

Conference of

Consulting Actuaries™

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CONTENTS

CCA NEWS

2016 CCA ANNUAL MEETING RECAP	3
2016 CCA ANNUAL MEETING BUSINESS SECTION	3
CCA AWARDS.....	3
REMARKS BY DONALD J. SEGAL, CAA PRESIDENT 2015-2016.....	6
REMARKS BY DONALD E. FUERST, CAA PRESIDENT 2016-2017	7
CCA BYLAWS BALLOT RESULTS.....	8
ACADEMY REMOVES CCA SPECIAL DIRECTORS FROM BOARD	8
THE CCA ANNOUNCES NEW COMMITTEE AND ENCOURAGES ENGAGEMENT.....	8
NEW – EXPERT WITNESS SIG	9
CCA WELCOMES NEW MEMBERS.....	10
IN MEMORIAM.....	10

SESSION SUMMARIES FROM 2016 CCA ANNUAL MEETING

WOULD YOU LIKE TO BE A SESSION ASSISTANT AT THE 2017 ANNUAL MEETING?	11
THANK YOU TO OUR SESSION ASSISTANTS	11

CONTINUING EDUCATION

BUILDING YOUR BRAND SEMINAR	54
CCA 2017 AUDIO/WEBCAST SERIES.....	55
2017 CCA HEALTHCARE MEETING.....	56
REGISTER NOW CCA PROFESSIONAL STANDARDS SEMINAR	56
ENROLLED ACTUARIES MEETING	56
FUTURE MEETING DATES	56
2017 CCA ANNUAL MEETING.....	56
2018 ENROLLED ACTUARIES MEETING.....	56
2018 CCA HEALTHCARE MEETING	56
2018 CCA ANNUAL MEETING	56

NEWS IN OUR PROFESSION

INTERSECTOR MEETING UPDATE	57
CCA MATCHING GIFT FOR DONATIONS TO THE ACTUARIAL FOUNDATION.....	57
NEWS FROM THE ACTUARIAL FOUNDATION.....	58

THE CONSULTING ACTUARY

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CCA NEWS

2016 CCA Annual Meeting Recap

The 2016 CCA Annual Meeting, held October 23 – 26 at the JW Marriott Resort and Spa in Las Vegas, Nevada, was a resounding success with record high attendance of more than 600 actuaries and guests.

A robust continuing education program of 60 sessions provided up-to-date information on relevant topics to help keep consulting actuaries current on issues impacting specific areas of interest in their daily work. Representatives from the Internal Revenue Service (IRS) and the Pension Benefit Guaranty Corporation (PBGC) offered insights and perspective to participant questions in a few of the concurrent sessions.

Participants enjoyed the opportunity to network with colleagues, exchange ideas, and catch up with long-time friends in a relaxed setting. Special networking sessions engaged participants of CCA's Communities and Special Interest Groups, including Emerging Leaders, Multiemployer Plans, Public Plans, Healthcare, and Smaller Actuarial Consulting Firms.

The Conference of Consulting Actuaries' Annual Meeting is the only meeting designed to address the day-to-day issues facing consulting actuaries. Mark your calendar now for October 22-25, 2017 to join us for the 2017 Annual Meeting at the JW Marriott Marco Island Beach Resort, Marco Island, Florida.

2016 CCA Annual Meeting Business Section

2016 Treasurer's Report

Edward M. Pudlowski delivered the Treasurer's Report. Mr. Pudlowski reported that the Conference of Consulting Actuaries maintains a positive financial

position and that the CCA's Board of Directors voted to approve a budget based on an increase of three percent for pricing on 2017 audio/webcast programs, with no change in membership dues.

CCA Awards

Lifetime Achievement Award

Lance J. Weiss was honored with CCA's 2016 Lifetime Achievement Award.

Mr. Weiss has been, and continues to be, outstanding as a volunteer for the Conference of Consulting Actuaries, beyond his service as President of the CCA in 2008-2009. He continues to serve on the Annual Meeting Committee (serving as co-section head in the Public Plan section); and he chairs one of CCA's most important groups—the Seminar Committee, responsible for seminars and audio/webcasts. As Seminar Committee Chair, he has tirelessly served to ensure CCA provides a full slate of audio/webcasts by providing strong leadership and active support with speaker suggestions and alternative topic ideas. His efforts result in the development of respected, high-quality continuing education programs.

Mr. Weiss consistently develops some of the top rated Annual Meeting sessions. At the 2013 Annual Meeting, he led the closing general session; through hard work with actuaries and outside lawyers, he put together one of the best rated closing sessions of any of CCA's Annual Meetings.

Mr. Weiss continues to be one of the top volunteers.



*2016 LIFETIME ACHIEVEMENT AWARD
RECIPIENT LANCE WEISS (RIGHT)
PICTURED WITH 2015-2016 CCA
PRESIDENT DON SEGAL*

His commitment to the CCA and the continual drive to develop high quality continuing education is invaluable.

CCA awards the honor of Lifetime Achievement to a volunteer for contributions made to the Conference of Consulting Actuaries, or the actuarial consulting profession in general, during his/her professional career. Although nominations are accepted throughout the year, nominations made by June 1 of each year would be considered for presentation at the upcoming Annual Meeting. Follow this link for details about the Lifetime Achievement Award or to submit a nomination.

Most Valuable Volunteer Award

Patricia A. ("Pat") Rotello was honored as the CCA's 2016 Most Valuable Volunteer. Ms. Rotello has served the CCA in a variety of leadership positions, including CCA President in 2012-2013. She has been a valued mentor to volunteers who are stepping into CCA leadership roles, and she helps them navigate their new roles. Ms. Rotello is respected among her CCA colleagues for being a courageous leader who is forthright in addressing controversial topics with the best interest of the CCA in mind in all her interactions.

Ms. Rotello led the Annual Meeting Committee in 2015, which had the highest attendance at any CCA meeting at the time. She has volunteered, led and participated in numerous CCA activities since serving as President of CCA. Ms. Rotello continues to be a voice of reason that provides sound direction, and she demonstrates her true leadership skills through her actions.



*2016 MOST VALUABLE VOLUNTEER AWARD
RECIPIENT PATRICIA ROTELLO (RIGHT)
PICTURED WITH 2015-2016
CCA PRESIDENT DON SEGAL*

The Most Valuable Volunteer honor is awarded to a volunteer for contributions made to the Conference of Consulting Actuaries, or the actuarial consulting profession in general, during the past 12 to 24 months. Although nominations are accepted throughout the year, nominations made by June 1 of each year would be considered for presentation at the upcoming Annual Meeting. Follow this link for details about the Most Valuable Volunteer Award or to submit a nomination.

Wynn Kent Public Communications Award

The honoree of the 2016 Wynn Kent Public Communications Award was Steven G. Vernon. Mr. Vernon is a Consulting Research Scholar at the Stanford Center on Longevity, in the Financial Security Division, and President of Rest-of-Life Communications. He is active with research, writing, and speaking on the most challenging issues facing retirees today, including finance, health, and lifestyle. Mr. Vernon currently authors a regular blog column for CBS MoneyWatch, titled Money for Life. His latest book is Money for Life: Turn Your IRA and 401(k) Into a Lifetime Retirement Paycheck. Before joining the Stanford Center on Longevity, he worked for more than 35 years as a consulting actuary.



*2016 WYNN KENT PUBLIC
COMMUNICATIONS AWARD RECIPIENT
STEVEN G. VERNON*

In 2005, family and members of the CCA Board established this award in memory of Irwin I. "Wynn" Kent (CCA President 1989-1990) and his contributions to financial risk and the profession's work product. The award is given to members of the actuarial profession who have contributed to the public awareness of

the work of the actuarial profession and the value of actuarial science in meeting the financial security of society in the fields of life, health, casualty, pensions and other related areas. Any actuary is eligible for the Award. Follow this link for more information about the Wynn Kent Public Communications Award, or to submit a nomination.

CCA Welcomes New Directors to the Board

CCA welcomes to the Board for three-year terms new members Michael S. Clark and Felix A. Okwaning, and those returning for a second term, Board members Richard H. Bailey, Scott A. Hittner, Judith A. Kermans and Edward M. Pudlowski.

Special thanks and appreciation go to retiring Board member and Past President John J. Schubert for the time and commitment he dedicated to the CCA through his Board service.

Donald J. Segal, President for 2015-2016, is now Past President, succeeded by Donald E. Fuerst as President for 2016-2017.

The 2016-2017 CCA Officers of the Board, voted on by the current Board, are as follows:

- John H. Lowell, President-Elect
- Justin N. Hornburg, Vice-President – Communities & Special Interest Groups
- Ellen L. Kleinstuber, Vice-President – Continuing Education
- Edward M. Pudlowski, Vice-President – Member Services
- Richard H. Bailey, Secretary
- Maria M. Sarli, Treasurer



*FELIX A. OKWANING,
NEW MEMBER OF THE CCA BOARD OF DIRECTORS*



*MICHAEL S. CLARK,
NEW MEMBER OF THE CCA BOARD OF DIRECTORS*

Remarks by Donald J. Segal, CAA President 2015-2016

As my year as President is now coming to a close, I want to thank you all for the support you have shown to the Conference during the year. I think we've had a good year. I've had a terrific Board and I want to thank the Board.



*DONALD J. SEGAL,
CCA PRESIDENT 2015-2016*

We've accomplished some things during the year. For example, we adopted a new vision statement:

"Consulting actuaries advance the practice through innovative education programs and robust common interest groups."

And, we have a new mission statement:

"The Conference of Consulting Actuaries provides quality education and facilitates networking among established and aspiring leaders in the actuarial consulting community. The CCA is dedicated to supporting the professional needs and career success of consulting actuaries."

These statements are our guiding principles in the coming years.

Also significant among the last year's activities is the growth of our communities and special interest

groups. We have two communities now, Public Plans Community and Healthcare Community, and recently we've launched four special interest groups:

- Emerging Leaders,
- Multiemployer Plans,
- Corporate Qualified Pensions, and
- Smaller Actuarial Consulting Firms.

A special interest group is a group of individuals with a common interest and believes it's a good idea to meet periodically. A community is an entity that has a steering committee and creates continuing education content, and/or publishes documents for public consumption. The creation of new groups is determined by the leadership team at the request of the Vice President of Communities and Special Interest Groups. So basically, this is for you, our members. What we do on the Board is for you, our members. If you have ideas for additional special interest groups, let us know. Essentially what happens eventually with special interest groups, we hope, is that they will become communities as they grow in size and activity and contribute further to our education programs. The CCA is a vibrant, active and forward moving organization, and we're continually changing and improving to maintain this status.

I've enjoyed leading the CCA and the many activities we've accomplished this year. I think it's been a very successful year. Thank you to the CCA staff: Rita DeGraaf, our Executive Director, Matt Noncek, Kelly Fanella, Jim Uhlarik, Samantha Feinglass, Denise Cahill, Marie Shaw and Darla Stieper. They do a fabulous job for us all year long.

Most importantly, I want to thank all of you for your support.

Remarks by Donald E. Fuerst, CCA President 2016-2017

Good morning everyone. I would like to start by thanking Don Segal for the outstanding work he has done this past year as President of the Conference. Don's leadership was extraordinary and most helpful to me as I prepare to lead the CCA in the coming year.



*DONALD E. FUERST,
CCA PRESIDENT 2016-2017*

I also want to thank Phil Merdinger for his work as Past President and Executive Committee member for his excellent work and leadership during the past year. These two gentleman provided a great model for me to follow. I look forward to trying to fill those big shoes!

I am excited about the coming year for the CCA. We have some new changes and will continue some excellent programs:

- We are significantly expanding our Communities and Special Interest Groups,
- We will experiment with a new Consulting Skills Seminar this spring to help consulting actuaries improve some of their soft skills,
- We have an outstanding lineup of webinars scheduled for 2017, and
- We are planning another outstanding Annual Meeting in Marco Island, Florida in October 2017.

I would like to thank the staff of the Conference for

their help in putting all of this together. The CCA staff is small but does an outstanding job.

Now I would like to take a moment to say a very special thank you to Rita DeGraaf, the Executive Director of the CCA. Rita joined the staff of the CCA in 1985, coincidentally the same year I became a member. Three years later, Rita was appointed Executive Director. She has led the CCA for 28 years. I know that I and many former presidents, members, committee members, volunteers and countless scores of our members can attest to the outstanding leadership she has provided during these 28 years.

Today, it is my bittersweet duty to inform you that Rita will be retiring this year before our Annual Meeting in October. It is bitter because we will all miss Rita as a colleague and as a friend. It is sweet because I know this marks the start of a wonderful new phase of her life that she will thoroughly enjoy. We have invited Rita to join us at this year's Annual Meeting, but due to some personal commitments, it is uncertain that she will be able to join us. This may be Rita's last Annual Meeting. Would you all please stand and join me in giving Rita a wonderful round of applause to express our sincere thanks.

Thank you Rita! I am looking forward to working with you for 11 of the 12 months I will be President!

CCA Bylaws Ballot Results

CCA's membership approved the Bylaws amendment as proposed by the Board of Directors in September by an overwhelming majority of 97% of the votes expressed in favor. These revisions allow the entire membership to vote for the Board of Directors slate each year, rather than only those members in attendance at the business portion of the opening session of the Annual Meeting. With this change in the Bylaws comes a change in the overall process.

If you are interested in further details, please view Interested in Being Considered for [Board Nomination](#).

