

Informal Discussion Transcript
Concurrent Session 3C: Challenges and Strategies for
Financing an Increasingly Long Life

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DAVID G. BOETTCHER: I will be acting as moderator for the session on the challenges and strategies for financing an increasingly long life. We are going to use some polling questions, and so there is a link that you need to use there. If you want to, just take a look and make sure you have the link; if not, the link will show up on the slides. We just have some questions that we would like to poll the audience on as we go along. If you signed on to the conference website, you will have an email that has the links right in the email, but you have to be hooked up into the website here at the hotel to make sure that works. So if you just want to, take a look.

I am the chief operating officer for Global Financial Solutions at RGA Reinsurance. GFS provides customized reinsurance solutions for longevity, investment and financial risks, and so this topic is of particular interest to me. We write a lot of longevity risk. We provide a lot of support to our clients in the retirement income space.

On today's panel, we have Vickie Bajtelsmit, who is a professor at the Department of Finance and Real Estate at Colorado State University, in addition to being one of the authors of the SOA sponsored paper of the same name as the session. Vickie has taught a wide variety of undergraduate and graduate finance courses, including financial planning, investments, corporate finance, insurance, risk management and entrepreneurial finance. She holds a Ph.D. in insurance and risk management from the University of Pennsylvania's Wharton School of Business, a J.D. from Rutgers University School of Law and a B.A. from the University of Virginia. Vickie will be presenting a summary of the paper.

Seated next to Vickie then is Ben Miclette. Ben is an actuary and colleague of mine at RGA who heads our Global Living Benefits Products Team at RGA and is tasked with the development of critical illness, disability income and long-term care reinsurance solutions for RGA worldwide. He is also the lead risk management officer for all RGA's morbidity products. Ben has more than 20 years' experience in the living benefits and health insurance markets in both Canada and the United States, as well as familiarity with a number of international markets. Ben will focus on the challenges and strategies of financing from the perspective of the need for long-term care coverage.

And then sitting next to Ben, we have Vekevia Tillman-Jones, who is a Certified Financial Planner from Financial Finesse. If you head to the website at Financial Finesse, it actually has an

interesting definition of financial wellness I would like to share. It says, “Financial wellness is a state where an individual has achieved the following: minimum financial stress, living below their means with no high interest debt, an emergency savings fund, income and assets protected from loss, and an ongoing plan to reach future financial goals.” So it sounds like a pretty nice retirement, actually. Anyways, on that note, I will ask Vickie to get us started.

VICKIE BAJTELSMIT: So to get started, we are going to actually do our first polling question. So this is your test if you can do this. If you got the email that was sent to you, the link that I have up here on the screen was in the email, if you just click on it. If not, you can type that into your Web browser, and it will take you to that polling question. We are just going to get a little flavor for what all of you think about your own longevity, to get us started here. I will give a minute before I go off of that screen, in case you need to type in that one. Okay, so you should see that when you go in there, and you can pick between those. Do I have to vote? Okay, why not? I can vote.

So we have 14 total votes. That does not look like everybody here, but I think what we are seeing is an audience that is pretty well informed about their own longevity, so 50 percent say 90 to 99, and 7 percent say 100 or over. So the project that I worked on with Anna Rappaport and one of my colleagues from Colorado State University—and Anna is the audience here—was looking at the issue of how to fund this longer retirement that we are going to have in the future.

This is a picture of a lady from Great Britain on her 100th birthday, lighting her 100th candle with her cigarette. She is very proud of the fact that she had smoked five a day from the time she was age seven, so she managed to avoid some of that senescence we heard about in the last session, I guess, but she did die just before her 103rd birthday.

What we are finding today, of course, is that a lot of people are living longer, and we are seeing those dramatic increases in life expectancy compared to previous generations, largely because we have managed to make it better in terms of infectious disease and so on. Whether we will be going much beyond our current level of longevity is something we do not know. The scientists will have to look at that. But my issue, coming from the finance standpoint, is whether the people today who are looking out at that longer period of retirement, longer life span, whether

they are financially prepared for that, and I think you probably know the answer to that—that we on average are not very well prepared for that. But let us talk about some of the details a little bit.

One thing interesting about life expectancy is we often hear, and the general public hears about, life expectancy from birth, but they start thinking about planning for it a little bit later, and by the time they do that planning, their life expectancy is actually quite a bit longer, on average. Just thinking about my own situation, born in the 1950s, I probably had a life expectancy at birth of about 80 years, and now that I am much older than that, I have a life expectancy that is about seven years longer than it was when I was born, because I made it this far. If I was planning, thinking about my overall average, I probably would have underestimated quite a bit what that later average would look like.

Some of the things we do know, and we have known for a long time, are that women live quite a bit longer than men and that there are large differences by socioeconomic group and by health status, and also by ethnicity. African Americans tend to live a few years less, Latinos live a few years longer, Asians live a few years longer on average. And we know that poorer people live a little bit shorter lives, which actually in their planning for retirement might turn out better for them.

What we also know is that most people are not planning to live as long as they actually will live. Now, the oldest old, because women live longer, the oldest old tend to be women. About two-thirds of the people over the age of 85 in the United States are single women, and if you get to the people over 100, about 85 percent of those people are women. We also know that women are more often living alone than men in old age and as a result are living on a single income, often on an income that has been depleted by their former spouse's last illness—the cost of that—or long-term care costs. So Anna and I are both quite interested in women's issues, and I think that one of the reasons looking at the oldest old was of interest to us was that these issues are not really general; they are much more issues of women and how they survive and pay for their expenses in old age.

So, we have a second polling question coming up here, and this has to do with retirement age. We know you think you are going to live to be 99 or 100 or more. At what age will you, or if you are already retired, at what age did you retire? So the polling number is almost the same, but

it has a little bit different number at the end. So I will give you a second to type that one in. So I am going to give myself—. It depends on how you define retirement. Anna is a good lesson in that; my coauthor retired from Mercer quite a long time ago but has been working at least as hard as me ever since then, so maybe work is a little bit elusive.

We have a pretty even distribution here between the people who say under 65, 66 to 70, 71 or older, and we had a couple of votes for never. I am wondering who those are. I was thinking 70, but in fact, my partner always says, “When you are officially retired from CSU, you will be working just as hard doing something else.” He knows that. Let’s move on here.

So the interesting thing about retirement is we are living these much longer lives than, say, 50 years ago, and yet what we find across all of developed countries and the United States, on average, [is that] the age of retirement has been declining, not increasing. You live longer, so you work a little bit longer, not just because you can, but maybe because you need to in order to finance your longer life span. But that is not actually happening, and that could be a combination of factors. Sometimes people would like to continue working, but they cannot, but it is also because leisure has a lot of value, and people would like to be able to have more time in leisure. Now, the downside, though, is that if you live longer and you retire earlier, you really need to have quite a lot more wealth to fund that period.

My grandmother lived to be 98 years old, and she retired from the U.S. Census Bureau at age 55 after working there for about 30 years. She had a federal pension that continued until she was 98, so she worked 30 years and collected a pension for 40-some-odd years in retirement. But today we do not have those types of pensions for a lot of workers, and I think this creates a challenge for saving sufficiently.

Now, longevity risk is something that lots of people at this conference and all over the world are very interested in. A lot of the research has focused on the issues for the providers of services and financing mechanisms for longevity—so pension funds, annuities, long-term care. Because most actuaries work in those kinds of environments, actuarial research has a lot of times focused in those areas. Our paper or project really was looking more at the individual—not so much how someone else is going to manage it, but how are those individuals managing, and what

kind of risks they are exposed to, as opposed to what the providers are exposed to. So this is a little bit different angle on things than you might have seen in some other papers and research that look at it. So household risk management we see as being a combination of a whole lot of risks.

I have worked a lot, and Anna has also, with the Committee on Post Retirement Needs and Risks, which funded this project, and we look at this as being risks from every angle. On your retirement resource side, you have risks associated with the future of Social Security, the future of Medicare, the health costs, insurance, housing, investments, all kind of things on that side, and on your needs side, you do not know really what your living expenses will be necessarily. You do not know what is going to happen to housing costs or health care, so there are a lot of pieces on the needs side, and you have to take all those things into consideration, which for actuaries, that is actually something you could do, but for the average person, that is a very difficult thing to do. So I am going to skip this polling question, because we have a lot of evidence of what people worry about on post-retirement risk, but in the interests of time, I am going to skip over this one.

We know from previous SOA research that people are worried about long-term care and health risks, and to a certain extent inflation, but I do not think that risk is as well understood. So this project is trying to look at how much you would need to have at the time you retire in order to fully fund all of those costs that are going to hit you over the next 30 or 40 years of retirement.

