SOCIETY OF ACTUARIES

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DILBERT

Check out Dogbert's retirement planning service.

Full Article

SOCIETY OF ACTUARIES

PENSION SECTION *NEWS*

CHAIRPERSON'S CORNER

By Faisal Siddiqi

I hope that everyone had a relaxing and enjoyable holiday season this year and is looking forward to a great 2013 from both a personal and business perspective. I would first like to thank Penny Bailey, the previous chair of our section, for her hard work and leadership on many of the projects while on council. I look forward to moving ahead on some of the these prior projects that are multi-year in nature and some new ones we have under way in 2013 with the great cast of council members we have this year.

Council Activities

As you many know, the purpose of the SOA's Pension Section is to help advance research in the retirement area, provide our section members with opportunities for continuing education via webcasts and meetings, and to communicate pension topics via the *Pension Section News* and other vehicles. During the coming year, the Pension Section will be working on various projects to further our purpose, teaming with other sections to produce some great quality research and continuing education opportunities, and also thinking about the long-term future of the retirement arena and how we can help you and the profession succeed.

Some of the projects we have under way this year are related to promoting our Pension Section research, preparing podcasts, educating on mortality/longevity issues, and evaluating investment opportunities for pension actuaries. I will touch on each of these, as follows:

- *Promoting our research:* the Pension Section has a long history of producing some ground-breaking research to help practitioners and the public alike. The research is conducted by many experts through academia, consulting firms, and volunteer efforts. However, I suspect many of our section members are not aware of how much research has been done and where to find it. Therefore, we have organized a group of our council members to review the research done and find the best way to promote it.

- *Podcasts:* after conducting the 2012 Pension Section Survey, we found that many of the respondents were supportive of the section preparing podcasts to help communicate pension related topics whether it be research or any interesting topic that is top of mind. Luckily, the Society of Actuaries was already there and with their assistance we have prepared some initial podcasts highlighting recently completed research projects. These short podcasts give you a quick overview of the research from the authors' perspectives. Please listen to our podcasts and let us know what you think!

- *Mortality/longevity education:* the section and the SOA have put in a great effort over the last two to three years to understand improvements in mortality, how it improves and where this is headed. You are all familiar with the new Scale BB, however, more is coming. To help our section members understand mortality improvement and how to communicate this to various stakeholders, the section has been and will continue to include articles in the *Pension Section News*, hold sessions at meetings, and produce reference material to be used as needed. In fact a specific project is a mortality toolkit that includes a short slide deck to be used in client meetings. This is a joint effort with the American Academy of Actuaries and we hope it will raise the comfort level and knowledge of pension actuaries with respect to this complex and sometimes confusing area.

- *Investment Opportunities for Pension Actuaries:* this is a very exciting new project for us and we are exploring ways to promote pension actuaries in two ways. First will be to the investment community where we feel pension actuaries can provide expert advice with respect to pension investments. Second is moving pension actuaries along the spectrum to be more comfortable with discussing investment topics and corporate finance issues with the organizations they provide advice to. Look forward to our plan in this area through future *Pension Section News* articles, podcasts, and meetings.

We will also be working more with other sections in 2013. We have a natural connection to the Investment Section. You will see us working together on the upcoming Investment Symposium, working on webcasts, conducting research, and preparing articles for each of our respective section newsletters. We also have plans to work with the Social Insurance and Public Finance Section related to social security topics.

Finally, we are exploring some long range topics for the Pension Section to investigate further to help our members based on your feedback. We are looking at some of the fundamental shifts in demographics, longevity, pension plan types, retirement risks, and interest rates. These are very big picture issues but also topics where pension actuaries and experts can provide some great research and expert opinion based on our training and experience. I hope that you will stay tuned and interested in many of the projects listed above and even excited enough to provide input by participating in a meeting session, writing an article, conducting research, or just adding in your two-cents if you have feedback on our work.

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SOCIETY OF ACTUARIES
PENSION SECTION NEWS

NOTES FROM THE EDITOR

By Raymond Berry

Congratulations to Tonya Manning, our new President of the Society of Actuaries a member of the Pension Section and a past member and chair of the Pension Section Council.

Also congratulations to Faisal Siddiqi, our new chairperson of the Pension Section. We welcome his first article as chairperson.

Need some updating on pension finance? See the article highlighting the Pension Finance Task Force on-line continuing education quiz.

Interested in phased retirement? Read Anna Rappaport's insights on her personal phased retirement.

Other topics in this issue include lifetime income, de-risking pensions, variable annuity plans and another look at "Dogbert's Retirement Planning Service."

If you were not able to attend the SOA annual meeting this year, be sure read the comments from actuaries who attended about what they found most interesting at the meeting.

Thanks to all the authors for their articles.

Please send us any articles that you feel may be of interest to others in the Pension Section. Also, send us topics or issues that you want to know more about.

A reminder, it is time to attest to Continuing Professional Development (CPD) for the 2011-2012 period. Annual SOA dues for 2013 are now payable. Be sure to sign up for the Pension Section again when you pay your dues.

Raymond Berry, ASA, EA, MAAA, MSPA, can be reached at raymonddberry@yahoo.com.

SOCIETY OF ACTUARIES
PENSION SECTION NEWS

A VIEW FROM THE SOA'S STAFF FELLOW FOR RETIREMENT

By Andrew Peterson

This is the time of the year when we typically reflect on events of the past year and evaluate how they may impact the future. As I reflect on significant developments in the retirement plan area, I see three major trends which I believe will continue to impact our business in 2013 and beyond. While I'm writing this based on my view of the U.S. retirement market, I don't think they are unique issues to the U.S. and so should be of interest to our readers in Canada and beyond.

1. **Pension (longevity) "de-risking"** – The initial move last spring by Ford and then GM to offer lump sums and/or annuities to select former employees and retirees started a wave of such announcements during 2012. (See related article in this issue by Cindy Levering.) It seems this is a trend that will continue despite "conventional wisdom" that these transactions are too expensive in a low interest rate environment (see Evan Inglis' article on why plans are de-risking now) and calls from certain groups like the Pension Rights Center for a moratorium. While this is described as "de-risking" from a plan sponsor perspective, I encourage SOA members working in this area to focus on providing a holistic view to your clients about risk and who is carrying the risk after the transaction. Is the risk being mitigated or just transferred and are the parties now taking on the risk able to manage it? For some more thoughts on this subject, see a blog post I wrote back in May 2012, after the Ford announcement.

2. **Public pension plan pressures** – With the ongoing economic challenges, there continue to be significant pressures on many public sector pension plans. Contributions are escalating to insupportable levels for some plans due to past underfunding and losses from the "great recession" that are still being recognized. The pace of design changes for many states and localities continues to be significant in an attempt to manage costs. In addition, the Government Accounting Standards Board (GASB) in the United States adopted significant changes in 2012 (see our November *PSN* article on this topic) which represent a significant shift in public sector pension accounting rules. Paradoxically, the change in accounting standards is receiving unsatisfactory reviews both from those satisfied with the prior paradigm (for the new de-linking of accounting cost and the annual required contribution) and from those advocating for market-based reporting (for continuing to allow most systems to use long-term rates of return as their discount rate). In the context of improving actuarial funding, the SOA hosted a *Public Plan Funding Symposium* in September 2012 which brought together experts to discuss this topic. A conference report is anticipated in early 2013, but in the meantime, conference presentations are available at the link provided.

3. **Lifetime Income** – With the continued trend to defined contribution (DC) plans and the baby boom generation

now retiring, it seems like the retirement income industry and policy makers have finally awakened to the fact that individuals cannot easily manage the “pot of money” that they have accumulated to provide lifetime income in retirement. Lifetime income and the “annuity puzzle” (why more people don't select an annuity when given the option) are hot topics right now for academic papers and industry meetings. The retirement income industry is developing different products that manage retirement income from DC plans in various ways—from in-plan solutions to various types of rollover options. Finding new ways to efficiently convert account balances into lifetime income streams is an important contribution that actuaries can make to the area of retirement security. The SOA has several ongoing projects in this area which will be completed in 2013 and should be helpful for our members and plan sponsors.

I'm sure there are other significant events from 2012 that others might identify, but I believe these are three that will continue to impact the work of pension actuaries in 2013 and beyond. Finally, as I close this column, I would like to highlight a just released SOA retirement research report, *Observations on Input and Output Smoothing Methods: How do they affect the funding of defined benefit plans?* It is focused the general similarities and differences between input and output smoothing methods in the private sector pension arena—a topic that received significant attention during deliberations over the U.S. MAP-21 Pension Funding Stabilization provisions and will likely receive attention again. The report seeks to inform policymakers of the basic attributes of each type of method—absent specific policy proposals—so that they can better determine whether one type of method better suits their objectives and, if so, which type. We believe actuaries have a unique and essential perspective on the issue of smoothing, and should help other stakeholders—legislators and sponsors – understand the options before them. I encourage you to read the report and provide any feedback or comments to either Joe Silvestri (jsilvestri@soa.org), the lead researcher, or me.

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SOCIETY OF ACTUARIES
PENSION SECTION NEWS

PERSPECTIVES FROM ANNA - SOME INSIGHTS INTO PHASED RETIREMENT AND RETIREMENT DECISIONS FROM THE RETIREE'S POINT OF VIEW

By Anna M. Rappaport

This column was motivated by my recent work in updating my website (annarappaport.com), and thinking about it, and by a session at the 2012 Society of Actuaries annual meeting focused on retirement decisions. We were very fortunate to have Paula Hogan, a leading financial planner, as a guest presenter. Paula was very interested in the ideas around life portfolio and managing our lives in retirement and wrote about them (click here to read). It was further motivated by the fact that I am just starting on a project of which phased retirement is an important part.