Academy Removes CCA Special Directors from Board

by Donald E. Fuerst, CCA President 2016-2017

The President and President Elect of the CCA have served on the Board of Directors of the American Academy of Actuaries for many years. In the early years of the Academy, this was an informal arrangement. In 1992, the Academy created the role of Special Director with a two-year term and formalized this practice. The presidential officers of the Society of Actuaries, the Casualty Actuarial Society, and the ASPPA College of Pension Actuaries also served as Special Directors on the Academy Board. In January 2014, the Academy Board removed from the Board the two Special Directors from the Society of Actuaries. Later in 2014, the Academy changed their policy regarding automatic nomination of the new President Elect of each organization and instead asked each organization to nominate multiple representatives to serve as Special Directors, with the Academy Board selecting the actual Special Director from those nominated. In the fall of 2014, the Academy chose a Special Director

from the CCA other than the President Elect for the first and only time. At the October 2016 Academy Board Meeting, the Board voted to remove all Special Directors who were representatives of other actuarial organizations, citing what they referred to as "...an inherent conflict of interest...." As a result, the CCA no longer has direct participation on the Academy Board.

The CCA leadership team regrets this change of policy. Our Special Directors did not agree that an inherent conflict exists and both voted against the proposal, but it passed with a strong majority. The Academy announcement regarding this change can be found [here](#).

The CCA Announces New Committee and Encourages Engagement

The CCA Board of Directors has launched the new Communities and Special Interest Groups Committee. This committee serves to optimize interaction among members through use of CCA's Communities and Special Interest Groups (SIGs).

The CCA welcomes volunteers for this and other committees. Get involved with the CCA and put your expertise to work!

There are a variety of ways for CCA members to participate. For more information, visit our website and view our Member Engagement form at http://www.ccactuaries.org/Portals/0/pdf/CCA_Volunteer_Form.pdf, where the responsibilities and time commitments for each opportunity are outlined. Once you match your talents and interests, please email your interest form to Kelly Fanella at CCA (kfanella@ccactuaries.org).

Check out the Member Engagement Opportunities at CCA

<p>I want to participate with others in getting answers, sharing concerns, and taking actions to help shape the profession.</p> <p style="text-align: center;">Communities and Special Interest Groups</p>	<p>I want to share my knowledge and expertise about important actuarial concerns.</p> <p style="text-align: center;">Presenter/Speaker</p>	<p>I want to help membership grow in the CCA by developing an increased awareness of membership benefits to consulting actuaries and their employers.</p> <p style="text-align: center;">Membership Committee</p>
<p>I want to keep CCA on the cutting edge of technology when providing education.</p> <p style="text-align: center;">Education Innovation Committee*</p>	<p style="text-align: center;"><i>Which one are you?</i></p> <p>Enhance your knowledge and network by participating in the CCA as a fully engaged member. Consider the available opportunities.</p>	<p>I want to help design, implement, present and/or recruit for diverse types of CCA audio/webcasts and seminars.</p> <p style="text-align: center;">Seminar Committee*</p>
<p>I want to develop and implement social media strategies to enhance the value of CCA membership to consulting actuaries and to promote the activities of the CCA and its membership to the general public.</p> <p style="text-align: center;">Social Media Committee</p>	<p>I want to help ensure members are fully engaged, welcomed and supported by matching appropriate opportunities that make use of members' talents.</p> <p style="text-align: center;">Member Engagement Committee</p>	<p>I want to design and implement program content, recruit speakers and coordinate presentations for the Healthcare Meeting.</p> <p style="text-align: center;">Healthcare Meeting Program Committee*</p>
<p>I want to review education offerings industry-wide to ensure CCA stays ahead of the curve on hot topics.</p> <p style="text-align: center;">Education Scan Committee*</p>	<p style="text-align: center;">Annual Meeting Program Committee* Joint Program Committee for the Enrolled Actuaries Meeting*</p>	

Go to www.ccactuaries.org, click the header *Member Resources* and get engaged!

**An asterisk indicates that individuals on this committee need to have strong or extensive networks.*

NEW – Expert Witness SIG

The Expert Witness Special Interest Group is comprised of actuaries who perform or are interested in Expert Witness work. The purpose of this SIG is to facilitate networking among its members, help make them better in this line of work, and provide a repository for appropriate reference material. Topics of discussion will be member driven, but may include: differences between EW opinions and actuarial analysis reports; EW trends and opportunities; resolving potential conflicts of interest; testimony preparation, presentation and pitfalls; and maintaining attorney-client privilege.

Join today by logging into the website at www.ccactuaries.org.

CCA Welcomes New Members

The CCA congratulates and welcomes the following new Associates (ACAs) and Fellows (FCAs) as of January 31, 2017.

Carter Angell, FCA	Nicolas Lahaye, FCA	Steward Sainvil, FCA
Sara Ark, FCA	Wang Y. Li, FCA	Leah Sardiga, FCA
Kevin Baker, FCA	Jeff Long, FCA	Jeffrey Schapel, ACA
Olufemi Balogun, FCA	Christopher Lucas, FCA	Kurt Schneider, FCA
Valerie Bolduc, ACA	Brenda Majdic, FCA	Todd Schroeder, FCA
Rayon Brown, FCA	Veronique Marchand, ACA	Mary W. Shah, FCA
Edie Campo, FCA	Mark Maselli, ACA	Mark Shemtob, FCA
Yon-Loon Chen, FCA	Timothy Shawn McGhee, ACA	Tong Shen, FCA
Andrea Christopherson, FCA	Jennifer McHugh, ACA	Daniel Siblik, FCA
Justin D. Clinger, FCA	Daniel R. McMonagle, FCA	Jeffrey R. Smith, FCA
Adam Condrick, FCA	James McPhillips, FCA	Erica Sorg, FCA
Isabelle-Aubert Cote, FCA	Stephen Mekenian, FCA	Jonathan Stern, FCA
Margaret Crist, FCA	John M. Merrill, FCA	William Strange, FCA
Kara Dusterhoft, FCA	Chad Mezvinsky, FCA	Cameo Tsai, FCA
Jeff Dutton, FCA	James Oatman, FCA	Scott Turner, ACA
Nazlun A. Faleeldeen, ACA	Riddhi Patel, ACA	Jessica Valukas, ACA
Elise Falk, ACA	James Sterling Price, Jr. FCA	Mark VanBuskirk, FCA
Rachel Gilmore, ACA	Yubo Qiu, FCA	Tamara L. Wilt, FCA
Robert M. Glus, FCA	Julie M. Reyes, FCA	Suzanne C. Wyatt, FCA
Theodore Goldman, FCA	Francisco Javier Ruiz de la Pena Olea, FCA	Gordon Young, FCA
Craig Hallermann, FCA	Anita P. Roopani, ACA	Delbert A. Zamora, FCA
David Kent, FCA	Syed Saghir, ACA	Jeffrey Zimmerman, FCA
Sumit Kundu, FCA		

In Memoriam

The CCA wishes to extend our condolences to the family and friends of the following CCA members who passed away since our last issue:

Charles Cook, FCA	Eugene Oppo, FCA
M. Olivia Corrao, FCA	Scott Otermat, FCA

SESSION SUMMARIES FROM 2016 CCA ANNUAL MEETING

Would you like to be a Session Assistant at the 2017 Annual Meeting?

Serving as a Session Assistant is an excellent way to network into other continuing education opportunities, gain exposure within the profession, and potentially participate in speaking opportunities. Actuaries new to the profession, or to CCA, are especially encouraged to consider serving in this capacity to build contacts and experience in coordinating an educational session.

Duties include writing a brief description of specific sessions, collecting continuing education forms, and other duties as requested by the moderator.

Sign up now to volunteer for next year's Annual Meeting.

Thank You To Our Session Assistants

A special thank you to our Session Assistants who provided the following summaries:

Carter M. Angell,
Nyhart

Dan Hoffman,
Optum

Jennifer Milstein,
Lockton Companies, LLC

Michael W. Ringuette,
Willis Towers Watson

Brian Boring,
TIAA

Suzanne K. Hughes,
Conduent Human
Resource Services

Therese Morong,
Consulting Actuary

Ruth Schau,
TIAA

Janet Brazelton,
San Francisco Employee's
Retirement System

Kelly L. Karger,
Willis Towers Watson

Tiffany Mouton,
Prudential Retirement

Erica Sorg,
Willis Towers Watson

Troy Dempsey,
Fidelity Investments

Piotr Krekora,
Gabriel Roeder Smith

Christine S. Nassor,
Willis Towers Watson

Mike Spetko,
Deloitte Consulting LLP

Kara Dusterhoft,
Quantum Health

Frederick (Rick) Kwan,
M Benefit Solutions

Russell Niswander,
Nestle USA

William Strange,
Fidelity Investments

Andrea Fleser,
Willis Towers Watson

Guodong Li,
Conduent Human
Resource Services

Jeremy P. Olszewski,
Fidelity Investments

Melissa Verguldi,
Lockheed Martin
Corporation

Rachel Gilmore,
Arconic

Albert Phelps,
Arthur J. Gallagher & Co.

Amy Whaley, Willis,
Towers Watson

Alice C. Hicks,
Willis Towers Watson

Richard A Mackesey,
Willis Towers Watson

Steven Pribis,
Dietrich and Associates

Joshua M. Wynveen,
Optum

2016 CCA Annual Meeting Session Summaries

Session 102

ANNUITY BUYOUTS

Speakers:

- Joseph Strazemski – Conduent Human Resource Services
- Alex Gagnon – Mercer
- David Godofsky – Alston & Bird LLC
- Margaret G. McDonald – Prudential
- Session Assistant: Suzanne Hughes – Conduent Human Resource Services

This session covers an annuity buyout as one of the options for plan sponsors to consider when looking to de-risk their defined benefit (DB) plans. Several aspects surrounding such a transaction including the consultant's, plan sponsor's and insurer's point of view as well as the plan sponsor's fiduciary responsibility are reviewed.

In determining whether an annuity buyout is something a DB plan sponsor should consider, there are several aspects that should be explored. Many plan sponsors are looking at annuity buyouts for all or a portion of their defined benefit plans as part of a broader de-risking strategy. This interest is being driven by the degradation of the funded status of such plans (exacerbated by recent funding relief regulations) and higher administrative costs, including legislated increases in Pension Benefit Guaranty Corporation (PBGC) premiums, as well as the increasing longevity risks associated with them.

Retiree only transactions have become more prevalent in recent years and according to insurer projections, 2016 is on track to at least match the activity that occurred for this type of transaction during 2015. While the recent market activity was mainly due to a few "jumbo" transactions (i.e., \$1 billion or more), the expectation is that we will see more volume in the coming years. The prevalence of retiree only buyouts is likely due to the inability for plan sponsors to be able to fully terminate their DB plans since the contributions necessary to fully fund their plans on a termination basis are too large. A retiree only buyout can relieve a plan of rising PBGC costs and remove a large portion of liability from the plan.

Pricing of annuities is highly dependent on the population being considered for a buyout. For a retiree only population, longevity risk is the main risk that the insurer purchasing the annuities will face. Deferred lives (i.e., active and deferred vested participants), introduce several new aspects of risk for an insurer. These risks include the question of when these participants will retire and what form of benefit they will choose once they do. The longer duration of the liabilities associated with these groups means the insurer faces re-investment risk. Due to these additional risks, insurers have shied away from populations heavy with deferred lives and prefer a population that has a mix of retiree lives. If a full plan termination is

being considered in the near future, the plan sponsor may want to consider that doing a retiree only buyout may render the remaining plan less attractive to insurers.

Buyouts for retiree populations with small benefit amounts are another option plan sponsors may find of interest for a number of reasons: the plan sponsor is paying a relatively higher cost for these participants due to PBGC flat rate premiums; additional contributions to the plan may not be necessary; pricing for these types of benefits will be more attractive; the transaction size can be limited to avoid settlement accounting; retiree lives are still left in the plan in the event the plan sponsor decides to do a full plan termination in the future.

Another item to consider that could reduce the cost of a buyout transaction is in-kind asset transfers. Insurers portfolios tend to be over 90% invested in fixed income while the traditional pension plan portfolio is 60% invested in fixed income. Insurers will work with plan sponsors in advance of a transaction to help develop a preferred portfolio. The premium paid for larger transactions can be reduced using this strategy since it will help make the transaction more efficient for the insurer.

One of the biggest concerns both plan sponsors and participants have with respect to annuity buyouts is insurer solvency since PBGC protection is gone once an insurer buys the annuities. The National Organization of Life & Health Insurance Guaranty Associations (NOLHGA) recently put out a paper which discusses the dollar amount of state guarantees which show them to be quite sufficient and very comparable to those of the PBGC. Additionally, the likelihood of insurer insolvency is much lower than for a corporate sponsor as insurers oversight on the state level is much higher than oversight on the Federal level.

Department of Labor (DOL) interpretive bulletin 95-1 provides guidance to plan sponsors regarding their fiduciary responsibilities under the Employee Retirement Income Security Act (ERISA) with respect to selecting an annuity provider for these types of transactions. The bulletin calls for selection of the "safest annuity available" unless there is a good reason not to do so, e.g. if the cost to provide the safest annuity is disproportionality higher than

providing an only slightly less safe annuity. Interpretive Bulletin 95-1) also brings in the concept of the fiduciary obligation of prudence, which requires that, at a minimum, plan sponsors conduct an objective and thorough search to identify and select an insurer. While hiring a consultant to help with this search may not result in different lists than use of rating agency data, it may help to have a consultant's expertise on what the ratings of such agencies mean and will certainly help to prove that the plan sponsor conducted a thoughtful process which could matter if the plan sponsor finds itself in the court system defending their decision.

