Welcome to InFRE's October 2020 Issue of Retirement Insight and Trends

Retirement InSight and Trends is the quarterly newsletter for the International Foundation for Retirement Education's Certified Retirement Counselors® (CRC®s) to help retirement professionals with the practical application of new retirement readiness, counseling, planning and income management concepts for the mid-market. Find out more about the CRC® and InFRE here.

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October, 2020 InFRE Update: Announcing the New InFRE and Retirement InSight Websites!

We are pleased to announce the launch of the new InFRE website and the new Retirement InSight website.

The InFRE website has been redesigned and has several enhancements including:

- Retirement professionals interested in learning more about the CRC® will more easily be able to navigate to information about the benefits of becoming CRC® certified,
- Certificants will find it easier to locate information about renewing their CRC® certification online, promotional resources, and continuing education courses,
- In addition to ordering CRC® client brochures, Certificants will also be able to order a professional gold embossed matted frame for their CRC® certificate, and
- A new and more secure login process will now require a personal username and password.

The Retirement InSight website is now mobile friendly and has additional categorization of content to make it easier to find articles on specific topics.

We hope you enjoy the new sites and welcome any feedback you may have.

Managing Retirement Income: What Your Clients Need to Know

Kevin S. Seibert, CFP®, CRC®, CEBS, is Managing Director, International Foundation for Retirement Education (InFRE)

Editor's note: Many of your clients are part of the 78 million Baby Boomers approaching or already in retirement. What do you need to help them understand about when to retire and how to manage, protect, and withdraw their savings? This articles is excerpted from a webinar that was a demonstration of a program that Kevin Seibert and Betty Meredith developed for InFRE in the mid-2000s to help retirement professionals explain to clients and plan participants the process for how create a retirement income plan.

You can read the summary article here as part of the 3rd Qtr 2020 Retirement InSight and Trends Newsletter, worth 1.0 CE when read in its entirety (after passing the online quiz.)
You may also choose to take the full length course Managing Retirement Income: What Your Clients Need to Know for 1.0 hour continuing education (CE) credit.

By Kevin S. Seibert, CFP®, CRC®, CEBS, Managing Director, International Foundation for Retirement Education (InFRE)

The idea of retirement is a relatively new concept. A child born in 1900 had a life expectancy of age 47. People worked as long as they could and then moved in with their children. The idea of not working someday because you reached a certain age or felt like it never really entered their minds. Your parents retired, and your grandparents retired, but what about your great-grandparents? It has only taken a couple or three generations for us to go from where retirement was something that our predecessors never thought of to where we think of it today as one of our inalienable rights; life, liberty, and pursuit of retirement, right?

Over the past two to three decades, the retirement landscape has changed. We're in a new retirement environment where people live longer, want to retire earlier, have higher lifestyle expectations than their predecessors, and have a real reason to be concerned about healthcare costs and how to invest for a 30-year retirement. And we now have more personal responsibility – at least many of us have more personal responsibility for our retirement plan than those who went before us. Therefore, it's never been more important to have a plan for the first five years of retirement and the last five years so that you don't run out of money before you run out of breath.

What's Different About Retirement?

The main reason retirement income planning is different from retirement accumulation planning is the additional risks we will face during retirement.

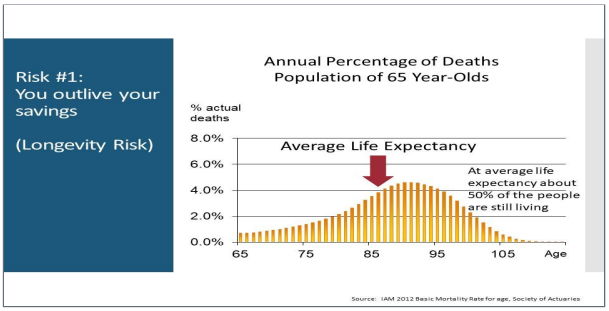
There are many of them, so we'll focus on the four primary risks here – retirement risks that we need to manage when creating a retirement income plan.

1. The risk you will outlive your savings is longevity risk.
2. Inflation risk is that your expenses increase faster than your retirement income over time.
3. Health and long-term care costs could become your largest expense.
4. Investing risks and your investments' income and real values fluctuate or decline over time.

Let's take a closer look at these four primary risks and what you can do to manage them.

The risk of longevity

This bell-shaped curve represents the percentage chance of dying at a certain age if you're 65 today. We see that while the average life expectancy for a 65-year-old is approximately 87 years of age, only 4% of the people died when they're supposed to be based on the average. But at the average life expectancy, about 50% of the people are still living. Remember that averages are acceptable for statistics but are based on groups of people. They have nothing to do with you or me when planning for retirement or other needs.



So, how long should we plan to live in retirement? This is a critical question that everybody needs to evaluate on their own. But today, one thing's certain. People live longer, and most, if not all of us, should be thinking about planning to live 10 to 15 years beyond the average life expectancy. You need a cushion because if you live long, you'll

have it. If you don't need the cushion, then your children can have it.

A 65-year-old male has a 95% chance of living to age 70. A female has about a 96% chance of making it to age 70. For a couple both age 65 today, there is almost a 100% chance that one of them will make it to age 70. At age 85, which is close to an individual's average life expectancy, there's more than an 80% chance that one of a couple will still be alive. At age 95, there's about a 30% chance that one of the couple will still live. Those are pretty good odds.

And if one of you does get there, who is it most likely to be? Yes, women do live longer than men typically, but that's not a guarantee. Nevertheless, did you know that 73% of women age 85 and older are widows? And 2/3 of Americans over age 65 living in poverty today are women. But since we don't know for sure who will die first, you need three plans. One for if you both live longer than expected, which of course, is the plan you want. But also, you need one for if he dies first, and also if she dies first. And realize that when a spouse passes away, expenses don't get cut in half.

The risk of inflation

In this case, we're looking at an individual or couple whose expenses in year one of retirement are $60,000. Over a 30-year retirement at just 2% inflation, their expenses come very close to doubling: they're $106,000 after 30 years. And if inflation happens to be at 3% – and by the way, inflation for retirees typically is higher than when you're working because typically healthcare costs at 3% inflation are $60,000 – their expenses more than double to $141,000.

Over time, inflation works against us precisely in the same way that compounded interest works for us during the accumulation years. In this case, however, the longer you have inflation working against you, the harder it works against you due to the compounding effect of inflation. It happens a little bit each year but begins to add up over 25 to 30-year retirement. So, when it comes to your retirement savings, it's essential to be thinking more about preserving purchasing power than conserving capital.

Healthcare and long-term care costs

Forty percent of men 65 and older will need long-term care during their lifetime; it's 58% for women. And the average number of years men will need long-term care is 1.5 years; 2.5 years for women. So, only about half of the people need long-term care, but I guess you have to ask yourself if you're willing to flip a coin to determine if you'll need it or not. And although the average need for long-term care is less than three years, those with related cognitive needs and who are otherwise physically healthy may require long-term care assistance for five to 10 or even more years.

You could do everything right, but without a long-term care plan, your savings could be wiped out in a short amount of time. If you're single, that may not be as big a concern as those who are married, but everyone should want to have some control over their long-term care needs.

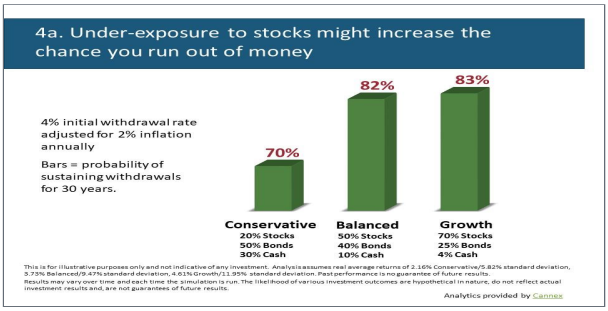
Assisted living base rates in the United States today are $48,612 a year. Home healthcare, if you have somebody coming to your home to take care of you is $23 an hour. And for a long-term care facility, the average semi-private room costs just a little over $90,000, getting close to $100,000 per year.

Market risk

Underexposure to the stock market and experiencing losses in the early years of retirement can impact your retirement income plan.

A systematic withdrawal plan or SWP is where we start by taking 3% or 4% from savings in the first year of retirement and then increase that amount every year for inflation. It may be sustainable over a 30 to 40-year retirement, depending upon your equity allocation. To state the obvious, the higher the initial withdrawal rate, the lower the chance of sustainable lifetime income.

For example, assume you take an initial withdrawal rate of 4% of the portfolio adjusted for inflation. On $100,000, the initial amount taken in the first year would be $4,000, and that dollar amount would be adjusted for inflation each year after that. Again, we're using a 2% assumption for inflation. The bars show the probability of savings lasting 30 years when invested in a conservative, balanced, or growth portfolio, going from left to right. When looking at the conservative portfolio, lower returns and inflation has a more significant impact on your ability to beat longevity risk, and savings only has a 70% chance of lasting 30 years.



But when investing in a balanced portfolio, there's an 82% chance of the portfolio lasting 30 years. Of course, the challenge is that to increase the chance of success, you need to assume more short-term market risk. You can see that when investing in the growth portfolio, there's only a 1% increase in the percentage chance that savings will last 30 years when compared to the balanced portfolio (83% compared to 82%). So, this tells us that, at some point, further increasing a portfolio's market risk would not be very helpful. The one thing about a SWP is that regardless of how we invest, there are no guarantees.

How Much Will I Need in Retirement?

How much you spend in retirement has the most significant impact on how long your savings will last. Studies show that the average American today should replace 75% to 80% of their income when they retire.