Since retiring from Mercer at the end of 2004, I have given a lot of thought to managing retirement and have been an active phased retiree. Many people have focused on managing income and assets. This article focuses on a different aspect of managing retirement: managing life beyond money. (It assumes that financial management is under control and that there are adequate financial resources.)

Building and maintaining a life portfolio: From my perspective each of us should have a life portfolio as well as a financial portfolio. Just as the financial portfolio requires focus and management, so does the life portfolio. However, the strategies that make sense for the life portfolio are very individual, and there are few established guidelines for defining and managing a life portfolio. Some of the observations about my decisions and life portfolio are as follows:

- I view myself as a phased retiree. I have stayed very active professionally and hope to continue to do so.
- I seek consulting assignments consistent with my interests.
- Volunteering in areas that I view as important is a good way to give back while at the same time doing something that I enjoy.
- Research, writing and speaking are all a big part of what I do.
- I am also an artist and have worked to balance actuarial and retirement system focus with art.
- I place a high value on family commitments and do not get involved in projects that will create difficulty with other priorities. This is a choice that someone with a regular job often can't make.
- I work regularly to maintain contacts.
- I only undertake projects that are of interest to me, and which I can do on my own without staff. I may partner with others and have others help me.
- Advisory group roles can fit well into what I want to do.
- I am creative, and seek to apply my creativity in both professional work and art. In my art, I have focused on several areas of innovation. My website describes what I have been doing.
- I want to feel that what I do has value.

As we age, we may become limited in what we can do. Ideally, the life portfolio has some flexibility to adjust to limitations. I think it is important to include some elements in a life portfolio that can be continued even if one is physically limited or significantly involved in caring for others. That will mean that a physical limitation or care giving responsibilities will not require one to give up the entire portfolio.

Some people will work on building a life portfolio long before they retire, and others will not start until after they have retired. My view is that it is better to start on this before retirement and to have some pieces of a life portfolio in place, or ready to be put in place quickly. A friend who is now doing significant volunteer work for the Society of Actuaries observed that getting elected to the Pension Section Council two years before retirement opened up a new world to her, and helped her build her portfolio. While I strongly support thinking ahead and building a portfolio over time, it is also important to maintain flexibility and not get committed to too much.

Building a brand and using it: It is important to define what you want to do and to be selective about what you decide to take on. Think about what you want to be identified with and what you want people to ask you to do. Today many people are aware of the need to build a brand earlier in life, and to use it to manage a career. That need does not go away for a phased retiree. In fact, since there are no well formed expectations about what a phased retiree might do and how such a person fits in, the need tends to intensify.

I participated in a panel on Women's Leadership this summer and I commented that it is also important to remember that appearance is a part of branding. Women particularly can be remembered because of what they know or because of how they look or both. My view is that it is desirable to dress and maintain an appearance that supports one's professional goals and is not a distraction. However, as a phased retiree, I feel I have more freedom to make personally appealing choices with regard to jewelry, colors, etc. However, if my goals were to get appointed to corporate boards—a goal often held by phased retirees—then it would be extremely important to dress that part and maintain an image that would make people comfortable with me in that role.

Part of using your brand is communicating it. After retiring from Mercer at the end of 2004, I established Anna Rappaport Consulting in 2005. Once I did this, I developed a brochure and shared it with many people to let them know what I was doing. Regardless of whether one has a paper brochure, I think it is important to have a focused and brief statement about who you are and what your goals are. I also developed a website and this is discussed below.

Use of technology/website: Technology has been critical to my life portfolio choices. The professional work I do can be largely done from any location online and by telephone. Access to a good computer and printer is key. One of the things I no longer have is "tech support" from my employer. I still need support and it has been invaluable to find a local person who can come to my house and help when I have a problem or need something set up. An early step in making phased or full retirement work can include upgrading technology—including telephones, internet service, computers, printers, etc.

An important part of telling my story has been to have a website. The website was first developed in 2005 and it has just been updated. The development work also helped me to define my story better. For those interested, the website is annarappaport.com. This link was also placed on brochures and business cards. The brochures were extremely helpful in the first three years to tell people about what I am doing.

I have spoken to other phased retirees who do not have websites and feel that they do not need them. I felt that I needed a website if I was to be viewed as a credible speaker and advocate. Even if someone knows me, I feel that they need the website if they want to tell their boss about me with credibility. I do not believe the website attracts people to me, but it is a reference point for people who hear my name. **The topic of when one needs websites would be a worthwhile discussion topic.**

There has been a great deal of discussion recently about the use of technology and social media. LinkedIn has been very valuable to me in locating people with whom I had lost touch. Overall, this is an area where I still have a lot to learn, and my use of social media is somewhat limited. I have tried posting ideas and questions to various group sites on LinkedIn to see if we could get discussions started—but without too much luck to date. I have to decide how much effort I will put into building more skills in the formal social networking area. However, I have spent a lot of effort building the website. **Another good discussion topic would be the best balance of the use of personal resources between building websites and various social media.**

Others thinking about this may be interested to know that I used professional help both in formulating the story and in implementing the website, and for me, that help was critical. This exercise forced me to think about what I want to do and what I do not want to do. It also encouraged me to identify good examples of my work and decide which to show to others. In the recent revision of my website, I decided to do several things beyond merely updating:

- Incorporate an improved design.
- Group all of the presentations into the three topic areas where I am the most active. Select a few slides to show how ideas are presented in the slides.
- Change the balance between art and actuarial work, display more art and talk about what I have been doing.
- Add a blog. I hope to be able to keep it up pretty well, even in the absence of voluminous feedback.

Securing opportunities: Opportunities can be found in many areas—think about the life portfolio. One never knows what opportunities will come along. Opportunities most often happen because of seeds that have been planted along the way. As a phased retiree, I have learned that there are many pro bono roles available, that they can be very gratifying and that people appreciate good work. It is much more challenging to get paid consulting work, and more difficult than most people think it will be. For any individual, I believe there is also an issue of deciding what one is professionally qualified to do, can manage independently and what one wants to do. This answer will differ for each individual. I encourage people to be realistic as they think about these trade-offs and constraints.

My strategies for keeping my story in front of people include maintaining contacts, participating in committees and panels, seeing people, a website, limited use of social media, and periodic update letters. I keep up with people and when I am traveling I try to connect with people beyond the meeting I am attending. On a number of occasions, I have organized a dutch treat dinner with a small group. The dinners have been a great success. I also attend a few face-to-face meetings each year.

I do something else to tell my story: Every year or two I have sent out a paper letter to more than 200 contacts updating them on what I have been doing. While this seems very old fashioned, I get many compliments on the letters. Because few people do this today, I think they stand out and help people to remember that I am available and professionally active.

Measuring life portfolio success: As a phased retiree, my life is very focused on meeting my personal goals. A simple way of deciding if things are working out is to periodically (at least once a year), think about what one has been doing. If you are doing things that you are happy about and proud of, then I would call that a success. On the other hand, if you do not have a story about accomplishments that you feel are worthwhile, then it may be time to rethink your goals and strategies.

Sometimes we get derailed from doing what we want to do because of the needs of family members who need care and support. From my perspective, that is also important and a good reason to put some of the other life portfolio issues on hold.

Other observations: I have tried to avoid overhead so that I am not under pressure to earn a minimum consulting income just to support the overhead. I do not have employees, an outside office or billable hours goals.

Some support is essential to me. That includes a local tech support person who comes to the house, website support, someone who can help with editing and making PowerPoint presentations look nice, and peers who are available to review articles. Family members and friends have been critical to my solutions to these challenges.

Time management during phased retirement is entirely different than while one is working, but is just as important. This requires new skills, discipline, the ability to set priorities, and insight into when it is best (or possible) to say no. With regular employment, one usually has a defined structure to the week. As a retiree involved in different activities, every day may be different, but there are still commitments that require adhering to schedules. One has many options about what to do and can get many requests for help and it is important to be able to choose. It is also important to be able to decide how much time to spend on a project before moving on to the next.

I balance my focus on actuarial and retirement issues with an interest in art. There are many other areas where one can also find a very different interest. One of my friends who is an animal lover balances her interest in retirement issues with volunteering for PAWS. (PAWS is a champion for animals—rehabilitating injured and orphaned wildlife, sheltering and adopting homeless cats and dogs, and educating people to make a better world for animals and people.) She has been able to use the skills from her working career in several ways. She does training, helps provide computer support, and helps match cats to families. The training uses her consulting and presentation skills, the computer support uses some of her technical and financial skills, and the matching builds on the skills she had in working with clients and supervising employees. The skills that actuaries have through their working careers can be valuable in many different settings.

It is valuable to have flexibility in our schedules, so that as we meet new people and encounter different ideas that sound interesting, we have time to test them out and see if they have appeal, both to ourselves and to our potential audiences. One of the advantages of being retired is that we can experiment with going down different roads and seeing what we might find.

Retirement is a time of transition. At that point we move away from established long-term obligations to a period of new activities and new freedom. We have many choices and challenges as we build our own life portfolios.

I hope this article will be of interest to those who are trying to design their own life portfolio and make phased retirement work for them. This would be a good discussion topic for the Pension Section LinkedIn site. We would love to see some postings from retired (or phased retired) actuaries that could generate additional ideas and solutions for this increasingly important phase of our lives.

PS: Thanks to Carol Bogosian and Cindy Levering for reviewing my draft and adding some interesting ideas.

Anna Rappaport serves as chairperson of the Committee on Post-Retirement Needs and Risks.

SOCIETY OF ACTUARIES
PENSION SECTION NEWS

LIFETIME INCOME - AN IMPORTANT FOCUS FOR RETIREMENT PLANNING

By Anna Rappaport

Many of the ideas in this article come from discussions with Kelli Hueler or research that we have done together. Thank you to Kelli Hueler.