We look at this in a simulation model, so that we can look at a distribution of those outcomes, because there are risks, so you put all those risks together, and you have a risky distribution of outcomes. And because we can do it that way, we can look at what do you need to be 50 percent sure, what do you need to be 90 percent sure. Obviously we have the full distributions so we can look at all different things, but that is our focus of how we are going to report here. Then we look at it first with no risk management tools, just you start with your expenses, and you figure out what you would have needed to cover all of them, and then we add in and consider lots of different tools you could use to help yourself make it through retirement without running out of money—and that could be investments, it could be insurance products, it could be strategies like downsizing—and through the background of this model is improving all these risky distributions on your expense patterns in retirement. So we specifically incorporate investments, inflation,

longevity risks and mortality—although in this case, mortality is better for you than longevity in terms of how much it costs you—health risk and long-term care risk.

The format of it is a detailed cash flow forecast looking through all the years of retirement until both members of a couple die. So the mortality is separately analyzed for each member of the household, male/female, and we run 50,000 alternative life paths within each year; all these different things could happen to you, based on the probability distributions that we have imposed. The focus of this project—we actually did a couple of projects prior to this for the SOA, our reports are available on the SOA website—but this one is focused specifically on longevity issues.

So what we tried to do was look at what happens to the oldest old, so if you don't just live the normal life span, but you are the ones who are lucky and live extra-long, what products helped you the most, how much more do you have to have to finance that extra longevity. This has great interest to me, because having a grandmother two generations past who lived to be 98, and my other grandmother in her high 80s, I look at myself as maybe one of those people who could be in that upper distribution as I get to that age span, and I would like to see what I need to do.

So we compare our base case to the scenarios with all these different risk mitigations, strategies and products. Now, what I will say is, I am not going to report all of it to you here. It is a long report, and we do lots of different scenarios, so I am going to give you a little taste of it.

But let's start with a caveat about assumptions. This is a simulation model; we have to make assumptions about every single thing about these households. So what we start with is base cases that are kind of typical households. So our typical household number one is the median household based on income and wealth at the time we started this study, and household number two is a 75th-percentile household based on income and wealth, using Current Population Survey data. These households are not very wealthy. At the 75th percentile, the couple's income is only \$105,000, and the amount of savings they have in that just-before-retirement time period, not counting their home, we assume to be only \$250,000, and that is based on national averages. They do own their home, because on average, people in that age range historically have owned a home without a mortgage. In the more recent data that we are seeing come along now, that will be different, because even though maybe 80 percent or 90 percent of retirees owned their home

outright without a mortgage at the 2010 census, I think we are going to find that when we look forward, we won't see as many people without mortgages, because mortgage rates have been so low that people have gone and mortgaged them, so they had money to do other things. But in our model, we assume no mortgage. We also assume that they are eligible for Social Security on the man's earnings. That is still, on average, the way we see things from a Social Security standpoint—that the wife was the lower earner during her life span and therefore is still the lower earner, as she is still working at the time we pick up this family.

We set the goal as being able to retire without reducing their standard of living. It turns out we would actually do better if we allow them to say, "No, we are going to cut expenses," but in the beginning we are trying to say, "Can you continue your same standard of living?" so that is the base case. The risky distributions we imposed—all the details are in the paper that you can look at on the SOA website, but essentially, we would look at historical investment returns, which admittedly are probably higher than what we think will be going forward, but we use the historical numbers. And that actually means that what we are saying is, how much money you need is probably a lower limit, because if you get lower returns on your investments, you will need more money, but you also may be exposed to just as much risk, because even when the estimated return is lower on the stock market, the standard deviation is often just as high, so we still have a lot of risk exposure there.

We do assume that there is uncertainty about out-of-pocket medical expenses and the couples are covered by Medicare. Long-term care is a tricky one, and you are going to hear a little bit more about that from Ben. We don't have great evidence today yet about the incidence and length of long-term care stays. What we did was use a study out of Boston College that has given some modeling based on the data that is available, and we imposed that model on what we have here. So the risk is twofold: One is that you will enter long-term care, and that is age dependent, with a higher probability when you are older. And the other is, when you enter long-term care, you stay in it for a period of time, and we made a very simplified distribution of length of stay: in for three months, one year or until you die. Most people are entering at pretty old ages, so until you die might be three years, five years. But there are some people as we run the simulation who end

up in 20 years in care, which you could picture as the Alzheimer's case where they live longer than expected for Alzheimer's.

So it is still the probability distribution that comes out based on data. It does not look too bad, but it is still simplified and admittedly dependent on our assumptions that we have made here.

So just a little picture of the joint life expectancy—this is something actuaries understand quite well, but I think the average population does not. That is, if you are a married couple and we are looking at the second-to-die's distribution, the joint life expectancy of that married couple is much longer than the life expectancy of either of the two. So we see the green distribution there shows a much higher probability of living into the hundreds, and we see that in our simulation output, too.

So the base case is where we don't do any risk management; we just start out and say, "Here's our expenses. We are going to spend and collect the present value of all those expenditures and see how much we need." What this graph shows is, for the median household and for the 75th-percentile household, how much they needed to be able to cover all their expenses with all these risks. I think I can get my arrow to show there—you can see that the red set of bars is much lower because they were spending at a lower standard of living, because they were living within their means at that median income, and [for] the 75th-percentile household, you can see the amount they needed is higher, because we assumed they needed more to fund a higher standard of living. But another point to take out from this graph is [that] the distribution is much wider for the higher-income household. The reason for that is really Social Security. Because Social Security for that lower-income household, the median, replaces a much larger percentage of their pre-retirement needs than it does for the higher-income household, and that reduces risk tremendously, it narrows the distribution of the expected amount they needed at retirement.

Now let's go and look at some of the details about how much this costs and how different it is for the longer-lived tercile. So we broke up the outcomes, these 50,000 life paths, into different terciles—the one-third at the bottom, the one-third middle, and the one-third top, so that is by how long they lived. Let's look at the 50th—the red bars are the 50th percentile—so on average what you need, if you retired and claimed at 66, would be \$290,000. If I want 90 percent confidence,

which I actually do—I would like 95 percent confidence if I could have it—but if I want to be pretty sure I have enough, I would need to have \$430,000 saved at age 66 to be 90 percent confident of meeting all my expenses. But if I am going to live into the top-third tercile, I need \$520,000, and that is the average of that tercile, so some of the people needed more if they lived to be 106, let's say.

But if I delay retirement to age 70, then at age 66—because all of these are what I would need at age 66—I could have quite a bit less saved by age 66 if I am planning to work a few years longer, because I am going to save a little more, and I will have fewer years to cover in retirement, and we get a similar benefit for the older age group. So if you are going to live longer, retiring a little later helps a lot. There is not much difference in the 75th percentile in the main takeaways; just the dollar numbers are bigger, because they are funding a larger retirement.

So I have some mini-conclusions here: Just basically, you need more if you are going to live longer. If you delay retirement to age 70, things look a little better, you need a little bit less, and you need about one-third less if you can delay those four years.

So the next step, and I am only going to show you a couple of these in the interest of time, is to investigate some of the risk management methods that we could use. We did a whole lot of different scenarios, and originally we were not going to downsize, because obviously we said we wanted to maintain the standard of living. But it turns out that it is really hard to make a big dent in the amount of money you need at retirement without considering downsizing as one of the options. So we looked at downsizing different amounts of your percentages of your discretionary expenses. That is not all of your expenses, because most of your expenses are not discretionary, but it is the portion of them that are discretionary. Downsizing housing 20 percent or 30 percent—we looked at reverse mortgages and other types of annuity products. We looked at long-term care insurance and at some combination strategies.

Our general conclusion—this is consistent with work that Anna and I did earlier—is that if you focus on strategies that just reduce your expenses, it helps, but it does not offset the big risks. So I could downsize my expenditures, but if I have a huge long-term care event, I am going to run out of money. So what you have to do is think about methods that can really affect those

large risks that can basically bankrupt the household, and that is really difficult to do in today's marketplace, although there are new products that are coming out that may be more helpful.

So let me give you two examples from our different scenarios. One is some housing strategy examples. We did a lot of different types of things, including, at the extreme, going ahead and mortgaging your house right before you retire, so you have more cash, because the people, if you look at the average, don't have much money when they retire. That median household only had \$100,000, and \$100,000 is not even enough for the emergency funds that was on the Financial Finesse website as to what you need for financial wellness. So \$100,000 does not go very far.

What we did find, though, is that downsizing your house helps. That is one of those expense reductions. The way we define downsizing is you sell your larger home, you buy a smaller home, you incur some transaction costs, you invest the net gain, and that results in a reduction in your property taxes, insurance and maintenance costs going forward. No mortgage, because again, we are dealing with households that have complete equity in their home.

Reverse-mortgage scenarios—we looked at a number of different reverse-mortgage possibilities, as when you decided to do it, and I am reporting here is the one where you retire at either age 66 or 70 in our scenarios, and you delay doing the reverse mortgage essentially until a later date when you are probably more likely to need the money, but we did not do it as when you run out, you do the reverse mortgage. I actually think that is an interesting one to consider. We just said, "Do the reverse mortgage at 75." Now, during the time period between 66 and 75, your house increased in value. We did not have them using all their housing equity. We used the federal guidelines, so they are using a fairly conservative proportion of their housing equity, and we provided that it was a life annuity income. So that helps a lot on the out end for the last surviving spouse who has still the use of the home, has income coming in, and still has home equity. So that home equity is building, and the home equity still belongs to the homeowner in that scenario.