The idea of whether an annuity purchase could be a fiduciary breach was also discussed. In assessing whether this is the case the plan sponsor should ask the following questions: Was a certain

group of participants favored over another? Will the transaction reduce the funding status of the plan beyond a certain threshold? Did the plan sponsor not make an effort to buy the "safest" annuity?

Some examples of plan provisions that are required to be included in an insurance policy and those that are not include the following:

Included – actuarial equivalence factors, early retirement subsidies and ability to grow into such subsidies

Excluded – shutdown benefits not yet triggered, future changes in law e.g. changes to Internal Revenue Code Section 417(e)(3) basis

Session 107

LEGAL AND LEGISLATIVE UPDATE FOR PUBLIC PENSION PLANS

Speakers:

- Paul Angelo – Segal Consulting
- Caleb During, Esq. – Rollin Braswell Fisher, LLC
- Kimberly Boberg, Esq. – Groom Law Group, Chartered
- Session Assistant: Janet E. Brazelton – City and County of San Francisco Employees' Retirement System

COLA Litigation

Plan sponsors across the nation have attempted to make an immediate impact on costs by reducing Cost-of-Living Adjustments (COLAs). These attempts have led to over 10 years of COLA litigation. Focus has been on whether or not the COLA is a contract right. In considering changes to COLAs, many states and courts are adopting a three-pronged analysis: 1) Does a contract exist; 2) If a contract exists, does the modification result in an impairment of the contract and if so, is the impairment substantial; 3) If the impairment is substantial, does it meet a three-part test: Is the impairment reasonable and necessary to achieve a significant and legitimate public purpose.

Since 2010, most courts have upheld changes to COLAs including changes for retirees. Courts in Minnesota, South Dakota, Washington, Maryland, Colorado, New Mexico, Florida, Maine, New Hampshire, New Jersey and Tennessee have ruled that either no contract right to COLA existed or that there was no impairment to contract rights. A court in Rhode Island also upheld changes to COLAs for the City of Cranston under the three-part test of reasonable, necessary, and achieving a public purpose to avoid bankruptcy. This was a different outcome than in prior Rhode Island cases that were settled.

However, modifications to COLA benefits have also been rejected. A court in Montana found that the impairment was not reasonable and necessary. A court in Oregon found that the arguments for COLA modification did not justify the impairment of the contract. Constitutional protections for public retirement

benefits were used to reject reduced COLAs in Arizona and Illinois. Restrictions imposed on COLA payments in California were struck down under the "California Rule" that pensions vest upon acceptance of employment. Restrictions were upheld for retirees whose period of employment did not include the promise of future COLAs.

Future Benefit Accrual Litigation

Changes in employee contribution rates were upheld in Alabama, Florida, and Georgia. Employee contribution increases were also upheld in New Jersey except for judges because of the state's Judicial Anti-Diminution Clause. Employee contribution increases were found unconstitutional in Arizona and California.

Changes in future benefit accruals for current actives were upheld in Missouri, Wisconsin, and Texas. Modifications to earnable compensation were upheld in New Hampshire and California, although the California case is currently being appealed. If the California case is upheld by California Supreme Court, it would be a significant change to the "California Rule."

Although most future prospective changes have been upheld, we can expect to see more litigation in this area as more plan sponsors look beyond COLA reduction to reduce costs.

Healthcare Benefit Litigation

Attempts to rein in healthcare costs by reducing subsidies and/or requiring active or retiree contributions have been largely successful. Such changes were upheld in California, New Jersey, New Hampshire, and New York. These rulings from states that

generally bar pension changes suggest that healthcare benefits are not considered on par with core pension benefits.

Employer Withdrawal Litigation

More employers are looking to withdraw from public pension systems as a way to deal with increased contributions. Every state has its own statutory system; however, the default is that an employer cannot withdraw unless 1) There is a means provided to withdraw, and 2) The employer complies with that means. Common steps required to withdraw include a vote of the membership, an application to and approval by the pension system, accounting of and payment of withdrawal liability, and disposition of vested/non-vested active employees.

Actuaries play a major role in the determination of withdrawal liabilities including the actuarial assumptions. Questions such as “What is the proper discount rate?” (or plan assumed rate of return, or annuity rate) can lead to actuaries as dueling experts.

In Colorado, the City of Colorado Springs leased out its municipal hospital for 30 years and attempted to remove all employees from the retirement system without following established withdrawal procedures. The trial court found that the withdrawal provisions apply even if not all the provisions were followed. The city had to pay a withdrawal fee to the Colorado Public Employees’ Retirement Association (Colorado PERA).

The Texas Supreme Court found that the retirement system’s findings were final and binding and related to fiduciary duty to maintain system integrity. Deliberate privatization could not be used to avoid contributions to the retirement system.

Municipal Bankruptcy Update

A confirmation hearing on San Bernardino, California’s debt adjustment plan was held in October 2016. San Bernardino did not propose cutting pensions but rather limits to long-term bond debt and retiree healthcare.

Puerto Rico’s retirement fund is approximately 10% funded, but Puerto Rico isn’t allowed to file for bankruptcy. Congressional assistance for Puerto Rico could be forthcoming.

IRS Determination Letters Update

Revenue Procedure 2016-37 (released June 2016 and generally effective January 1, 2017) changes the Determination Letter Program for tax-qualified individually designed plans (IDP) and also the requirements for when plan amendments must be adopted.

Determination letters can now only be requested for an IDP if at least one of these apply:

- The plan has never received a letter before
- The plan is terminating
- IRS makes a special exception

Per Notice 2016-03, expiration dates on determination letters issued prior to January 4, 2016 are no longer operative. Determination letters issued to sponsors of an IDP after that date will no longer contain an expiration date.

Going forward, the IRS will publish a Required Amendments (RA) List after October 1 of each year. Generally, plan sponsors

must adopt any item placed on the RA List by the end of the second calendar year following the year the RA List is published. For example, plan amendments for items on the 2017 RA List generally must be adopted by December 31, 2019. Discretionary amendments will still be required by the end of the plan year in which the plan amendment is operationally put into effect (no change from Rev. Proc. 2007-44). Deadlines for governmental plans are extended to the later of the above deadlines or dates related to the regular legislative sessions of the relevant legislative bodies.

The IRS intends to provide an annual Operational Compliance (OC) List to identify changes in qualification requirements that are effective during a calendar year. Rev. Proc. 2016-37 does not change a plan’s operational compliance standards.

Rev. Proc. 2016-37 also kept and clarified the six-year remedial amendment cycle for pre-approved plans and extended certain deadlines for pre-approved defined contribution plans.

Internal and external review processes will likely take the place of the determination letter filing cycles. A move toward pre-approved plans is not feasible for most governmental plans.

Proposed Normal Retirement Age Regulations

New proposed regulations (January 2016) provide guidance on the applicability of the 2007 Normal Retirement Age (NRA) regulations to governmental plans. These proposed regulations clarify that an explicit definition of NRA is not required for governmental plans that do not provide in-service distributions prior to retirement. However, NRA eligibility is also relevant for 402(l) healthcare distributions and special catch-up provisions of 457(b).

Under the proposed regulations, the definition of NRA must be reasonably representative of the typical retirement age or it must meet a safe harbor:

General Safe Harbor	General Employee Safe Harbor	Qualified Public Safety Employee Safe Harbor
Age 62	Age 60 and 5 Yrs. Svc Age 55 and 10 Yrs. Svc Rule of 80 25 Yrs. Svc w/ other Safe Harbor	Age 50 Rule of 70 20 Yrs. Svc

The proposed regulations also clarify that using multiple normal retirement ages for different classifications of employees including classifications by dates of hire would not fail to satisfy requirements.

Session 201**DIALOGUE WITH PBGC**

Speakers:

- Amy C. Viener – Pension Benefit Guaranty Corp.
- Darren Michael French – Pension Benefit Guaranty Corp.
- Adi Berger – Pension Benefit Guaranty Corp.
- Session Assistant: Guodong Li – Conduent Human Resource Services

The session covers various Pension Benefit Guaranty Corporation (PBGC) topics, including 4010 filings, risk mitigation, reportable events, multiemployer plans, PBGC and Congressional Budget Office (CBO) report, missing participants, and Premiums.

4010 filings

The amended 4010 regulations become applicable for the 2016 information year.

The most significant change is that the \$15 million Funding Shortfall Waiver is based on the aggregate 4010 funding shortfall for all plans maintained by the controlled group using non-stabilized segment rates, rather than the stabilized rates under Pension Protection Act (PPA). This is a fix to the PPA regulations.

There are a few new waivers. Agreeing that small plans pose little risk to the system and need not be monitored, PBGC's final rule provides a waiver when the total number of participants in all the plans maintained within a controlled group is fewer than 500. It also adds a waiver from the 4010 reporting requirements for any missed contribution liens and funding waivers reported on a timely basis to PBGC under the reportable events requirements by the due date of the 4010 filing.

A small plan with a Funding Target Attainment Percentage (FTAP) less than 80% can trigger the 4010-filing requirement by all companies in the control group. A good approach to resolve the situation could be to fully fund the small plan or combine the small plan with another plan in the control group. This approach might be more cost effective than doing the actual 4010 filing for all the companies.

To simplify reporting, we can now report the funding target as if the plan has been at-risk for five (5) years. The funding target should be based on the form of payment assumption under ERISA 4044.

Risk Mitigation

Risk mitigation is one of the PBGC missions. PBGC identifies and monitors the plans and companies at risk through early warning programs, reportable events, funding waivers, and statutory liens.

Another PBGC mission is to encourage the continuation of pension plans while maintaining premiums at the lowest levels possible. PBGC has established some predictive models and uses them to find out which plan sponsors and plans could be in trouble. Over the year, PBGC has looked into more than 100 significant events and/or transactions of large plan sponsors and reached out to the companies. The events usually involve the change in control of companies, transfer of significant underfunded pension liabilities,

leverage buyouts among the big players, payments of very large dividends to shareholders, and significant downtrends of cash flows. PBGC filtered out a small percentage of those companies and performed further investigation.

Based on the findings and negotiations with the companies, PBGC executed actions as needed for a few of the companies filtered out. PBGC had reached a settlement with Sears in March 2016 and Alcoa in October 2016.

To decide which plans to monitor, PBGC currently uses the threshold of having at least 5,000 participants in the plan and at least \$50 million underfunded in funded status.

Reportable Events

PBGC processes reportable events in three steps. PBGC first determines if a reportable event filing is complete and filed timely. PBGC then reviews the content of the reportable event filing and determines whether the sponsor's ability to maintain the plan is at risk. In the last step, PBGC decides if PBGC opens a case for further analysis based on the outcome of the second step. If the sponsor's ability to maintain the plan is at risk, then PBGC opens a case and assigns an analyst. Otherwise, PBGC closes the event and notifies the filer of such a decision. Some events may stay open for monitoring until the situation is resolved. For example, a case of a reportable event due to missed quarterlies is not closed until the missed quarterlies are made up by the catch-up payment date.

PBGC received 303 filings of the reportable events in the first half year of 2016. The reportable events filings should be made through PBGC's new e-filing portal. The primary reason of the reportable events is the failure to make the final contribution.

Multiemployer Plans

Tools are available for plan sponsors to use, but there is nothing new. Such tools can help critical and declining plans avoid insolvency. The first such tool is through benefit suspensions and is the easiest one.

Another tool is to use facilitated mergers. The facilitation may get some financial assistance from PBGC. However, fiduciary standards may be a barrier to certain mergers.

The last tool available is using partitions. To use this tool, the original plan must suspend and/or reduce the accrued benefits to the maximum extent permitted under Multiemployer Pension Reform Act (MPRA). PBGC may create a successor plan. Basically, the sponsor needs to transfer enough liability for the original plan to avoid insolvency. The new plan provides only PBGC guaranteed benefits and is immediately insolvent and receives financial

assistance.

PBGC is currently working on simplifying withdrawal liabilities and will provide rules related to withdrawal liability calculations.

PBGC and CBO Report

Based on the most recent PBGC and CBO report, the funding status for single employers is improving, but de-risking activities could affect the projection significantly. In comparison, the funded status is bad for multiemployer plans.

The PBGC MPRA report was issued to Congress on June 17, 2016. The fiscal year 2015 premium revenue from both flat and variable PBGC premiums is much higher or \$138 per participant for single employer plans and \$21 per participant for multiemployer plans. The projected income will be much smaller than the projected payouts for multiemployer plans. An increase in multiemployer premium rate might be very likely and could be in the range of 350% to 500%.

The CBO report was issued in August 2016. The report discusses the options to improve the PBGC program for multiemployer plans. These options include increasing PBGC premium at least 4.7 fold, reducing the PBGC maximum benefit guarantee by 25%, requiring

20% higher employer contributions to red zone plans, restricting "risky" investments, and/or a federal government bailout.

Missing Participants

If an annuity has been purchased for a missing participant, PBGC needs only to provide information to connect the participant with the benefit. Otherwise, PBGC assumes the responsibility of paying the benefits. This is the process under the current PBGC missing participant program.

The average number of missing participants that were turned over to PBGC from 2009 through 2013 is 1,267. More than half of them have benefits of more than \$1,000.

The program is expanded under PPA '06 to include other retirement plans such as defined contribution (DC) plans, small professional service defined benefit (DB) plans, and multiemployer plans with the same structure.