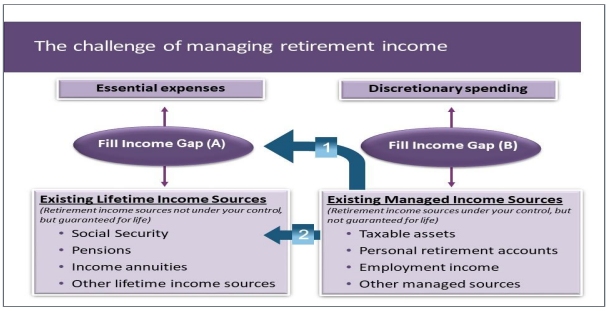
If we assume your pre-retirement income is $60,000, let's assume we'll replace 80% of your income so you may spend $48,000 a year in retirement. That may sound like a good and easy way to determine your retirement income needs, but unfortunately, it's not very helpful. The problem with this approach for determining the most crucial

retirement planning question you need to answer is that, again, it's based on an average. A person or couple who currently makes $150,000 may only need to replace 60% of their income, and a person or couple who makes $30,000 may need to replace 100% of their income.

So, by going through a budgeting process, you'll be able to come up with the best answer to how much you'll need in retirement. It's critical to do this. Otherwise, it's just a guess, and if you guess wrong, you won't realize it in the first five years of retirement but instead in the last five years when it's too late to do anything about it.

This is an important slide because, more than anything else, it helps us understand how to create a retirement income solution. It starts by taking budgeting for retirement one step further by breaking down your expenses into the two categories of essential expenses and discretionary or lifestyle expenses.

If you don't have enough lifetime income sources to meet your essential needs, then the first challenge is to fill "Gap A," as indicated on the slide; and you fill that with other lifetime income resources.



Once we have a plan to fill "Gap A," we need to see if we have a "Gap B," which is the gap that may exist between our discretionary or lifestyle spending goals and the rest of our nest egg, which may include your 401(k), IRAs, other savings and investments you have. For a while, as you transition into retirement, it may also include employment income.

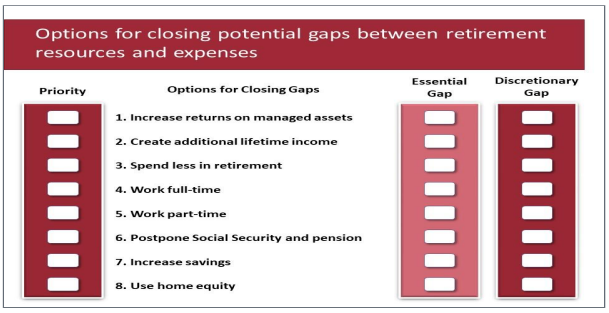
If after that you have filled "Gap A" but still have a "Gap B" when you're getting ready to retire, you have an essential question to answer, which is, "Do you want to retire now with the savings you have or save more to have the retirement you want?" The answer to that question determines what you do next.

As you determine your income needs in retirement, keep in mind that you may have different phases of spending patterns. For most retirees, determining how much you will spend in retirement doesn't mean figuring what you'll need in the first year of retirement and then plan on the same spending increase for inflation each year. If you think about it, retirees typically spend more in their early years of retirement because they're, again, traveling and checking things off their bucket list. We call these the "go-go years," and it's when your discretionary expenses typically are going to be at their highest. At some point, however, although you maintain a high degree of activity, spending slows down, and you enter what we call the "slow-go years."

And then, for the latter stage of retirement, you will become less active as health and other issues impact your mobility, and you're in the "no go years," which doesn't mean by the way you can't have a "go-go" moment once in a while. It is also important to realize that in the "no-go years," if there are higher than expected health or long-term care costs and you have not managed those risks, your total inflation-adjusted expenses could be higher than they were in the "go-go years."

Options for Closing Retirement Income Gaps

You may have gaps between your essential needs and lifetime income sources or between your discretionary needs and managed income sources. Here are the eight options to consider for closing retirement income gaps. Once you determine which options are on the table and off the table, you can then determine how to prioritize them and use them to fill essential and discretionary needs. In many cases, it's going to be a combination of options that you need to consider and adopt.



Option one is to increase returns on managed assets. Although it would be difficult to fill a five or 10-year income gap by just adjusting how we invest our retirement resources, it's always going to be a good place to start. Many retirees like to avoid the stock market in retirement, and I get it; they want to preserve everything they earned and not take risks. But as we saw earlier, underexposure to stocks might increase the chance that you run out of money. By trying to avoid the short-term risk of the stock market, the tradeoff is that you're just trading stock market risk for longevity, inflation, and maybe even a little healthcare cost risk. The key is to find the right balance in your investment portfolio to manage all the risks and give you the best opportunity for success over a 30-year retirement.

Option two is to fill gaps is to create additional lifetime income. As we saw earlier, when looking at the importance of using lifetime income sources to fill essential needs, one option for creating lifetime income was an annuity. So, how does an annuity work? Well, it's a lump sum investment typically with an insurance company, and then the insurance company will send you a check every month for life. But the payments stop upon the death of the owner or the joint annuitant. Why do they work? Some people live longer than others, and those who live longer receive the unused investment of those who die earlier.

Annuities work just like your life, car, and homeowner's insurance. All insurance allocates premium payments for those who don't experience a risk to those who do. In this case, we're insuring against longevity risk, and people who don't live as long help provide lifetime income to those who live longer. In this case, the tradeoff is if you happen to be one of those who die earlier, you may not get back all the money you invested in your annuity. For that reason, many people don't like annuities. But remember that we need to plan for if we live longer more than if we die earlier.

Also, there are other advantages to using an annuity to create lifetime income for essential needs. Generally, you can safely receive more money annually for a dollar annuitized than what you could take if you managed it yourself. And the insurance company must keep paying you even if you live so long that your initial investment runs out.

Option three for closing income gaps is to spend less in retirement. Do you want to retire now with the savings you have or save more to have the retirement you want? It comes down to either decreasing your spending goal so that you can retire earlier or continuing to work so that you can keep growing your nest egg.

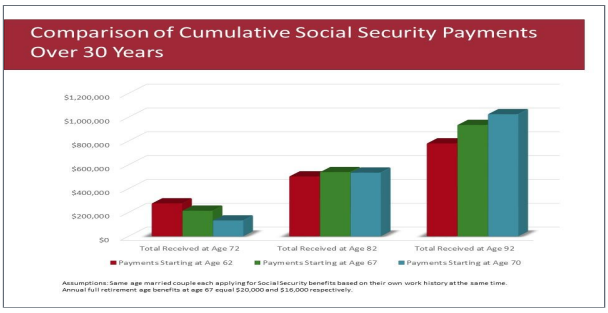
Options four and five are to retire later or work part-time. Just remember that if you decide to continue working during retirement, you must ask yourself if work will be available and will you be able to continue working. One study found that the percentage of workers planning to work in retirement is 74%, but only 25% of retirement age people were still working.

Our sixth option for closing potential income gaps is postponing Social Security and pension benefits. In this example, we'll evaluate the Social Security decision, but many of the same considerations apply to those with a pension. Social Security benefits can still start as early as age 62 and be delayed to as late as age 70. The amount received relates to your full retirement age, or FRA, which today is going to be age 66 or 67, depending upon when you were born. If a retiree's FRA is age 67, they will receive 30% less than their FRA amount if they start their benefits at age 62, and 20% less at 64.

The key factors to consider are certainly health and longevity risks. Another factor is the breakeven point between the total income received if you took less starting at age 62 versus waiting until your full retirement age. That breakeven point is around age 78. In other words, if you start Social Security at age 62 and receive $14,000 per year for 16 years until age 78, it will be very close to the same amount you'll receive if instead you start benefits at age 67 and receive $20,000 per year for 11 years until age 78.

If you tell me when you're going to die, I'll tell you when to start Social Security benefits. If only it were that easy. Did you know that if you were born after 1943, you could receive an 8% increase in monthly benefits for every year you delay taking Social Security benefits past your FRA up to age 70? This can make a big difference because you would now receive $24,800 a year at age 70 versus $20,000 at age 67. By the way, there's no benefit to taking Social Security benefits after age 70. You wouldn't want to wait later than that.

The decision for when to start Social Security benefits can be rather complicated, but – and this is important for most people – delaying Social Security can probably have the most significant impact on filling income gaps. Let's look at an example. The red bars represent the combined totals of a couple with a full retirement age of 67 receive from Social Security if they started their benefits at age 62. The green bars are the totals received if they started at 67, and the blue bars are the total they received if they waited until age 70 to start.



Notice that at age 72, the total amount received when starting benefits at age 62 still beats the totals from age 67 or 70. That makes sense because if they waited to age 70 to start, at age 72, they've only received benefits for two years. But at age 82, in the middle, things start to change. They've passed that breakeven point at about age 78, so the total received by waiting to start at age 67 is more than if they started at 62. Because delaying benefits until age 70 gives them so much more per month than if they started at 62 or 67, the blue bar to the right shows a total amount received at age 92 of almost $1,000,000 compared to a little more than $900,000 for the green bar. They will receive less than $800,000 for the red bar, again, showing if you started at age 67 or 62, respectively.

The seventh option for closing potential income gaps is to save more for retirement. If you remember to think of your savings as last in, last out, meaning that the last money you save before retirement will be the last money you spend later in retirement or the money your children will inherit. For example, if you saved $50,000 from age 60 to age 65, it may grow to as much as $135,000 at age 80. That amount could go a long way toward filling future potential income gaps in the "slow-go years."

Our last option for filling retirement income gaps is tapping into home equity. For most people, their biggest asset is their home, especially when their mortgage is paid off. One question to ask yourself is to consider downsizing your home either at the time of retirement or in the future. If that answer is yes, let's assume you have a $500,000 home with no mortgage; if you downsize to a $300,000 home, that could free up $200,000 for your retirement spending goals. Some may also decide to rent after selling their home so that they don't have the responsibility for ongoing maintenance, or to give them the flexibility to move again later if needed. The third way of tapping home equity today is to obtain a reverse mortgage.