What we find here is that, although it is helpful, it does not completely solve the problem. But if you look down at my red circles, you see that, as compared to the base case, if you downsize housing, you reduce your needs at age 66 by about \$50,000. Now that is not a lot, because it is just the present value of your future expenses that you are saving, so it is not really saving you that

much, but it is a little. The reverse mortgage is a little more beneficial. That ends up reducing expenses by about \$130,000, and that is similar for that higher tercile in the savings. It is just a larger dollar amount because the person is living longer.

So now let's look at long-term care, and I know Ben is going to be spending most of his time talking about some of the nuances here. So let me first say that the type of product that we use is one that is similar to what is offered in a lot of employer plans today. It actually looks very similar to the one that my employer offers, where you have a maximum coverage for your lifetime, and it pays out on an amount per day, a maximum per day. So the way we approach this, since our length of long-term care risk is that you are either in for three months, for a year or for life, what we looked at was when you run out of your amount of your maximum, then you do not have it anymore. So our presumption was that the daily rate would cover what they needed for those days. So if a person goes into long-term care, let's say the first person to go in, the wife, if she is the one left, stays in the home. If a second person goes into long-term care or a widow goes into long-term care, then the home is sold, and those dollars go into the pot that they can spend on other things. But \$250,000 is the maximum.

We also tried higher maximums, because my perception was—at least my pre-perception was—that the problem was you did not have a big enough max. Very few people hit the \$250,000 max. So it did not make much difference whether we had a \$250,000 or a \$500,000 cap on lifetime expenses. It would make a difference to that person who did hit it, but on average, it did not seem to make that much difference. So we used the average annual cost of long-term care, which was, I think, in this model about \$80,000, and we assumed only full care. We did not look at first you go and have home care, and have a staged thing, because this is a simplified version of it.

So what we find here is that it does not make a huge difference, because this is an insurance product, and insurance tends to cost more than the expected loss, and this is a simulation, so all the possible scenarios are inside of it. I think the conclusion might be that a simulation is not the best way to look at whether long-term care is the best approach to solving the problem, but I will show you that when we do it in combination with some other strategies, it has a little bit better effect.

So here is an example where we combine—and this is my only combo strategy I am going to show you—we combined delaying retirement to age 70, because we know that had a big effect. We combined that with a reverse mortgage at age 75 and long-term care insurance that was on the wife only, because we did the husband only, the wife only, and both of them with long-term care. Given that, on average, the wife is more likely to end up in long-term care and be the last one in long-term care, which would mean the first one that is ill can maybe stay at home longer, we thought that long-term care insurance for the wife might be a strategy that would be helpful. And we do find that this combination of strategies significantly reduced the amount of wealth needed at age 66. It is interesting that individually, say, delaying retirement gave us the same bang for the buck, but as you look at what happens with long-term care, the long-term care product addition to this combination strategy actually has some benefit.

My theory on that is that what is happening is some of the expense-related issues are being covered by other things because we are managing these risks in a combination. We are getting almost like an enterprise risk management effect, for those of you who do enterprise risk management—that if you manage things together, there are some synergies that occur. I don't have the details of how that is happening exactly, and it does not work with all combinations that we do, but long-term care insurance seemed to be a good strategy with other things.

I guess I should back up and say one of our original ideas was to look at how long could people survive on the amount of money they actually have. Now, if you look at what this says, the household that is in the 75th percentile needed \$230,000 to be 90 percent confident. That household on average has \$250,000, so that looks pretty good, but that average 75th-percentile home would have enough to do that. But most don't do that, and when you run the model without these strategies, what happens is they run out in three or four years trying to cover all of their expenses. If they have not delayed [being] retired, if they haven't done something like a reverse mortgage, we can look at all different combinations. So the issue really is we need to have perhaps—and this is what we will hear from our last speaker—is better advising of people about the risks that they face.

In summary, I guess the introduction is all well known to everybody. We know we are

living longer. We haven't been retiring later, and therefore we need to have more saved at the date of retirement in order to be able to fully fund our needs over the life span. The people who are predisposed to live longer are really at most risk here, and they do not necessarily know who they are, so it could be you, or it could be me. But if we haven't planned for it, we may run out of money and be living with our kids when we are a little bit older. I am hoping I won't have to do that.

This study shows that there are some risk mitigation strategies that in combination can really increase the chances of a successful retirement, which I am defining here as making it to the end without running out of money. You could define it in other ways, obviously, but this is a purely financial look at it. My personal feeling, and I think Anna agrees with me on this, is that the key here is some sort of inflation-adjusted life income, which Social Security does pretty well at the low end of the income spectrum, but we don't have as good options on the higher-income spectrum. Then also benefits, whether it is long-term care or whatever that will provide coverage for those life events that are very expensive but unexpected, and that is a difficult one for everyone to have access to and have enough money to buy. So at the lower-income levels, they don't have enough wealth to be able to effectively buy enough of a life annuity or enough long-term care insurance to be able to cover those risks for themselves.

So I will pass it on to Ben.

BENOIT G. MICLETTE: Good morning, everybody. So based on the numbers that you have seen, I don't know if you want to revise your answers as to when you are going to retire, if you think you have enough money already perhaps, or you will need to work a bit longer. So as you might have guessed, the purpose of this session was to focus on the paper that Vickie and Anna put together, and I was asked to take a look at one small component of the study, which was on long-term care. So throughout my part of the session, I will focus on that product.

We will take a closer look at the model and some of the conclusions, specifically with relationship to long-term care. Regardless of how you feel about this product, whether it is the right product to address the needs for an aging population, it is a big dilemma. I do not believe one market has found a specific solution that will work for everybody. We will take a look at some of these international long-term care offerings, what are other countries are doing with respect to this

risk, and talk about some of the solutions. As you will see, I haven't done a presentation without any graphs or numbers in a long time, so that is going to be interesting for me. I will focus on the product aspects to try to transition toward what Vickie will be talking about, which is financial planning.

So one of the aspects I like about this study is no mice were hurt in that one, but there was a quote that actually got my attention: "The purchase of long-term care insurance on one or both spouses has only a small effect on wealth needed at retirement." Now, if you live in the United States or even in Canada, we hear about this. Long-term care has not had a very good reputation in recent years, in part because of sales from an insurer point of view, but also in terms of the premium changes that have taken place, which have been reported in the news significantly. So to read something like, especially for someone who is an advocate of living-benefit products in general, and specifically for long-term care, it is just another nail in the coffin.

Before we call the time of death on long-term care, I do think we have to look at it from different perspectives. One of these perspectives is shown here using a couple of papers that have been published in recent times, which are trying to alert people that there is a problem coming. There is a big wave of expenses relating to health care that is coming our way, and we need to find solutions for this. So the NAHU (National Association of Health Underwriters) in their position paper actually talks about the fact that the majority of the expenses we expect for long-term care will be with people who are age 65 and older. There is a portion of people who do get into accidents at younger ages, but currently approximately 133 million Americans are living with at least one chronic condition which could eventually lead to long-term care or requiring long-term care, and by 2030, the number is expected to increase. So those statistics are alerting. Obviously, they are pointing to an emergency that is coming and for which we may not be prepared—at least governments may not be prepared for.

The CLHIA, the Canadian Life and Health Insurance Association, did a study from a financial point of view and looked at it specifically for the baby boomers, looking at the retirement period, from the time they retire until death. They came up with a conservative number measured in current dollars: The cost of providing long-term care over the time frame of these baby boomers

until death is about 1.2 trillion Canadian dollars, which is roughly about 1 trillion United States dollars, based on the current level of government programs. And if you are familiar with the Canadian health care system, we do have universal health care, and people do believe that part of it is covered through that system, which is in a large part incorrect. Based on that, as well as promises from the last election probably, about half of it is going to be expected to be covered by government programs. So that leaves a deficit of about 600 billion dollars, and that represents about 94 percent of all individual registered savings plans in the Canadian market—so the equivalent of an IRA in the United States—94% of the funds that people have set aside for their retirement is what it is going to take to pay for the deficit that is expected to be created.

So it is quite alarming to hear these numbers. In light of that, we will take a closer look at the model. We have to keep in mind that the model, as Vickie indicated, was looking at financing a long life. It is not specific to long-term care, and she pointed out that some of the assumptions were made to try to present a view on long-term care using simplified assumptions. As she pointed out, the premiums and the benefit payments used are based on averages, so if products are priced properly, the expected average premium a person will pay should cover expected average benefits for an average person, ignoring profits and expenses. So by that definition, you would expect that people put money in, they will get the money out, so it does not have a significant impact from that point of view.

She also mentioned that she used average market premiums for products similar to the one that she is covered on, but the claims are only for facility care, so that underestimated the benefits payable through home care or assisted-living facilities, but most of the products in the United States market would include home care as well as other benefits.