Proposed regulations make modest changes to the current DB program regarding how to determine amounts to transfer to PBGC and how to determine benefits to pay out once the missing participant is located.

Session 203

RETIREMENT PLANNING MODELS MEET HOLISTIC FINANCIAL WELLNESS: HOW TO INCORPORATE NON-TRADITIONAL RIGS

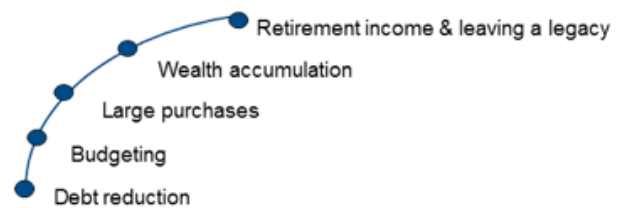
Speakers:

- Molly Lowry Whittle – Consultant
- Peter J. Neuwirth – Willis Towers Watson
- Barry Sacks – Consultant
- Philip M. Parker – Conduent Human Resource Services
- Session Assistant: Ruth Schau – TIAA

This informal panel discussion brought together a variety of experts together to discuss the wide and interesting topics that encompass holistic financial wellness. Financial wellness is an area of study that is really in its infancy, especially when you take a broader look. Retirement Income Generators (RIG), Retirement Planning Models, Alternative RIGs and their importance, and challenges with software models and planning efforts encompass the focus of the discussion. Each of the speakers brought a viewpoint into this topic based on their area of expertise: an actuary, an attorney, an infrastructure expert, and an actuary specializing in the systems area. All were essential in creating the vibrant and successful holistic discussion.

Financial wellness is an area of study that is multidimensional and encompasses skills that may involve a few actuaries, IT professionals, legal consulting and communications. This is a high-stakes and important area of study with current challenges for modeling a holistic financial wellness program.

Actuaries are overly focused on retirement readiness and generally ignore the life cycle we all hope to pass through which is depicted below.



Current and future assets/liabilities including potential earnings, debt payments, and other future expenses need to be reviewed along with home equity and any stream of cash from a pension plan. A holistic view of retirement planning must take the following four items into account:

- Home equity – may be significant and may also have a

mortgage in retirement;

- Life insurance if cash value present;
- Legacy objectives including family and causes;
- Personal rate of discount may differ significantly from what we as actuaries view as reasonable.

Additionally, people must recognize that the future is uncertain and what they value today may be very different from what they value in the future.

In considering planning tools, we might use deterministic or stochastic models, transactional or automated planning tools, or a financial wellness approach. The financial wellness approach looks at spending, saving, investing and protecting. It learns about an individual's debt, goals, priorities and aims for a financially fit future.

Financial wellbeing tools are needed. All assets should be taken into account in income generation. But nothing is easy and even a decision to pay off a mortgage or loan might be more difficult than one might initially recognize.

Home equity is an area that not many actuaries consider when initially looking at retirement income. Note that under current rules you must be age 62 to use a reverse mortgage for retirement income. Questions which need to be answered are:

Q: How do you access home equity?

A: By use of a reverse mortgage.

Q: Why access home equity?

A: To enhance financial objectives of retirees.

Q: Why use home equity?

A: To reduce sequence of returns risk.

A reverse mortgage is better secured early and not used as a last resort. The amount available is capped based on a percentage of the value of the home. Interest is variable and must be considered.

There is a coordinated strategy to using home equity that may also be available with a home equity loan. Use home equity when investment returns are negative to leave your other assets time to recoup before withdrawing from investment/retirement sources again.

No one wants to run out of money in retirement, and the house may be the largest source of equity other than retirement savings. When you consider available cash, both your investment portfolio and an amount from a home equity loan should be considered.

In conclusion, we are in the infancy of this research. If you have additional interest, we recommend the SOA as a source of reading and research into financial wellness, sequence of returns risk and retirement income generators.

Session 204

BIG DATA: ENTER THE MATRIX

- Trevor Fast – Mercer
- Ian G. Duncan – University of California Santa Barbara
- Satadru Sengupta – DataRobot
- Session Assistant: Christine Shaffer Nassor – Willis Towers Watson

How "big data" is, or should be, transforming healthcare consulting? What are the prime opportunities? What are the latest techniques in developing valuable insights from structured and unstructured data? Who is using it and how? What is the future of its application to actuaries' work?

The first half of the session, focused on how data (especially "big data") has become a larger part of our lives as technology advances. Every minute, Facebook users share 2.5 million pieces of content, YouTube users upload 72 hours of content, and Apple users download 50,000 apps. The question arises whether we are becoming inundated with data and whether it may lead to false conclusions or inferences.

Several examples were provided that show how data can be used or misused.

Example 1 sourced data from device-recorded workouts tracking light workouts and standard workouts over four years for approximately 300,000 participants. The impact of increased physical activity on certain health issues such as hypertension,

stroke, and coronary heart disease are well-known and documented, but relationship between Body Mass Index (BMI) and the level/frequency of workouts is less understood. Using the data, a predictive model was developed to predict the effect of exercise levels on BMI.

Example 2 examined medical spending at end of life to predict and prevent "over-medicalized" end-of-life care. The last year of life represents approximately 30% of total Medicare Fee-For-Service spend. An end-of-life predictive model was devised to use risk factors to develop a "risk score" that could be used to target a risk threshold to avoid over-medicalized death (and thereby generate cost savings). Examples of over-medicalized death include chemotherapy for cancer patients within 14 days of death, life-sustaining treatment within 30 days of death, and unplanned hospitalization within 30 days of death. Risk scores were developed based on a variety of attributes, with the most influential including several specified disease states and number of admissions. The model resulted in a finding that, even when considering the

effect of intervening on false positives, net financial savings were attainable when targeting those with risk scores above a given threshold.

Additional examples included studies to develop models to predict hospital readmissions and length of stays in hospice.

Lastly, it was demonstrated how data can be misused when trying to develop a predictive model. Google decided that if they tracked internet searches for symptoms related to the flu, they would be able to predict outbreaks faster than the Centers for Disease Control and Prevention (CDC). However, the prediction model resulted in vastly overestimating the number of outbreaks for the year.

The second part of the session focused on the advantages of machine learning, where actuaries have a competitive advantage, and the transition from generalized linear models (GLM) to machine learning approaches.

The movement towards machine learning has arisen, in large part, due to the higher volume of data created in today's world, along with exponential increases in computing power. In fact, 90% of all data in the world today has been created in the last two years.

The ability to analyze data more quickly and to employ the next generation of tools and approaches has led to a shift from a "methodology-driven approach" which applies pre-determined methodology to solve any problem to a "product-driven approach" which uses the best methodologies that align with the product requirements. There are a variety of learning methods, each suited for different types of analysis. Some examples of learning

algorithms are Neural Networks, Support Vector Machines, Trees, and Multivariate Adaptive Regression Splines.

Within the insurance industry, there are multiple areas requiring analysis and solutions across the business such as customer acquisition, risk selection, retention, pricing, estimation of claims, and identifying fraud.

Advances in data science have facilitated a shift from traditional approaches to a more modern approach. The traditional approach focuses on activities instead of outcomes, is assumption-based, and development is costly, limited, and relies heavily on programmers. The modern approach focuses on outcomes, uses a validation-based model, and uses automated, often crowd-sourced solutions that remove reliance on programming.

Actuaries are well-suited to the modern approach of data science, having working knowledge of algorithms and validation frameworks as well as having the ability to focus on the right questions to ask, the right data to answer these questions, and the ability to experiment and socialize results.

The most important takeaways from this part of the session are:

- Data science has moved away from assumption-based models towards validation-based models.
- Machine learning algorithms permit modeling of non-linear and interaction effects without having to pre-specify them in the model hypothesis.
- Machine learning algorithms are not black boxes, and techniques such as partial dependence plots allow for understanding relationships between target and predictor variables.

Session 205

MEDICARE ADVANTAGE AND PART D WORKSHOP

Speakers:

- David M. Tuomala – Optum
- JoAnn Bogolin – Bolton Health Actuarial, Inc.
- Paul Douglas Erickson – Optum
- Session Assistant: Joshua M. Wynveen – Optum

This session was presented in a workshop format and featured a facilitated discussion of current topics in Medicare Advantage and Part D (MAPD) from the benefits consultant and health plan perspectives. This session was intended for those with considerable experience in this area. Given the large number potential topics for this discussion, the speakers focused on a few particular topics of choice and, also, those raised by the audience.

Each spring, actuaries play key roles as MAPD bid certifiers and strategic consultants. The speakers initially discussed how the bidding cycle is changing. Plan sponsors and actuaries are monitoring their experience year-round, reviewing publically

available information as it released by Centers for Medicare and Medicaid Services (CMS), working on formularies earlier, and evaluating their strategies prior to beginning the bid development process. Ever-changing MAPD rules and provisions plus increased competition in a maturing marketplace require actuaries and their clients to allocate more resources to bid development.

Changes to the CMS risk-adjusted revenue model require MAPD stakeholders to evaluate their population characteristics, operations, and coding practices. These changes include a transition to encounter data submissions, a revamped Hierarchical Condition Category (HCC) model which will impact cohorts

differently based on their dual status, and a sometimes variable normalization adjustment. In addition, the changeover to the ICD-10 (International Classification of Diseases) coding system will impact the norm.

Speakers and participants discussed the circumstances surrounding the decline of the Part D direct subsidy. This decline is driven by high trends in national average reinsurance costs paired with negative national average basic premium trends. Double-digit drug cost trends and market competitive pressures also contribute to this decline.

Given the challenges discussed and others, certain strategies appear to be trending for successful plan sponsors. Plan sponsors

are analyzing and monitoring their experience to understand where they are successful and not-so-successful and developing strategies to leverage or improve their positions. Among larger plan sponsors, co-branding has become a key component of their strategy.

Looking ahead to what may be coming next regarding MAPD, speakers and the audience discussed potential changes to the Part D benefit structure and/or total beneficiary cost testing for Part D plans. It seems likely CMS will continue to phase in the Employer Group Waiver Plan (EGWP) rate book changes and reintroduce the insurer fee in 2018. Further, will CMS expand their value-based insurance design (VBID) demonstration program? What changes might we see to the STARs quality rating program?

Session 207

RISK MITIGATION STRATEGIES FOR PUBLIC PLANS

Speakers:

- David Driscoll – Conduent Human Resource Services
- Alan W. Milligan
- Kai Petersen – Conduent Human Resource Services
- Session Assistant: Michael Ringuette – Willis Towers Watson

What Are the Risks?

Historically, risk management has focused on plan funded status, particularly on the volatility of asset returns and their impact on contribution requirements. However, in recent years, stakeholders have begun to adopt a more holistic view of potential risks, including longevity risk, asset/liability mismatch, interest rate risk, contribution risk and investment risk. These are the risks cited in the exposure draft of the proposed Risk ASOP (Actuarial Standard of Practice) developed by the Actuarial Standards Board.

In particular, there has been significant focus on the relationship between investment risk and contribution risk. Investment decisions that drive expected rates of return and volatility of returns can also significantly impact public budgets. This has led to a greater integration of investment and funding strategies, balancing the need to take certain investment risks (and accepting the associated volatility) with the need for relative stable public budgets.

There was a discussion related to approaches to adjust assumed rate of return gradually over time. For example, California Public Employees' Retirement System (CalPERS) is implementing a policy to address this by gradually lowering its assumed rate of return over an extended period of time. Reductions in the assumed rate of return each year are linked to actuarial gains from investment performance. It is estimated that it will take 20 years for the assumed rate of return to reach its ultimate level under this policy.

Actuarial Techniques for Risk Reduction

The discussion focused on three approaches to risk reduction: asset smoothing, contribution smoothing and margins for adverse deviation.

Asset smoothing is commonly used for public plans, and ASOP 44 provides significant guidance on the topic. In addition, other sources of guidance include a CCA White Paper on the topic (copies of which were available at this session), a publication from a Society of Actuaries (SOA) Blue Ribbon Panel and a recommended set of best practices from the Government Finance Officers Association (GFOA). The SOA and GFOA guidance suggest that smoothing should be limited to a period of not more than five years.

CalPERS adopted a 15-year asset-smoothing period (with corridors) several years ago in the aftermath of the 2008 market crash. The analysis that led to the adoption of the policy suggested no undue risk under a 15-year smoothing method with 20% corridors. However, when the investment losses of 2008-9 emerged, the increases in contributions were large and the corridors were widened to mitigate the impact. This widening of corridors may suggest that the corridors are not "real." The original analysis used to support the 15-year / 20% approach also suggested that 15-year smoothing with no corridors was not a sufficient approach. Given this, it may be better to limit the smoothing period to something less than 15 years.

Instead of smoothing assets, it is sometimes argued that plans should smooth contributions directly. There is currently no comprehensive or binding guidance for this in the ASOPs, although ASOP 4 contains implications for such techniques. The CCA white paper and a California Actuarial Advisory Panel provide similar (but not identical guidance). The SOA blue ribbon panel encourages consideration of direct rate smoothing, but urges avoidance of choice that would endanger adequacy or intergenerational equity.

The Pension Committee of the ASB will develop an ASOP on smoothing (including direct rate smoothing).

There was some discussion from the audience on the use of reserves from additional contribution in good years to mitigate contribution increases during tough times. Some plans in California have adopted a similar approach. Local units may set aside additional funds (perhaps in trusts outside the pension fund) to use for times when it is otherwise difficult to meet contribution requirements.

Plans can also use a margin for adverse experience. This is provided for under ASOPs 27 and 35, but the actuary must disclose the margin used.

