

PERSPECTIVES ON RETIREMENT

THE SOA RECENTLY HELD A

Around this time of year, my wife and I have a little wager. What exactly will be the justification in the annual letter we receive from our children's grade school explaining the inevitable, nearly double-digit increase in tuition? Decreasing enrollment? Increasing enrollment? New equipment? Old equipment? The depressed economy? The robust economy? I always seem to lose this wager. At the same time, many of our friends with college age children have told us about their renewed appreciation for the term "sticker shock" as they send their kids off for a new semester. In the midst of this life stage which is focused to a large extent on educating our children, there is one theme that frequently recurs when we gather with our friends: retirement seems like a distant fantasy. In light of all these financial burdens, it's clear that how to invest for the future is on the minds of many.

These issues, among others, have been at the forefront recently as part of an ongoing dialogue on a model of personal investing known as the *Life-Cycle Model of Investing and Saving*. To gain additional insight into the model and its implications for retirement planning, the SOA's Committee on Post Retirement Needs and Risks (CPRNR) recently gathered a panel of leading experts for a roundtable discussion on the model with the hope of providing a lively forum to exchange ideas. We were not disappointed.

The roundtable was inspired by a conference held last fall in Boston called *The Future of Life Cycle Saving & Investing*, which was jointly sponsored by the Federal Reserve Bank of Boston, Boston University, and the CFA Institute. This conference, which was attended by a diverse group of financial professionals, provided an exploration of the Life-Cycle



PLANNING AND CONSUMPTION

ROUNDTABLE ON THE LIFECYCLE MODEL OF INVESTING AND SAVING.

BY STEVEN SIEGEL

Model including findings from behavioral finance, the role of government and software development. As a result of the issues discussed at the conference, the CPRNR was interested in examining in-depth how the model relates to risks in retirement such as the death of a spouse, how the model is applied as compared to a replacement ratio approach and ultimately how actuaries and economists could advance the dialogue on these issues.

The format of the roundtable, moderated by Anna Rappaport, chair of the CPRNR, was a series of seven questions posed to each of the roundtable participants. Each was given an opportunity to present their own views as well as ample time to interact with others on the roundtable.

Participants

The roundtable consisted of the following participants (see related inset for expanded information about the panel): Zvi Bodie, Jeffrey Brown, Ronald DeStefano, Jerry Golden, Michael Leonesio and Dave Sandberg.

Questions and Discussion

To set the stage for the discussion, the roundtable opened with the following questions:

What are the key features of smoothing lifetime consumption through the Lifecycle Model as it can be applied by individuals and families? How would smoothing lifetime consumption impact persons at different life stages?

Zvi Bodie led off the discussion by noting several key features of life cycle planning and smoothing lifetime consumption. First, in life cycle planning, it is consumption

over a lifetime that is of primary interest to individuals and families, rather than wealth. This is an important distinction because optimizing wealth at various life stages is considerably different than optimizing utility or welfare from consumption. As a demonstration of this difference in terms of retirement saving, a risk-free asset such as a lifetime deferred annuity that guarantees a standard of living after retirement would be consistent with life cycle planning as opposed to an investment product guaranteeing a certain level of wealth.

Second, lifetime consumption smoothing implies that deploying resources most efficiently typically results in the need for a contingent contract—a clear example of this is a lifetime contingent contract. In this context, it is always more efficient to buy a lifetime annuity, rather than a stream of income that is paid whether or not you are alive.

Finally, a key component of lifetime consumption smoothing that is often overlooked is an individual and family's own human capital. In other words, the lifetime profile of an individual's earnings makes a significant difference in terms of planning with particular emphasis on the inherent risk and potential fluctuation of those earnings at various life stages. To drive home this point, Anna Rappaport observed that her son-in-law, who is a TV writer, would need to be more conservative in his planning than a teacher or policeman because of employment uncertainty.

Expanding on the concept of smoothing the fluctuations, Jeffrey Brown commented on the role of insurance products in this context. He noted that planning for consumption would be quite easy if you knew at the outset how



ROUNDTABLE PARTICIPANTS

Anna Rappaport, Moderator

Anna Rappaport is a consultant specializing in strategies for better retirement systems. She is passionate about improving retirement security for all, and is particularly concerned about older women who are alone. She is a former president of the Society of Actuaries and she chairs the Society of Actuaries' Committee on Post Retirement Needs and Risks. Prior to starting her firm, she had a 28-year career with Mercer Human Resource Consulting.