Successful retirement strategies depend on managing financial resources and life situations during retirement. The work of the Committee on Post-Retirement Needs and Risks focuses on strategies during retirement, and the committee has focused on the need to create a post-retirement paycheck in several projects. Actuaries work with several different sets of stakeholders, and are very concerned about this topic. However, it proves to be a difficult topic and there are important barriers to choice of lifetime income when it is an option.

This topic has become more challenging in light of the changing structure of the retirement system. Although defined contribution plans have become more prominent in the retirement landscape, there is no accepted strategy with regard to helping employees focus on a paycheck replacement strategy in retirement, or even any agreement that the employer has a role in supporting a paycheck replacement strategy. Roles that employers can play include the following:

- Create a culture focused on the importance of paycheck replacement
- Provide illustrations that focus on paycheck replacement during working years
- Offer in-plan income options: Lifetime income can be offered through competitive purchasing platform or through choice of a single insurance company
- Serve as purchasing agent: Offer purchase of lifetime income through use of competitive purchasing platform
- If DB plan is offered, permit rollover of DC money to the DB plan
- Permit employees to leave their funds in the plan post-retirement and offer investment options, and/or managed accounts, and installment payouts; investment options which work well pre-retirement may not work well post-retirement, and vice-versa
- Offer education with regard to options and considerations – both before retirement and at time of retirement
- Ensure that plan administration providers understand employer’s philosophy and are supporting it in implementation
- Offer advice either through an advice service, or by hiring advisors to work individually with employees.

These roles are not mutually exclusive. An employer may choose to implement several of these steps to work together. Actuaries supporting employers have an important role to play in helping them to think through these roles and evaluate the costs, benefits and risks linked to each role. Actuaries working with financial services companies have an important role to play in helping them think through what support services and products will be appealing to employers as they think about what to offer their employees. Actuaries working with individuals have an important role in helping them understand alternatives and think through the costs, benefits and risks from their perspective. From an individual perspective, it is important to think about this topic from a "portfolio point-of-view." Questions to be answered include not just how much money should be used for paycheck replacement, but how various options fit into the total picture, when to make choices and how much to allocate to each choice.

Trade-offs between options from the perspective of the individual

There are major differences and trade-offs between options from the individual's perspective. The first challenge is gaining an understanding of the range of options. Some of the advisors and salespersons working with individuals represent particular types of products or are compensated primarily by taking specific actions. They may tend to present their preferred approach or product rather than explaining all of the relevant types of choices. The Exhibit below indicates some features of major retirement income funding options:

Features	Income Annuity	Other Products with Guarantees	Withdrawals
Guaranteed income for life	Yes	Yes, but at lower level than income annuity	No
Mortality leveraging*	Yes	Some	No
Liquidity/access to funds	Not in most products	Yes, within limits	Yes
Remaining account value goes to heirs if early death	No	Yes, after fees for guarantees	Yes
Owner can control funds in the account while income is being paid out	No	Yes, within limits	Yes

*Mortality leveraging means that early deaths among people receiving payouts from the pooled annuity funds subsidize the payouts for those who live longer. This pooling effect benefits policyholders by enabling higher payouts than if taking systematic withdrawals.

Source: Society of Actuaries, Designing a Monthly Paycheck for Retirement, 2012

More on trade-offs

An individual who decides to buy life income will need to make choices about the product design. Some of the choices that are important to an individual include when to buy, how much to buy, whether or not to include inflation protection, whether or not to add joint and survivor benefits, whether to include a period certain, and whether to make the purchase in stages. An employer who provides a program needs to decide what individual choices will be embedded in the program and how to offer them. The employer also needs to choose between using a single carrier or a competitive billing platform.

Steve Vernon[i] provides much more detail about various methods of producing long-term income. He defines three retirement income generators (or methods of producing income) and then rates them on five criteria: amount of initial income, longevity protection, inflation protection, flexibility and financial legacy, and whether exposure is minimized. He uses a three point rating scale. His discussion focuses on the individual perspective, and he also looks at examples of products from specific financial services organizations in his book.

The Committee on Post-Retirement Needs and Risks has an ongoing project to understand the issues from the perspective of a plan sponsor. That project recognizes that there is a difference between focusing on what amount of income is delivered the participant and focusing on how the plan sponsor is involved. As indicated above, the plan sponsor can choose to assume a variety of different roles, singly or in combination.

Barriers to life income

There are several barriers to annuitization. They may relate to the plan sponsor or the individual. Understanding and dealing with barriers is an important part of building a strategy.

Barrier	Applies to Individual	Applies to Plan Sponsor
Negative perceptions and press	Yes	Yes
Employer concern about fiduciary and legal liability	No	Major barrier
Financial advice steering individuals away from annuitization, including very strong disclaimers on websites discouraging certain offerings	Yes	May influence plan sponsor offering and can undo an employer program
Confusion about products and failure to fairly present broad range of products	Affects individual	Yes
Requirement in some benefit plans that decision to annuitize be an all or nothing decision	Is a deterrent to the individual using lifetime	Plan sponsor can offer a program that includes choice of when to annuitize and allows partial annuitization—All or nothing decisions are difficult and often not in best interest of

	income	employee
Individuals have too short a planning horizon, and often do not	Yes	Influences response to various offerings
Lack of control and liquidity in life annuity options	Major issue and must be considered as part of trade-off evaluation	Is a concern; death benefits can be included in annuity options

From the plan sponsor point of view, fiduciary liability is a major barrier to getting involved directly.

Linking Social Security to the use of retirement funds and income strategy in retirement
For employees with limited financial assets and no defined benefit plan, Social Security is their main source of income in retirement. Their only paths to increase income in retirement are to defer claiming Social Security and to work longer. Yet most people claim early and many of them do not evaluate the options for claiming. Employers can assist employees in focusing on the issue and provide—or point them to—resources for looking at options.

Social Security is a source of retirement income available to nearly all working Americans. It is a very important part of retirement income for the majority of the population. The amount of monthly income if claimed at age 70 is about 75 percent percent greater than if Social Security is claimed at age 62. There are additional issues for couples as they consider their strategy for claiming these benefits.

This is an important area for actuaries to think about. Anyone who can influence decision making around retirement should encourage people to evaluate the options before automatically making an early Social Security claim decision. Actuaries working with plan sponsors and individuals can help their clients by raising the issue, and pointing them toward tools and information to make informed decisions. One of the Society of Actuaries Issue Briefs is on Social Security claiming.

Advising employers, plan sponsors and those who develop products and approaches
Important insights as employers consider their strategies include:

- There are several different types of strategies and there are important trade-offs between the different payout methods. Many employees are hampered from making the most appropriate choices because they do not understand the options. The Society of Actuaries Issue Briefs and the book from Steve Vernon lay out the trade-offs and Vernon provides some evaluation of them. From an employer perspective, this is important in deciding what options to offer, what education to offer, how to structure advice offerings, and whether to offer tools or advice on where appropriate tools can be accessed. Providing access to good information is an important first step.

- The choice of payout methods and investment strategies should be considered from a bigger picture portfolio perspective. Many individuals will want to diversify during retirement, and may choose multiple methods of payout. However, different advisors and plan administration services differ with regard to the extent to which they offer post-retirement support, and if they do, whether they offer a fair presentation of a range of options, vs. “steering” people in a specific direction.

- Competition matters as does access to payout options without needing to go to the retail market. For example, for immediate life annuity purchasing, the Hueler Income Solutions® platform includes competitive bidding for all quotations. An analysis of several thousand quotations indicated that the average difference between high and low quotes in the United States was 8 percent, and that in some cases spreads could be as high as 20 percent (although spreads over 15 percent were unusual.)[ii] An analysis of quotes in the United Kingdom showed considerably greater spreads.

- Active guidance matters. Advice can steer people toward investigation of annuities or away from them. The employees and retirees who wish to explore an annuity option are much more likely to complete an annuity purchase if they are able to have a conversation with a trusted person whom they perceive as unbiased. Many buyers will have multiple conversations.

- All or nothing decisions are not desirable. The best programs allow employees flexible timing to make choices and allow them to devote part of their funds to specific payout options. Timing flexibility is feasible with defined contribution plans, but it is not feasible with the choice of payout options in defined benefit plans. A desire for such flexibility may be a reason for employees to take a lump sum, roll their account balance into a retail IRA and then focus on managing retirement funds using the IRA. But this can be an expensive strategy.

- A plan sponsor offering a program needs to decide what types of participant choices should be embedded in the program.

- Many plan sponsors have worked hard to lower expenses in their 401(k) plans and offer very efficient investment options. In contrast, retail IRAs have much higher expense charges than plan investment options. Employees should be discouraged from taking lump sums and rolling them over into retail IRAs unless they have carefully investigated the costs involved. They should be encouraged to pay attention to expenses.

- As employers consider life income options, it is important for them to remember that guaranteed life income is an important part of retirement security. Paycheck replacement without guarantees is helpful, but it leaves an important gap. Annuitization is not a good choice for everyone, but it needs to be included in the options presented and offered. Ideally, participants will understand a range of options for the pay down phase, and they can make choices considering trade-offs and a total portfolio approach.

There is growing recognition that the post-retirement period is very important, and it is expected that more employers will offer at least some support for post-retirement planning. Both the Department of Labor and the Treasury have been working on related issues and can be expected to issue further guidance in the coming months. It is becoming increasingly important for employers to actively review their strategies and do what works to balance employer resources with an approach that meets employee needs. Actuaries advising them need to encourage a focus on these issues.

Important resources offer information for employees and insights for employers as they consider what they should do. Three recommended resources are:

Hueler, Kelli and Anna Rappaport. 2012-11. The Role of Guidance in the Annuity Decision Making Process, Pension Research Council Working Paper.