Reduction of Investment Risk

Some pension systems have chosen to lower their expected rate of return assumption and to shift more of their asset allocation to more conservative investments. Some have asked which is the more effective technique: reducing the return assumption or shifting asset allocation? At modest investment risk levels, reducing the rate of return assumption will necessitate a shift in the asset allocation. The tails are generally better with a shift in asset allocation relative to just changing the return assumption.

Modeling Risk

Both deterministic and stochastic approaches can be used to model and assess risk. Both can be helpful. In particular, deterministic modeling may be best for understanding some of the most adverse scenarios and outcomes.

Stochastic Modeling of Corridors and Floors

A case study was presented demonstrating the use of stochastic modeling to analyze asset smoothing corridors and contribution floors (i.e., the contribution is set to be the large of the amount determined by the valuation and a targeted contribution amount). The analysis showed the contribution floors have more downside risk five years out.

Investment Strategy

A case study was presented illustrating a sample asset/liability modeling analysis to evaluate alternative asset allocation approaches. Sample portfolios were developed that were intended to be optimal under certain macroeconomic scenarios (e.g. steady growth and inflation, high growth and inflation, low growth and inflation and stagflation). Two blended scenarios based on weighted combinations of these individual scenarios were tested to see which would perform best. The blended scenarios were intended to represent approaches that would perform well in a variety of macroeconomic scenarios. Both blended scenarios outperformed the naïve portfolio based on 10 years of accumulated contributions and projected funded ratio 10 years out.

The panelists discussed the use of return distributions using a normal curve vs. a distribution that produces "fat tails." There was a general preference to use distributions that produce fat tails, but it was noted that over long time horizons (e.g. 30 years) non-normal distributions with fat tails start to look like normal

distributions and it is difficult to see the impact of the fat tails. It was noted that it is helpful to look at some of the specific individual scenarios in the tail to better understand what potential outcomes could occur.

Additional Discussion and Audience Questions

There was some discussion regarding political risk (i.e., the risk that cost concerns could result in political decisions that would result in inadequate funding). The consensus was that good data and communication are the best measures to address these issues.

There was some discussion about risk-sharing structures (e.g., plan designs that allowed for changes to employee contribution rates based on the funded status or contribution levels). Some had seen plans with such structures, and commented that it did help mitigate risk to the employers.

There was also some discussion about the use of liability-driven investments (LDI). This is more typically used in private sector plans than public plans (given that private sector plans are required to use different assumptions, many are frozen, etc.). However, it may be used for public plans more over time, particularly as a way to hedge the portion of a plan's liability to retirees (as opposed to the portion attributable to active and terminated vested participants).

Session 302**WORLD CLASS DC PLANS**

Speakers:

- Robert J. Reiskytl – Aon Hewitt
- Chad Mezvinsky – Fidelity Investments
- Robert O. Bacher – ConocoPhillips
- Marina L. Edwards – Willis Towers Watson
- Thomas Oksanen – Liberty Mutual Group
- Stephen F. Doucette – Aon Hewitt
- Session Assistant: Frederick (Rick) Kwan, M Benefit Solutions

This session aims to illustrate the prevalent trends among Defined Contribution (DC) plans today, as well as provide case studies discussing the plan re-design and implementation process.

DC Plan Prevalence and Trends

While there are a variety of match designs, the two most prevalent match formulas offered are the 100% match on contributions of up to 3% of an employee's salary, and the 50% match on contributions of up to 6% of an employee's salary, with both effectively providing a 3% employer contribution.

The increase in plans offering a Roth option has increased significantly over the past six years, especially in the small- to medium- plan size space (under 25,000 participants) which has nearly doubled. However, usage of Roth accounts by participants has only grown gradually, from approximately 5% in 2011 to approximately 8% in 2016. Roth accounts are used more frequently by younger participants rather than older participants. Likely drivers are younger participants' lower tax brackets and inertia among older participants to shift away from traditional accounts.

Larger plans (10,000+ participants) continue to have more fund offerings than smaller plans, but have declined in recent years. While companies are offering a lot of funds, most participants only utilize three to four choices. Additionally, the number of plans that offer company stock has declined over time, in part due to increased litigation.

The number of plans that offer auto-enrollment has grown steadily since the Pension Protection Act (PPA). Currently, over half of all large plans surveyed offer auto-enrollment. Auto-enrollment opt-out is fairly similar by age group. Younger participants are slightly likelier to not opt-out compared to older participants. Most plans offer 3% as the auto-enrollment level, but in recent years that initial level has started to increase, especially in the light of continued Defined Benefit (DB) plan freezes. The opt-out rate is not really affected by the increase in initial auto-enrollment level, and even those that do opt out do not necessarily reduce savings rate to zero.

Other trends that are emerging include how to measure DC program success (i.e., by the level of benefit provided, participant contribution level, asset allocation, participant activity and engagement), as well as other issues such as financial wellness and lifetime income options. Additionally, there has been an increase in

litigation revolving around fiduciary responsibility for managing fees and allowing imprudent investments.

Case Study 1: ConocoPhillips

ConocoPhillips closed their final average earnings DB plan in 2012 and provided a cash balance plan for new hires. The defined contribution plan was also redesigned at this time using the company's global benefit guiding principles in mind:

- Simple, sustainable design aligned with company culture and business needs
- Commitment to competitive and fair benefits; anticipates benefit and regulatory trends
- Prudent consumerism and shared responsibility

This manifested itself through the company's design choices, such as providing both a matching and discretionary employer contribution, access to varied investment options (including target date funds and company stock), and a broad selection of distribution options. In addition, the company provides pre-tax, Roth, and after-tax accounts to allow participants greater flexibility in saving.

During the design process, some designs were determined to not be necessary or prudent. For example, ConocoPhillips' high 98% participation rate meant that implementing auto-enrollment was not required. Additionally, self-directed brokerage accounts are not provided based on studies that show that this option has a lower expected return and significantly higher risk.

In addition, ConocoPhillips provides participant education resources involving retirement readiness, distribution options, and healthcare expenses.

Case Study 2: Liberty Mutual

Liberty Mutual's defined contribution plan was already considered successful when compared against industry and market benchmarks in terms of participation and average savings rates. However, the company did not want to fall in the trap of "market medians" and sought to create a "best-in-class" plan when compared to the industry.

The company focused on its investment lineup, plan design (with an initial focus of adding a Roth option), and plan governance. The fund choices were reduced from 20 to 10 with a focus on shifting away from asset classes and toward investor types. Seeking to shift the inertia exhibited by DC plan participants, the company

initiated a reenrollment with target date funds as the default option. The plan design review resulted in adding a Roth 401(k) feature, providing for after-tax "spillover" in which participants can contribute in excess of the 402(g) limit in order to maximize company match, and revising the plan loan provisions. The ultimate goal of the redesign was to allow for participants to have more money in retirement. The governance of the plan was analyzed and updates to internal processes were performed, such as updating the

charter and investment policy statement, reviewing the retirement committee membership, and conducting an annual review of fiduciary standards.

The company also rolled-out a revised communications approach, including high-impact emails and the implementation of "microsites" (publically available websites which allow for access outside the company intranet), and seminars/webinars.

Session 304

EXCISE TAX UPDATE: PERSPECTIVES OF THE IRS AND EMPLOYERS

Speakers:

- Tanya Sun – Mercer
- Trevis Parson – Willis Towers Watson
- Ed Pudlowski – American Fidelity
- Session Assistant: Piotr Krekora – Gabriel Roeder Smith & Company

This session focuses on recent developments relative to the Excise Tax on High Cost Employer-Sponsored Health Coverage, introduced by the Patient Protection and Affordable Care Act of 2010 (ACA). Under this provision, if the aggregate cost of "applicable employer-sponsored coverage" provided to an employee exceeds a statutory dollar limit, which is revised annually, the excess is subject to a 40% excise tax. Section 4980I, added to the Internal Revenue Code by ACA, was originally scheduled to take effect for taxable years beginning after December 31, 2017. The Consolidated Appropriations Act, 2016 (CAA), signed into law in December of 2015, delayed implementation of the tax by two years.

The session started with an introduction and a brief overview followed by a discussion of challenges facing our profession and the regulators in implementing the law. In the absence of any new guidance since the previous CCA Annual Meeting, the primary objective of the session is to provide the perspective of the Internal Revenue Service (IRS) on the rule making process and to summarize efforts undertaken by members of the American Academy of Actuaries' Health Council to assist the IRS in addressing some of the more challenging provisions of the law.

Once the Excise Tax becomes effective, a 40% nondeductible tax will be assessed on excess in value of employer-sponsored coverage over thresholds calculated **per participant** based on total cost of participant's selected coverage/tiers. The ACA established a standard threshold of \$10,200 for self-only (SO) coverage and \$27,500 for other-than-self-only (OTSO) coverage for 2018. Thresholds will be indexed to Consumer Price Index (CPI), with amounts for 2020 (the first year the tax is scheduled to be assessed) developed by increasing 2018 thresholds by CPI+1% from 2018 to 2019 and by CPI from 2019 to 2020; all future increases will be set to be the same as CPI. Plans with demographic characteristics driving the cost up will be allowed to apply an age and gender

adjustment to reflect high cost membership profile. Furthermore, all coverage through multiemployer plans is subject to OTSO thresholds for all coverage tiers.

Although it is not clear who will be paying the tax, most practitioners expect the additional costs to be passed on to the employers sponsoring affected plans. IRS indicated that for fully insured plans, vendors will be responsible for paying the tax while employers will be responsible for payments whenever they make contributions to plans like Health Savings Account (HSA) or Archer Medical Savings Accounts (MSA). For self-insured plans, IRS uses a phrase "the person that administers the plan", but it is not clear if it is an employer or a third party administrator (TPA). However, the employer's total cost will be approximately the same regardless of who is determined to be the responsible party. IRS staff stated their goal of delivering rules resulting in the same tax liabilities for plans providing the same values.

According to a limited guidance issued in 2015, the tax will be based on the total aggregate cost of all benefits included in the "applicable coverage". Most professionals expect that term to include medical and prescription drug plans, but inclusion of the Flexible Spending Accounts (FSA) funded by members caught many by surprise. In general, voluntary health benefits paid on a pre-tax basis by employees are considered by the IRS as paid for by employers and as such will be included in the applicable coverage and determination of the tax. In addition to HSAs and FSAs (employer's contribution and pre-tax employee pre-tax salary deferrals) the list is expected to include gap coverage, specific disease insurance, hospital fixed indemnity and Health Reimbursement Arrangement (HRA). Certain wellness benefits or on-site clinics will be included if they are found to be group plans but it is not clear how this will be determined. Stand-alone dental and visions plans will be excluded. Long-term care, life, or worker's

compensation benefits are not expected to be included.

It was noted that while the Excise Tax on High Cost Employer-Sponsored Health Coverage was dubbed the “Cadillac Tax”, this characterization is highly inadequate. Most practitioners are aware that while the tax thresholds are scheduled to increase with inflation (as measured by CPI), costs of healthcare coverage are increasing at a much faster pace. If this trend continues, all group plans will be subject to tax, even those providing minimum value required by the ACA. Employers who undertake plan design changes to avoid paying the excise tax may ultimately have to pay an excise tax on their “high-cost health plans” in order to avoid paying penalties for not providing employees with the required minimum coverage.

The limited official guidance comes in the form of IRS notices issued in 2015 offering some clarification and soliciting comments from the interested parties on numerous issues. IRS Notice 2015-16 defines the “applicable coverage” and discusses aggregation by benefit plan, mandatory disaggregation, permissive disaggregation and permissive aggregation. It also offers comments on determination of the cost of applicable coverage suggesting that it would follow procedures used in the development of premium rates applicable to coverage required under the Consolidated Omnibus Budget Reconciliation Act (COBRA). Although regulations pertaining to setting COBRA rates have never been issued, Notice 2015-16 mentions two approaches commonly used for that purpose: (i) actuarial basis, estimating expected costs of coverage using factors yet to be prescribed by regulations and (ii) past cost method taking recent claim experience and adjusting them forward. Employing these methods would make it possible for employers to determine their tax liability in advance. Guidance included in Notice 2015-52 dashes those hopes by referring to development of accumulated claims on a historical basis. Under this approach, tax liability would be determined by simply adding all costs for the year and comparing those amounts to the thresholds. This would make it very difficult to estimate the tax in advance or take measures to minimize the liability.

In addition to issuing formal guidance, IRS responded to efforts to communicate made by the actuarial community and engaged in formal and informal discussions on implementation of 4098. Session presenters and other actuaries met with IRS staff to talk about our concerns and challenges facing the regulators. The common theme seems to be IRS’ ability to audit calculations of tax liabilities. This may be one of the reasons for proposing that the tax is assessed based on historical costs rather than using prospective COBRA rates. The main goal of actuaries working with the IRS is to find ways of implementing the law without overburdening employers, and at the same time preserving IRS’ ability to audit calculations. One of the first steps is educating IRS staff on the details of operating and administering employer health plans. For example, the proposed guidance was developed with a calendar plan year in mind while in reality many group plans have different plan years. Administrative challenges will face employers as liability

will need to be calculated on a monthly basis and assessment will need to be made on an employee-by-employee basis. Employers will have to determine the total cost and communicate prorated tax amounts to providers (medical, FSA, etc.). Although many questions remain unanswered, it is encouraging to see IRS’ willingness to listen and engage in discussions with the actuarial community.