Essentially, a reverse mortgage is exactly what the name implies. Instead of paying the bank a monthly payment and increasing your home's equity, the bank pays you monthly, and your equity decreases with each payment. Many are reluctant to use home equity for living expenses. But for those who want to stay in their family home and find themselves running short on resources later in retirement, a reverse mortgage can be a wonderful option for creating needed income. Going back to the idea of selling

your home and downsizing, a certain kind of reverse mortgage will also help you buy a new residence with the reverse mortgage, freeing up some of the proceeds from the sale of your prior home for retirement expenses.

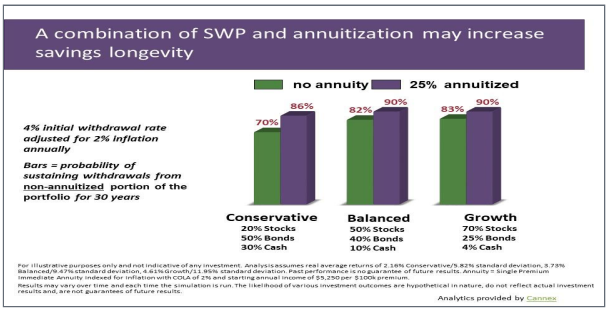
Using a reverse mortgage is also another way to think about paying for potential long-term care needs of one spouse while allowing the other spouse to continue living in the home. Certainly, there are fees to consider when purchasing a reverse mortgage. But one of the benefits is that some reverse mortgages are federally insured so that when you leave your home, you never have to pay the bank more than its value.

How to Create a Retirement Income Plan

When it comes to creating a retirement income plan, figuring out how to convert retirement resources into income is where the rubber meets the road.

Remember we talked about a systematic withdrawal plan or SWP for withdrawing funds from your managed asset sources. We start by taking 3% or 4% of your savings in the first year of retirement and then increasing that amount annually for inflation.

To create more lifetime income for essential needs, we also talked about the benefits of using an annuity to fill "Gap A." Something else to consider is that it's not an either/or decision. Just like when we want to diversify our investments when saving for retirement, it's probably a good idea to think about how we can diversify our retirement income plan by using a combination of both a SWP and an annuitization to help us get the best of both worlds. Let's see how that might work.



In this slide, the green bars indicate the percentage chance of various portfolios lasting 30 years when using an initial withdrawal rate of 4% and adjusting for 2% inflation.

The purple bars show that by purchasing an income annuity with 25% of the savings, we have created a guaranteed income source to pay for essential needs, and we have also potentially increased the percentage chance that remaining non-annuitized savings will last 30 years. How can that happen? Well, remember that in addition to creating a source of lifetime income, another advantage of the annuity is that you can safely receive more money annually for a dollar annuitized than what you could take if you managed it yourself.

So we're getting a higher percentage of income than 4% from the annuity, and therefore we can take less than 4% of the remaining savings. As a result, when looking at the conservative portfolio, we see that there's a 70% chance that the portfolio will last 30 years without the annuity. But when adding the annuity to the mix, you have a source of guaranteed income created with 25% of the savings, and the rest now has an 86% chance of lasting 30 years. We've now created a bar that says there's a 100% chance that at least some of my savings will last 30 years.

For retirees whose only source of lifetime income is Social Security, and they are concerned about stock market risks, annuitizing a portion of the portfolio can dramatically increase how long the rest of their savings might last. Even the growth portfolio benefits, though not as much. And in this case, the percentage chance of savings lasting 30 years goes up from 82% to 90%. Again, as before, there's not much additional benefit for taking the additional risk of the growth portfolio.

Key Takeaways

Retirement planning is not one-size-fits-all. Your specific plan for making sure you don't run out of money before you run out of breath will require an evaluation of your particular facts and circumstances to determine what potential combination of retirement income solutions is best for you.

It's impossible to predict what will happen over a 30-year retirement. Undoubtedly, not everything is going to go as planned. Therefore, after retirement begins, you'll want to make sure you periodically review your plan and adjust as needed. Each of these events listed – and others – can significantly impact your retirement plan's success. Remember that there's no "set it and forget it" button when it comes to retirement plans. Retirement can truly be the best time of your life if you plan for it to be.

Remember, goals without actions are just dreams; action without goals just passes the time. But goals with action is what changes your life.

Managing Retirement Income: What Your Clients Need to Know – Kevin Seibert

About Kevin S. Seibert, CFP®, CRC®, CEBS, Managing Director, International Foundation for Retirement Education (InFRE)

Kevin joined the International Foundation for Retirement Education (InFRE) in 2003 and serves as Managing Director. He works closely with retirement plan sponsors, providers and advisors to offer retirement income management training and InFRE's Certified Retirement Counselor® (CRC®) certification. He has more than 30 years of experience in retirement benefits, financial planning and financial education.

Kevin also continues to create and present customized financial planning and preretirement education programs. He talks extensively to audiences nationwide and is regarded as an informative and motivational speaker.

Prior to InFRE, Kevin was co-founder of Balance Financial Services, a Chicago area financial planning and consulting firm. Before founding Balance in 1988, he worked as a consultant for William M. Mercer, Inc. and was responsible for the

implementation of compensation and employer provided benefit plans. Kevin was also Director of Marketing for a New Jersey based company specializing in the development and distribution of defined contribution and financial planning programs.

Kevin is recognized as a Certified Financial Planner (CFP®), a Certified Employee Benefits Specialist (CEBS) and a Certified Retirement Counselor (CRC®). Kevin earned his MBA in finance from the University of Wisconsin and received his undergraduate degree in finance from Miami University of Ohio. Serving as Treasurer and Executive Board member for the Greater Chicago Chapter of the International Society of Retirement Planners, Kevin played an active role in providing on-going retirement planning education to professional and employer members of this organization.

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21st Century Longevity, Health, & Wealth: Preparing for Health Care Risks in Retirement

Heather Homes, Founder and CEO of Genivity

Editor's note: This article is an adaptation of the live webinar delivered by Heather Homes in 2020. Her comments have been edited for clarity and length.

You can read the summary article here as part of the 3rd Qtr 2020 Retirement InSight and Trends Newsletter, worth 1.0 CE when read in its entirety (after passing the online quiz.)
You may also choose to take the full length course 21st Century Longevity, Health, & Wealth: Preparing for Health Care Risks in Retirement for 1.0 hour continuing education (CE) credit.

By Heather Homes, Founder and CEO of Genivity

I come from the healthcare industry and spent much time working in hospital systems around the world, working directly with physicians and patients. One of the interesting things that I learned was that regardless of the healthcare system, I consistently saw people delay making critical-medical-care decisions because they were afraid of the cost, not realizing that delaying care today could be much more catastrophic from a cost perspective later. I became interested in this intersection between health and wealth and am excited to share what I have learned.

Top Ten Trends in Wealth Management

The Aite Group publishes research each year about where they see the direction of the industry. One of the planning and wealth management opportunities in 2020 and beyond is for advisors to support their clients around longevity-planning and thinking through different strategies and planning opportunities. Also in the 10 top trends is this trend of financial wellness, which used to be very popular in the workplace and has now jumped over now into the advisor's practice where leading advisors are thinking about ways to incorporate financial-wellness planning into their client's goals-based plan. I want to challenge everyone to think about how we can evolve our practice from planning for finances to planning for life. When I mean planning for life, that means planning for longevity and all the positive aspects of living longer, having more time in retirement, and then planning for health, which means planning for those active phases of retirement and those later slow-go years.

By doing this, you help shift those goals-based conversations to help guide the conversation across different life stages because all phases in life are impacted by health. When you shift the conversation to focus on longevity and health, you can better understand what is going on with the client and the client's family to help you better protect their assets based on these risks.

Three Key Challenges when Planning for Life

The first is longevity optimization. From there, you work your way into eldercare planning and that big lingering fear, which is out-of-pocket healthcare expenses.

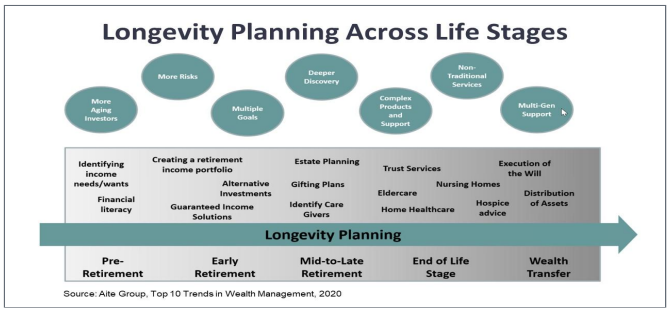
Regardless of how they perceive their health today, most say their retirement goal is age 65, regardless of whether they had good or poor health. When asked how many years they perceive their retirement lasting, the average answer for those in excellent health and good health was 20 years of retirement, or age 85. As you started to go down to fair and poor health, you see those numbers decrease. People in fair health expect they will live about 18 years in retirement, and people in poor health expect 14 years, or age 79.

This matters because all of them are underestimating how long they are potentially going to live. Other research shows that most Americans in the U.S. will grossly underestimate their life expectancy. The average male and average female in the U.S. have a 50 percent probability of living to age 87 if they are a man, and age 90 for a woman, or as a couple, one of them might live to age 94. People guessing between ages 79 and 85 could potentially be putting their plans at risk. It is a difficult conversation when clients are stuck on thinking that they do not need their plan to go out that long.

Regardless of the person's perceived health or how they classified their health today, what does that mean in reality? From fair health, to poor health, to good health and excellent health, all of them plan to retire at 65. But the reality is that most people end up retiring much sooner than they were planning. Sixty-six percent retire earlier than their goal of age 65.

Thirty-eight percent of Americans today are forced out of the workplace earlier than they plan because of ill health or having a health issue. Seventeen percent of people have to retire sooner than they plan because they have to step in and provide caregiving for a loved one.