Vernon, Steve. 2012. Money for Life: Turn Your IRA and 40(k) Into a Lifetime Retirement Paycheck. Rest of Life Communications.

Issue Briefs: Designing a Paycheck in Retirement and Deciding When to Claim Social Security, Society of Actuaries, 2012.

Anna Rappaport, FSA, serves as chairperson of the Committee on Post-Retirement Needs and Risks.

[i] Vernon, Steve, Money for Life: Turn your IRA and 401(k) Into a Lifetime Retirement Paycheck, Rest-of-Life Communications, 2012

[ii] Hueler, Kelli and Anna Rappaport, The Role of Guidance in the Annuity Decision Making Process, Pension Research Council Working Paper, 2012

EMPLOYER COSTS FOR EMPLOYEE COMPENSATION

By Martin McCaulay

The U.S. Department of Labor's Bureau of Labor Statistics (BLS) publishes a broad based national survey of Employer Costs for Employee Compensation (ECEC). As a percent of compensation, employer costs for defined benefit (DB) plans for state and local government workers are nearly nine times the costs for private industry non-union workers. The DB plan costs for private industry union workers are six times the cost for private industry non-union workers.

Employer costs for benefits as a percent of compensation in June 2012 were 39.8 percent for private industry union workers, 28.1 percent for private industry non-union workers, and 35.0 percent for state and local government workers. Employer costs for defined benefit plans as a percent of compensation were 5.4 percent for private industry bargaining workers, 0.9 percent for private industry non-bargained workers, and 7.8 percent for state and local government workers.

Benefit Costs as a Percentage of Compensation in June 2012

Benefit	Private Industry Union Workers	Private Industry Non-Union Workers	State and Local Government Workers
Paid Leave	7.1%	6.8%	7.4%
Supplemental Pay	3.2%	2.8%	0.8%
Health Benefits	12.8%	6.9%	11.7%
Life and Disability	0.8%	0.4%	0.4%
Defined Benefit	5.4%	0.9%	7.8%
Defined Contribution	2.0%	2.1%	0.7%
Legally Required	8.4%	8.2%	6.2%

Total Benefits	39.8%	28.1%	35.0%

The ECEC is a product of the National Compensation Survey (NCS). The NCS is based on an unbiased set of sample employers. The ECEC measures the average cost to employers for wages and salaries and benefits per employee hour worked. ECEC data on total compensation, wages and salaries, and benefits are produced annually for 15 metropolitan areas. The survey months are March, June, September, and December. The December tables are available by mid-March.

The ECEC press release is available on the BLS website. The costs for state and local government workers are found in Table A and the costs for union and non-union workers are in Table 5. Supplemental tables with occupational, establishment size and bargaining status series for detailed industries are also available on the BLS website.

WHAT I FOUND INTERESTING AT THE SOA ANNUAL MEETING

By Raymond D. Berry

Introduction

We asked several actuaries who attended the SOA Annual Meeting in October to respond to the following two questions:

1. What was the most interesting or your favorite thing that you learned or heard at the annual meeting that related to retirement issues?

2. What was the most interesting or your favorite thing that you learned or heard at the annual meeting that related to non-retirement issues?

Here are their responses:

Anne Button, FSA:

1. I really enjoyed the session, "Modeling Mortality Improvements in the Pension Arena." Larry Pinzur and Robert Howard were excellent speakers and the heat maps showing the cohort effect made a compelling argument as to why Scale AA should no longer be relied on and why Scale BB would be a vast improvement.

2. As far as non-Retirement issues, I thought the meeting app for the iPad was great. Easy access to presentations, maps, schedule, etc. Allowed me to make notes on the presentation and email them to myself.

   I also liked the general session speakers, especially Matthew Syed’s talk about the need for sustained practice in order to be really good at something. The fact that at one time, five or so of the top table tennis players in Great Britain lived on Silverdale Road in Reading, England (out of around 30,000 players in the country) seems amazing until he points out that that the players had access to a great coach who also lived there and had 24-hour access to a place to practice as well as equally engaged players to play against.

Eric Freden, FSA:

1. Session 24 Panel Discussion: "Mortality Improvement Trends—What Does the Future Hold?" I found the research on mortality improvements quite interesting. Increases in longevity have been consistently underestimated 2-3 years per decade. Drilling down into mortality improvement shows wide variations in which

groups enjoy the improvement and why. The "heat map" approach to plotting the data reveals patterns not visible in traditional line graphs or bar graphs. It is interesting that men tend to group into "cohorts" of mortality improvement by generation, and women do not. It seems that groups well-off enough to control their risk factors live longer, up to a point. Over age 85, it appears to be much tougher to maintain the mortality improvement patterns of earlier ages. Regardless of private plans, governments are the ultimate holders of longevity risk. New mortality tables to be available in 2014 will have a two-dimensional mortality improvement model based on this research.I was also impressed with the variety and quality of the pension-oriented presentations.

2. From Session 56 Panel Discussion: "The Future of General Health and Medicare Insurance Programs." The Role of Public and Private Sectors, and Design and Funding IssuesU.S. health care financial systems design and most proposed "solutions" are not actuarially sound. A return to the actuarial principles of proper risk classification, limiting anti-selection, avoiding moral hazard, and confirming actuarial soundness might lead to better solutions for the country. This may lead to less insurance and more pre-funding or self-funding of health care costs for both private and public health care programs.
   I was also astounded at how much more high tech the SOA annual meeting is compared to my last visit. Of course, during my last visit, presentations were still shown using Kodak slide projectors, so it has been a while since I attended an annual meeting. I found the SOA meeting app on my iPhone to be very handy for keeping up with the schedule and viewing tiny versions of the presentations. The big screens in the main ballroom helped me see what was going on. But, just like on the Internet, we had to look at pop-up ads on these screens all through the meals. I guess that is life in 2012.

Donald Fuerst, FSA:

1. "Are Baby Boomers on Track for Retirement?" This session highlighted the enormous diversity within the boomer generation with insightful statistics and tongue-in-cheek humor. Retirement will likely be pleasant for the top earners of this generation, but the continued growth in disparity between top earners and the rest of the population will make retirement challenging for many and forever a dream for much of the low wage category. The presentations were filled with interesting descriptions of the events that shaped this generation, particularly the change in family structure and the evolution of the two-worker family. Despite our progress, we still face significant obstacles for the unmarried, minority groups, and the less educated.

2. Outside of retirement issues, the greatest feature of these meetings is the networking. With almost 2,000 participants, there were many long lost friends I saw and colleagues from recent and distant times. Catching up with old friends and trading stories during the breaks is always a highlight for me.

Cindy Levering, ASA:

1. I was interested in the presentation on the stochastic actuarial valuation of DC plans by Dimitry Mindlin in Session 76 PD, "Retirement Adequacy – Much More Than a Replacement Ratio." He sees this as an area of not only tremendous challenges but also great opportunities for pension actuaries. He envisions the emergence and development of best practices eventually leading to a formal ASOP outlining minimum requirement. This is an area the Research Team is talking about exploring, perhaps with a call for papers.

2. I also went to a session on Variable Annuity Risk Management. My interest here was more personal than professional since I purchased two of these with some of my 401(k) assets when I retired three years ago! While a lot of the technical material was "over my head,," I was interested (but not particularly surprised) to learn that many insurers have taken on a lot of risk with some of these products and some weren't reserving enough to cover all the guarantees they were offering.

Martin McCaulay, FSA:

1. I heard about more research that supported using the geometric rate of return rather than the arithmetic return for pension projections. At the Pension Section breakfast, Victor Modugno discussed his research on Estimating Equity Risk Premiums. His research report cites work by Jacquier, Kane, and Marcus that found that the geometric mean is a superior estimator of the mean when the sample period and projection periods are long. They "developed an unbiased estimate of the mean (U) from historical data by weighing the geometric (G) and arithmetic (A) means by the ratio of number of years in the projection (P) to the number of years in the sample (S): U = A*(1-P/S) + G*(P/S). As the projection time gets longer, the geometric mean becomes more important. When the projection time equals the sample time the geometric mean is the unbiased estimate of the mean. Since most pension work involves long projection periods, the geometric mean is a more appropriate measure for future projections." The research report is available at SOA.org/research/research-projects/pension/.

2. I was surprised to hear about how successful the SOA's global membership initiatives have been. During the general session, Brad Smith described the seismic demographic shift in our membership. He stated that "it is insightful to consider the top ten SOA exam centers in the world. And no, this is not a David Letterman top ten list, but I do think you will be surprised. Only three are in the United States: New York, Chicago and Hartford. No surprises there. Two are in Canada: Montreal and Toronto. The remaining five are surprising: Beijing, Hong Kong, Taipei, Seoul and Kuala Lumpur." The entire text of Brad Smith's address can be found at SOA.org/research/research-projects/pension/research-est-equity-risk-premiums.aspx.

Anna Rappaport, FSA:

1. I really liked the session on Social Security issues. It was great to hear an update on the financial status and options for the future from Steve Goss, Chief Actuary of Social Security, and to hear Frank Todisco, Actuary of the Government Accountability Office, talk about the retirement age issue. Steve explained the options for increasing revenue or decreasing expenditures, and then provided links to find an analysis of each issue on the Social Security Office of the Actuary website. The Office of the Actuary analyzes and prices proposals made by members of Congress, and that makes the analysis available on the website for anyone who wishes to read it.