I like the fact that the model does look at a long elimination period of 90 days. This takes Medicare out of the equation. Not everybody can qualify for the long-term care benefits under Medicare, but certainly it would cover the person up to 100 days, so that takes that away from the analysis, since we don't know what Medicare is going to look like in 20 or 30 years' time, and that was the right thing to do.

One of the key conclusions is also that this product is not affordable for everybody. It is an

expensive product. It focuses on people who have the means to purchase this, and I think it was the right approach actually to look at the upper quarter as those able to afford this.

Vickie and I spent some time talking about some of the refinements. Again, the paper was not focused on long-term care, but should there be a part two of the paper, with further refinements on long-term care, we talked about using more recent data. The paper itself, as she pointed out, was based on the data of a study done out of Boston College, but it uses the long-term care facility expenses based on the 1984 study, so the SOA certainly has published more recent data that could be used.

One of the key assumptions is also the impaired mortality assumption. How long will people live with a chronic illness? That is a big question. It is very difficult to assess what it would look like in 20 years or 30 years. Mind you, we try to do this with healthy lives, and it is also a challenge. But how will medical advancement impact people's lives and how they deal with chronic illnesses is a big question. We talked about including other benefits—home care, assisted-living facilities, etc.—also reflecting some of the features that are commonly found in the products in the United States, such as shared benefit pools between the two spouses, having a waiver of premium on the surviving spouse, or once one of the spouses goes into a facility care, the other one's premium is waived.

We also talked about looking at the higher quintiles of LTC payments for people who actually do live a long time with a chronic illness. The products, as Vickie mentioned, look at maximum benefits of \$250,000 lifetime. It was somewhat surprising to hear that even going to \$500,000 does not have a big impact. Obviously, the paper focuses on people living very long periods of lives, so the amount of money if they are sick—and if we were to isolate these individuals, [it] would certainly highlight what is missing from their package of benefits.

Also I would be interested, as I pointed out to Vickie, to assess the claims of those people who are not buying it. They might be wealthy, but they did not qualify because they already had a chronic illness. What happens to them, and how do they cope with the situation? Long-term care remains a big dilemma.

The SOA polling system is not user-friendly, so I will do it the old-fashioned way and just

ask you to raise your hands, if that can work for everybody. As a consumer, what do you consider is the biggest issue for long-term care insurance? Do you think it is a lack of education on the need; affordability of premium, both in the short and long term; or is it that the product designs are not addressing the needs; or is it a social issue which really should be covered by social benefits; or is it something else? So how many of you think it is a lack of education around the needs covered? Affordability of insurance premiums? The product is not addressing the needs? It is a social issue and should be covered by social benefits? Anything else, any other positions? Would you care to share your reasoning? [*Questions from the floor*]

FRED VETTESE: I am Fred Vettese from Toronto, Canada. When I looked at long-term care insurance and I looked at the United States papers as much as the Canadian data on this thing, it seemed like it does not address the needs. It seems like long-term care insurance generally is just the very opposite of what you want from insurance. You want to have premiums which are modest or affordable, but if you do have a disaster or catastrophe, you are covered. That is what happens with your house, with life insurance, and your car insurance. With long-term care, it is just the opposite. First of all, the premiums are not modest; they are very hefty. And if you do have an incident, then you are not covered. It covers up to a certain maximum, but post maximums may rise with inflation, and the inflation isn't necessarily covered or is covered but at a much higher price. So it is kind of the opposite of what you want from the insurance.

The other problem with it is that, by the time you actually get your mind around to thinking about it [insurance] when you are like 60 or 65, it is kind of too late to get it. They may not cover you anymore. You may be uninsurable at that point in time.

Third, I actually did a sample, a typical kind of situation where somebody might be in their late 80s: By the time they need long-term care, and they are typically going to be in there [a facility] for two or three years, and I looked at what their insurance premiums would have been starting at age 54 and projected that forward. They could have had those premiums that whole time, and so this is the situation where the person actually does need the insurance, and usually when you do need insurance, you say, "Thank God I had the coverage." So in this case, I looked at it. I found that for a person that set aside an equal amount of money in a bank account, figuring in an after-

tax interest rate of 3 percent or 4 percent—which you cannot get in a bank account but, say, in investments—he would have actually been better off not being insured than being insured. So that is why I answered the way I did.

BENOIT G. MICLETTE: Okay.

ANNA RAPPAPORT: There is a real problem with any kind of long-term financial product for voluntary purchase. One issue is that most people just aren't going to buy a long-term voluntary product. The other problem is that for the people like the people in our studies at the median and the 75th percentile, there are a lot of different risks. And while long-term care is the biggest risk, it is hard for them to decide to cover one risk and not another risk. In addition, in the United States, Medicaid offers long-term care coverage for those with low resources. Some middle-income people will eventually end up on Medicaid. So there are a lot of reasons why people don't buy long-term care insurance.

I have an additional comment about the model and insurance products. This applies to stochastic forecasting modeling and distributions. Whenever there is reasonably fairly priced insurance and you focus on the median, the insurance will not appear to offer a big benefit. You have to consider the payoff when an adverse event occurs to understand the value of the insurance. It is the tails of the distribution that enable one to see the value of the insurance. Also, I would say that when planning and modeling that does not include this risk, that is a really big problem.

BENOIT G. MICLETTE: One last comment, and then we will move on.

FROM THE FLOOR: All of these comments have been great, and similar to what I guess my reaction is. I think the way I would frame it is, insurance fundamentally is economic value by selling peace of mind, and it is peace of mind about if something disastrous happens. It feels to me like we have designed a product that provides a service, as opposed to thinking about the risk mitigation—if you started with the risk mitigation issues and said, “Yes, have I managed detail, and now does this product provide the best way?” instead of starting with the bottom and the cap if you are saying, “I am looking for the extreme events.”

BENOIT G. MICLETTE: Yes, that is a very good point—aligns with the rest of my comments. I really appreciate this.

Again, raise of hands only to try to make it easy. How do you intend to cover your future potential long-term care expenses? What I am trying to get at is, how many of you think long-term care will work for you, now that you have heard these comments? Not a surprise. Okay. Are you going to buy long-term care or not, essentially is what I was trying to get at. How do you intend to cover your future long-term-care-related expenses, with long-term care or some other means? So how many of you think it is through long-term care insurance?

So long-term care is a big dilemma. Essentially you have to look at both sides—whether you buy long-term care protection and you risk not using it, or you don't buy it and you risk needing it. It is very difficult for the average person to actually determine what will actually work for them, and they do look at it from the same point of view as some of the comments that have been made.

I have helped develop these products or versions of long-term care in various countries, and I sat behind the mirrors listening to focus groups. Some of the main comments that we hear is that there is a general belief that the existing government benefits will help to address these needs, and this may not be true in every country. But there is still that perception that the government will step in to take some action, as they realize that there is a big wave of expenses coming. There is also in certain countries the idea that a family unit will actually take care of you, and that is still very strong in certain countries. It is breaking down, and it is quite daunting to think what it will look like in 20 or 30 years.

Insurance products often are viewed as not offering the safety of long-term premium rate guarantee—that is what people worry about. They might be able to afford it today, but in 30 years' time, once my income is fixed, what will happen if my premiums start to increase significantly, as they have in the United States in recent times? Premium rates are expensive. Not everybody can afford it. Even the needs analysis process is not a very appealing one for the sales force or potential applicants, because you have to put them in a situation where they think about a time where you can't eat on your own or bathe on your own or walk on your own, [and] here is a product. If you think most people don't even like to do a will, because they don't want to think about their death, and they only have to pay \$250 for the will, this would be \$1,500 a year forever, just in case I get

to a stage where I actually don't function as an individual anymore.

In the thought process for most people is that I buy long-term care insurance. If I don't become long-term care dependent, I am healthy, my bonus is I get nothing. It is an exaggeration—some of the products do offer return of premium on death or a small death benefit—but for most people, though, they are going to think, “I am paying this money forever, and yet if I remain healthy, my bonus is I get nothing.” Unfortunately, that is the view. If I do get benefits because I become long-term care dependent, then I have to manage between these benefits, personal assets and government and family support. I may run out of benefits, or my needs may actually be lower than what the benefits are paying, in which case I may feel that I got cheated out of some of the money.

But the reality is there is probably a product. When we started looking at combination products, and that might be the ultimate solution for all this, it's if I don't become long-term care dependent, then somebody, my beneficiaries, do get that benefit, and it could be substantial, versus just a return of premium. But if I do get long-term care dependent, then I get access to this money. And that is when we start talking about combination products, to try to address more situations, more needs.

As we look at long-term care and the potential scenarios of health for all of us, there is a big variety. I think most of us could come up with a definition of what death is, but a definition of what long-term care dependent looks like is not as easy. There is a big variety of potential scenarios that could occur.