What does this all mean for you if you are thinking about bringing longevity planning into your practice? It helps you reach across the life stages. And once again, the Aite Group put together this information. It illustrates very well the opportunities advisors have to position themselves as a longevity planner at all different phases from pre-retirement through to that end wealth transfer with clients and their households.



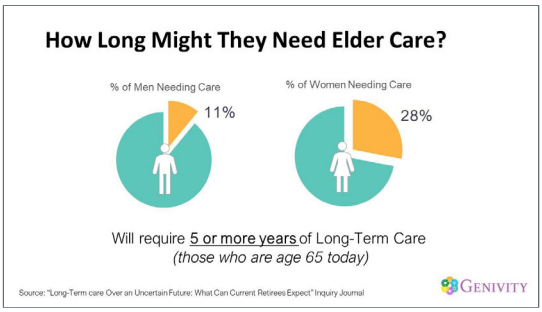
Elder Care Planning

The reality is that two out of three people require elder care at some point in their lives. Often the disconnect is not thinking or believing or understanding that they will potentially need care.

Sixty-five percent of parents agree, and their adult children agree, that they should be having conversations to discuss their parents' wishes as a family. Who is going to provide care? Is there a financial component for those adult children? Even though both agree that this conversation is necessary, 72 percent disagree on the level of detail. Eleven percent of kids are walking away from the conversation, feeling that the conversation did not go into the depth needed.

This is a great opportunity as the adviser to position yourself between the household, between the parents and those adult children, and help them facilitate that conversation. Show them how through the planning you are doing with the parents that either this is taken care of or if there is a need for the adult children to step in to help them understand that. The reality is that when adult children and parents walk away from these conversations, a quarter of those adult children walk away believing that they will have no responsibility for their parents and 97 percent of the parents believe they will not need their help. Reality is different.

Often people wonder that when it comes to elder care, do they need to plan for it, and for how long? The average numbers are well-discussed. What is the probability of a client needing more extended levels of care? For people aged 65 today, the need for five or more years of long-term care is much lower for men at around 11 percent, but for women, up to 28 percent of women will need five or more years of care.

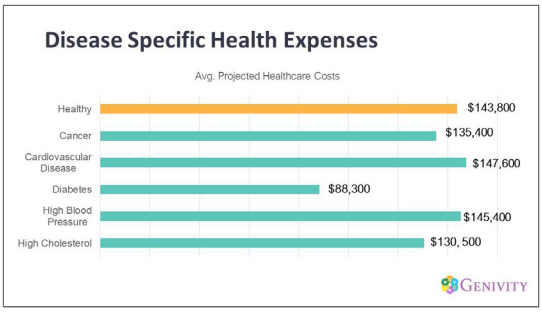


Circling back to that adult children conversation, who will be there to care for your clients? Seventy-two percent of parents, regardless of thinking if there is a financial impact on their kids, believe that one of their children will be the person who can be the go-to person they can count on. Forty percent of those children have no idea that their parents think – are counting on – them to be the ones to do it. Siblings need to understand who is going to be that lead caregiver. This is an opportunity for you as the advisor to speak with your clients because the lead caregiver is often the alpha child in the family. Knowing whom that identified person is and establishing that trusted relationship can help move the needle if you think about wealth transfer, family dynamics, and family relationships.

Out-of-pocket Healthcare Costs

Baby Boomers' health fears are clear. Fifty percent of high-net-worth pre-retirees are terrified of healthcare costs and what that will do to their retirement and financial well-being. Almost 40 percent of Boomers are unsure whether their advisor is knowledgeable about this issue, so they are not bringing it up to them. So, this is your chance to engage in these conversations and let your clients know that this is an important conversation area and that you are there to help them understand and address it.

What does "addressing" it mean? Fidelity does some great research about the expected average annual healthcare expenses for a couple. But no client is average, and no couple is average. When you start looking at different health conditions, health, in general, is not average. Healthcare costs in retirement can look different based on your health risk or the health condition you have today. There is a wide range between cancer, cardiovascular disease, and diabetes. We tend to see shorter life expectancies for people with diabetes.



Being a healthy individual has one of the higher-projected healthcare costs in retirement. Many people think that because they are healthy, that means my healthcare expenses will be a lot lower. The reality is that this is not the case. In retirement, you will see higher healthcare costs for healthy individuals because they are living longer and will need to pay for healthcare longer. They will also be doing more preventative health care.

What Does Genivity's HALO Measure?

How do your clients think about their family's longevity? How do you incorporate that into their plan? From there, then you can plan for elder care and then future out-of-pocket healthcare expenses. This leads to what we do at Genivity, which is to help advisors help their clients understand in a personalized way how health and longevity can impact their finances.

The standard way of estimating longevity is to use an actuarial table, which does not create the personalization level needed as it is a population-based average. By creating personalization and matching the individual client to people similar to them, we can help create better data and assumptions to plan future healthcare expenses.

We create a digital experience for clients built around grounded science, sound research, and data. This drives everything behind the algorithms that create a very individual personalization for each client.

Advisors can use our interactive digital assessment directly with their clients and prospects to help those concerned about longevity and health understand their risks. It is designed to take the client less than five minutes to complete.

In the typical client scenario, we start with background information to establish a baseline for calculating their personalization. Depending on how the client answers, different questions will reveal additional questions to create even more personalization. Each question along this path directly impacts the outputs in our results.

The second phase of the assessment focuses on the most critical lifestyle factors that can impact how long you live. Many people think that their genetics are their destiny, which is a big misconception. The reality is that lifestyle and environment play a huge role in how your health progresses and whether different diseases you might have a genetic risk for come to fruition.

Exercise is incredibly important, and smoking has the most significant negative impact on longevity, which is probably no surprise. Diet has a smaller impact. Alcohol is probably one of the more complicated calculations because depending on how much you drink and your age and gender, that can be a positive or a negative at different phases of your life.

The last component is emotional support. Who is in your care circle? This has an incredibly strong tie to future longevity. For clients who do not as strong as a network, this can be a great area to help them try and optimize their life for creating these connections.

In the health section of the assessment, we start by understanding their healthcare mindset. How are they utilizing the healthcare system today? Because if they are lower utilizer, their out-of-pocket expenses will be a little bit lower; if they are a higher user of the system, they'll experience higher heathcare costs.

We also look at health conditions, which are important for you to think about in your client conversations. The 15 most common chronic health conditions in the U.S. have a strong family-history component to it, so we want to understand their risk from their immediate family level as well as for themselves.

Once someone answers yes to a question, we get more personalized from there. We look at Alzheimer's and Dementia. We look at diabetes. We look at heart disease, and we look at a stroke.

You can use this in your practice without HALO because understanding clients who have a family history of these risks can tell you if it is a first-degree relative, meaning their parents or their siblings. This significantly increases their probability of having that disease. Costs will be different based on different diseases. But understanding that can help you start to understand where their future costs could go and what are some of the steps to take.

Then we start tying things back to their retirement goals. We create personalization of cost based on the state that they want to retire in. In the last part of our assessment, our algorithm has already done an initial risk assessment of the client.

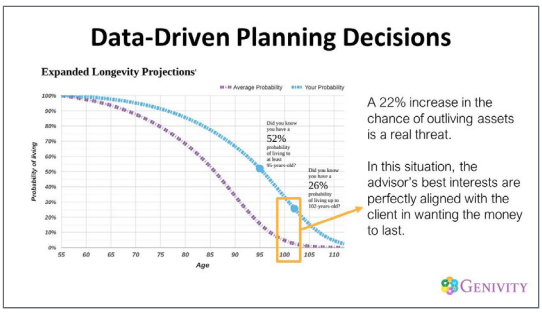
Your client can complete the assessment in the privacy of their own home, which is great during COVID for digital engagement, or it is something that you can do either screen sharing or together side by side. We focus on their longevity health span and helping them get into the frame of mind of living longer than they might expect.

A Case Study with Jane and John

Jane and John are pre-retirees. Jane makes $75,000 a year; John makes $250,000. They both want to retire at 65 and in Florida.

Jane has an incredibly healthy lifestyle. She has several family members that have had extended longevity. From her longevity healthspan, we can see that she has a 50 percent probability of living to be aged 96 or older, so she is already well on that high average. But let us look a little bit deeper at her projections.

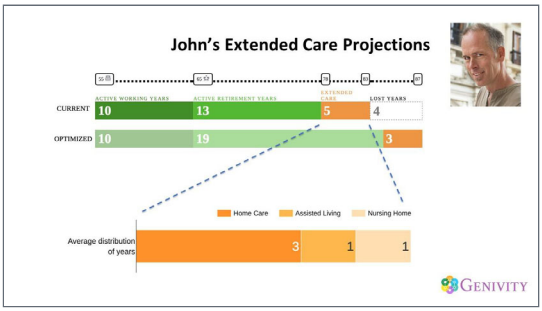
The blue line on this chart is Jane's personalized probability. Now we match her to women just like her, same ethnicity, family health-risk profile, and lifestyle choices. You can see where this starts to make a pretty big difference.



In this case, is she has a 26 percent chance of living age 102. The average woman has approximately a three percent probability of living that long.

This is where you can step in to see where she feels most comfortable from a risk perspective. How far out would she feel comfortable moving the plan and the decisions around that to help her meet these goals? This is also a great way for you to sit on the same side of the table in an unbiased way to discuss different investment decisions.

Now let's look at John's profile. John has a few opportunity areas that he could optimize. John does not like exercising. He hates his fruits and veggies. He likes to live life his way. But he does have a family history of heart disease. So far, he has been a pretty healthy guy, but we know that some risks are lingering for him that could create some financial issues.