   Frank asked the audience if they favored raising the retirement age, favored lowering it, or were unsure. Before he explained the options, an overwhelming majority of the actuaries present favored raising the retirement age. After he explained the options, he repeated the question, and a few people had changed their minds, but the majority still favored raising the retirement age. Some of the concerns raised included the need to coordinate with disability benefits, differences in mortality by different population subgroups, and different needs of those who do manual labor. Another option is to support phased retirement. The session handout is available on the

SOA website, and includes links to several GAO and other reports that contain detailed information about the issues related to raising retirement ages. Because of the increases in longevity since the program started, this is a major issue in the United States. There are also issues related to appropriate retirement ages in many other countries. Some have raised retirement ages, and of those countries that had different retirement ages for men and women, some are making them uniform.

2. What I like most about the annual meeting is the diversity of the program. In every time slot there were topics of interest, usually two, three or four. This meeting allows me to balance pension and other topics, and to learn much more about what is going on in the profession generally. I was sorry that I could only attend one session in each time slot

   I also really liked the general sessions on Monday morning and at the Tuesday lunch. Both sessions' presentations offered thought-provoking content that seems very useful to me personally and that I also think is useful to many people in the profession. The first presentation focused on how much work, concentration, discipline and training it takes to become world class. It also focused on the importance of having an expert coach or other method of gaining top level expertise. The second speaker focused on the differences between introverts and extroverts, and how they can work effectively together. The speaker also focused on the role of introverts as leaders, and provided examples of introverts who are widely recognized as leaders. That presentation reminded me of the importance of being patient and thoughtful and thinking that through. Too often keynote speakers are entertaining but offer little other than what I can see on television. At this meeting I felt really good about both presentations.

Marcus Robertson, FSA:

1. While all the sessions were interesting, the session I enjoyed the most, despite the fact that I helped to facilitate, was "Ethical Dilemmas for Pension Actuaries." This was an interactive session held at the end of a long day and it was great to hear animated discussions about retirement-related case studies that presented ethical issues for pension actuaries. The discussions showed me that there is a real appetite for this kind of session. They also showed the power of group input (peer review?) as several participants changed their opinions about the problems presented once they'd heard the views of others.

2. I made a point of attending some non-retirement sessions and one that was very interesting was "ERM for Small Business." I was particularly interested in this session because of work I'd done on enterprise risk management for the Fundamentals of Actuarial Practice Course and the new Enterprise Risk Management Course. The speakers focused on one industry (the restaurant industry) and issues faced in that industry, so it was more narrowly focused than I had expected. Nevertheless, it was a very interesting session.

Presentations are available at the link below. Click on "Agenda and Presentations Day 2 (3, or 4)" on the column labeled "Related Links" on the right hand side of the page and then click on the session.SOA.org/Professional-Development/Event-Calendar/2012-Annual-Meeting Mark your calendar now for the 2013 SOA Annual Meeting which will be held in San Diego, CA. Dates are October 20 - 23, 2013.

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SOCIETY OF ACTUARIES
PENSION SECTION *NEWS*

TEST YOUR PENSION FINANCE KNOWLEDGE

By Evan Inglis

Do you know what Treasury STRIPS are? Could you clearly explain what it means for a securities market to be "efficient"? Do you know how lump sum payments impact the duration of a pension plan?

You'll find answers to these questions and more by taking the Pension Finance Quiz!

The Pension Finance Task Force has developed a short quiz on the topics of:

Interest Rates [learn about Treasury STRIPS in this section]
Investment Theory [find out what an “efficient” market is in this section]
Investment Practice [see if you know about lump sums and duration in this section]

The quiz is intended to be a quick and fun way to familiarize yourself with important concepts that are useful to a pension consultant, but may not be part of your every day practice. Answers to the quiz questions include links to additional information on the concepts covered. Each of the three sections of the quiz will take about 15-20 minutes to complete, excluding time spent exploring the links included and thinking more deeply about the concepts. It's easy to do one section at a time and you can answer a few questions and come back later to finish up a section.

Here is the link to the quiz: SOA.org/professional-interests/pension/pen-finance-quiz

The Pension Finance Task Force (PFTF) is jointly sponsored by the Academy and the SOA and its SOA activities are overseen by the Pension Section Council. The mission of the PFTF is to study how basic principles of finance and economics can be incorporated into retirement actuarial practice and used to strengthen retirement systems; to educate actuaries, plan sponsors and other stakeholders on these principles, especially with regard to measuring and understanding risk, cost and value in retirement systems; and to provide and assist in formulating views based on sound economic principles for public statements by the profession.

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SOCIETY OF ACTUARIES

PENSION SECTION *NEWS*

VARIABLE ANNUITIES: A RETIREMENT PLAN DESIGN WITH LESS CONTRIBUTION VOLATILITY

By Mark Olleman, Ladd Preppernau, and Kelly Coffing

Editor's Note: This white paper has been reprinted here with permission from Milliman.

Many pension plans, including multiemployer plans, have had their funded status deteriorate due to the difficult and volatile investment markets of recent years. Many multiemployer pension plans have had to increase contributions and reduce benefits. For some plans, this has made collective bargaining more difficult, reduced participant pay increases, and caused some employers to struggle to stay competitive. This has left many trustees wondering if there is a more sustainable and less volatile way to provide participants with lifelong benefits.

One alternative to consider is changing the pension plan so that future accruals are paid in the form of variable annuities. Much like changing to a defined contribution (DC) plan, changing to a variable annuity plan shifts the plan's investment risk for future benefit accruals to the participants. Variable annuity plans have the following advantages over DC plans:

- Participants will still receive benefits for the rest of their lives (they will not outlive their benefit).
- Professional investment management and longevity pooling are expected to lead to larger monthly benefits.

In a variable annuity plan design, the investment risk for future benefit accruals is moved from the plan sponsor to the participants by changing benefits to match the actual investment returns of the trust. In good times, participants share directly in the gains and the pension benefits will increase to at least partially offset inflation. In bad times, participants share directly in the losses and the pension benefits will decrease to match investment returns. However, participants are still provided with lifelong income. Variable annuity retirement benefits are generally larger than the DC retirement benefits provided by the same contribution due to professional investment management and the pooling of longevity experience. Variable annuity plan participants receive lifelong monthly pension benefits that increase their overall financial security. While DC plan participants can purchase annuities at retirement, guaranteeing lifelong income, very few do so, which puts them at risk of outliving their assets. Many of us have focused on the "guaranteed benefits" of DB plans for a long time. It may be time to change our focus to "lifelong" benefits, where the exact dollar amount is not guaranteed, but participants are assured that they will not outlive their benefits and some inflation protection may be provided instead.

What Is a Variable Annuity Plan?

In general, a variable annuity plan is a defined benefit pension plan where benefits change based on the return of the plan's assets. Although they have been around for a long time, variable annuity plans are not common. Perhaps this design has been less appealing in the past because it does not guarantee that participants' monthly pension benefits will not decrease. However, these guarantees are getting harder for employers to provide, as evidenced by the move of many single-employer sponsored plans to defined contribution arrangements. With Revenue Ruling 185, 1953-2, the IRS confirmed in 1953 that a plan "which provides benefits that vary with the increase or decrease in the market value of the assets from which such benefits are payable" satisfies the Internal Revenue Code 's requirement that defined benefit plans provide "definitely determinable benefits."

In a variable annuity plan design, the plan establishes a conservative assumed investment return (AIR), or hurdle rate. If the plan's investment returns equal the hurdle rate, the plan functions exactly like a traditional DB plan. However, if the plan's investments earn more or less than the hurdle rate in a plan year, all benefits earned in prior years are adjusted up or down by the difference between the actual investment return and the hurdle rate.

Figure 1 demonstrates how variable annuity plan benefits might accumulate based on returns from an actual multiemployer plan over the last decade. This example assumes the plan changed benefit accruals to a variable annuity form at the beginning of 2002, and established a hurdle rate of 4%. The participant earned $30 per month of retirement benefit each year; the benefits earned each year could be based on a formula similar to your plan's current formula. The difference from a traditional DB plan is that benefits are changed by the amount that actual annual investment returns of the trust differ from 4%.

Figure 1 shows that the trust earned 16.5% in 2003 instead of the assumed 4.0%. This means the assets are 116.5/104.0=112.0% of what was expected. As a result, benefits earned in prior years will be increased by 12.0%. The participant's $30.00 accrual at the beginning of the year will be increased to $30.00 x 112.0% = $33.60 at the end of the year. In good years the participant gets the advantages of the high returns; in bad years the plan 's funding is protected by reductions in earned benefits.

View Figure 1

Figure 1 shows that after nine years the amount of the benefit accrued in 2002 is $33.63, which is larger than the $30 the participant started with, even with the low returns of 2008 and 2011. By contrast, the benefit earned in 2007 is worth less than $30 as of January 1, 2012.

It is important to note that retired participants are subject to these adjustments, and some retirees could see their benefits decrease below their initial retirement benefit in periods of poor investment return. For example, based on the investment experience in the previous example, a participant who retires at 1/1/2003 with a $1,000 monthly benefit would experience significant year to year benefit volatility. The original $1,000 monthly benefit would have increased to about $1,358 at 1/1/2008 followed by a sharp reduction to about $966 at 1/1/2009. The same benefit would have recovered to about $1,121 by 1/1/2012. However, timing of retirement is significant. A participant who retires at 1/1/2008 with a $1,000 monthly benefit would see it decline to about $711 at 1/1/2009. The same benefit would only have recovered to about $825 by 1/1/2012. This indicates that if a variable annuity plan is adopted, methods that dampen the volatility of retiree benefits are worth considering. One such method would be to give retirees the option to have their benefit based on a portfolio with lower expected volatility and a lower expected return. Providing this option would in turn require retiree education so that participants are aware of the potential impact of their decisions.