And some of the international markets have tackled this before, and we will skip this question in the interests of time, and the OECD [Organisation for Economic Co-operation and Development] actually categorizes these products, government-sponsored benefits, so either they are paid out of payroll tax money, or they are organized by the government and they are mandatory programs. We find a variety of them. Some of them are universal social security programs, as we find in Norway, where general tax revenues are used and paid benefits through it. It could be a social insurance program, so by definition, “insurance program” means that they have to put some money in to get some money out. We find this in Germany and Japan, where in Germany,

everybody is covered in the country, and it is a mandatory benefit. It could be part of a means-tested safety net, as we find in Canada or even the United States with Medicaid. It could be part of health care insurance or a universal personal care benefit—a separate benefit from health insurance—as we find in Italy in cash or Australia in services. So governments are trying to come up with something.

But as we discussed earlier in my slides, at least the Canadian study was showing that it is going to come short of what the need will be. So the insurance companies have responded with certain products, and the one that is common in the United States is still the periodic long-term care payment, either per diem or reimbursement of expenses. In many countries, we actually find standard or lump sum payments, so you buy often as part of a combination product with life insurance, but it could be on a stand-alone basis as well. If you meet the definition, which is usually in those markets three out of six ADLs [activities of daily living] or more, then you get a lump sum payment, and it is up to you to manage that money.

In the United States, most of the recent product developments have been acceleration of life insurance or annuity payouts, where your life insurance is paid out as 1 percent per month, for example, until it runs out, and it might be a long-term care policy that kicks in after the fact. We have also seen supplementary annuity payments where he has part of a disability product: If you are disabled and cannot work, you get your benefit, but if you also meet the definitions of dependency under long-term care, they would increase that benefit. It could also be part of an annuity payment for a pension plan where it could increase the benefits if you are also long-term care dependent.

We see a variety of conversion or transition products where a disability product becomes long-term care. Either it converts, or the definition itself changes. So that is what we are currently seeing.

Some of the solutions that are being addressed—that is probably the picture that we need to look at. As somebody pointed out, there is probably not a single solution, and I am not going to be sent up here and say that long-term care insurance the way it looks like today is the right solution. I think this is a much more complicated issue. There are a lot more scenarios that could

occur when someone gets older.

What insurance companies have done in various markets [is that they] have taken different approaches. Some of them figured, “Nobody knows the answers; this is dumb. Come up with something, and see what happens.” Others are leaving it up to competition and pushing the limits in terms of benefits, in terms of coverage, and even competing on premium rates, and hoping that over time, everybody will reach their comfort zone, and that will become the new product that everybody needs. And other markets have been more conservative on their approach.

But if we look at product development for long-term care in the headwind that it is facing, and I will exclude interest rates, it is a big issue, don’t get me wrong, but it has been tackled, and it affects all the products, and it certainly could be a whole session on its own. But looking at other aspects, what will mortality improvement look like over time, and will it continue, and where is it coming from? Is the mortality improvement coming from the impaired lives, so we have better ways of dealing with chronic conditions, or is it the healthy lives are super-healthy and keep getting healthier? This is very significant for a product like this, because we have to determine when they will get sick and how long they will remain sick, and that is something to consider. It is not one that we have a good answer for. There have not been a lot of studies to date on the impaired lives. A lot of it focuses on the healthier lives until they reach mortality.

We also have to think about what will the product look like and whether we issue a product today and what happens in the future. Showing two pictures here, the first one at the top is a real British lady who wears a skeleton because she does not have use of her legs, and it helps her to move around. Certainly, when we look at the definition of dressing, putting on clothes as well as braces and artificial limbs—that definition might change over time, as well as hands-on assistance, with a more futuristic picture of the lady being helped by a robot to get up.

Trying to design products today that will actually stand the test of time is difficult, because the scenarios of everybody—going from people who will die from cancer to people who will die from Alzheimer’s and Parkinson’s—the needs are going to be very different, and it certainly makes it very challenging for actuaries when they develop products. So new solutions already exist. Somebody pointed out it is a social issue that people have to contend with, and whether some of

the social issues that exist in the world—Germany is one again where everybody needs to contribute to this program, but it aims to cover about 50 percent of the expected cost. It is not meant to cover everything. They do this from the affordability point of view but also recognize that the scenarios are so wide, it is going to be very difficult to try to cover everything. And it leaves some of the responsibilities to the individuals, so for them to actually look at supplemental coverage or other options, as Vickie has pointed out.

The long-term care product, the way it stands today and the way it looks like today, may not be the right solution, as some of you have pointed out. So is it more about having multiple options and combining these options. And that is probably what I believe is the long-term solution for this product—is to look at different options that people can cater with and combine them together: so looking at long elimination period or large deductible, so that you cover the first level of expenses, reverse mortgages, combination products [and] having a life insurance policy, for example, that covers you if you die, but if something happens to you, then you can access that money to pay for these expenses.

The rebuttal that I get a lot of on discussion of combination product—the discussion often comes back to “I am not leaving anything for my beneficiaries, and that is not really fair,” while the opposite is to use your assets to cancel your investments, to access this money to pay for expenses. That may not be the right solution either.

Impaired annuities—using a lump sum of money based on an underwritten annuity to cover you until your death—are another solution that some markets have contemplated. Longevity annuities—annuities that start at age 85 or 90—are also another solution. Or is it something else? Is it perhaps a combination? Or is it coming down to financial planning? And for that, this is my perfect segue to bring Vekevia in to talk about financial planning.

VEKEVIA TILLMAN-JONES: All right, perfect. So I think that based off of what Vickie and Ben have mentioned, a lot of what we see is that the financial plan is an important piece to sort of bring it all together and help a person figure out which financial products are going to make sense for them, because, like we spoke about, it can be very expensive, and you can’t just choose every financial product out there to try to eliminate all the risks that you might see later in life. So the

idea is to have a plan and figure out which risks you are more likely to incur, based on your particular family situation or your own health needs.

So there is a behavioral piece of the financial plan being successful. And one of the things that I thought was important here is that at Financial Finesse, we actually looked at our clients that have financial wellness programs. And we looked at the employees there, and those employees that participated in the financial wellness program a year later looked at the results of how they were doing, based on a personal assessment that they took in the beginning of the program, to see what improvements they had made. And the study found a positive relationship between financial wellness scores of those participants. So on a scale of 1 to 10, those with the financial wellness score of 4.0, they participated in their employer retirement plans at a 6.5 to 7 percent contribution rate. Then, for those with a score of 5.0, it increased to 8.37 percent, and then it continued from there.

Boomers were the generation that had the biggest increase in the percentage as far as being in the category of knowing that they are not on track for retirement. It went from 17 percent to 20 percent. But that also coincided with an equal drop in the percentage of those who had not even run a calculation. So it seems that it is more about awareness than it is actually not being prepared for retirement. So actually, just running the numbers could make a huge difference.

The idea is that people are not as prepared as they need to be for retirement, especially not a long retirement, and a lot of that comes from, like, what Vickie was mentioning. Are they running the scenarios based on the right assumptions? Because a lot of the assumptions that you make are going to depend on how much you actually need to save and whether or not you are saving enough.

People have a flawed life span assumption. Basically, most people don't really even consider how long they might live. And if they do consider it, oftentimes they underestimate it, or they use just what the Social Security tables say for average life expectancy, which we know is lower than the average of what people are living.

Another piece is that we are not getting younger. Findings show that people are living longer, and technological and medical advances play their part. Now, there is some difference in terms of the opinion of how much of an increase you might see in life expectancies going forward,

but the main point is that we can expect to live much longer. That was not an issue in the past, like was mentioned earlier, because people spent a lot more time in working years than in retirement years. So now they have to make some behavioral changes to actually be able to prepare for the longer time in retirement years. So they need to look at their income and preretirement expenses, as those sources will either pull from or add to what they can save toward retirement.

Someone making \$10 versus \$20, \$30 or \$40 an hour, might find it more difficult to save, and the point is to make sure that over time, their income supports essential living expenses and that they manage their debt and nonessential expenses along the way.

People might have to consider prioritizing retirement before helping loved ones. I hear this quite a bit when I speak with parents and they are trying to make the decision about how much they are going to be able to save for retirement versus put toward college funding for their children, and they put that first. Well, you know, you are not able to borrow for retirement, so you really have to look at maybe still being able to help fund kids' education, but at the same time being able to put money away for retirement. So maybe I help fund 75 percent of the education, and they have loans, grants and scholarships and other potential sources for college funding there. So it is really about looking at those expenses and trying to manage exactly how much you might take on before retirement so you can make sure you don't have those added expenses to worry about during retirement, and that you can save more.

Some strategies and behaviors to offset the financial risk of living longer are taking advantage of retirement plans available through employers, like 401(k)s and 403(b)s, and getting the match. Or making use of alternative savings vehicles like IRAs, and that is especially true for those who don't have access to retirement plans at work. And, of course, saving. The idea of compounding interest tells us that the earlier that you start to save compared to someone who starts saving much later in life, that could be a huge difference in terms of what you actually have when retirement comes along.

And people have a tendency to pick a dollar amount that they can just afford to save right now, without running any numbers to see exactly how much they should save. While that might be good in the beginning to start saving for retirement, you actually have to run the numbers and

think about your particular situation and what your expenses might be. A lot of people, especially further from retirement, are a little bit more concerned, because they do not know what their expenses might be in retirement, but as you get closer, you want to continue to run those retirement projections and estimate what you might need to actually cover expenses.