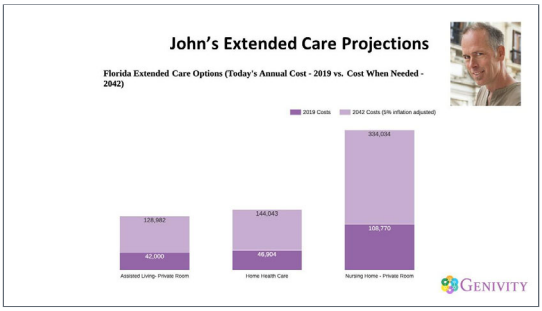


Let's take a closer look at John's personalized longevity health span. The first line is what his longevity healthspan is today. We are projecting for him 13 active retirement years once he retires at 65, with around five years of increased levels of slowing down. And he has some opportunity years to optimize if he made some lifestyle, exercise, and diet changes.

Below this is the optimized scenario. If John made changes today, he could have six more active years to spend with Jane and possibly reduce his slow-go years down to three. Also, he has further optimized his life expectancy.

So what about the slow-go years? HALO takes those five years and breaks them out in distribution around how many years of more home-based care is he likely to need, where possibly Jane takes care of him before he needs more stepped-up levels of care. We project three years of home-based care before needing to step up to some level of assisted living or home healthcare, and then later, a level of nursing home support.

We then estimate costs in today's dollars and future dollars with inflation, with different care levels so that John and Jane can come up with a scenario that makes the most sense for them.



As an advisor, this provides the information you can then input into your planning software to create more personalization for both Jane and John.

Key Takeaways

There is no avoiding it. At some point in our lives, we will experience a health crisis. That could be our own or a loved one. There is no escaping that this will happen and the impact it can have.

Suppose you wait until a health crisis happens. In that case, there may not be time to have these difficult conversations around health when there is no longer an opportunity to look at alternative solutions to help them plan and prepare. You want your clients and their adult children to know that you are the first person to call when a crisis like this happens because you will help them then figure out the financial parts of it and how they are going to take care of it.

As someone who personally has gone through a health crisis with a loved one, having that open and ongoing dialogue with an advisor long before a crisis happens made all the difference. This creates a loyal next-generation client for you.

Health is the one thing that will bring a family to their knees and stop everything and bring them together regardless of wealth level. While families can be funny about how they talk about money or what they are willing to talk about as it relates to money, health tends to be the area that is more of a uniting factor for them. This is a way for you to be that connector across the different family members.

I hope you understand that the future of goals-based financial planning must include planning for health. I would like to see that talking about health and planning for longevity – just like in the medical world where we talk about the standard of care for treatments – becomes the standard of care for goals-based financial planning. This approach is something you can actively incorporate into your practice and use as a key way to differentiate yourself from your competition.

Part of that planning for life and planning for health needs to include longevity, as people are living longer. There is no escaping this part of it. Longevity planning is your key to having a positive conversation about how a client wants to spend those active years in retirement and celebrate the things they have been able to accomplish and do. Health and longevity are facts. None of us are escaping them. You can approach them from two sides: from the more scary aspect that we are all going to be facing this, or once you understand and start thinking about longevity and health, it allows you to plan for what you want to accomplish in life.

Whether that means retiring earlier or retiring later, or so they have more time to achieve the things they want to do; whether it is making those lifestyle changes today, so they have a more active retirement, or they have greater longevity … all of this helps you help clients understand what they can do to achieve their retirement lifestyle goals. This is an empowering conversation to make people feel good and shows the value of the strategies you have been putting in place for them.

Dr. Coughlin from MIT's AgeLab does much wonderful research about longevity and the impact on health and financial planning. He wonders if financial advisors can fulfill their fiduciary responsibility to clients today without an intimate understanding and knowledge of their health aspects that impact their physical and financial lives.

By starting these conversations, bringing them into your plan, you can put that stake in the ground that shows clients how you are different, shows prospects why they should be working with you, and helps set your practice up for this next phase of holistic planning.

About Heather Homes, Founder and CEO of Genivity

Heather is Founder and CEO of Genivity, an innovative WealthTech SaaS platform at the nexus of health and wealth for long term financial planning and wealth management strategies. Heather leads the vision for Genivity and focuses on product design, business development, and fundraising. She brings a decade of sales, marketing and market development experience to Genivity from her time in the medical device industry working for Medtronic & Abbott Vascular.

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Making Retirement Sustainable: Revisiting the Role that Income Annuities Can Play (2015)

Branislav Nikolic – Vice President, Research, CANNEX

Branislav Nikolic is Vice President of Research where he leads research and development in the fields of retirement income planning and investment analytics. This includes custom research and consulting relating to the evaluation, purchase and utilization of annuities.

He is a speaker at seminars organized by various industry organizations and represents CANNEX at IRI, NAFA, LIMRA, CLHIA, and the Fields Institute for Research in Mathematical Sciences.

Editor's note: We obtained permission from CANNEX to reprint their 2015 research paper that explains the math behind how annuitizing a portion of assets benefits a client's retirement income and legacy. This paper builds on a 2002 paper by Ameriks et al that showed the effects of annuitizating 0%, 25% and 50% of a portfolio. The findings in both of these papers are incorporated into the Certified Retirement Counselor®'s (CRC®) study guides and other InFRE advisor and client retirement income education materials. Also see the "Managing Retirement Income" article in this quarter's issue of Retirement InSight and Trends by Kevin Seibert, CFP®, CEBS, CRC® that demonstrates how to communicate the benefit of using an annuity in a retirement income plan to clients and employees.

Every financial advisor knows that as your Baby Boomer clients plan for retirement, one of their main concerns is: How can I make sure my savings last for as long as I need them to? The question is anything but trivial, as today's retirees are facing the twin uncertainties of both market performance and (increasing) longevity – as well as reduced savings levels compared to previous generations, and the disappearance of the defined benefit pensions that formerly provided a lifetime of guaranteed income in retirement. In short, your retiring clients face a set of challenges that previous generations simply did not. As a result, when near-retirees turn to their financial advisors for help, they are looking for solutions to ensure they can sustain their desired standard of living in retirement without running out of funds.

One option to increase retirement income sustainability is to add a source of retirement income that cannot be outlived. In a 2001 article for *The Journal of Financial Planning* entitled "Making Retirement Income Last a Lifetime," Ameriks et al. concluded that adding annuities to a retirement nest egg reduces portfolio failure rates, which is the risk of running out of money during your lifetime.[1] Their analysis found that withdrawals from a retirement portfolio "can be sustained with more certainty for longer time periods, by adding the risk-pooling characteristics of an immediate annuity to the overall retirement portfolio."

Does that conclusion still hold over time, when many of the underlying conditions have changed? Some 15 years later, in this article we revisit the question of whether the benefits of including a lifetime income annuity in a retirement plan persist in the current economic environment.

Specifically, we evaluate the merits of purchasing an annuity with part of the retiree's nest egg in an environment characterized by low interest rates and, in turn, low(er) annuity payout rates (than in 2001), using annuity quotes obtained from CANNEX.[2] We measure the benefit of partial annuitization by using a conceptual "retirement income frontier" that traces out the trade-offs between the *sustainability of a retiree's lifetime income* and her *expected financial legacy*, using the framework put forth by Milevsky.[3]

"Annuitizing a Portfolio:" What and how?

First, let's review what is meant by "annuitizing" (part of) a portfolio. In this article, we mean taking a portion of retirement savings and using it to purchase a single premium income annuity, or SPIA. While the SPIA is often overlooked in retirement income planning, it can provide a tremendous boost to the overall sustainability of a client's retirement: for a one-time premium, in return the SPIA provides a lifetime of income. (Thus it functions much like a workplace defined benefit pension.)

When contemplating both retirement income and income annuities, the SPIA is frequently shunned – by clients and advisors alike – despite the benefits it can offer, because the purchase decision is irreversible and thus the asset, although it produces income, is illiquid. This point of view, however, sidesteps both the *mortality credits* that retirees acquire from pooling their assets, which provide a greater yield than products with similar levels of guarantee; and the *lifetime nature* of the SPIA income, which provides a hedge against an unknown and potentially longer-than-expected lifetime. Ultimately, while a reliable source of retirement income may be replicated with investments in fixed income products, a SPIA nevertheless provides a higher income than what is typically available from other non-pooled, non-life-contingent assets or products. In fact, given the relative advantage that the SPIA can offer to retirees, the low take-up of lifetime income annuities by retirees is known as the "annuity puzzle"– a riddle which has been discussed at length by both academics and practitioners for decades.

Retirement Portfolio Sustainability: Does adding a SPIA (still) help?

In this article, we will explore the impact of adding a SPIA on our client's **Retirement Sustainability Quotient** (on one hand) and her **Expected Financial Legacy** (on the other). It is the trade-off between these two outcomes – increased sustainability or increased financial legacy – that is traced out by our conceptual retirement income frontier.

Our analysis assumes that the client has her financial assets consolidated in either (a) a managed account, defined as a portfolio of stocks, bond, ETFs, mutual funds or any combination thereof, or (b) some combination of managed account plus SPIA, in which the annuitized portion mimics a pension to

provide lifetime income starting at retirement. We further assume that our client has a good grasp on what her future income needs will be, on an inflation-adjusted basis; that her spending needs will grow at a constant 2% per year, and that she chooses to manage inflation risk by purchasing a cost of living-adjusted SPIA. Further, in assessing our case study client's retirement income plans and when the client has a combination of a SPIA and portfolio assets in a managed account, in our analysis the account withdrawal is coordinated with the annuity payment to match the desired spending amount.

We define retirement income sustainability as a function of first, the fraction of income annuitized and secondly, the "lifetime ruin probability" of the managed account. The lifetime ruin probability, in turn, is defined as the probability the investment portfolio will be exhausted (that is, fully depleted) while the retiree is still alive.