Potential Inflation Protection by Redistributing Benefits Over Time

One of the most significant risks to a member's retirement security is the potential loss of purchasing power due to inflation. Over the last 86 years, inflation has averaged 3.0%, and inflation is expected to continue to greatly reduce the purchasing power of any benefit that does not increase over time. Figure 2 shows the impact of inflation over 30 years at different inflation rates on a traditional DB benefit. The purchasing power of a $1,000 benefit is reduced to $552 at a 2% inflation rate, $412 at a 3% inflation rate, and $308 at a 4% inflation rate over 30 years. Variable annuity plans, however, are designed to mitigate this risk.

View Figure 2

For example, if a hurdle rate of 4% is used in a variable annuity plan and the plan's investment return is 7% per year, then benefits are expected to increase by very close to 3% per year (approximately 7% over 4%). However, benefit increases cost money. For example, a $1,000 benefit with 3% annual increases costs more than a $1,000 benefit with no annual increases. Figure 3 shows that, assuming 7% investment earnings, a flat $1,000 benefit with no increase (traditional DB benefit) is approximately equivalent in value to an $834 initial variable annuity with a 5% hurdle rate or a $754 initial variable annuity with a 4% hurdle rate. However, if actual returns are 7%, all three will be paying about the same benefit after 10 years, which is where the lines in Figure 3 cross. At an inflation rate of 3%, each benefit provides a purchasing power in year 10 that is about the same as $744 was at retirement. The flat benefit retained 74% of original purchasing power. However, the variable annuity plan with a 4% hurdle retained 99% of original purchasing power. This demonstrates that the variable annuity benefits are better at keeping up with inflation than traditional flat DB benefits. Beyond 10 years, the dollar amounts of the variable annuity benefits are larger than the flat benefit. At year 30, the variable annuity with a 4% hurdle rate has purchasing power equal to 97% percent, whereas the flat benefit has only 41% of the original purchasing power.

View Figure 3

Note that, although not shown, the initial 4% hurdle benefit of $754 is projected to have grown in non-inflation-adjusted dollars to $1,002 after 10 years and $1,769 after 30 years while the flat benefit is still $1,000. The variable annuity benefits may provide more financial security in retirement than a traditional DB plan by mitigating the effects of inflation.

Since variable benefit increases are expected to be positive in some years and negative in other years, reality will not be as smooth as Figures 2 and 3 imply. Figure 4 shows the actual experience in non-inflation-adjusted dollars that an actual variable annuity plan with a 4% hurdle rate experienced from 1961 to 2011. Figure 4 shows that to keep up with inflation, $1 of monthly benefit would have had to increase to more than $7 of monthly benefit over this 40-year period. In fact, for this plan, one dollar of monthly benefit did keep up with inflation and increased to more than $8 over the 40-year period. However, the variable benefit would have lagged inflation during the 1970s and 1980s due to the high inflation and low returns of the 1970s. There is no guarantee on how much inflation protection (if any) will be provided in a variable annuity plan. It will depend on whether trust assets outperform the hurdle rate.

View Figure 4

Traditional Defined Benefit Plans, Defined Contribution Plans, And Lifelong Benefits

Defined benefit plans have many advantages over defined contribution plans. They pay guaranteed lifetime benefits. They can pay larger benefits for the same dollar of contribution because the investments are professionally managed and longevity experience is pooled. They reward long-service participants, help participants to plan for retirement, and can aid in workforce management by providing older participants the opportunity to retire with lifelong benefits. Unfortunately, defined benefit costs can be volatile. This can interfere with bargaining and make it difficult to stay competitive with employers who are not in the plan.

Defined contribution plans have very stable costs. However, participants run the risk of outliving their investments unless an annuity is purchased. Also, on average, DC participants earn lower returns than defined benefit plans. Consequently, the same benefit is generally more expensive to finance.

As summarized in Figure 5, variable annuity plans share many of the advantages of both defined benefit and defined contribution plans. There is one notable exception: Variable annuity plans shift the focus from a specific benefit guaranteed for life to lifelong income. It is not the presence of a "lifelong" benefit that is causing contribution difficulty for some traditional defined benefit plan sponsors and active participants, it is the guarantee of a specific dollar amount of benefits regardless of plan experience. Unlike traditional defined benefit plans, variable annuity plans change benefits to match experience. Unlike defined contribution plans, variable annuity plans make sure that participants receive benefits for the rest of their lives. It could also be argued that traditional defined benefit plans do not provide a guaranteed benefit in real dollars since the future impact of inflation is unknown. To the extent that variable annuity plans offset inflation, they may provide more retirement security. Generally, older participants are less impacted by a conversion from a traditional defined benefit plan to a variable annuity plan than by a conversion to a defined contribution plan because the benefit accruals for both traditional defined benefit plans and variable annuity plans are generally more valuable for older participants.

View Figure 5

Choosing a Hurdle Rate and Benefits Earned before Conversion

There are several considerations to be aware of when choosing a variable annuity plan's hurdle rate:

- As shown in Figure 3, a lower hurdle rate will provide a smaller initial benefit with more potential inflation protection, while a higher hurdle rate will provide a larger initial benefit with less potential inflation protection.
- Hurdle rates below 3% are not allowed.
- A hurdle rate of less than 5% will result in the plan being subject to statutory hybrid plan rules, including three-year vesting and certain plan conversion rules.

It may be simplest in conversion to make no changes to benefits that have already been earned, and to pay them only as fixed monthly benefits. However, participants can be given the option at retirement to convert their prior accrued benefits into variable annuities with smaller initial payments and the potential for future increases.

Current Funding Problems are not Eliminated

Changing from a traditional defined benefit to a variable annuity plan or a defined contribution plan does nothing to reduce existing unfunded liability on benefits earned under the old formula. The same assets accumulated to date still have to fund the same benefits promised in the past. The same future contributions to pay for unfunded benefits accrued to date are still needed. Contributions plus investment earnings must still provide for benefits plus expenses. The difference in both cases is that investment risk is contained. There is no investment risk added for benefits earned in the future. In a variable annuity plan, there will still be risk for mortality, retirement, termination, and disability experience, but these are not nearly as significant as investment risk and they too can be minimized with careful plan design. As the defined benefits already earned are slowly paid out, investment risk to the plan will diminish, but this can take a long time. Risk may be decreased more rapidly if at some point annuities are purchased or bond portfolios are set up to match prior promised benefit payments, but both of these strategies are very expensive in the current fixed income market.

Conclusion

If you are considering a change from a defined benefit (DB) plan to a defined contribution (DC) plan, or if you are looking for ways to modify your current DB plan design to improve sustainability and reduce contribution volatility, the variable annuity plan is one possible solution. The variable annuity plan changes the focus from guaranteed benefits to lifelong benefits, where the exact dollar amount is not guaranteed, but participants are assured that they will not outlive their benefits and the possibility of some inflation protection is provided instead. Variable annuity plans provide plan sponsors a lower risk alternative to traditional DB plans but retain many of the advantages of DB plans while capturing contribution stability similar to a DC plan design.

Since these plans are not common, there will be significant implementation issues, including but not limited to transition decisions, selection of the hurdle rate, asset allocation decisions, and the calculation of withdrawal liability. Furthermore, since these plans are not common, plan counsel will need to examine all legal aspects closely, and additional communications will be required to help participants understand how the plans work.

Defined benefit plans continue to have significant advantages compared to other retirement plan designs for participants of multiemployer plans. However, the past decade's investment volatility has highlighted some weaknesses of the traditional DB plan design. Variable annuity plans address some of these weaknesses, including reassigning of investment risk. If you are considering changes to your current pension plan design, variable annuity plans provide one alternative to consider.

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SOCIETY OF ACTUARIES

PENSION SECTION *NEWS*

LIVING TO 100 MONOGRAPH – MORTALITY ARTICLES

By Raymond D. Berry

The next Living to 100 Symposium is scheduled for January 8-10, 2014 in Orlando, Fla. This is the fifth symposium in this triennial event. The symposium is supported by over 50 organizations from around the world, including the SOA. Thought leaders provide insights into various issues related to the increased number of retirees such as mortality projections and the benefits and risks associated with the increases in retirees. Details concerning this upcoming symposium are here: Livingto100.soa.org/symposium.aspx.

One of the positive outcomes of these events is the accumulation of a wide array of papers on various topics related to longevity, mortality projection, patterns of aging and so on. Below are abstracts of four papers regarding mortality which may be of interest to pension actuaries. PDF's of the complete papers are available at the following link: SOA.org/library/monographs/life/living-to-100/2011/2011-toc.aspx

How to Survive Living to 100: Ways to Improve the U.S. Retirement System
By Beverly Orth

Workers in the U.S., along with their counterparts around the world, face significantchallenges in saving enough funds to last a lifetime. Many who plan for increased longevity andpurchase insurance products to protect their assets may still have difficulties if they live to bevery old or require extended periods of long-term care.

The U.S. retirement system has many defects that affect individuals' ability to surviveliving to 100. This paper explores some of the problems that individuals face and recommends changes that could make the U.S. system work better.

Pension Reform in Canada-An Actuarial Perspective
By Robert Brown

This paper is written in two parts. In the first section, we give background materialon the existing Canadian Income Security system, including both government-sponsoredsystems and private sector supplements. This is to give the rest of the paper its propercontext.

Part two of the paper is the report from the Canadian Institute of Actuaries' TaskForce on Government-Facilitated Retirement Income Plans, published in March 2010 to provide a response from the Canadian actuarial profession on the continuing pension reform debate in Canada.

Mortality Compression and Longevity Risk

By Jack Yue

Mortality improvements, especially of the elderly, have been a common phenomenon in many countries since the end of World War II, and many believe life expectancy will continue to increase. As a result, longevity risk becomes an essential component in designing annuity products, as overestimating mortality rates may result in financial insolvency for a life insurance company. Stochastic mortality models have been a popular choice for addressing this risk. However, the longevity predictions of these models are based on historical data and the predictions behave somewhat like extrapolation. But there are no guarantees that future longevity will follow historical trends.