So a lot of parents, as they near retirement, are finding that they still have parent PLUS student loan debt—that maybe they took out a loan to be able to help their kids go through college. And maybe it is refinancing that for a lower interest rate or looking to pay all, or at least a portion of that, off before they retire, or at least plan to have most of it paid off early in retirement, so that that is not pulling from any funds that they need later to cover other expenses of their own.

Some people—whether they enjoy the work that they do, and I think Vickie mentioned this as well, about people having to retire earlier than they thought they might have to—whether it is from their own health issues or they left to be able to take care of a family member who is sick, whatever the situation might be, but if they have something like that that might come up, it is even more important to run those numbers, so that they can try to accommodate and save as they need to in order to be able to afford this extra expense that they might have into retirement—not just their own expenses, but for that dependent. So maybe they will anticipate taking Social Security at a later date if they can afford to actually put off withdrawing from their own retirement funds and then taking Social Security later.

A lot of people are not really sure when to take it, but if they wait to take Social Security at least at the full retirement age, you will get your full benefit. But for instance, for someone that can wait until age 70, if you look at someone who is expected to get \$1,000 at full retirement age of 66, and they put off taking Social Security until 70, that could be another \$320 a month. It may not be a lot, but that is extra for that particular household.

Also, if someone is married and one spouse is going to continue to work, maybe the spouse is going to continue to work and put off taking their Social Security retirement benefit until later. And another benefit of delaying Social Security is that the spousal benefit will be more. So, for instance, the wife might outlive the husband. That spousal benefit being higher could benefit the wife, or any other dependents for that matter.

Most people find themselves trying to figure out whether they want to downsize at home. They spoke about this earlier. Some people may downsize. I think about my mother-in-law. They have a pretty big house, and on one side, they are not even using that side of the home, so they have been going back and forth about “Will I rent it out, or what exactly should we do with this?” My husband and his brother, they don’t necessarily want to purchase that house from their parents or take that house on, so maybe a reverse mortgage might make sense in that particular situation. But you have to have the equity, and you can’t start that just at any age; you have to be age 65. Of course, you would essentially not have a mortgage payment, which is a benefit. Then, just depending on the terms of that particular mortgage, you might be able to get an additional check each month to help fund other expenses that you might have, take out a line of credit or even a lump sum option. So there are some negative sides to that, though, because there are fees, just like [with] a traditional FHA mortgage. Under some terms, you might still pay taxes and insurance. Like I said before, you have to have enough equity to be eligible. Now, Social Security and Medicare are not affected, but for lower-income individuals who might find themselves on Medicaid, that would be impacted, but that person may also not have the home ownership or the equity, so they would just have to look at that as another resource for them.

As a polling question, I am just going to go to this: If you were to pick one, which of the following sources is the most important to financing your desired retirement income? Just by a show of hands, would that be delayed retirement? All right. What about part-time or post-retirement income? Okay, more people there. What about downsizing or reverse mortgage? Okay. Accumulated savings? Okay. Private pension fund? Social Security benefits? Okay. So that is interesting. The part-time and post-retirement income—this even came up yesterday in one of the sessions—is that people are looking to work possibly after retirement. It does not mean that you fall off the face of the earth, and you are not going to be doing anything anymore. Some people might take on a career of a passion that they had before retirement and look to do that afterwards, or work in consulting, whatever it might be. So you might have that additional income, and you would want to factor that into any calculation that you might actually run. Thanks for participating in that.

We spoke about some of this earlier. An annuity is another potential resource. With the longer life expectancies affecting companies being able to offer pensions, so people are not seeing that they actually have that available anymore, or at least it is dwindling. But if someone does have a pension, they will likely need to decide what are they going to do with that pension. Oftentimes, we have people call in to our financial help line, and they are not sure: Should I take the lump sum? Or should I take the annuity route? A lot of what we talk about, in helping that person decide, is if they are comfortable leaving it with the employer. You have to be comfortable that that employer will be able to continue to make those benefits, and of course, there is insurance to help support that. Or do you want to take a lump sum and take more ownership of having to invest those funds on your own, and feel that you could get just as good of a rate of return and be disciplined in how you invest your funds after?

Now, for someone who chooses the payment option, once you actually begin receiving the payments, oftentimes there is not an inflation-adjusted portion to that. I saw something that said, in England, there was an annual inflation rate of 3 percent. That can cut the value of your pension in half in 24 years. So you might have to look at other sources of income or where you are going to pull from in retirement, especially if you consider the fact that you might have a loan at some time in retirement.

Now, outside of the pension, you still have the option for an annuity. So people might consider they want guaranteed income, especially with someone with a more conservative outlook. Maybe you want to have guaranteed income to cover at least those essential expenses that you have, so you know that, okay, my mortgage or if you have a car payment, or those types of things would at least be covered. Then I will pull from our retirement income that I have saved in my 401(k) or 403(b) or whatever have you; I will use those for other expenses. Some people feel more comfortable with that, and I think it is getting a feel of what is important—what you think you actually want to have covered, just to make you feel more at ease. Because people are transitioning from having steady income and saving, and then having to mentally deal with the fact that now I am starting to use all the money I worked my entire life to save, and I think that is something emotionally people have to deal with. And running the numbers and running the estimates might

actually help people through that.

That also brings me to another type of annuity or feature that would be added to annuities: a joint survivor annuity. If you have a spouse, you don't necessarily want to just look at your own life expectancy. What happens if one spouse goes away? Will the other spouse still need that income? So making sure those discussions are there as well, especially between married couples.

Some people might take advantage of a longevity annuity just because of the idea that, okay, over time, if I live much longer than I was expecting or that I ran the numbers for, it might be nice to have that extra boost of income later in life, when maybe I am having additional health issues. A lot of people are not necessarily going with the longevity annuity right now. We might see participation in that increase over time, but it is an option.

Another source to consider would be any cash value life insurance you might borrow from—your life insurance policies especially, because over time, the life insurance that you took out in earlier years, you may not need as much coverage. You have fewer dependents, or they just don't need as much. You don't need as much protection on that, so you might be comfortable with taking funds out of any cash value life insurance.

Now a combination of the strategies, just like both Vickie and Ben mentioned earlier, could be the best solution. Maybe delaying retirement to age 70 for the reasons we spoke about or doing the reverse mortgage much later on and the long-term care policy on the wife.

I think a lot of planning for this extended time in retirement, it does fall on the individuals, but we are seeing that employers are starting to step up and help their employees through this process, so we are seeing more financial-wellness programs that employers are taking on and offering as a benefit to their employees. Trying to help change behavior and help individuals increase their confidence in planning for retirement. Basically, the more that employees are aware where they stand financially and realize how they can take control, they feel more confident in making plans for their financial future which includes incorporating those longer-life-span assumptions into their plans.

I think the point is really to have a financial plan and communicate with any planner or advisers that you work with, as well as any family members that might be impacted. Sometimes

people have this great plan, and they think, “My family will help take care of me,” or whatever the situation, “I will be able to depend on someone else.” But you don’t know, if you don’t communicate with that person in your family, will they be able to actually afford to help you if you cannot help yourself. So I think having those conversations early on is huge, and we talk about that with individuals when we meet with them and talk about their plans—budgeting and managing their spending before retirement and during retirement, and making sure that you have that budget in place.

Try to minimize high-interest-rate debt as much as possible, either getting rid of that type of debt before retirement or having a plan to get rid of it early in retirement, so that if something does come up later in life where you have these issues or any health issues that you need to cover, you have that extra funding available, and you don’t have them going to high-interest-rate expenses.

Also, having a protection in place for temporary loss of income, disability income insurance through working years, having that emergency fund as something that you can go to and be able to depend on. Life insurance to protect your family for unexpected death. Are there any expenses that might need to get paid off, so that your spouse is not left to deal with any extra expenses and not have that help, and be able to continue to live a healthy retirement or the retirement that you guys had dreamed of together?

When it comes to investing, making sure that you don’t invest the funds that you will need within the next five to seven years. Are you properly invested? Rerunning that estimation as you get closer to retirement. Making sure you are saving enough, and not only that, but looking at your risk tolerance and taking a questionnaire for risk tolerance, so you can make sure am I still invested properly for how I feel currently about my investments and my investment strategies. And just looking at your time horizon, as all of those things will start to change.

Sometimes we have people call in on the help line. Not everyone—we might all recognize it, but not everyone—recognizes that they actually are still going to invest their funds once they retire. Helping a person through that decision. Maybe you keep a portion of your funds that you will need within the next five years more conservative, and then the remaining funds, you might

be able to take on a little bit more risk and allow those funds to continue to grow and be there to support you later in retirement.

It's potentially adding income for life options like we spoke about—the annuities or even that longevity annuity for protection for later in life. Then looking at medical costs also will be something to plan to cover those expenses that Medicare might not be able to cover. Have you saved in a health savings account, and you will have those funds available to you, or what will be your source to be able to pull from to help with expenses medically?

