers that offer financial coaching and mentorship to their early career employees are more likely to help them achieve their life goals and enjoy financially healthier lives.

The Link Between Financial Wellness and Retirement Preparedness

The best way to secure future retirements is to offer a comprehensive financial wellness benefit that goes beyond retirement planning and incorporates life planning. Financial wellness has been shown to have a significant influence on retirement preparedness. Individuals with higher levels of financial satisfaction, perceived financial knowledge and confidence in their current asset allocation have an increased likelihood of reporting a strong sense of retirement preparedness. One specific financial behavior

1 Brandon Rigoni and Bailey Nelson, "Millennials Want Jobs That Promote Their Well-Being," *Gallup Business Journal*, Nov. 1, 2016, *http://news.gallup.com/businessjournal/196985/millennials-jobs-promote.aspx*.

2 Karie Willyerd, "Millennials Want to be Coached at Work," *Harvard Business Review*, Feb. 27, 2015, *https://hbr.org/2015/02/millennials-want-to-be-coached-at-work*.

associated with retirement preparedness is calculating one's future retirement income needs. Running a retirement calculation is positively related to retirement preparedness,[3] and people who calculate their ability to meet future retirement income needs[4] have higher retirement confidence.[5]

Younger employees are less likely to run a basic retirement calculation on their own, but those who participate in a workplace financial wellness program are more likely to run a projection.[6] This simple financial planning tool prompts discussions on all the things in life that can get in the way of retirement savings, such as debt, student loans, housing costs and parenting expenses. When early career employees master the basics of cash-flow management, debt reduction, goal-based saving and investing, they are more likely to achieve important life milestones such as home ownership, and more likely to contribute more to retirement savings throughout their career.

How to Design a Successful Workplace Financial Wellness Program

Successful incorporation of a financial wellness program in the workplace begins with a holistic assessment of the workforce. This step is necessary for the design of a robust financial education program that can simultaneously address and balance immediate financial stressors, such as cash-flow needs and debt reduction, with longer-term needs and priorities such as planning for retirement.[7]

Unfortunately, many workplace financial wellness programs focus solely on providing information to employees designed to improve their knowledge of company retirement programs. This is a disservice for all employees—especially younger workers. The presumption is that additional knowledge will help employees better prepare for retirement and manage their finances more successfully.[8] However, recent studies show no significant association between perceived financial knowledge alone and the intention to engage in retirement-planning behaviors. Increasing financial knowledge is insufficient to improve retirement preparedness unless this knowledge is also accompanied by motivated behavioral change.[9]

A successful workplace financial wellness program serves as a valuable employee benefit that provides continuous access to unbiased financial guidance and coaching. The core intention of the program is to help employees develop better financial habits and behaviors and make informed financial decisions that are in their best interest. Effective workplace financial wellness programs must meet the following criteria to be appropriately described as a financial wellness benefit, as opposed to offering limited aspects of financial education or financial advice.

- Holistic and comprehensive in nature—covers all aspects of financial planning from debt management to more advanced estate planning
- Personalized to the employee based on their specific needs
- Unbiased—free from sales pitches or conflicts of interest
- Designed and delivered by qualified experts who have extensive financial planning experience
- Delivered as an ongoing process, to provide the support and accountability employees need to

3 Paul Gerrans, Craig Speelman and Guillermo Campitelli, "The Relationship Between Personal Financial Wellness and Financial Wellbeing: A Structural Equation Modeling Approach," *Journal of Family and Economic Issues* 35, no. 2 (June 2014): 145–60: *http://dx.doi.org/10.1007/s10834-013-9358-z.*

4 Robert N. Mayer, Cathleen D. Zick and Michelle Glaittli, "Public Awareness of Retirement Planning Rules of Thumb," *Journal of Personal Finance* 10, no. 1 (March 2011): 12–35, *https://issuu.com/iarfcregister/docs/vol_10issue1.*

5 Jinhee Kim, Jasook Kwon and Elaine Anderson, "Factors Related to Retirement Confidence: Retirement Preparation and Workplace Financial Education," *Journal of Financial Counseling and Planning* 16, no. 2 (January 2005).

6 Financial Finesse, "2016 Year in Review," report, March 22, 2017.

7 Scott M. Spann, "Three Essays on Financial Wellness in the Workplace" (Ph.D. diss., Kansas State University, 2014), *http://krex.k-state.edu/dspace/handle/2097/18412.*

8 Cliff A. Robb and Ann S. Woodyard, "Financial Knowledge and Best Practice Behavior," *Journal of Financial Counseling and Planning* 22, no. 1 (2011): 60–70.

9 Spann, "Three Essays on Financial Wellness."

make, sustain and build upon positive financial habits and behaviors

- Integrated with all employee benefits, with guidance on how employees can most effectively manage their benefits as part of their overall financial plans
- Offered as a benefit available to all employees

After performing a financial wellness assessment for the entire workforce to establish benchmark financial wellness measurements, employers may decide to establish an online financial learning center where employees can access a variety of personal finance tools and information on their own. (Examples can be seen in Figure 1.) Other layers of the workplace financial wellness program may include telephone and internet access to personal financial guidance and education via a financial help line staffed by independent and unbiased certified financial planner professionals. Other elements of the program can include educational webcasts, financial workshops at worksite locations, one-on-one financial planning sessions or similar interactions to help employees get their finances on track and move forward with their retirement-preparedness efforts.

Moving the Retirement Preparedness Needle

A retirement crisis is looming in the United States for both workers and their employers. Retirement preparedness is both a financial wellness issue and

Figure 1 Multi-channel Education Model

Source: Financial Finesse

a significant financial burden for employers due to significantly higher costs associated with a workforce of distracted, overstressed, under-engaged employees who hold on to their jobs longer than planned in order to postpone unaffordable retirements. A holistic focus on overall financial wellness that includes financial mentorship to help younger employees plan for major life events is needed to improve the retirement outlook for those not prepared to become financially independent or to make the transition from the workforce into retirement.

Scott M. Spann, Ph.D., CFP®, is a resident financial planner at Financial Finesse. He can be reached at *Scott.spann@financialfinesse.com.*

Cynthia Meyer, CFA, CFP®, ChFC®, is a resident financial planner at Financial Finesse. She can be reached at *Cynthia.meyer@financialfinesse.com.*