Mathematically, the Retirement Sustainability Quotient (RSQ) takes the following form:

$$RSQ = (1-p)(1-f_{SPIA}) + f_{SPIA} = 1 - p(1-f_{SPIA})$$

where p represents the ruin probability and f_{SPIA} represents the ratio of the annuitized income to the client's desired income.

In the above equation, we are measuring retirement sustainability as the weighted average of the success probabilities ("success" defined as the cases in which the retirement income portfolio is able to support the desired withdrawals during the client's lifetime). Note that the annuity, by its very nature, has a ruin probability equal to zero (assuming no default risk of the insurance company); while the investment account has a "non-zero" ruin probability.[4]

As everything in finance, there is always an economic trade-off – and the added retirement sustainability that is produced by annuitization comes at a cost that we can view through the prism of the client's "Expected Financial Legacy," which is the wealth that is available to be left to heirs.

We define Expected Financial Legacy (EFL) more formally as the expected value of the funds left over upon the retiree's death, measured in today's dollars. More precisely (and technically), our client's EFL is calculated by aggregating the present value of the probability-of-death-weighted account balances over time. Here we note that portfolio account balances may veer below zero; implying that the client, instead of leaving a financial legacy, is instead borrowing funds in retirement (possibly from the people who would otherwise be heirs!). In our examples, when borrowing is required we assume the cost is equal to the long-term interest rate – but we caution the reader that in the extreme (and in real-world scenarios), borrowing may not be available or the cost may be higher than our assumptions.

Together, the two concepts of Retirement Sustainability and Financial Legacy form a frontier that helps us to better understand and model the income sustainability and financial legacy trade-off introduced by the inclusion of life annuities in the client's retirement portfolio.

Methodology: Modelling Legacy and Sustainability along the Retirement Income Frontier

Now, on to our model. In our case study, given the illiquid nature of the SPIA, and the irreversibility of the SPIA purchasing decision, we limit the allocation to SPIAs to be no more than 30% of our client's initial wealth. With the remaining (non-annuitized) portfolio, we consider three kinds of asset allocation models: *conservative*, *balanced*, and *aggressive*.

We also consider two approaches:

- Approach 1: SPIA + No Change to Asset Allocation ("SPIA + No Change")

  In approach one, we assume our client maintains their asset allocation (whether conservative, balanced or aggressive) even after purchasing the annuity. That is, we do not adjust the allocation of the managed assets in response to the annuity purchase.

- Approach 2: SPIA + Modified Asset Allocation ("SPIA + Modified Portfolio")

  In our second approach, we proportionally adjust asset allocations within the client's managed account such that entire retirement portfolio conforms to the overall risk profile of our retiree (whether conservative, balanced or aggressive), taking the allocation to the SPIA into account. This means we change the asset allocation of our client's investments once the client has purchased an annuity, viewing the annuity purchase as a bond-like allocation on the balance sheet.

In our analysis, we use a stochastic modelling approach which incorporates two separate sources of uncertainty (namely, market returns and remaining lifetime) to explore how adding a single premium income annuity to a range of "traditional" investment portfolios affects both retirement income sustainability and financial legacy. (Although our focus is on the single premium income annuity, or SPIA, we note that a similar analysis could be carried out with other types of income annuities, such as deferred income annuities, or even variable or fixed indexed annuities.)

While the Retirement Sustainability and Financial Legacy calculations we are interested in can be carried out using Monte Carlo simulations, we chose instead to use the numerical and analytic methods that are available in QWeMA NumeRIcs®, a set of analytic tools which equip financial specialists to explore and solve questions in retirement income planning.[5]

From a technical point of view, for our analysis, market dynamics are stochastically modelled and we

assume that asset returns are normally distributed – and thus asset prices follow a lognormal distribution. Finally, in modelling remaining lifetime for our client, we utilize the Gompertz-Makeham Mortality model calibrated to RP2000 actuarial tables for calculating retiree life expectancy that are readily available from the Society of Actuaries.[6]

In our case study, we chose a client who is a 65-year old healthy female retiring immediately. She desires to spend 5% of her initial wealth annually, adjusted in subsequent years for inflation, which we assume is 2%. As noted earlier, we consider three asset allocation models to perform our analysis, namely:

- **Conservative Portfolio**: 30% Equity and 70% Fixed Income
- **Balanced Portfolio**: 60% Equity and 40% Fixed Income
- **Aggressive Portfolio**: 70% Equity and 30% Fixed Income

All calculations are performed on an initial wealth value of $1 which allows us to scale the client's legacy value by her initial wealth.

The capital market parameters used in our model are based on J.P. Morgan Asset Management's 2016 Long Term Capital Market Assumptions.[7] Specifically, we chose U.S. Large Cap equity returns and U.S. investment-grade corporate bonds for the equity and fixed income returns, respectively. We assumed the long-term borrowing cost was 2.5%.

Tables 1 and 2 summarize the capital market assumptions used in the case study and the return and volatility assumptions for our three (conservative, balanced and aggressive) portfolios.

Table 1. Capital Market Assumptions

Asset Returns & Volatility Assumptions		
Fixed Income	Return	4.5 %
	Volatility	6.5 %
Equity	Return	8.1 %
	Volatility	15.5 %
Correlation Coefficient		26 %
Portfolio Management Fees		1 %
Long Term Discount Rate		2.5%

Table 2. Portfolio Return (Net of Fees) & Volatility of Returns Assumptions

	Annual Return	Volatility of Returns
Conservative Portfolio	4.6 %	7.3 %
Balanced Portfolio	5.7 %	10.3 %
Aggressive Portfolio	6.0 %	11.5 %

In our analysis, we consider the impact of an annuity purchase on the client's retirement sustainability and financial legacy if she annuitizes up to 30% of her initial wealth – and we calculate and display the outcomes for no annuitization, and annuity purchases using 5%, 10%, 15%, 20%, 25% and 30% of her initial wealth. (In this way, we can evaluate the differences in outcomes from annuity purchases of varying amounts, up to our cap of 30%.) For the annuity purchase, we have used the average of the A.M. Best's A++ rated quotes, obtained from CANNEX, for a healthy 65-year-old female annuitant. This gives us a quote of $410 per month ($4,920 annually or 4.92% on the $100,000 purchase) for a $100,000 purchase, indexed at 2%.[8]

With these assumptions in place, we are ready to examine how adding an annuity (specifically a SPIA), in varying proportions, to our client's portfolio impacts the sustainability of her retirement income, and her expected financial legacy. We'll start with the conservative asset allocation, then move on to the balanced and aggressive portfolios.

For each allocation, we first show a table that displays numerically how varying the portfolio allocation to different combinations of investments and a SPIA impacts the sustainability of the retirement income as well as the expected financial legacy for our client, both *without* making changes to the original allocation ("SPIA + No Change") and *with* modifying the investment allocation to ensure the holistic or overall allocation conforms to the client's conservative, balanced or aggressive risk orientation ("SPIA + Modified Portfolio"). We then graphically display the legacy and sustainability results for our combinations of portfolio plus SPIA, along the conceptual retirement income frontier we described earlier – showing how "no change" and "modified" portfolio allocations have varying sustainability scores (the "RSQ"). Finally, we present a chart that shows the sustainability and legacy outcomes for each combination of investment portfolio and annuity purchase, both with and without portfolio modifications.

Table 3. Results for a Conservative Portfolio

	Allocations to Investment Account & SPIA		SPIA + No Change		SPIA + Modified Portfolio	
	Investment Account	SPIA	Retirement Sustainability	Financial Legacy	Retirement Sustainability	Financial Legacy
1	100 %	0 %	74.0 %	0.214	74.0 %	0.214
2	95 %	5 %	75.2 %	0.203	75.6 %	0.206
3	90 %	10 %	76.4 %	0.191	77.3 %	0.197
4	85 %	15 %	77.6 %	0.180	78.9 %	0.189
5	80 %	20 %	78.8 %	0.169	80.4 %	0.180
6	75 %	25 %	80.0 %	0.157	82.0 %	0.172
7	70 %	30 %	81.2 %	0.146	83.5 %	0.163

Figure 1. Comparison of SPIA + No Change vs. SPIA + Modified Portfolio: Conservative Allocation

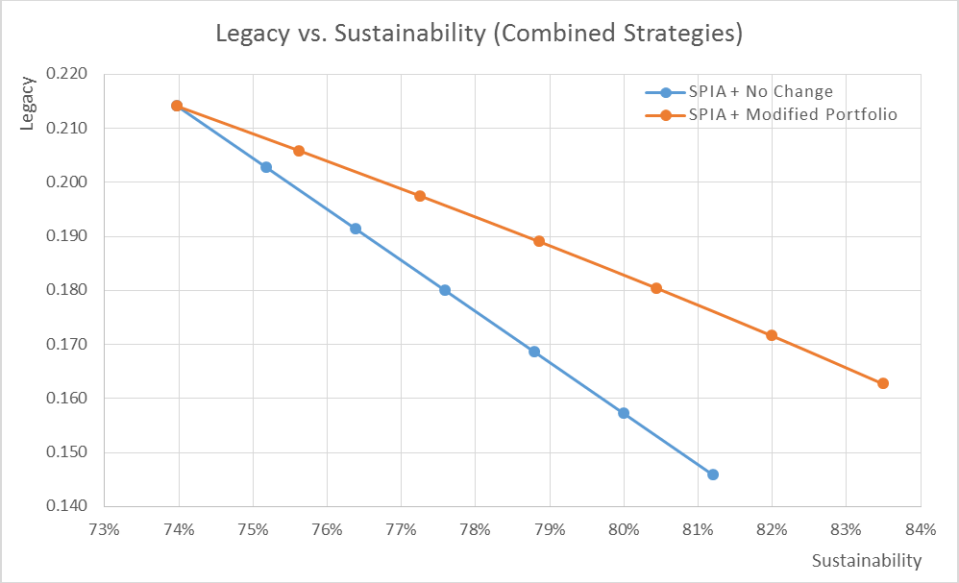


Figure 2. Sustainability & Legacy vs. Annuity Allocation (Conservative)