You take the time to put the plan together and make sure you would draw in the most tax-efficient way. Have a plan in place. You will be looking for income, maybe income-producing assets like stocks, where you might get dividend-paying stocks or income from bonds. Then having something in place to make sure that you have a medical directive. If something were to happen to you, can someone else make decisions for you when it comes to the medical situation, as well as be in charge of your finances? So looking at a durable power of attorney or the different power of attorney options available.

I think the important thing is to have a plan around the fact that you might live longer and pretty much run the estimation, so that you are not guessing.

DAVID G. BOETTCHER: Now if we can open the floor for questions for the panel, if somebody wants to come up to the microphone. If not, I have a couple of questions myself.

FLOOR COMMENT: Yes, this is great information and discussion. I think the subject in the study—and I think it kind of was alluded to a little bit—is this idea of looking at medians and trying to frame this in terms of what are the end risks that I have, and if I am looking at a long-term vehicle, long-term risk ahead, I have funding issues, and then I have got how to address those issues. So the idea of using confidence intervals seems like it misses one of the key pieces. In other words, what is my maximum loss? In actuarial terms, a conditional tail expectation, that kind of gives you a sense of, oh, I have pulled out all of these, so that now I have a finite horizon. Similar thinking goes to the idea of longevity and annuity. If I can take care of a lifetime income after age 85, now I have a finite problem to deal with.

The second aspect that I think is important is thinking about what those funds are. Because

we talk about annuities versus portfolio, and you end up with “How do I handle volatility of the financing?” So now I have a risk spectrum that says, “Do I invest in the market? Do I invest with some kind of guarantee? Or how do I manage that piece in between?” I think those are the keys, and those are my takeaways as kind of the key thought pieces about how we might move this forward.

And the last piece is thinking in an integrated fashion. Yesterdays’ session talked about the importance of social capital. So the idea that I go into a nursing facility with a fixed income is kind of a partial solution, as opposed to saying, “What am I thinking for my end state?” Some of the options are being developed: I want to enter to a community. I can buy a bunch of different products and do a bunch of hedging because of all the tools that we have. But a lot of interest is in the idea of saying, “Well, maybe at age 65, I move into a community that I start as fully functioning.”

The other question is, Who am I sharing the risk with? That is the other aspect of it. Am I on the risk for the tail? Is the government on the risk for the tail? And as we saw with long-term care, all of a sudden, all the huge rate increases are needed. We need some mechanism that, in a sense, the people that are holding that risk can be able to try to manage. Just my reactions. Thanks. This is great stuff.

ANNA RAPPAPORT: It is Anna Rappaport again. I have a comment/question about the long-term care product and a comment about future steps and this research. To help cover long-term care needs, even though this is not a long-term care product, I like longevity annuities a lot. I am very aware of the spectrum of health and the support that people need. Between the stage of independence and everything is fine, and you need long-term care as the term is defined in an insurance policy, there are many gradations. So I like the idea of longevity insurance to give you more money at high ages a lot.

My other comment is a question about long-term care insurance from someone who is not an expert. Long-term care products are confusing and are structured many different ways. It is so confusing. I am curious as to whether you think having standard definitions, so people could compare products better, would be beneficial. I have heard a lot of positive comments from

different audiences about the comparability of Medicare supplements. Unlike other insurance products, at least you know there is A, B, C, D, E, F and G, and if you investigate, you are not so confused. I would be interested in comments.

I am very proud to be able to work with Vickie on these studies. This is phase three, as she mentioned, and every time we did one of these studies, the end of the study would show a list of ideas for further research. We need to remember that these are research studies. They are not recommendations. This is not something a planner can go and take to their client. The research offers you a list that you might want to build on and develop further. Some of you might want to take some of these ideas and do future research studies. An in-depth study of long-term care issues would be a great future addition to this work. But this will work if and only if the research team really knows long-term care and how to build it into the modeling.

BEN MICLETTE: I think I narrowed it down to three questions. So your first question about the range of benefits or the “in between.” Longevity insurance, I think, is a great product, but again, it would have to be in combination with something else, because your concern at age 85 is having enough income because you have outlived your assets. Well, you don’t know if you are going to be healthy at that age. So I don’t think we can ignore the fact that that scenario is possible, that you might be long-term care dependent at 85. You may be healthy if you are from her family, but it is a risk that you also have to consider. So determining what amount will you need at 85 is still sticky. So I think having that combination perhaps, with that kind of annuity with a long-term care product, could actually help as well, too, to look at the more catastrophic scenarios, as somebody pointed out.

Your other question about the spectrum from healthy to fully long-term care dependent: Some of the markets around the world actually have a series of determinants to consider what amount you are entitled to. France and Germany, for example, have up to 21 criteria that they look at. Singapore has even more, I think. They will look at all the components of your current chronic condition and determine the amount that you are going to get, so that you don’t get too much money early [and] you don’t run out of money too quickly as well.

It comes down in the end that you may not qualify for the benefits; as you pointed out, the

definitions could be tricky. So you need something in between. There are other products that exist. Disability insurance, as was mentioned, when you are younger, or a critical illness—somebody who has cancer may need help earlier than what long-term care can provide. I have cancer, and by the time I meet the long-term care definition, I am in a pretty bad state. But they do need care earlier. There are products for that as well.

I am trying to remember the third question. It escapes me. Was there a third question? Oh, Anna asked also about a Medigap standardization approach. Unless I am wrong, I think the NAIC [National Association of Insurance Commissioners] has a model of long-term care which has definitions. I don't know if it is mandatory for every company to use, but it seems to be fairly widespread. Around other markets, there is a tendency to try to standardize the definitions, especially when it is government run or when the government provides some social benefits. A lot of insurance companies try to piggyback on those definitions. It is tricky. It is a tricky product to begin with, and I understand the confusion, as the products are not easily comparable, but I think the United States has done a fairly good job in trying to standardize.

JOHN CUTLER: In one of my previous hats, I was the architect of the federal government's long-term care insurance program, which is your traditional standard comprehensive approach, which I think is what you essentially modeled. The long-term care insurance market is going in two different directions. One is adding value, going with life and annuity kind of stuff. The other, which is my question in terms of whether the research would shed any light on this, is to have a smaller basket of benefits. There are two approaches that I see happening. One is the one-year policy: short-term care policies. The other that the state of Minnesota is looking at, as is the Bipartisan Policy Center, combines long-term care with Medicare supplement insurance, because that is a market that is also well established. And it also answers that value proposition; just like life insurance, people buy it. Medigap, people buy it. But in both cases, the idea is to try to address the price problem by having a smaller basket of benefits, and so I would be curious as to what the research might show on going that route in terms of protecting people's needs for long-term care, by having a smaller, less costly product.

VICKIE BAJTELSMIT: I am not the long-term care expert, but I think the issue I see with long-

term care, and this may get at your issue, John, is that there is an extreme. It is almost an adverse-selection problem—it is not exactly an adverse-selection problem—where we have a pool of people who probably are a little more predisposed to need long-term care. And the idea of combining it with a product that a broader range of people buy, and keeping the benefit pool benefits a little bit lower, it will attract a broader population into that pool, and it will turn into something a little more like insurance. Somebody in the middle of Ben’s talk asked about it. It almost looks like a prepaid plan instead of insurance, leaning a little too much in that direction, and that makes it more costly and look like less of a good deal, because it is even being talked about as the deal. It should be talked about more like insurance, where you hope you will never have to use it, and most people never have to use it, but if you do, it covers you. And that is not really the product we have right now. But I like that idea of combining it with something everybody would buy anyway, until you have more people and hopefully at a lower cost per person.

BEN MICLETTE: I mentioned it during my session, too. I am a big proponent of combination products. I think these have to be looked at as catastrophic events, as opposed to prepayment. It would lower the cost. From an actuarial point of view, they are not easy to price. Don’t get me wrong, but I think it is probably the better solution for the long term.

JEFF GLOBERMAN: I work with OSFI Office of the Superintendent of Financial Institutions] in Canada. Just to offer a little different perspective, long-term care in Canada seems to be that the thought process is “We are not going to worry about it. We are basically going to allow the government to take care of us, right.” In my former life, I was a tax specialist at Arthur Andersen, and I still do it as well, but the one planning process is we always tell everybody, “Get all your money, as much as you can, in the TFSA [tax-free savings account]; have as little taxable assets as possible, because then if you need to go into a nursing home, your fees are going to be a lot lower.”

But having said that, watching my mom who has had dementia the last three years, and watching my dad take care of her every day, I could tell you it is a life that nobody would want to live. My question would be, with recent court decision in Canada, where assisted suicide is now allowed, I know from a mortality perspective, life insurance companies have basically said they

are going to pay out if somebody qualifies for the assisted suicide/assisted dying. But from a longevity product perspective, do you see any ability to tailor products? I know this is new. It is also a very morbid discussion. I wouldn't want my kids to have to take care of me. Like, I would rather be just given an injection and end it, which would obviously cause your life to end a lot earlier. So that is one question.