Aggregation by Benefit Package

Current guidance suggests that the IRS will require development of cost separately for each type of plan. They appear to be opposed to allowing the experience of one plan to affect the cost of other plans. The IRS wants each plan to stand on its own experience for the purpose of determining the cost to compare against the Excise Tax limits. That may mean separate determination of the cost for each plan option: Preferred Provider Organization (PPO) vs Health Maintenance Organization (HMO) vs High Deductible Health Plan (HDHP). This is not consistent with actuarial practices where we often use pooled experience of all options and determine plan-specific rates based on actuarial relative value factors. The actuarial community may need to educate the IRS on methods to drive credibility into the process of determining plan costs for budgeting, COBRA rate development, and employee contribution development. Actuaries brought up the issue of credibility with the IRS, and the staff appeared to be receptive to these comments. In addition, if denied flexibility in cost development, employers may be required to pay higher levels of the excise tax, or may pay sooner as a result of higher volatility.

Mandatory Disaggregation

After aggregating all employees by benefit package (Aggregation by Benefit Package) the employer is then required to disaggregate the employees by SO and OTSO coverage. This may require separate experience rating calculations by SO and OTSO. Again, this is contrary to long-standing actuarial practices of maximizing credibility in plan rate determination and the actuarial community may need to further educate the IRS on those details. It is not clear if the IRS will require costs to be determined based on the actual experience of the enrollees by coverage tier within a plan, or if determination based on pooled experience will be allowed. If the latter, setting tier ratios to be the same as tax threshold ratios will always produce the lowest excise tax.

It appears that some flexibility will be permitted as all-other-than-self-only will be allowed (but not required) to be aggregated. This is relevant because most employers set rates and contributions on a 3-tier or 4-tier basis. Excise tax thresholds, however, are set on a 2-tier basis: SO and OTSO. Moving from 3-tier or 4-tier rating to 2-tier rating for tax determination will generally reduce excise tax liability. It is not certain if regulators will allow employers to adopt 2-tier rating for tax determination without also requiring shift of contributions to a 2-tier basis. Details of regulations will have significant impact on tax amount as changing plan structure to 2-tier design may lower tax liability but may not be beneficial, or fair, to employees.

There is a great ambiguity on how the IRS will address situations

where employees enroll in different levels of coverage for different components of applicable coverage (e.g., elect family coverage for major medical but self-only for gap insurance).

Permissive Disaggregation

The treasury and IRS are considering further permissive disaggregation based on distinctions that have traditionally been made in the group insurance market: bona fide employment-related criteria (nature of compensation, specified job categories, collective bargaining status, etc.) or a more specific standard (Current and former employees, bona fide geographic distinctions). Employers may be able to separate retirees from active employees but this may

not always be beneficial (for example, when there are no post-65 retirees in the plan). Aggregating pre- and post-65 retirees appears to always be beneficial but it is not clear in what circumstances it will be allowed (do both groups have to be covered through the same plan, will plans need to be identical, etc.).

In conclusion, the speakers discussed several areas challenging actuaries and regulators and stressed that IRS has difficulty writing regulations that are easy to implement and audit because of the way the law was written. The actuarial community offered help drafting regulations and IRS appears to be engaged in a dialogue with actuaries in an effort to develop something we all can work with.

Session 305

ALTERNATIVE CONSIDERATIONS IN REDUCING HEALTHCARE COSTS AND IMPROVING OUTCOMES

Speakers:

- Mac McCarthy – McCarthy Actuarial Consulting
- Ashley Edwards – Lowe's
- Joseph B. Altman – United Healthcare
- Session Assistant: Kara M. Dusterhoft – Quantum Health

Employers have just about exhausted traditional options for containing healthcare costs through plan design, contribution strategy, and eligibility policy. Often those approaches did little to improve outcomes, and may have had the opposite result. Many non-traditional ways of reducing healthcare costs (while improving quality and outcomes) are currently being introduced. This session addressed two promising non-traditional approaches and their results.

The introduction for the discussion focused on historical healthcare cost trends and the evolution of medical plan design and delivery through the past decades. We arrive at the current state with new aims of lower cost, improving health and providing a better patient experience.

An introduction of Lowe's experience with healthcare navigators began by providing an overview of their workforce and the challenges facing their employees when accessing healthcare. Lowe's strategy for their employee's healthcare needs focuses on three pillars:

- 1) Get the care you need.
- 2) Use the system wisely.
- 3) Participate in maintaining your health over time.

They have sought to empower their employees to achieve these by providing them with access to independent third party member advocates. These advocates become trusted advisors to the members, and are perceived as being more trustworthy than their insurance company or employer.

By meeting members where they are in their healthcare journey,

the care navigators have helped move patient care to less costly in-network facilities, assisted employees to better understand their benefits, helped develop appropriate questions to ask providers, and helped select the most appropriate place of service. Lowe's identifies these actions as leading to better outcomes at a lower cost for their employees, saving employees money and time, increasing clinical engagement of their employees, and providing employees with a more satisfactory healthcare experience.

Lowe's specific results from their engagement with Quantum Health included the following highlights:

- 1) Strong overall engagement with a care coordinator in the first year, particularly with claimants in excess of \$10,000;
- 2) Increase in members identified as high risk and targeted for nurse engagement;
- 3) An overall reduction in emergency room utilization, inpatient days and readmission rates; and
- 4) A Year 1 per member per month negative trend rate, after adjusting for plan design, demographics, etc.

The second non-traditional approach considers Group Medicare Advantage (MA) plans, which are providing an opportunity to achieve cost savings in the post-65 retiree coverage space.

Insurers are now able to offer Group Medicare Advantage National Preferred Provider Organization (PPO) plans, instead of the more geographically and provider restricted plans available historically. These national plans have proven to be advantageous to employers by significantly reducing costs and the Other Post-Employment Benefit (OPEB) liability, and providing minimal

disruption to the retiree populations they serve. The retirees also benefit through expanded benefit coverage, limiting ID cards to one, and reducing premium.

Group Medicare Advantage plans are more effective at managing costs than Medicare Supplement plans for a couple of reasons. The full claim liability under a Medicare Advantage plan is the employer's responsibility, thus creating more incentive to continue to reduce costs. The majority of the savings under a Medicare Supplement would accrue to Medicare, thus creating little to no incentive for employers to help their retirees control cost.

In the case study of a closed group of members who had moved to Medicare Advantage plans from Medicare Supplement plans, emergency room visits and inpatient acute admissions all showed significant decreases, while visits to urgent care increased.

One of the innovative healthcare delivery mechanisms that is

helping to achieve some of these cost reductions is HouseCalls. Through HouseCalls, nurse practitioners have helped to identify gaps in care, increased coordination and collaboration with the member's primary care physician, and increased plan adherence. A RAND corporation study, published in 2015, has been completed to assess the value of these HouseCalls, and has confirmed a decrease in hospital admissions, emergency room visits, institutional care, and an increase in physician office visits when compared to Medicare Advantage plans that do not provide for HouseCalls.

Other potential opportunities for cost-savings include the recently allowed member incentives for wellness within the Medicare population, transitions of care from a hospital to skilled nursing setting overseen by nurse practitioners, paying for care based on value instead of the more traditional fee for service reimbursements, and utilizing technology to get at real-time data.

Session 306

START/STOP/CONTINUE – IMPACT OF EMPLOYMENT TRANSITION IN GLOBAL M&A TRANSITION

Speakers:

- James L. Jones – Deloitte Consulting LLP
- Martin Rondeau–AIG
- Robert Richard Maciejewski – Deloitte Consulting LLP
- Vaibhavi V. Patel – Aon Hewitt
- Session Assistant: Mike Spetko – Deloitte Consulting LLP

U.S. based multinational companies know the U.S. Human Resources (“HR”) landscape quite well. They are familiar with the mergers, acquisitions and divestitures process and often have dedicated staff to execute corporate transactions with well-established and proven plans, processes and timelines in place. The HR function is not thought of as being the lifeblood of a corporation but it is the HR function that is key to a successfully executed corporate transaction. This session provides an overview of how things change when the transaction perimeter expands outside of the U.S. The complexity of transaction varies based on several key factors.

(1) Transaction Type: Asset Deals can create significant challenge as new legal entity, tax and local authority registrations may need to be established prior to employee transfer. In addition, certain jurisdictions may treat the employee transfer as if it were a Stock Deal. The Stock Deal is often logistically easier as infrastructure is already in place.

(2) Legal Entity Strategy: Legal entity changes typically drive the need to issue new employment contracts or negotiate new union agreements; they are driven and may change based on the buyer's planned operating model for the target company.

(3) Statutory Requirements and Regional Variations: Vary by jurisdiction with often well-defined timelines and processes.

Typically, the employee transfer is either automatic with prerequisite notification or requires consent from employees and/or a local works council.

(4) Labor Bodies: Most often these are the local employee representative bodies such as unions or works councils. However, based on jurisdiction, other governmental labor authorities may need to be notified. In addition, companies should also pay attention to the local cultural traditions and communicate with local municipal and/or tribal authorities.

(5) Terms and Conditions (“T&C”): Understand the terms of the sale/purchase agreement as well as any local requirements regarding the transfer of all employment T&C including various remuneration components and benefits.

(6) Communications/Employee Notification Requirements: Develop a plan for key stakeholders to address the alignment of the transaction's goals and objectives. Communicate frequently and address questions quickly.

The risks of global acquisition may be covered during the due diligence phase of the deal prior to signing only for the significant countries. Then during the sign-to-close period the hard work begins trying to make sure all countries (regardless of employee population size) are covered. This is when it is absolutely critical for HR to work with both the business leaders driving the transaction

and with legal to ensure the transaction is structured in an optimal way to support the transfer of employees in each and every legal jurisdiction.

Success of corporate transactions depends on the people on the ground tasked with the execution. It is key to keep them informed and have a two-way dialogue.

A well-executed corporate transaction will seek to address the following key risks:

- Organizational design of the new organization/business, including future business model changes, may impact which employees are needed to transfer.
- Lack of organizational knowledge related to employment contracts and legal requirements or the failure to engage internal or external Employment Counsel.
- Missed statutory employment transfer deadlines (i.e., consultation durations and consent processes) may result in legal action and subsequent costs.
- Failure to coordinate with legal, tax, finance and other functions as legal employment is dependent on many factors including creation of legal entities, business and tax registrations, place of business address, etc.
- Failure to appropriately transfer employment contracts may result in significant cost as benefit/policy dollars may only apply to full-time, active employees.

The final step – Integration

After getting the transaction on track with a detailed execution plan it will be necessary to address the integration aspect for the organization. This typically involves a deeper dive into the acquired organization's compensation and benefits.

This also presents an opportunity for a company to review its culture and drive the point with relevant changes to total rewards to both the legacy and acquired organizations. In addition, this is an opportunity for HR to retool in order to support the business in the future.

Benefits are an important and interrelated component of the broader rewards program.

During the initial phase following closing, compensation and benefit programs need to be maintained for a certain period of time following a corporate transaction either as directed by law or the sale/purchase agreement. The requirements to meet all statutory and transaction requirements for benefits when transferring to a new entity can be complex. It may be impractical or impossible for a Buyer to replicate benefits or obtain similar insurance or coverages. This can often lead to negotiations after a deal has been signed and closed.

Even when changes are permitted it may not be desirable to push them through on Day 1 especially when integration will result in subsequent changes. On the other hand, benefits may be quick wins to reinforce business messages, especially when extending new or improving existing benefits. Again, avoid making changes that may not be permanent during subsequent integration and

after new benefit programs for the combined organization will be designed.

The success of a benefits transition is often not in the benefit changes themselves, but how those changes are understood and received. Employee communication is often the differentiator and key factor in achieving a successful execution of a corporate transaction.

In addition, the transition of benefits is often dependent on the ability to transition HR information system ("HRIS") and payroll data – coordination of benefit transitions with HRIS and payroll is critical. There are a broad range of HR 'policies' that are closely related to benefits (e.g., leave policies, work at home policies) that typically need to be aligned.

Not all corporate transactions are born equal. Even for well-versed global multinational corporations with deep expertise in divestitures, an acquisition can create significant additional complexity that is not encountered in divestitures.

Session 401**PPA MORTALITY ASSUMPTION CHANGES AND OTHER NEW ISSUES**

Speakers:

- William E. Roberts – Willis Towers Watson
- Gordon A. Young – Willis Towers Watson
- Marcy Ann Bloodgood – Conduent Human Resource Services
- David A. Coronel – Willis Towers Watson
- Carol Zimmerman – Internal Revenue Service
- Session Assistant: Jeremy P. Olszewski – Fidelity Investments

This session provides a brief overview of the MP-2016 mortality improvement scale, the mortality table under the Pension Protection Act of 2006 (“PPA”), a theory for building a credible mortality table, what we might expect from the Internal Revenue Service (“IRS”) with regards to a new mandated PPA funding and lump sum mortality assumption and relative value issues.

MP-2016

The recently released MP-2016 mortality improvement scale incorporates three additional years (2012-2014) of historical U.S. population data and modifies two input values (regarding initial slope constraint and convergence period) designed to “improve the model’s year-over-year financial stability.” The scale is intended to replace MP-2015. Using present value factors based on MP-2016 instead of MP-2015 will result in a decrease in the present value of pension benefits. For example, deferred to age 62 annuity factors using a 4% interest rate and MP-2016 are 1.3% to 3% lower than if MP-2015 was used, depending on age and gender.