Zvi Bodie

Zvi Bodie is the Norman and Adele Barron Professor of Management at Boston University. He holds a Ph.D from the Massachusetts Institute of Technology and has served on the finance faculty at the Harvard Business School and MIT's Sloan School of Management. Professor Bodie has been published widely on pension finance and investing in leading professional journals.



Jerry Golden

Jerome (Jerry) S. Golden is president of the Income Management Strategies Division of MassMutual. At MassMutual and previously at Golden Retirement Resources, Inc. (GRR), which MassMutual acquired in 2005, Golden and his team developed a patent-pending system for converting retirement savings into secure, retirement benefits. Prior to formation of GRR, Golden was executive vice president of AXA-Equitable.



Jeffrey Brown

Jeffrey Brown is the William G. Karnes Professor of Finance at the University of Illinois at Urbana-Champaign. He also serves as the associate director of the NBER Retirement Research Center, and as director of the Center for Business and Public Policy at the University of Illinois. In 2006, President Bush appointed him a member of the Social Security Advisory Board.



Michael Leonesio

Michael Leonesio is an economist in the Social Security Administration's Office of Policy. His research interests include the economic status of current and future beneficiaries, work and retirement trends, changes in the distribution of lifetime earnings and analysis of proposed changes in Social Security's programs. He received his Ph.D in economics from Cornell University.



Ron DeStefano

Ron DeStefano is a senior vice president with Aon Consulting. With Aon for 35 years, he has served as Retirement Practice Council chair and consults with large corporate and governmental clients on retirement issues. He was the project leader for Aon's most recent "Replacement Ratio Study."



Dave Sandberg

Dave Sandberg is the vice president and corporate actuary at Allianz Life. His extensive professional involvement has included vice president of the Life Insurance Practice Council for the American Academy of Actuaries. He has been involved in work projects on International Accounting and Solvency for the last nine years and is also a Board member of the American Academy of Actuaries.



long you will live, how much health care you will need, how much your earnings will change over time and how high the inflation rate will be. But, obviously, those are unknowns. To address these unknowns is where the availability of insurance products such as lifetime annuities and long-term care insurance becomes so important. In terms of planning for retirement consumption, it is not enough to plan for averages or expected outcomes to help you maintain a consistent standard of living because you might not be average. Insurance products address this by protecting you from the downside risk and essentially what could be a “feast or famine” scenario of retirement.

Dave Sandberg added that another important aspect to this is the changing frame of reference for the time horizon over which consumption would be smoothed. For example, over a person’s lifetime this personal reference point could change from that of a single individual’s own lifetime to the lifetimes of a married couple to a more generational focus on children and grandchildren and all the way to a focus on lasting legacies. This changing frame of reference complicates the smoothing process.

Anna Rappaport pointed out that last year the SOA conducted focus groups composed of participants who retired relatively recently and found that for many of them, their planning time horizon was two to five years. Longer term thinking is fundamental to good planning.

A final thought came from Michael Leonesio regarding the existence of important discontinuities within the smoothing process. For instance, when fairly complex lifecycle models are tested against actual data, a particular discontinuity at retirement is evident. The data show average consumption declines of 15 percent which could be caused by a number of factors including health problems. The message here is that consumption smoothing requires models that account not only for differing aspirations and plans regarding future earnings and retirement income, but also critical life stage changes.

What are the differences between consumption smoothing and replacement ratio modeling of retirement needs? What are the general pros and cons of each approach? How



would each of the models respond to significant health or marital status changes during retirement?

Ron DeStefano opened the discussion with his thoughts on the approaches of replacement ratio modeling as compared to consumption modeling. Explaining that the premise of the replacement ratio approach for retirement is focused on pre-retirement income replacement adjusted for savings, taxes and retirement needs, he felt that the two approaches mostly approximate each other. As far as discontinuities or shock events like disability or long-term care, replacement ratio modeling would not explicitly factor for those, but, rather, would assume that insurance or savings would cover those events. He further noted that one of the current limitations with replacement ratio modeling is that it is focused on the point of retirement. However, he believes that replacement rates and spending vary over time and this is where a consumption approach provides a possible paradigm.