Instead of fitting stochastic models for mortality rates, this study explores increasing life expectancy by examining the basic properties of survival curves. Specifically, we shall check if there are signs of mortality compression (i.e., rectangularization of the survival curve) and evaluate what it means to designing annuity products. Note that the majority of past studies for mortality compression use graduated mortality rates and their results are likely influenced by the graduation methods used. Based on the raw mortality rates, we propose an alternative approach and also propose some measurements to verify if there is mortality compression. We then apply the proposed method to the mortality rates of Japan, Sweden and the United States (data source: Human Mortality Database). Unlike the previous results using the graduated mortality rates, we found there are no obvious signs that mortality improvements are slowing down. This indicates that human longevity is likely to increase, at least for a while, and longevity risk should be seriously considered in pricing annuity products. In addition to verifying the mortality compression, we also propose some suggestions for dealing with the longevity risk.

Mortality Rates at Oldest Ages

By Bob Howard

Because of a lack of data, the highest age mortality rates in most tables are conjectural. This paper presents a method for using death records to infer exposure on nonextinguished cohorts, thereby allowing the development of a credible table for high ages. The method uses Whittaker-Henderson graduation in a number of unusual ways. The paper also validates the method by applying it to stochastically generated sets of death records for which the underlying mortality and improvement tables are known. There are some surprising results.

Recent Adult Mortality Trends in Canada, the United States and Other Low Mortality Countries

By Nadine Ouellette, Robert Bourbeau

This paper examines recent changes in the age-at-death distribution at older ages in Canada, the U.S. and eight additional low-mortality countries. Data starting in 1950 are taken from the Human Mortality Database and a flexible two-dimensional smoothing approach based on P-splines is used to monitor these changes. The U.S. displayed the most worrying picture for the latest two decades. Indeed, for several consecutive years in that timeframe, US females and males have both recorded important declines in their modal age at death and their level of old-age mortality remains high compared to the other countries. Thus, although Canada and the US are neighboring countries, the findings for the former regarding recent old-age mortality trends rather resemble those obtained for the remaining eight low mortality countries studied. Further analysis of changes in the age-at-death distribution at older ages by socioeconomic group or by region could improve our current understanding of the latest mortality dynamics recorded among US adults.

Is Raising the Age of Eligibility Fair to All? An Investigation of Socioeconomic Differences in Mortality Using Population Data
By Geoff Rashbrooke

Constraining the cost of pay-as-you-go financing of social security age pensions isbecoming an increasingly important issue as population's age. One option, increasing the age ofeligibility, raises the issue of the impact of differential mortality by socio-economic status onthe fairness of such a change. Analysis using panel data may not be fully reliable due todefinitional issues. Population mortality data by ethnicity is available but subdivision by socioeconomic status is more problematic.

This paper draws on New Zealand research that has matched individual death records tocensus records. Using this research, the paper derives mortality tables by adapting New ZealandMāori and non-Māori population mortality data to reflect differences in socio-economic status.This adapted data is used as a basis to explore the implications of differential mortality inassessing the equity of increase in the pension age of eligibility.As convergence of mortality rates over time would remove the impact of differential mortality,a brief discussion is included on the prospects for convergence, and some conditionsconsidered necessary for this to occur described. The paper concludes with suggestions as tohow the imperatives for fiscal sustainability might be tempered with actions designed tomitigate the equity shortcomings indicated by the paper's analysis.

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SOCIETY OF ACTUARIES
PENSION SECTION NEWS

WHOSE RISK IS IT ANYWAY?

By Cindy Levering

There has been a lot of corporate defined benefit plan activity in the United States lately that has been labeled with a seemingly new term—“de-risking.” While there is no general definition of the term, de-risking can be broadly defined as actions taken by plan sponsors to reduce their exposure to risk through hedging, risk transfer, diminution or prevention. For defined benefit plans, some common areas where “de-risking” is being applied include:

- Governance — periodic review of roles and responsibilities of the plan’s governing body, including the identification of members who are fiduciaries; clear separation of operational and oversight functions; clear identification and separation of settlor and fiduciary decisions; and timely review and exploitation of risk management opportunities.
- Asset/Liability Management — hedging, immunization, annuity purchases, asset allocation/LDI
- Plan design — hard or soft plan freezes, lump sum options (including offers to former employees), cash balance conversion, variable annuities, plan termination

While some of this has been going on for years as employers have shifted from defined benefit to defined contribution plans, these changes have generally only affected current employees. Only 30 Fortune 100 companies offer defined benefit plans to new salaried employees compared to 90 in 1985. The asset and longevity de-risking that began in 2006 in the United Kingdom has moved recently to United States and is expected to become more prevalent in Canada in near future.

So why has de-risking become the *mot du jour*?

Each plan sponsor has its own issues but here are some very important concerns they all share.

High investment volatility has impacted balance sheets and increased the risk of unexpected plan contributions.

Plan sponsors are beginning to understand the impact longevity has on the cost of the plan.

Exposure to litigation and administrative costs are increasing.

PPA may encourage some plan sponsors to minimally fund their plans.

PBGC premiums are rising.

Sponsors do not perceive pension risks as worth holding.

Investors, lenders, and rating agencies may reward companies that reduce pension risk.

In 2012, the full phase-in of lump sum interest rates under PPA was completed. In addition, recent changes to the funding rules under MAP-21 decreased liabilities and contribution requirements making fewer plans subject to benefit restrictions. Together, these events have spawned a new movement toward paying lump sums to former employees, both deferred vested and retirees. GM, Ford, and Verizon are just a few of the firms that have made headlines in this year (See Appendix for a list of major firms that have done significant de-risking thus far in 2012).

While de-risking may lower the future cost for plan sponsors, it could be significantly increasing risk to former employees and retirees, who may be less able to deal with it.

There are many issues and questions for stakeholders to consider. Here are some of them (in no particular order):

Issues/questions for employers/plan sponsors:

- If the transaction is focused primarily on retirees, will it effectively support future volatility and plan cost goals?
- Considering the interest and market environment, is the timing for the transaction right? Are there opportunity costs that need to be considered?
- If early retirement subsidies are being eliminated, will this be easily understood by employees? Will it cause an unacceptable increase in litigation risk?
- Does the transaction trigger a partial plan termination?
- Will the transaction trigger settlement accounting?
- Will the transaction cause an unfavorable adjustment in the long term rate of return?
- Post transaction, will the plan funding surplus/deficiency be acceptable?
- Are the savings on recordkeeping, administration and PBGC premiums (which are scheduled to increase in 2014) significant enough to justify the transaction?
- If the transaction includes a temporary lump sum offer, will a private letter ruling be necessary to reduce regulatory and litigation risk?
- Is there any impact on workforce management?
- Are there any collective bargaining issues to be considered?
- If transferring liabilities or offering lump sums, will post transaction liquidity needs be adequate and should the asset allocation be adjusted?
- Will the “top 25” employees be affected by lump sum restrictions?
- Will anti-selection cause higher ultimate costs?
- For publicly traded companies, how will security analysts react to the transaction?
- If liabilities are being transferred, will the DOL’s safest annuity rules be satisfied?

Issues/questions individuals should consider:

- If you accept the lump sum offer, can you effectively manage the transfer of investment, longevity and early retirement risks? Note: A lump sum is probably not the best choice if you are healthy, expect a long lifetime, and have a limited amount of additional assets.
- Do you understand the Relative Value Notice well enough to recognize if early retirement subsidies have been eliminated as well as compare the value of optional forms of benefit you will be giving up for the lump sum?
- Will you be losing the right to receive future ad hoc retiree cost-of-living increases by choosing a lump sum or as a result of an annuity purchase?
- Is spousal consent required to receive the lump sum? Is the choice impacted by a QDRO?
- What is the financial strength and quality of the insurer if annuities are purchased and thus PBGC/Plan Sponsor guarantees are being traded for insurance company protection with state guarantees?

Issues for society/public policy:

- What is the capacity of the annuity/bond marketplace to handle a large volume of these transactions if they are not spread out over time?
- Do some de-risking transactions conflict with the goals of recent Treasury initiatives to allow partial lump sums, transfer defined contribution balances to defined benefit plans and otherwise encourage more lifetime income?
- Has MAP-21 accelerated this activity by lowering liabilities and eliminating benefit restrictions? Is this an unintended consequence of the law?
- In October, the Pension Rights Center asked Congress to issue a temporary moratorium on these transactions to look at the risk to individuals' benefit security.

In conclusion, it will be interesting to see if the most recent wave of de-risking activity continues at the current pace, especially in light of the Pension Rights Center's efforts to slow it down. It will also be interesting to assess the long term impact not only on plans and their ability to manage volatility but also on individuals and their ability to manage their retirement assets effectively. Finally, to the extent the information is made publically available; the actual elections that employees make will form the basis for many behavioral finance studies.

Appendix

While most of us have heard that GM and Ford are de-risking their liabilities, here is a list of what they and 13 other large organizations are doing (taken from annual reports, SEC filings and press releases):

American Airlines – In March, American Airlines reversed its proposal to terminate its workers' pension plans and transfer them to the PBGC as part of its bankruptcy reorganization and decided to freeze the plans instead. The move, which must be approved by a judge, will reduce American's future contributions to the underfunded plans.

Ford – In April, Ford offered a voluntary lump-sum payment option to about 90,000 eligible retirees and former employees to reduce its future pension obligation by $1.8 billion. This is the first time a program of this type and magnitude has been offered by a U.S. company for ongoing pension plans. Payouts will start in late 2012 and will be funded from existing pension plan assets. This is in addition to the lump-sum pension payout option available to U.S. salaried future retirees as of July 1, 2012.