PPA Mortality

The current standard PPA mortality tables for Internal Revenue Code (“IRC”) § 430 funding valuations are based on the RP-2000 mortality table with either generational or static (projected 7 years for annuitants and 15 years for non-annuitants) projected mortality improvements using Scale AA. These tables vary by annuitant and non-annuitant as well as by gender. The mortality basis for IRC § 417(e)(3) purposes is a 50/50 male/female blend of the funding table using static projection.

In order to use a substitute PPA mortality table instead of a standard table, current rules require that a pension plan must have credible data and obtain IRS approval. In addition, if one plan in a controlled group uses a substitute table, then all plans in the controlled group must use a separate substitute table if credible data is available for such plans. Substitute tables can be constructed using either the general method, which is a method “generally used by the actuarial profession” such as the Whittaker-Henderson Type B or Karup-King method, or by using the alternate method which applies a fixed percentage to the mortality rates in a PPA standard mortality table.

Among the many requirements and rules to use a substitute table, a plan must have at least 1,000 actual deaths over 5-year period not ending more than three (3) years ago. This requirement results in only really large plans being eligible to use substitute

mortality tables (it is suggested that there may be no more than 10 substitute PPA mortality tables ever approved by the IRS).

The Bipartisan Budget Act of 2015 (“BBA 2015”) specified that the “determination of whether plans have credible information shall be made in accordance with established actuarial credibility theory” which is “materially different from [current] rules.” Although this provision of BBA 2015 was effective as of December 31, 2015, we are still waiting for IRS regulations to define “established actuarial credibility theory.” One mortality credibility theory is detailed in a paper by Gavin Benjamin (October 2008). Benjamin’s paper noted that one would need 1,082 deaths at each age to be 90% confident that observed value is within 5% of the actual value. This would require a lot of data and experience. However, the theory also can be used with a lot less data to adjust a fully credible table, such as the standard PPA table. For example, having just 1,600 actual deaths across all ages would allow a fully credible adjustment factor to a fully credible table. Fewer than 1,600 actual deaths would result in a partially credible adjustment factor to a fully credible table.

PPA says that new mortality tables are to be reviewed for appropriateness every 10 years. The first 10-year period ends in 2017, requiring a review of the mortality table to be used starting in 2018. Because there will be a full review of the mortality basis and not just an update for an additional year of improvement (which could be handled through an IRS notice), proposed IRS regulations will first be presented for comments before they become final.

As we wait for the proposed regulations, there are a lot more questions than answers. RP-2014 with MP-2014 suggested possible increases of 3%-10% over current standard PPA tables (MP-2015 and MP-2016 have backed those increases off 3% to 4%). How much of these increases will be incorporated (there have been comments within the actuarial profession that the mortality improvements reflected are too strong)? Will improvements be static and/or generational? Will there be separate tables for white and blue collar? How will annual updates be incorporated?

The new table(s) will have an impact on multiple metrics such as: higher minimum required contributions, lump sums and Pension Benefit Guarantee Corporation (“PBGC”) premiums. They could also require more plans to have quarterly contributions, PBGC 4010 filings, benefit restrictions and place more plans in “at-risk” status. This could result in many more plan sponsors applying to use a substitute table based on their experience if such experience shows

higher rates of death.

It was indicated that the IRS is currently working on the proposed mortality table regulations and hope to publish them for comment by the end of 2017. They are expected to include tables for funding and minimum present value purposes as well as guidance defining “established actuarial credibility theory” and on the application of a partial credibility factor under BBA 2015.

Some important consulting considerations are whether the increased longevity expectations warrant changes to other assumptions, like retirement rates, since people will need to work longer to financially support a longer lifetime and whether there may be additional lump sum windows in 2017 before the new methodology (and presumably higher minimum present values) goes into effect.

Relative Value Disclosure Considerations

The relative value disclosure is part of the qualified joint and survivor requirements under IRC § 417(a)(3) and aims to ensure that a participant can make an informed decision when selecting from optional forms of benefit available under the plan. It is required due

to concerns that there was not enough information being provided to allow participants to compare distribution forms without professional advice.

Relative value is provided to a participant during the pension benefit election process and can contain a single statement that all forms are equal and/or specific (or sample) relative values for each available form of payment. Comparison of values must use a reasonable assumption for interest and mortality; however, there is not a lot of guidance on what is “reasonable.” Using IRC § 417(e)(3) basis would seem reasonable but what about an old outdated plan basis such as the 1984 Uninsured Pensioners mortality table (UP-84) with 8% interest? All lump sum payments forms (including lump sums, social security level income, etc.) must use IRC § 417(e)(3) basis or another reasonable assumption used and defined in the plan (such as the definition of actuarial equivalence).

Some consulting challenges related to relative value include what is considered reasonable, how often the basis should be modified and/or updated and the interaction with other plan factors such as outdated actuarial equivalence.

Session 402

DEALING WITH PBGC ISSUES: PITFALLS AND STRATEGIES

Speakers:

- Harold J Ashner – Keightley & Ashner LLP
- Suzanne C Wyatt – Willis Towers Watson
- David R Godofsky – Alston & Bird LLP
- Session Assistant: Kelly L. Karger – Willis Towers Watson

The presenters in this session share their experiences about pitfalls to avoid and strategies to follow when dealing with the Pension Benefit Guaranty Corporation (PBGC) on a wide variety of issues, from the annual filings to the special events and related reporting. The session includes technical tips, practical issues and strategic guidance.

General principles for dealing with the PBGC were offered. A key theme is to start with the end game in mind. It’s important to understand what’s at stake and formulate your clients’ position before approaching the PBGC. The discussions of what’s at stake may go beyond our day-to-day contacts in order to understand the implications of a situation on lending agreements; other agreements, deals or plans; what penalties may apply and how those penalties might be paid or the potential for adverse publicity. As your client is formulating their position, remember that many of the rules and even regulations may not be as “black and white” as you might think.

Once ready to approach the PBGC, there will often be a long laundry list of information requested. Openness and honesty are key here. Providing the most pertinent and useful information is valued more than providing a large box including every document

requested. Remember in your interactions with the PBGC that the situation is not personal and that both your client and the PBGC representatives are human. Seek common ground and be polite and collegial at all times. The Participant and Plan Sponsor Advocate can help, but you should exhaust all other avenues first.

The session transitions from strategic to a practical and technical discussion of PBGC premiums. When it comes to PBGC premiums, an ounce of prevention is worth a pound of cure. Flat-rate premium participant counts should be assessed carefully; remember that the Form 5500 count is a broader definition than for premiums. There’s a financial value to ensuring an accurate headcount and optimizing methods and assumptions. Also be aware of the implications of duplicate premiums in connection with mid-year spinoffs and consolidations, and duplicate premiums or gaps in premiums in the context of mergers of plans with different plan year cycles. Plan mergers and spinoffs require careful planning around the date and the choice of which plan is to be the survivor plan.

With the continued increase in premiums, more sponsors are looking for ways to reduce premiums. Whether through an administrative approach or settlement, de-risking or risk transfer, sponsors should forecast and scenario test downstream impacts on

premiums, funding, benefit restrictions, accounting, etc.

Turning to standard terminations and related audits, timing is critical. Be sure to plan for not only the required timing but for the strategic setting of the proposed termination date and use of windows for filings/notices while understanding the practical implications of your selected timing. Keep in mind that the likelihood of an audit is generally the same whenever you file the post-distribution certification. Filing earlier puts you in an earlier audit pool, so that the audit will occur while memories are fresh. Ensure that your documentation and records are taken care of throughout the process; limit the need to reconstruct.

In connection with PBGC reporting requirements (such as reportable events, missed contributions, downsizing, and corporate transactions), avoiding delinquencies is important but also very hard in some organizations. And, the exposure for penalties can be large. Our day-to-day contacts need to understand what events can lead to a reporting requirement and how they are going to monitor

for events. This may require working with parties at a parent company level to ensure events at other organizations within the controlled group are known. People generally will not understand how events at unrelated organizations impact reporting for a pension plan. Education and understanding of financial implications of a missed reporting requirement can help. There are new reporting requirements and 4010 rules that should be reviewed to ensure monitoring processes are still adequate. Use of the e-filing portal will ensure the most current form is being used.

Remember that the calculations required for various PBGC purposes can have unique rules. Don't assume it's the same calculation as the one you have readily available. Review the Blue Book Q&As and cash balance regulations. When reporting, pay attention to timing and ensure that you provide context to the PBGC. Explain (if applicable) why the event should not be of concern to the PBGC, why reporting was delinquent if reporting late, steps taken to ensure future compliance, etc.

Session 404

LIVING WITH THE "CHANGE" IN "EXCHANGE"

Speakers:

- Alan J. Silver – Willis Towers Watson
- David A. Osterndorf – Health Exchange Resources
- Chris Condeluci – CC Law & Policy PLLC
- Session Assistant: Amy Whaley – Willis Towers Watson

Any type of successful exchange must have choice, price transparency, decision support, and participant engagement. There are best practices for exchanges that have been developed over time.

Private exchanges are not the same as public exchanges. Unfortunately, those in the C-suite tend to think "exchange" has only one meaning, so they think of private exchanges as "that Obamacare stuff I don't want".

Public Exchanges

The individual market of public exchanges is important and represents quite a bit of healthcare spending. The most recent numbers suggest that 10.4 million people have effectuated coverage (though 12.7 million signed up) on public exchanges. It is expected that the number that signs up for coverage will be materially higher than those who pay the first premium (and therefore initiate coverage). Health and Human Services believes there will be 13.8 million signed up for 2017 coverage. Open enrollment for 2017 is from November 1, 2016 through January 31, 2017.

We believe there are 20 million people in the individual market, so about half are through the public exchanges and half are outside the exchange. The individuals who receive coverage outside of the exchange experience some of the same problems as those in the

exchange. Risk pools must be combined between exchange and off-exchange participants.

The drafters of the Affordable Care Act (ACA) intended competition in the marketplace. While carrier participation in the public exchanges was originally healthy, in 2016 things began to change, and vendors began exiting the exchanges. While 2015 and 2016 premium increases were modest, premium increases for 2017 will be 25% on average and as high as 60% for some markets.

The \$95 individual penalty for not having health coverage was a compromise; it started at \$0. The very small amounts are still not high enough to "force" people to have coverage. The penalty is therefore not having the intended effect of encouraging younger, healthier individuals to purchase insurance coverage. Only 28% of exchange enrollees are between 18 and 34; 40% is the needed percentage according to actuaries for a stable risk pool.

As the political environment changes with the November 2016 elections, impacts to the ACA will determine whether or not the public exchanges are successful. The future will only be better if the young, healthier lives enter the market.

Private Exchanges

The ACA didn't impact active exchanges much but did affect Medicare exchanges (through the closing of the donut hole) and greatly affected pre-65 and access exchanges since they rely on

the public exchange market for their products. While the Medicare exchanges, in terms of their maturity level, can be thought of as “young adults”, the active exchanges are “steady toddlers”, while the pre-65 retiree and access exchanges are “unstable infants”. The employer interest in Medicare exchanges is high, while it is modest in active exchanges and lower in pre-65 retiree and access exchanges.

Private exchange enrollment was 8 million in 2016 (35% higher than 2015). However, this count includes those who only receive voluntary benefits through the exchange, and isn't necessarily including those whose main health plan is through the exchange.

Growth in private exchanges is slower than originally projected. Mercer has stated that in 2017 their private exchange enrollment will be flat compared to 2016.

Exchanges tout an “amazon-like-shopping experience.” This isn't quite accurate though because when people buy through amazon, they buy things they like and understand. This isn't necessarily the case with insurance and benefits.

Private exchanges combine financial savings, participant enhancements, and easier administration. All of these things must be in place for an exchange. Those considering an exchange should therefore consider several questions. Is it sustainable? How are savings generated? What is the participant experience? What is the strategic direction?

Exchanges produce savings of 5% on average. This savings is about half from vendors (better deals and networks) and half from utilization savings. Cost shifting would produce additional savings in addition to this 5% savings. Private exchange trends have been low, but there isn't a lot of experience yet, and the first movers into the exchange needed serious help and may have been “easy pickings”. Exchanges should help employers avoid or delay the excise tax due to the lower trends.

Employees do value choice. We see nice distributions in plan options suggesting that people are considering their individual circumstances. There must be robust communication and education strategies along with an exchange implementation to help employees understand their choice.

When companies implement exchanges, they tend NOT to reduce benefits staff, but rather reallocate them to different functions.

Best Practices of Private Exchanges

In private exchanges there should be several (at least 4) options with little similarity, and include High Deductible Health Plans. There should be multi-carrier choices with network options side by side (including broad and high-performing). There should be a consistent defined contribution approach across benefit options (though subsidy does usually vary by tier). The prices should be fully transparent with decision support and active enrollment. For an exchange to be ideal, participants must see the actual costs of their coverage, the value that the employer is giving them for coverage, and then the net required payroll contribution. Behavioral economics suggests that people choose differently (and more appropriately) when they see all three of these factors

However, in reality, employers do not always implement all of these best practices. For example, few employers are willing to offer broad and narrow networks (with the same vendor) side-by-side. Some employers are not willing to offer coverage for free (or for negative amounts) even when the subsidy dictates that is appropriate. There is fear among employers that opt outs may come back into a plan if a coverage is offered for free (or negative). Experience suggests this does NOT happen. Usually the free (or negative) option is far less generous than what the employee is receiving elsewhere (for example, through a spouse's plan) and they typically remain out of the plan. It is recommended that employers default these opt outs to continue to waiver employer coverage. Default options in general are important in setting up an exchange.