Building on Ron DeStefano's thoughts, Zvi Bodie commented that the difference between the two approaches becomes clearest when you focus on the actual decision of when and if to retire. The pattern of working full time to age 65 and then retiring is becoming obsolete for a number of reasons including the fact that many individuals are simply not saving enough to retire and many are actually

In thinking about the approaches from a risk management perspective, Jerry Golden commented that many retirement solutions will be driven by recommendations from investment advisors and planners. Because this is the case, the current situation is that there is a vast spectrum of recommendations. In other words, there is no consensus among the advisors and there's confusion in the planning market—a “mess” in his opinion. This is exacerbated by the lack of standardization and proper tools for planning, comparing products and solutions, and measuring the efficiency of

“The **pattern of working full time to age 65 and then retiring** is becoming **obsolete** for a number of **reasons**. . . .”

enjoying their work. With this changing pattern of when and how retirement is initiated, Bodie proposed that an effective model for financial security should not be premised solely on what were typical retirement needs, but, rather on how a balanced lifestyle can be maintained throughout the later years.

the approaches, thereby impacting both the advisors and those individuals in need of the recommendations. A major issue is that many of the approaches mask variability in life span and investment performance.

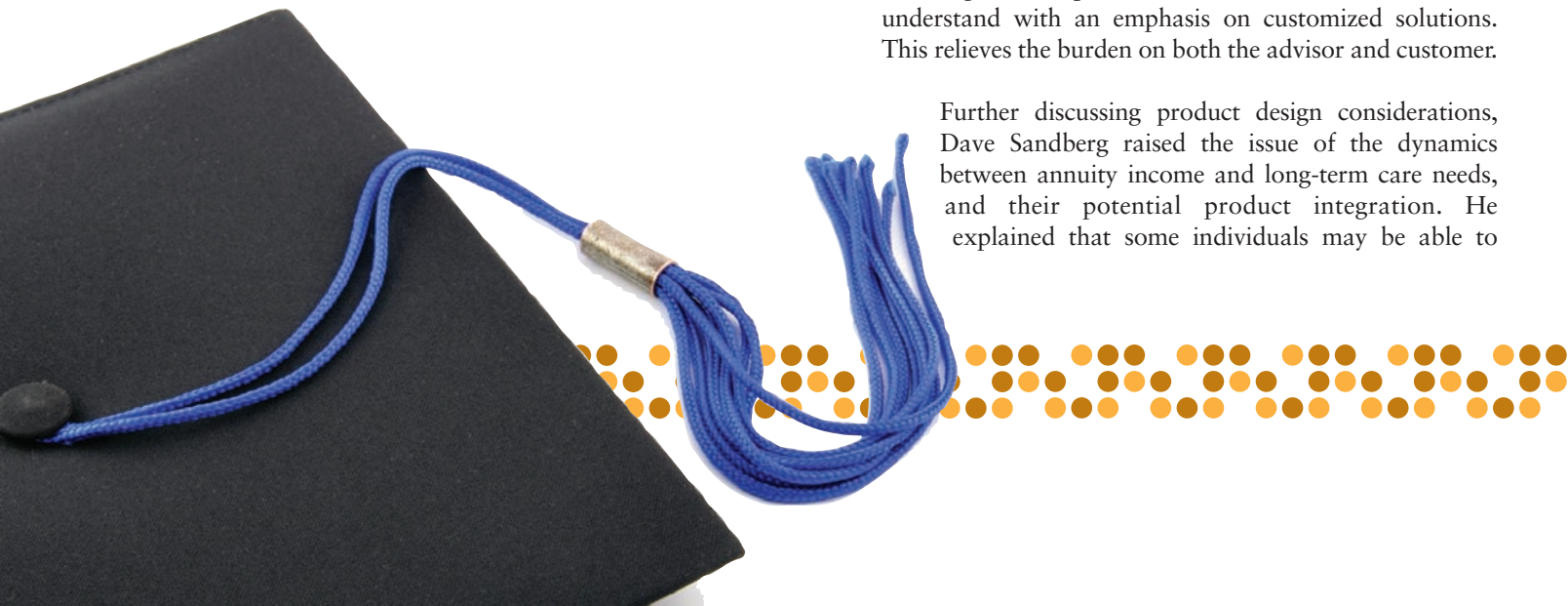
Providing further commentary from an economic perspective, Jeffrey Brown noted that the two approaches are definitely related. Furthermore, while a consumption model is more robust, an advantage of the replacement ratio approach is that it is much easier to explain because it is essentially just a number. But, he felt the replacement ratio approach is just the first step in the retirement planning process because it does not extensively factor in potential life changes and uncertainty. And if an individual is not thinking about uncertainty, it's unlikely the right financial products would be purchased to protect against it.