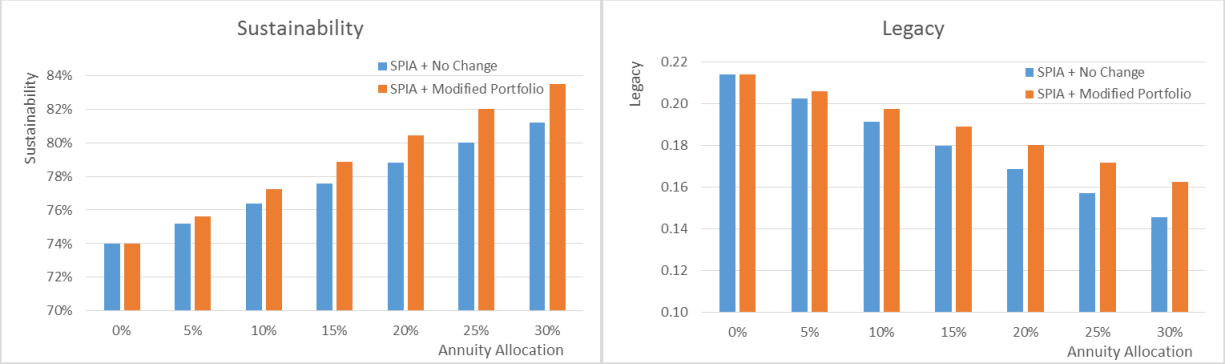


Table 4. Results for a Balanced Portfolio

	Allocations to Investment Account & SPIA		SPIA + No Change		SPIA + Modified Portfolio	
	Investment Account	SPIA	Retirement Sustainability	Financial Legacy	Retirement Sustainability	Financial Legacy
1	100 %	0 %	79.4 %	0.260	79.4 %	0.260
2	95 %	5 %	80.4 %	0.247	80.6 %	0.250
3	90 %	10 %	81.3 %	0.233	81.7 %	0.239
4	85 %	15 %	82.3 %	0.219	82.8 %	0.227
5	80 %	20 %	83.3 %	0.206	83.8 %	0.216
6	75 %	25 %	84.2 %	0.192	84.7 %	0.203
7	70 %	30 %	85.2 %	0.178	85.6 %	0.191

Figure 3. Comparison of SPIA + No Change vs. SPIA + Modified Portfolio: Balanced Allocation

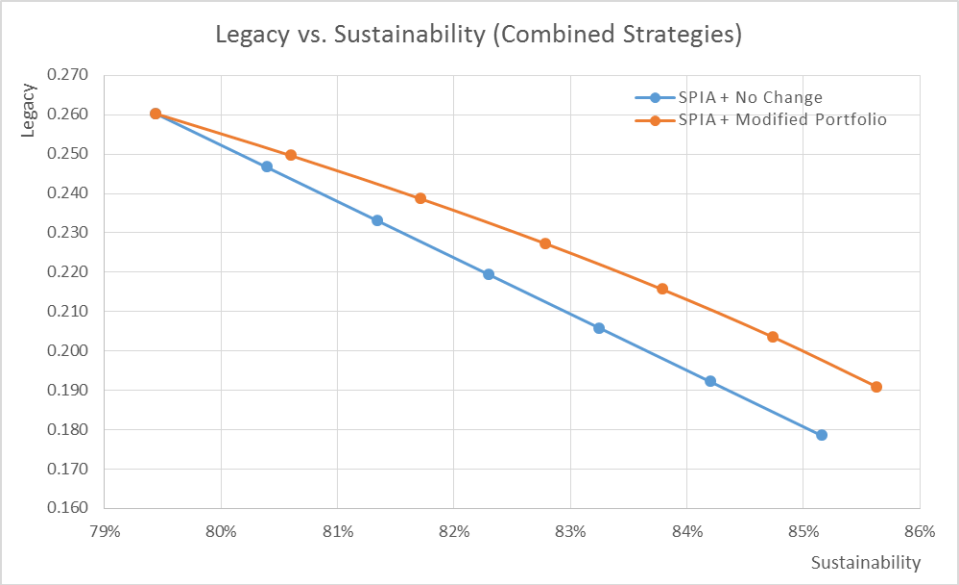


Figure 4. Sustainability & Legacy vs. Annuity Allocation (Balanced)

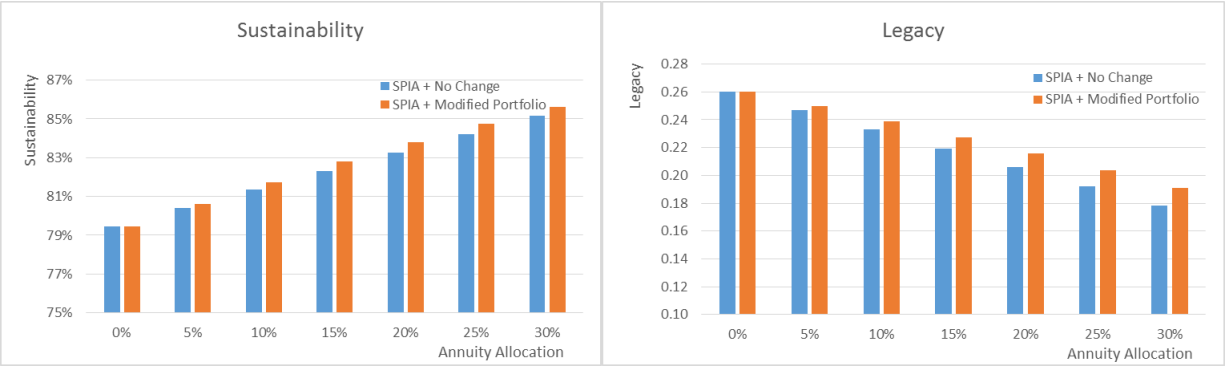


Table 5. Results for an Aggressive Portfolio

	Allocations to Investment Account & SPIA		SPIA + No Change		SPIA + Modified Portfolio	
	Investment Account	SPIA	Retirement Sustainability	Financial Legacy	Retirement Sustainability	Financial Legacy
1	100 %	0 %	80.0 %	0.269	80.0 %	0.269
2	95 %	5 %	80.9 %	0.255	81.0 %	0.257
3	90 %	10 %	81.8 %	0.241	82.0 %	0.245
4	85 %	15 %	82.8 %	0.227	82.9 %	0.233
5	80 %	20 %	83.7 %	0.213	83.7 %	0.220
6	75 %	25 %	84.6 %	0.199	84.5 %	0.207
7	70 %	30 %	85.6 %	0.185	85.3 %	0.193

Figure 5. Comparison of SPIA + No Change vs. SPIA + Modified Portfolio for an Aggressive Allocation

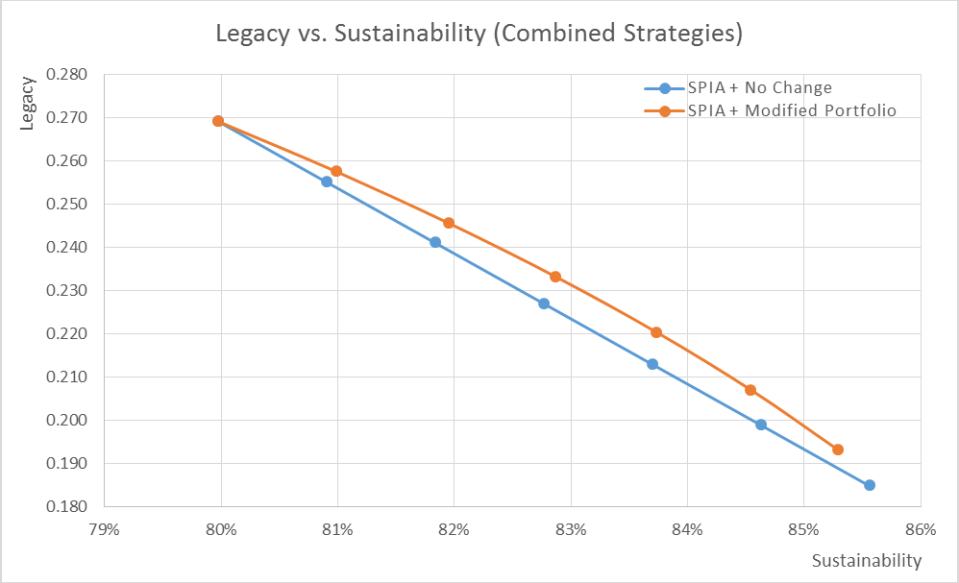
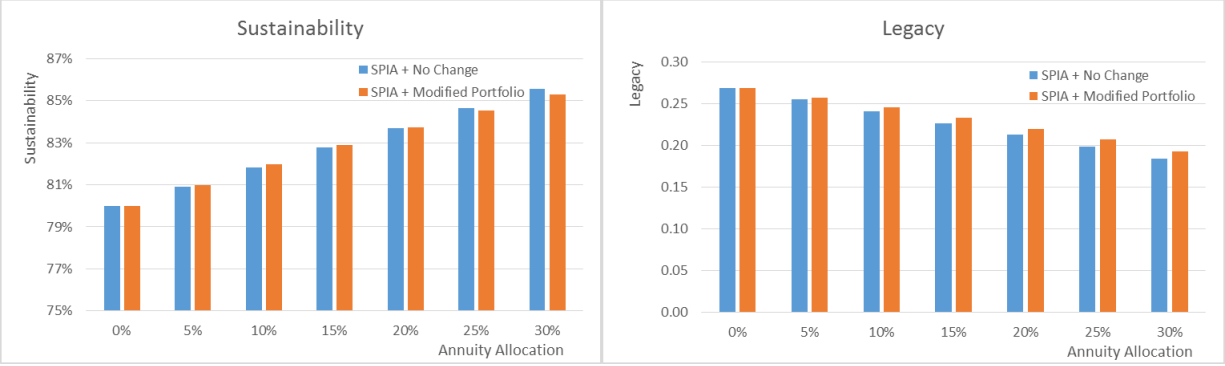


Figure 6. Sustainability & Legacy vs. Annuity Allocation (Aggressive)



Results and Discussion

After this analysis, what have we learned? Here is the main takeaway: when annuities are added to a portfolio, the sustainability of a client's retirement income plan is increased – both when the asset allocation within the investment portfolio is unchanged, and when the asset allocation is modified to match the client's overall risk profile.