General Motors – In June, GM announced an expected $26 billion reduction in its U.S. pension obligation by offering lump sums to 42,000 salaried retirees and purchasing annuities from Prudential for most of its remaining salaried retirees in the largest annuity purchase ever in the U.S. There is no change to active employee benefits and affected retirees are still eligible for medical coverage. GM announced on October 31 that about 30 percent of the eligible salaried retires had accepted the lump sum option.

Bank of America – Bank of America froze their pension plan as of July 1, 2012 and will instead begin making an additional 2-3 percent annual contribution to employees' 401(k) accounts, on top of their existing program that matches employee contributions up to 5 percent.

NCR – On July 31, 2012, NCR announced that it expects to make $800 million in contributions and offer a voluntary lump sum payment option to approximately 23,000 former deferred vested employees. In April 2010, NCR began to increase the fixed income component of their plan from 39 percent at the end of 2009 to 80 percent in 2011, and is expected to be at 100 percent by year-end 2012. The total liability associated with the U.S. deferred vested participants is approximately 33 percent of the U.S. pension liability. The offer will include the choice of a lump sum or either an immediate or deferred annuity from the plan, and is "designed to provide greater flexibility in managing retirement savings."

Verizon – In October 2012, Verizon announced it is purchasing a $7.5 billion group annuity contract from Prudential (the second largest only to GM) for 41,000 retired managers (many of them had a lump sum option at retirement). This represents about 25 percent of their total liability.

Sears – In September, Sears contributed $203 million to get to 80 percent funding so they could pay some lump sums. They are also planning to reduce their expected 2013 funding from $740 million to $350 million due to the provisions of MAP-21.

New York Times – On Sept. 14, 2012, *New York Times* informed 5,200 former employees that they intend to offer them the option of receiving a one-time lump sum payment or an immediate reduced monthly annuity from the plan. This represents approximately 15 percent of their total qualified pension plan liabilities, which was approximately $2 billion at the end of 2011. They hope to reduce the size of their pension obligations and the volatility in their overall financial condition.

Visteon Corporation – On Sept. 19, 2012, Visteon announced a one-time lump sum payment option from plan assets to certain former non-retired employees. The option will be offered to nearly 10,000 of the company's 20,000 total U.S. plan participants. Eligible participants who do not elect a lump sum payment will maintain their existing benefit.

Archer-Daniels-Midland (ADM) – On Sept. 20, 2012, ADM began notifying certain former non-retired employees of its one-time offer to pay their benefit in a voluntary lump sum. They estimate participation rates will be 50 percent to 75 percent which could reduce its global pension benefit obligation by approximately $140-$210 million and improve its pension underfunding by approximately $35-$55 million. They also expect ongoing pension expense to be reduced by $4-$5 million annually. Actual participation rates and payout amounts will not be known until December 2012.

Thomson Reuters – Eligible terminated participants who do not elect a lump sum or early annuity payment will receive annuity payments from the pension plan which had $1.5 billion in assets as of Dec. 31, 2010, according to its most recent Form 5500 filing.

Equifax – On Oct. 1, 2012, Equifax began notifying approximately 3,500 former employees of its offer to pay their pension benefits from the plan by the end of 2012 in either a lump sum or a reduced monthly annuity. This represents approximately 20 percent of their total qualified pension plan liabilities which were approximately $630 million as of Dec. 31, 2011.

Yum! Brands – On Oct. 9, 2012, Yum! began notifying certain former employees of a limited opportunity to voluntarily elect an early payout of their benefits to be paid from pension assets. As a result of this program, they anticipate recording an accounting charge between $25 million and $75 million in the fourth quarter of 2012.

A.H. Belo – They are offering, or will automatically distribute, lump sum payments to certain pension plan participants with a present value of $30,000. Approximately 1,500 participants, or 30 percent of total plan participants, will receive these offers. The number of actual participants selecting the voluntary opportunities will not be known until later in 2012.

Baxter International – Baxter is offering lump sums to 16,000 vested former employees to reduce administrative costs and investment volatility. They do not have estimates for how many participants will accept the offer and the effect it will have on pension liabilities. They had $3.67 billion in pension assets and $4.94 billion in liabilities for a funded status of 74.3 percent, as of the end of 2011.

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SOCIETY OF ACTUARIES
PENSION SECTION NEWS

WHY ARE CORPORATE PENSION PLANS REDUCING RISK NOW?

By Evan Inglis

Why are corporate pension plans reducing risk now, when conditions for de-risking seem so poor – interest rates are lower than low, and equities seem to offer reasonable if not favorable opportunity? In a nutshell, the question of how to invest pension assets is becoming a corporate finance issue rather than an investment issue. The corporate finance view looks at the pension plan from the perspective of a shareholder in the plan sponsor's business. Plans are bigger relative to the size of their plan sponsors than they used to be, and they cannot be ignored in thinking about the financial prospects of the plan sponsor's business.

While pension accounting and funding rules still incorporate a lot of smoothing and averaging, they have moved close enough to pure market measurements that short-term volatility in the funded status is an issue. Despite the conventional wisdom that pension plans are long-term investors, most corporate pension plans can no longer take this view. Although the transition is slow for many, corporate pension assets are being allocated with a shorter term view in mind.

There are number of reasons why the corporate finance view of pension investing leads to very different approaches than have been used in the past. These include:

- Business results are cyclical and equity investment makes pension costs cyclical as well. Another way to say this is that corporations double up on beta (their own corporate beta, plus the beta in their pension investments) to the extent that they invest pension assets in equities.

- Unpredictable pension results causes lots of problems for a corporate plan sponsor. Some of the problems relate to the plan itself (such as additional notices and benefit restrictions). Other problems include difficulty in planning capital expenditures, hits to balance sheet equity and investor concerns about uncertainty in earnings and cash flow.

- Uncertain pension information results in a higher required return for a corporation's equity. Because future earnings become less predictable, a higher return is demanded on equity investment. Equity investment in a pension plan adds no value for a corporation.

- Financial stakeholders in a corporation have access to all the equity exposure they want. Their individual efficient frontiers (presumably) guide their investment decisions and additional equity exposure through corporate pension plans is less efficient and effective than an investor simply allocating more assets to equity directly in his/her portfolio.

- Because bonds are taxed at a higher rate than equities, equities provide less compensation for the risk taken when they are held in a non-taxable pension trust.

- When financial analysts look at a pension plan sponsor's financial information, they typically reverse out the smoothing in pension expense information. They may also expand the balance sheet by consolidating the pension assets and liabilities similar to the way a subsidiary would be treated. With this view, key financial metrics such as the debt to equity ratio look very different and the risk posed by the pension assets and liability is apparent.

The investment perspective for a pension plan focuses on the pension plan by itself, without the context of the sponsor's business. We typically use the capital asset pricing model (CAPM) and asset-liability studies to find the asset allocation with the best risk/return tradeoff. This is a useful model, but it doesn't usually capture the impact of risk taking on the business and the owners of the business. Still, even limiting our view to this investment perspective, the wisdom of making large equity investment in corporate pension plans can be questioned for these reasons:

- The equity risk premium is smaller for pension plans, given that the lowest risk investment is long duration bonds, the compensation for taking on equity risk is smaller than for other investors.

- Many pension plans have short time frames for equity risk to pay off. Frozen plans will be forced to be fully funded within seven years by PPA rules[1].

- Most corporate pension plans intend to reduce their equity exposure over the next several years, which may put downward pressure on equity prices and upward pressure on long bond prices. First movers out of equities and into long bonds may have an advantage.

It's hard to get excited about investing in bonds with yields as low as they are in the middle of 2012, but for corporate pension plans, the problems with mismatching assets and liabilities have become all too apparent during the 2000's. It's ironic that the de-risking of pension plans has accelerated as interest rates have dropped.

Why has it taken so long for these compelling considerations to become drivers of pension plan investment strategies (indeed, even today many plans have still not made this adjustment) and other de-risking?

If we wound the clock back 30 years, and looked at pension plans at that time, we would find much smaller, younger plans. Smaller plans did not have the same impact on corporate finances and the corporate finance perspective could be ignored without causing problems. Plans grew dramatically during the 1980's and 1990's but during that time, consistently high equity returns masked the potential financial problems that plans might pose and plan sponsors, actuaries and investment professionals, did not need to learn good risk management. However, as we move through time to the 2000's when equity markets took a turn for the worse, we also find rules that changed to recognize the financial situation of pension plans more immediately and directly. Plan liabilities had grown large as populations aged and interest rates dropped, so pension plans had a bigger impact on businesses.

As of 2012, tough lessons have been learned and plan sponsors are changing their approach, some slowly, some dramatically. Not all of them are conscious of the shift from an investment perspective to a corporate finance perspective, but the actions (closing, freezing, lump sum settlements, and group annuity purchases) tell the story. Buying a group annuity contract or offering lump sum payments to participants are, from a risk management perspective, very similar to investing in long duration bonds. All of these actions lock in costs and we have seen very large initiatives (e.g., at GM, Ford, Verizon) in 2012 to do just that, even with interest rates at historical lows—good evidence that perspectives have changed.

For actuaries and investment professionals working with pension plans, it may be useful to describe explicitly the corporate finance considerations to DB plan sponsors who are struggling to deal with pension risk. Essentially, we want to encourage plan sponsors to see the financial impact of a pension plan from a shareholder's point of view. This may lead to more satisfactory outcomes over the long run. Many pension plans will not survive the economic turmoil of the last decade, but even the ones that may terminate in the near future will benefit from good risk management by understanding the plan in the context of the plan sponsor's business.

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[1] MAP-21 legislation may effectively extend this period when the lower bound of the interest rate corridor applies.

SOCIETY OF ACTUARIES
PENSION SECTION NEWS

DILBERT

By Scott Adams