Dave Sandberg agreed with the observations on the current state of the advisor market and its relationship to risk management. He further commented that much of the problem is that there is no common language for discussing risk, and that a lack of clarity on the distinction between the risk management goals of insurance and investment products are contributing to this situation. This is apparent in the guarantees seen on variable annuity products.

How does risk management fit into the framework of each approach and what type of products would support risk management under the approaches?

Speaking from an educational perspective, Zvi Bodie reiterated the lack of understanding of many advisors on derivatives and structured products. He noted that he is working on an educational monograph, essentially a primer on derivatives and structured products for financial planners. From a product standpoint, he conveyed that a few companies have been trying to be innovative in this area and develop smarter, more sophisticated products. The approach is to have the sophistication embedded into the design, so the product itself becomes easier to use and understand with an emphasis on customized solutions. This relieves the burden on both the advisor and customer.

Further discussing product design considerations, Dave Sandberg raised the issue of the dynamics between annuity income and long-term care needs, and their potential product integration. He explained that some individuals may be able to



SOME OBSERVATIONS AND COMMENTS FROM ANNA RAPPAPORT

I am very pleased that we are discussing the life cycle model and its relationship to replacement ratio modeling as well as other perspectives on retirement needs and adequacy. The panel discussion was very gratifying and has helped tremendously to provoke much thought about the key issues. I wanted to add a few comments:

- Risk protection is an important companion to consumption smoothing. There are a variety of risks that bear consideration in consumption planning. There is no scientific agreement or consensus among individuals on the right risk protection solutions in retirement and the extent to which risks should be hedged or transferred.
- The panelists have focused on the integration of risk protection products with consumption planning. This is extremely important but not compatible with the short time-horizon that many people have for their own planning.
- The life cycle model highlights the value of borrowing as a tool in people's lives. Certainly, many people are only able to make major purchases such as a house or car, or obtain a college education, because of the availability of borrowing. Likewise, reverse mortgages can be a valuable tool in retirement. At the same time, credit cards are overused by many, and too many Americans reach retirement age with too much debt. I would like to caution about the riskiness of debt and encourage thinking about when borrowing is a good idea and when it is not.
- In considering retirement needs, consumption smoothing helps move the evaluation beyond replacement ratios for certain issues. This is evident because consumption smoothing needs to be adjusted for needs and interests that change over life. For example, a family that spent a considerable amount of money on college education does not need to replace later on the income devoted to this.
- Replacement ratio modeling is very useful for employers assessing their retirement plans because employer data and records are based on earnings. Ratio modeling estimates future savings and spending reductions, and assumes that the rest of the income will need to be replaced. On the other hand, consumption smoothing or management is a very interesting model, but to apply it well, we need to better understand future spending. Many people are more aware of their income than their spending, and there are many uncertainties about future spending.
- A great deal of spending is influenced by the nature and sustainability of decisions. For example, choice of housing is a long-term decision that typically impacts spending over a long time-frame. From a shorter-term perspective, choices of health care plan affect outlays needed in the event of illness for a given year. Yet, other decisions affect spending on just a single item or activity, such as individual purchase decisions, eating in a restaurant, etc.

Again, our thanks to the panelists for contributing to this dialogue. ■

fund for long-term care out of the income from their annuities, but many will not. The product integration of annuities and long-term care products is an important consideration because of the growing need for long-term care because of increasing longevity. Other participants noted that there are definite challenges to linking annuities and long-term care insurance because of benefit design complexity, the current bifurcated regulatory environment, tax

Why are there large differences in the level of retirement resources needed for a satisfying retirement based on the recommendations of a variety of experts?

In thinking about this question, Michael Leonesio explained three potential reasons for retirement resource recommendation differences among experts. First, there are substantial personal differences among retirees and also differences in the procedures that analysts use to address this heterogeneity in arriving at their recommendations. This can be a significant source of the inconsistency. Second, there is the potential mismeasurement of

“The product integration of annuities and long-term care products is an important consideration. . . .”

consequences and of great importance, the impact of Medicaid on the private market.

Zvi Bodie likened the potential integration of annuities with long-term care insurance to what is happening in corporations that are embracing Enterprise Risk Management. Rather than having a separate insurance product for each corporate risk, an integrated comprehensive approach is applied to all the risks resulting in huge economies of scale. This approach has yet to be applied in a meaningful way to individuals in households.

resource availability to retirees. This mismeasurement can be pronounced for wealth components like housing equity as well as for current and potential resource transfers from family, community, churches and other institutions. Third, there is an aspect to these recommendations that transcends defining them in monetary terms and that relates to quality of life considerations, such as health, connectedness with community, sense of autonomy and personal control, and other difficult to measure indicators of contentment. Given these aspects it is easy to understand how a low income elderly person may be quite happy while a high income person may find old age an absolute misery.