Additionally, when the client purchases an annuity and her portfolio is modified to match her overall risk profile (the "SPIA + Modified Portfolio" cases), *both the legacy and sustainability of her strategy are improved* – whether the investment allocation is conservative, balanced or aggressive. This result is explained by the fact that annuity allocation, acting as a portion of the fixed income allocation of the retirement portfolio, allows our client to take more upside exposure (more equities) within her managed account.

Taking this specific point further, we note that when the client has an aggressive investment portfolio, beyond a certain annuity allocation the "Modified Portfolio" strategy does not provide any additional benefit over the "No Change" strategy. (See the allocation of 10% to annuities in portfolios three and four on Table 5, and note the sustainability and legacy scores for these two portfolios.) This is explained by the fact that at a certain point, taking additional risk within the investment account exposes the client to significant downside that cannot be overcome by further annuity purchases – as that will move the client away from an overall aggressive investment profile. Note that given our assumptions and parameters, the highest sustainability scores are obtained by annuitizing 30% of the initial portfolio while adopting a balanced portfolio allocation and *modifying* the portfolio to take the annuity allocation into account (Table 4), and from annuitizing 30% of the portfolio while adopting a conservative portfolio allocation *without modifications* (Table 5) – both give an RSQ score of 85.6%.

Finally, the analysis presented so far is for a female aged 65. How do the results change at earlier or later ages? In Table 6, we show values for a female age 60, and age 70; compared to our original 65-year-old client.

Table 6. Results for Additional Ages (Monthly SPIA income F60 = $353.60 and F70 = $472.05)

Age	Investment Portfolio Asset Allocation	Product Allocation		SPIA + No Change		SPIA + Modified Portfolio	
		Investment Portfolio	SPIA	Sustainability	Legacy	Sustainability	Legacy
60	Conservative	100.00%	0.00%	85.7%	$ 0.344	86%	$ 0.344
		95.00%	5.00%	85.8%	$ 0.322	86%	$ 0.324
		90.00%	10.00%	85.8%	$ 0.300	86%	$ 0.304
		85.00%	15.00%	85.9%	$ 0.278	87%	$ 0.284
		80.00%	20.00%	86.0%	$ 0.255	87%	$ 0.264
		75.00%	25.00%	86.0%	$ 0.233	87%	$ 0.244
		70.00%	30.00%	86.0%	$ 0.211	88%	$ 0.223
	Balanced	100.00%	0.00%	88.1%	$ 0.376	88%	$ 0.376
		95.00%	5.00%	88.2%	$ 0.352	88%	$ 0.355
		90.00%	10.00%	88.3%	$ 0.329	88%	$ 0.333
		85.00%	15.00%	88.4%	$ 0.306	88%	$ 0.311
		80.00%	20.00%	88.5%	$ 0.282	89%	$ 0.289
		75.00%	25.00%	88.5%	$ 0.259	89%	$ 0.267
		70.00%	30.00%	88.5%	$ 0.235	89%	$ 0.244
	Aggressive	100.00%	0.00%	88.1%	$ 0.382	88%	$ 0.382
		95.00%	5.00%	88.2%	$ 0.358	88%	$ 0.360
		90.00%	10.00%	88.3%	$ 0.335	88%	$ 0.338
		85.00%	15.00%	88.4%	$ 0.311	88%	$ 0.315
		80.00%	20.00%	88.6%	$ 0.287	88%	$ 0.292
		75.00%	25.00%	88.6%	$ 0.263	88%	$ 0.269
		70.00%	30.00%	88.7%	$ 0.240	88%	$ 0.246
70	Conservative	100.00%	0.00%	85.7%	$ 0.344	86%	$ 0.344
		95.00%	5.00%	86.9%	$ 0.331	87%	$ 0.333
		90.00%	10.00%	88.2%	$ 0.319	89%	$ 0.323
		85.00%	15.00%	89.4%	$ 0.306	90%	$ 0.312
		80.00%	20.00%	90.6%	$ 0.293	91%	$ 0.300
		75.00%	25.00%	91.8%	$ 0.280	93%	$ 0.289
		70.00%	30.00%	92.9%	$ 0.267	94%	$ 0.277
	Balanced	100.00%	0.00%	88.1%	$ 0.376	88%	$ 0.376
		95.00%	5.00%	89.1%	$ 0.361	89%	$ 0.363
		90.00%	10.00%	90.1%	$ 0.346	90%	$ 0.350
		85.00%	15.00%	91.1%	$ 0.332	91%	$ 0.337
		80.00%	20.00%	92.0%	$ 0.317	92%	$ 0.323
		75.00%	25.00%	93.0%	$ 0.302	93%	$ 0.309
		70.00%	30.00%	93.9%	$ 0.287	93%	$ 0.295
	Aggressive	100.00%	0.00%	88.1%	$ 0.382	88%	$ 0.382
		95.00%	5.00%	89.0%	$ 0.367	89%	$ 0.369
		90.00%	10.00%	90.0%	$ 0.352	90%	$ 0.355
		85.00%	15.00%	91.0%	$ 0.337	91%	$ 0.341
		80.00%	20.00%	91.9%	$ 0.322	91%	$ 0.326
		75.00%	25.00%	92.9%	$ 0.306	92%	$ 0.311
		70.00%	30.00%	93.8%	$ 0.291	93%	$ 0.296

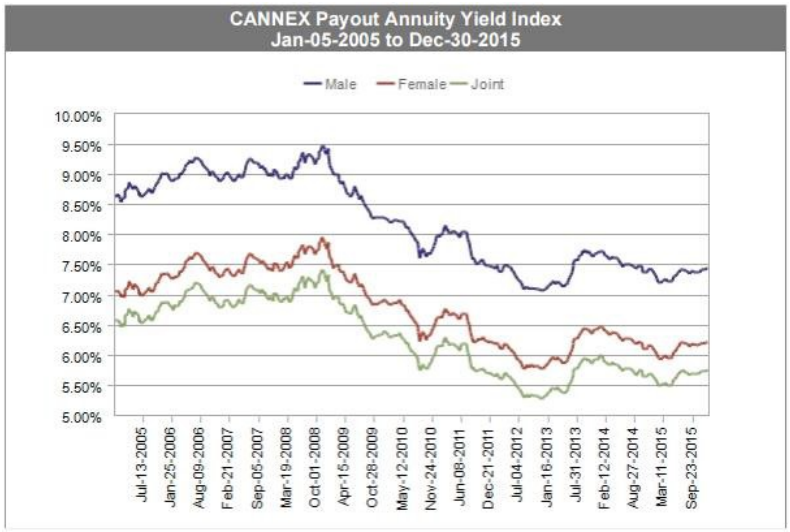
Conclusions: The Impact of Annuities on Retirement Income Portfolios

Our results confirm that including a SPIA into an individual's retirement portfolio improves retirement sustainability. This improvement is obtained through a reduction in the lifetime ruin probability of the

investment account as the portfolio is not burdened with higher withdrawals and is thus more sustainable. That said, this improvement comes at a price, which can be observed through the reduction in client's financial legacy.

More broadly, this result has persisted even when interest rates and thus annuity payout rates are lower than in earlier periods, such as when the original analysis by Ameriks et al. was concluded. Figure 7 provides an illustration of annuity payout rates in the United States from January 2005 to the end of December 2015.

Figure 7. CANNEX PAY Index – United States



What is the implication for retirement income advisors and their clients? When designing retirement solutions, it helps to focus on the client's retirement goals: is the client looking for a sustainable income, or is she interested in maximizing a potential legacy? Given that both market returns and remaining human lifetime are random, we propose the use of the Retirement Sustainability Quotient and Expected Financial Legacy (RSQ and EFL) concepts to help advisors evaluate the costs and benefits of including annuities within a retirement income portfolio. We also recommend that advisors and clients consider *product allocation strategies* to help determine an optimal portfolio on the sustainability-legacy frontier – a topic for a future publication.

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[1] Ameriks, John and Veres, Robert and Warshawsky, Mark J., Making Retirement Income Last a Lifetime. Journal of Financial Planning, December 2001. Available at SSRN: http://ssrn.com/abstract=292259

[2] CANNEX specializes in gathering, compiling and redistributing comparative information and calculations about products and services offered by financial institutions, including, in the U.S., guaranteed lifetime income products such as income annuities. Go to www.cannex.com for more information.

[3] See, for example, Peng Chen, Moshe Milevsky, "Merging Asset Allocation and Longevity Insurance: An Optimal Perspective on Payout Annuities". Journal of Financial Planning, June 2003. Available at http://www.ifid.ca/pdf_workingpapers/WP2003JUN.pdf.
[4] We note that our model could incorporate insurer credit ratings, or assume diversification via the purchase of annuities from various issuers. We have not included either of these as they are not central to our main message.
[5] More information on QWeMA NumeRIcs is available from CANNEX at www.qwema.ca.
[6] See https://www.soa.org/research/experience-study/pension/research-rp-2000-mortality-tables.aspx.
[7] Available at https://am.jpmorgan.com/us/institutional/library/ltcma-2016
[8] Quotes obtained on December 30, 2015 from www.cannex.com.

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