The second question I have is on the financial-planning side. You talked about building up assets in retirement. Right now in the federal government, we have a defined-benefit plan, so that is fine and dandy. Having been there, I could leave at 60 and have no cut on my pension, but as we have seen in New Brunswick, all of a sudden, they made a change in the pension plan. How do you plan for those kinds of events when you are hired under a contract? Things can change. I think a lot of people are going to be going under that in the future. I will leave you with those two questions.

VEKEVIA TILLMAN-JONES: So I think you bring up a very good point. I will start with the defined-benefit plan, because we had a number of clients who had either frozen the plans or are looking at doing that, and the employees are calling in, and they are worried about it. I think what is tough about that is exactly what you said. That is not something you were going to be able to predict when you first started working with an employer. You are depending on that. And I think for a person already in that situation—you know, closer to retirement or have been working with an employer already—is that you are going to have to start looking—really, really take advantage of running the retirement estimator calculation—and see based on what they are saying that you might get, where do you stand. Are you going to have to beef up savings or cut back on some expenses before you get to retirement? I think it is one of those situations. Yes, it is more reactive, but that is the best you can do, given where you would be now, if a person finds himself in that situation, and I think all the other things still come into play where you have to then decide, “Okay, am I going to be able to beef up my savings? Are there some things I am going to have to think about that I had planned to do in retirement that I won't actually be able to afford to do? Maybe it is fewer trips. Or what does that look like for me?” But I think that is one of the important pieces, is making sure that you stay on top of it, especially just from this point going forward, because

none of us can go backward. But staying on top of running those estimations. Knowing where you are and planning around it.

I think for people now who may be able to be in front of that type of situation is to really start to look at running estimations, not worrying about “Will Social Security be there?” but maybe planning without it. Then, even if you have a defined-benefit plan, also still taking those steps to do your own savings, even outside of any plans that they might have, whether it is an IRA or what that might be. So I think dealing with the situation just where you are and making sure you run your calculations is really the best that a person can do without being able to predict the future.

Regarding your first question, I don’t particularly know for sure, but if I was thinking about something like that, usually with insurance products, they are anticipating that there will be fewer people who they would actually have to pay out earlier, and that is why the price is where it is. I think if we start to allow more of that, where someone might be able to commit suicide and still get these payouts, you might see more payouts much earlier. I would hope that would not be the case. But if that is the situation, maybe you might see the cost of insurance be even more.

JEFF GLOBERMAN: The only thing, in the United Kingdom market, when they went to noncompulsory from compulsory annuity purchases at retirement, they wanted to introduce this idea of a secondary market, and they were pushing ahead. They have abandoned it since. But I always thought that was kind of an interesting idea—that you might be able to go to a secondary market if you have a change in your plans. You no longer really want the same locked-in income, but you would have to be re-underwritten at that point in time—which means you would have to do it early enough that it is before the period where if somebody says, “Hey, this is an assisted suicide,” because somebody is in poor health, so there is not a lot of value there anyways. Otherwise, I think that is already going to be priced into the product. It is going to be hard to give it back unless somebody insists on that being the policy going forward, which would be a social-policy issue, I think, as opposed to a product design one.

BOB POWELL: I am a journalist. I write for a number of publications. Two questions. One, I would be curious, Vickie, to see if you could run the simulations, instead of using same-age couples, to maybe reflect the reality of the world, which may be an age difference of two to five

years between husband and wife, and then introduce other planning strategies such as account diversification, inclusion of a Roth IRA, and how that may change numbers. I suspect it may be only marginally, but I would be curious to see how those numbers come out.

Secondly, as I think about your present-value number, it seems like when I compare that number to numbers for health care costs in retirement from Fidelity, EBRI (Employee Benefit Research Institute), HealthView Services, it almost seems that your number comes pretty close to what they say health care costs would be as a present value in and of itself, excluding all the other housing, transportation, etc. So I don't know if you can square that up. I know everything has to do with the assumptions being used and the data being used. But as someone who has to write about this stuff for the average consumer, if I tell them that they need \$225,000 for health care costs because that is what Fidelity says, and you say that is what they might need to maintain their standard of living at the present level, it is hard to square those things up.

VICKIE BAJTELSMIT: In answer to the first question, [in] our original first product that I did with Anna, the simulation model, we did that. We ran it with a three-year difference in the age. This particular one, we were doing so many different things, we decided to simplify a little bit and make them the same age, because it is very difficult to talk about all these different scenarios. So it was really more to be able to make our sound bites a little bit shorter, instead of say every time that the husband was 70, and she was 75, and that kind of thing. So that is the reason for that. But yes, of course, we could do that.

On the issue of the different types of investment products, we assumed that all the investments went into tax-deferred types of investments. Again, for simplicity, because there are a lot of people who have done research on the investment side, and that was not the focus here. We included investment risk. We did, in answering someone's earlier question, we did assume that they reduced their risky allocation as they got older, so over time, the amount they had in the stock market was lower as they got older. But we didn't try to test different versions of that, because that was not really the focus of the study. But yes, the model, you could do all of those things with. It is just what you want to focus on.

STEVE VERNON: I would just like to thank you. This was an excellent presentation, and I agree with a lot of the analyses and strategies that you talked about. So thank you for that. I have comments and questions, and really it is more on the first part of the presentation, not on long-term care by itself. It is on coming up with retirement strategies, how much income do you need. And Vickie, in your study, I saw the quick note that you were assuming continuing the same standard of living in retirement as before. I want to drill down on that assumption.

I have seen a number of studies, and I am experiencing this personally for myself, that a lot of people are happy living on lower income, a lower standard of living by dollar terms, and they really value their time off, and so they are willing to make less money and have less spending power to get that freedom. For example, when planning retirement, I think you would want to ask, “How much money do you need to be happy?” That is a different question than replacing your standard of living before retirement. But also when you think about the course of your life, you have a different standard of living all throughout your life. Somebody gets a bonus, somebody gets laid off, you are paying for kids’ college, you pay off the mortgage. Your disposable income jumps all over the place. So why peg a target of your pay just before retirement? It does not always make sense. And I guess the question for Vickie would be just to elaborate on what did you assume for the target, and did you have any alternatives that you looked at.

VICKIE BAJTELSMIT: Sure. Well, let’s first start with thinking about this median couple that was the base case household earning only \$60,000 pre-retirement combined income. And we looked at a lot of the studies out there that have considered what you need for your basic expenses. And at that level of income, once you reduce it for changes that happen, we did not assume that they had to spend \$60,000. That is their pre-retirement amount. We reduced it according to the studies that have shown that you don’t have your employment-related expenses, and you do have other expenses. So the net they needed was something a little less than \$60,000, but our thinking was that their target might be to try to do it at that level. If you read the paper, you will see that what we end up with is reducing your expenses some is probably a good idea, because you are not going to have enough to be able to stay at that level.

That average family had only \$100,000 when they retire. That is not enough money to be able to maintain, and this gets at really the other question that the previous person asked. We have done this in three different projects, and in each one we were doing. The first one [was] based on adequacy, so we were really looking in that study at what you needed and would it be enough. Then this last one was really looking at strategies for managing longevity, so we did not deal with all the same issues we dealt with in the earlier one.

Now, you commented on the health care costs, and the EBRI study is around \$250,000 or \$300,000. If you look at our base case results, it is more like \$600,000 to \$900,000 as your total cost, so that \$300,000 is probably the amount that is in there. When you get down to our smaller number, that is with doing a lot of cutting and buying product to have cover some of the costs, so I think that is really where that discrepancy comes from.

DAVID G. BOETTCHER: We are going to have to be pretty short, so maybe one more.

STEVE VERNON: I have a question on the big numbers for the present buy of your medical expenses, and it is more of a question than a comment. You see these big numbers, and the implication is you need to have that money set aside to cover medical expenses, but is there any thought that maybe you pay for them through your Social Security income that you get and through all the cash flow you are getting? Do you really need to have \$200,000 set aside as assets, when you think, “All right, I will pay for some of this out of pocket”?

VICKIE BAJTELSMIT: I am not familiar with some of the studies, but I thought the EBRI one did a present value of the extra medical expenses and insurance premiums, so I thought it included Medicare Part B premiums and deductibles that you would have to meet, the doughnut—this was back when there was a doughnut hole—so I think it did it on premiums and out-of-pocket costs. So that would probably not be what you are talking about. I think it really was the present value of those expenses. I read the article a long, long time ago. [*Comment from the floor—inaudible.*] They are doing a simulation, so again, it is a range; just like ours has a simulation, you have a range. On the high end, it will be more, and on the low end, it will be less, and that is probably their average.

STEVE VERNON: Just to maybe give an extreme example of what I am talking about. Suppose

you had a lifetime income, like an annuity of \$100,000 a year. You have great income. You have no savings. You could pay for these medical expenses out of pocket as they go with your Medicare premium and your deductibles and copayments. [*Comment from the floor—inaudible.*]

DAVID G. BOETTCHER: I want to thank everyone for the excellent discussion, in particular thanking the panel for their time and effort in putting together their presentations. Vekevia, for filling in for Liz on very short notice and doing an excellent job. So thank you very much.