Ron DeStefano suggested that some of the recommendation variability can be traced to inferior retirement income planning calculators and software. Many of these do not account for the impact of Social Security benefits as well as other factors. In addition, many of the recommendations that are premised on a 4 percent annual withdrawal rate result in an added layer of variability. Other participants agreed with the problem with calculators noting that many of them, while using simplistic, misleading assumptions have an ulterior motive to sell certain investment and savings products. The primary problem here is that although in a certain sense the calculators promote a worthy goal by encouraging more savings for retirement, the main risk is that many individuals have a significant investment portfolio misallocation that may be completely obscured by the calculators.



What are the phases of retirement? How do we incorporate them into approaches for meeting retirement needs?

Dave Sandberg started off by referring to a study recently sponsored by Allianz dealing with the concept of retirement and how individuals choose many alternatives to whether or not and how they leave the workforce. The whole idea of phasing is inextricably tied to the fact that many individuals view the prospect of working in old age very differently; hence, there is no simple, one step process. Consequently, in terms of risk management for phases of retirement, Sandberg further noted that it is desirable to have products that offer the flexibility to add assets and liabilities for different risk mitigation strategies over an individual's lifetime.

Other participants agreed with this need for options with Jeffrey Brown noting that companies will need to effectively package the options and customize them. It will simply be beyond most individuals to decide these options for themselves because of the myriad of choices.

In regard to phases, Ron DeStefano explained how he sees a range of thinking about retirement at different ages before retirement and after retirement. In particular, individuals under 40 are basically in denial about retirement, then starting with age 40, there is an awakening, with age 50 being the turning point where real planning begins. Post retirement, there is usually a honeymoon stage that may be followed by a period of disillusionment accompanied by limitations from health or other circumstances.

Other participants agreed with this categorization with Zvi Bodie also noting that it varies tremendously by individual. To illustrate this, he used as an example Paul Samuelson, the Nobel Prize-winning economist. At 93, Samuelson was the keynote speaker for the conference that inspired this roundtable in Boston and although he might need assisted living, there are no signs of aging in his intellect or ability to earn a living.

How exactly does the role of borrowing fit within the framework of the Lifetime model? What is the comfort level of the roundtable participants with the role of borrowing in the model—are there dangers in it?



In assessing the role of borrowing, Jeffrey Brown responded that it has a very useful and important role. If an individual is trying to smooth consumption over a lifetime and is reasonably confident of increasing earnings over time, the Lifecycle Model provides no reason to not borrow early in life to consume more sooner, knowing it can be paid back later. When it is done responsibly, it can be a very important and wealth enhancing tool. The problem he acknowledged is instances of individuals who are not sufficiently financially literate or have no self-control. In his view, although there are instances of problematic borrowing, public policy for all should not be designed around the small segment of the population that is irresponsible.

Viewing the role of borrowing in another context, Jerry Golden raised the issue of whether using reverse mortgages to help fund long-term care is a reasonable approach. From a retirement planning perspective this type of borrowing has been done, but it is unclear as to whether it will be a growing trend and is further complicated by the lack of tools to evaluate its appropriateness. In summing up the retirement perspective, other participants agreed that an important problem to consider is retirees entering retirement with an overwhelming amount of debt.

This led to the final question for the roundtable.



How might actuaries and economists work together to move forward this dialogue?

All participants agreed that forums such as the roundtable they were participating in are very useful and that actuaries and economists should work together increasingly. Zvi Bodie mentioned that an upcoming ideal forum will be the 2008 Future of Lifecycle Saving and Investing conference that will provide an opportunity not only for actuaries and economists to engage, but also risk managers, financial planners and government officials.

Some participants see a real benefit in these partnerships in helping to guide policy and inform regulators. In this regard, Michael Leonesio suggested that collaboration was natural since actuaries and economists often explore complementary aspects of an issue. Besides providing expertise for regulators, other participants see an educational benefit in such partnership. The need for education and better tools is great for both individuals and financial planners. As Jeffrey Brown noted, the state of the environment is such that "... if I had to pick one shortcoming of the financial planning industry today, it's the inadequate understanding, inadequate treatment, and inadequate planning for risk."

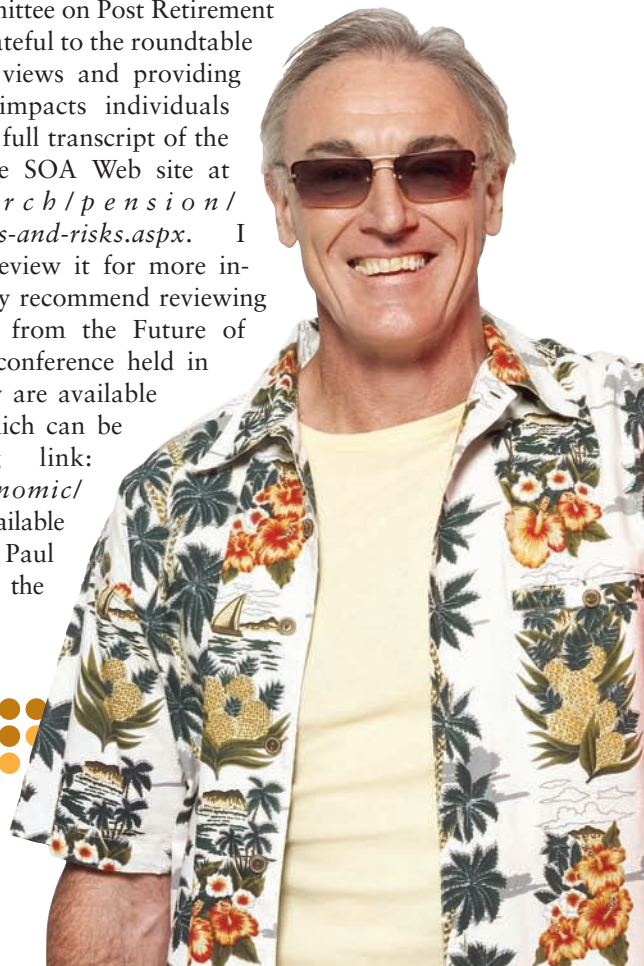
Concluding Thoughts

The Society of Actuaries' Committee on Post Retirement Needs and Risk is extremely grateful to the roundtable participants for sharing their views and providing insights on this topic that impacts individuals throughout their lifetimes. The full transcript of the roundtable is available on the SOA Web site at www.soa.org/research/pension/research-post-retirement-needs-and-risks.aspx. I would encourage readers to review it for more in-depth information. I also highly recommend reviewing the presentations and papers from the Future of Lifecycle Saving & Investing conference held in Boston in October 2006. They are available at the conference Web site which can be found at the following link: <http://www.bos.frb.org/economic/conf/lcsi2006/index.htm> Also available is a wonderful video of Paul Samuelson's keynote address at the

conference—you can find it at the following link: <http://smg.bu.edu/exec/elc/lifecycle/samuelson.shtml> Definitely worth watching!!

The Committee on Post Retirement Needs and Risks is dedicated to advancing knowledge on this topic, and in promoting understanding and solutions for the risks facing retirees. If you have thoughts or ideas on how to make its mission more valuable for you, we would greatly appreciate hearing from you. ■

Steven Siegel is a research actuary for the Society of Actuaries. He can be reached at ssiegel@soa.org.



WANT TO LEARN MORE?

Read the full transcript available on the Post Retirement Needs and Risk page on the SOA Web site. For a guide to specific sections of the transcript, please refer to the following table.

Discussion Questions	Transcript Pages
What are the key features of smoothing lifetime consumption through the Lifecycle Model as it can be applied by individuals and families? How would smoothing lifetime consumption impact persons at different life stages?	5-14
What are the differences between consumption smoothing and replacement ratio modeling of retirement needs? What are the general pros and cons of each approach? How would each of the models respond to significant health or marital status changes during retirement?	14-19
How does risk management fit into the framework of each approach and what type of products would support risk management under the approaches?	19-33
Why are there large differences in the level of retirement resources needed for a satisfying retirement based on the recommendations of a variety of experts?	33-38
What are the phases of retirement? How do we incorporate them into approaches for meeting retirement needs?	38-43
How exactly does the role of borrowing fit within the framework of the Lifetime model? What is the comfort level of the roundtable participants with the role of borrowing in the model—are there dangers in it?	43-46
How might actuaries and economists work together to move forward this dialogue? Conclusion.	46-54