Session 407**RECENT EVOLUTION OF PUBLIC PENSION PLANS**

Speakers:

- Koren L. Holden – Colorado Public Employees Retirement Association
- Douglas J. Fiddler – South Dakota Retirement System
- Keith Brainard – National Association of State Retirement Administrators
- Daniel D. Andersen – Utah Retirement System
- Session Assistant: Rich Mackesey – Willis Towers Watson

Speakers reviewed recent changes to retirement systems and the processes used during these changes, followed by a discussion of recent trends in the public sector marketplace based on years of research.

Utah Retirement System (URS)

In 2007, URS was a well-funded, unified system covering over 170,000 active members and 40,000 retired members. Like most pension systems, URS experienced significant asset losses in 2008 with an annual return of about -22%. The resulting drop in funded status resulted in an investigation of the benefit and contribution levels for URS. This investigation led to the development and passage of Tier II in 2010. The Tier II benefits impacts new hires and provides a choice between (1) a defined contribution plan and (2) a hybrid design containing both a defined benefit plan and a defined contribution plan. This reform also fixed the employer contribution rate at 10% of pay for the combination of defined contribution plan contributions and the normal cost for the defined benefit portion. Any amortization costs for unfunded liabilities would be in addition to the fixed 10% employer contribution rate. The defined benefit plan under Tier II is similar to the defined benefit Plan under Tier I with some significant differences. For Tier II, the accrual rate is 1.5%, the salary averaging period is five years, the maximum service is 35 years and the annual maximum cost of living increase is 2.5%. For Tier I these same amounts are 2.0%, three years, 30 years and 4%, respectively.

As of December 31, 2015 Tier II employees make up about 25% of the membership of URS. The majority of Tier II employees elect the hybrid plan (i.e., the combination of the defined contribution plan and the defined benefit plan). Over the next few decades, the number of Tier II employees will continue to grow and are expected to become the significant majority of members by the end of 2031 (i.e., over 55,000 members out of a total about 70,000 members).

During the URS reform process many facets of the reform had to be considered. The main considerations were political, operational and educational. The political considerations included the need for timely and reliable data including projections of possible future results. In addition, the appropriate use of and discussions with experts can help to gain credibility for the reforms within legislative bodies, the employers and employee associations.

The operational considerations start with handling the changes – the computer system will need to handle the new benefits and contributions, retirement counselors and staff will need to discuss

the new tier and answer employee questions, and the defined contribution plan contributions and employee elections will have to be maintained and administered. During the reform process, all interested parties need to be cognizant that these reforms fit within a larger legislative landscape and may impact other changes which are being contemplated. During the reform process, all involved need to be able to react to modified priorities and timing as outside influences impact the reform process. Finally, during the reform process, communication is critical both internally and externally to keep all those interested in the progress and decisions made along the way.

Educational considerations for the URS reform include developing specific strategies to use with those impacted by the changes. In order for the communications and changes to be appreciated, enlisting the help of key employees and employee associations early in the process is key. Enlisting the help of these groups can assist in a smooth transition as these groups can become champions for the changes.

The URS reforms are not a short-term fix but are a long-term solution. Since they are a long-term answer, there will continue to be challenges to consider as URS transitions from Tier I to Tier II. Some of the anticipated future discussions include changing back to the Tier I benefits, reducing the risk of underfunding in the future, dealing with reduced return expectations, continuing to analyze the tradeoff between current pay and future retirement benefits and considering the options for members to continue working while receiving retirement benefits. These and other discussions will continue for URS and their consideration will be measured against the goals and objectives established during the Tier II process.

South Dakota Retirement System (SDRS)

South Dakota is a fiscally conservative state with a high credit rating. South Dakota takes pride in its well-funded retirement system and considers both short-term and long-term measures when making decisions. The State (through its executive branch appointment to the Board of Trustees and its legislative committee review of pension legislation), employees on the Board of Trustees, and the employers on the Board of Trustees oversee SDRS. Changes are made to SDRS only with broad consensus from these three groups (i.e., the State, the employees and the employers).

The main features of SDRS include a 1.55% accrual rate, a three-year averaging period for pay, some subsidized early retirement and a variable cost of living increase based on funded status and

the Consumer Price Index. SDRS has a few hybrid-type features including a refund of contributions for vested and nonvested members and indexing benefits for terminated vested members. SDRS has a fixed contribution set by statute, which has never changed due to the experience of the system. Therefore, managing SDRS within the context of this fixed contribution is one of the Board of Trustees' key objectives. SDRS also shares improvements in benefits with all members when they are affordable. However, if SDRS experiences a decrease in funded status below defined thresholds or an increase in contribution rates above defined thresholds, corrective actions must be taken.

Since 1986, the funded status measure for SDRS has exceeded 100% in all but four years. SDRS currently has no unfunded liability and the fixed contribution rates exceed the sum of normal cost and expenses. However, in 2009 the funded ratio fell below 80% and corrective action was triggered. Much of the corrective action effected the cost of living portion of the benefit and the actions restored the funded ratio to 100% by 2012.

Even though action was not required due to the funded ratio or contribution thresholds, the Board of Trustees took action in 2016 to modify the benefits for future members. The reasons to review plan benefits when not required to include the thought that it is better to consider changes while not in crisis, that current benefits may no longer meet the needs of the employers or employees, that new accounting rules place more emphasis on shorter-term measures and that changes made now could alleviate the need for painful changes later on.

The first step in SDRS' review of the benefits is establishing the objectives of the study. SDRS' objectives used to review the plan design included increasing the likelihood of avoiding required corrective actions; decreasing subsidies, inequities and "hidden" costs ("hidden" costs include items like free optional forms of payment); recognizing the longer life expectancies of members; maintaining the current costs level; providing adequate retirement benefits to members; and providing benefits which support the employers' workforce needs.

Based on these objectives SDRS developed a new benefit structure for its members. The new benefit structure retains the defined benefit formula with some modifications and added some new features. The changes in the defined benefit formula in the new benefit structure included an increase in the accrual rate but eliminated above market subsidies, imposed an actuarial reduction for optional survivor benefits, increased the compensation averaging period and eliminated cost of living increases above inflation. The new benefit structure also added some new features. A cash balance account was added, which is funded by a portion of the employers' contributions, and is paid as a lump sum at retirement or as an annuity. These changes satisfied many of the objectives established by SDRS and also provided members the ability to get a share of the SDRS investment return (the cash balance account is credited with the same rate of return as the fund but not less than zero). The removal of the non-market subsidies

and other above-market practices (e.g., short compensation averaging periods), allows more of the employer contribution to fund the cash balance account, provide a cushion for future adverse experience and to help amortize any unfunded liabilities which may arise.

As a result of these changes, SDRS expects a stabilization of funded status: a better ability to withstand a future adverse experience and reduce the impact of the experience when it occurs; and the normal costs between the two classes of employees is virtually equal. This equality preserves the equity between these two generations of employees.

National Association of State Retirement Administrators (NASRA) Observations

The public pension fund universe is very large – over 6,000 plans, \$3.68 trillion in assets, 14 million active members, 10 million retirees with benefits paid annually of \$266 billion, and annual contributions of \$180 billion. Discussion addressed three aspects – changes to pension programs, funding of pension programs and future challenges.

Since 2009, almost every state enacted pension reforms, either by increasing employee contributions, reducing pension benefits, or both. The modifications in benefits took many different forms but generally attempted to reduce liabilities, costs, or both. Starting in 2010, these changes included an unprecedented reduction in cost of living increases for retirees. In some cases, the benefits offered to new members include large reductions as compared to the benefits for the existing members. Some states adopted hybrid-type benefits which provide retirement benefits that look and act more like defined contribution plans in an attempt to limit volatility in pension contributions. And a couple of states adopted new defined contribution plans to replace defined benefit plans for certain members. Mr. Brainard is (pleasantly) surprised more states have not moved to defined contribution only plans.

With all the changes to pension benefits that have occurred since 2009, there have been many legal challenges from current members. The results of these legal proceedings have run the complete spectrum – from affirming the changes to completely rejecting the changes. Results are also not consistent from state to state with some states' rulings contradicting the rulings in other states. There are a few states, California and Illinois for example, which have clear constitutional language against diminishing benefits and rulings in these states continue to affirm the inability to change benefits for active members in these states. In a Federal bankruptcy ruling in Detroit, Michigan and Stockton, California the courts have indicated that reductions in benefits are permitted despite legal protections in these states, although pension benefits were not reduced in Stockton and reduced only marginally in Detroit.

Over the last 15 years there has been a steady decline in funded status for public pension systems. This decline is a result of slightly increasing asset values but significantly increasing liability values. This increase in liability value is driven in part by lower expected

returns on plan assets, which are used to determine the liabilities, during this period. During this same period, contributions to public pension systems have also increased dramatically with employer contribution rates (as a percentage of pay) almost doubling and member contribution rates increasing slightly. When looking at these contributions over a longer period of time, one can see that in 1985 pension plan contributions were 4.9% of government budgets which decreased to a low of 2.3% of government funding by 2002 and has now increased back to about 4.5% of government spending by 2014. Thus, determining whether current pension contributions are higher than historical rates depends on the period one uses for its history.

With regard to pension contributions, the requirements for pension systems run a wide spectrum of requirements. Some policies require the payment of the actuarially determined contribution and the pension systems which receive these contributions are generally better off than other pension systems. Based on averages, pension systems generally receive from 85% to 95% of the actuarially determined contribution over the past 15 years. However, there are a significant number of pension systems not receiving 90% of the actuarially determined contribution – from 45% of pension systems in 2011 to 15% in 2001.

There are many challenges facing pension systems. The first of these challenges is adequately funding pension systems while

maintaining appropriate pension benefits. Balancing the needs of the various constituents can be difficult. Employers need benefits which will attract and retain the right employees. Taxpayers want the delivery of the benefits to be efficient and cost-effective programs with lower costs. And, employees want benefits which are competitive and fair. Balancing the needs of the constituencies is made even more difficult if the pension system does not have appropriate funding.

Another challenge is navigating the needs of the employer with regard to its debt and budgets. With the implementation of the new Governmental Accounting Standards Board (GASB) pronouncements, there are now standardized measures which may be used to compare systems. In addition, with the removal of the actuarially determined contribution from the GASB pronouncements, actuaries must work with the system and the employers to determine funding policy to ensure plans are adequately funded.

Finally, potential federal oversight could cause many issues for pension systems and state and local governments. The Public Employee Pension Transparency Act (PEPTA) would require the submission to the federal government of calculations based on a risk-free interest rate. Failure to provide this information could result in a loss of access to the municipal bond market for the state or local government.

Session 408

THE FUTURE OF BENEFITS AND SOCIAL INSURANCE: INSIGHTS FROM THE BELTWAY

Speakers:

- Thomas A. Swain – Findley Davies | BPS&M
- Harry Conaway – Employee Benefit Research Institute
- Robert B. Davis – Deloitte Consulting LLP
- Michael Kreps – Groom Law Group
- Session Assistant: Brian Boring – TIAA

The economy is the undercurrent of the political process in this election year. Details of the current economic state include total federal debt of approx. \$20 trillion, or 105% of Gross Domestic Product (GDP) – up from \$8 trillion, or 60% of GDP in 2008. Framing the discussion another way, federal debt is approx. \$60,000 per person (man, woman and child) living in the United States, which is more than the median household income of \$54,000.

Federal deficit spending peaked in 2009 at approx. \$1.4 trillion, or 10% of GDP, but remains historically high at around \$500 billion, or 2.5% of GDP. Because growth since the “great recession” and projected growth is around 1%, many economists are considering the slow growth environment the “new normal”. The slow-growth economy is one reason why the slogan “Make

America Great Again” seems to resonate with some voters. (Note that the GDP measure reflects improved health/well-being of society on a cost basis, but not necessarily on a value basis.)

The Federal Budget consists of five major categories: 1) net interest, which has benefited from the low interest rate environment, 2) discretionary spending, a small percentage of the total budget, 3) other mandatory spending, 4) major healthcare programs, and 5) Social Security. About 70% of the budget is for mandatory spending and only 30% is for discretionary items. Social Security deficits are not included in the budget because it was not intended to be funded, and should self-correct over time.

Healthcare and pensions continue to be supported through federal tax expenditures. Tax deductions are seen as tax expenditures for the federal budget. The largest and most popular

tax deductions based on the 10-year budget projections are 1) Health Insurance and Healthcare of over \$325 billion, which has climbed substantially due to the Patient Protection and Affordable Care Act (PPACA), 2) Pension Contributions and Earnings of over \$150 billion, 3) Dividends and Capital Gains Treatment of over \$150 billion, 4) State and Local Taxes of around \$80 billion, 5) Earned Income Tax Credit of around \$60 billion, and 6) Mortgage Interest of over \$50 billion.

Fiscal policy generally revolves around two competing priorities – economic stimulus vs. fiscal responsibility – with the goal to balance increasing national debt with stimulating a stagnant economy.

The problems with Social Security are exacerbated by the demographic shift as baby boomers continue to reach retirement age. The switch from when Social Security generated revenue to creating a cost occurred when baby boomers began to reach retirement ages in 2009 and 2010. Under the current law and Congressional Budget Office (CBO) budget report, the Disability Insurance (DI), Hospital Insurance (HI), and Old-Age and Survivors Insurance (OASI) are expected to be exhausted in 2023, 2028, and 2035 respectively. Current cuts of approximately 10-20% would be required to make the programs solvent in the 75-year projection. These projections assume a declining taxpayer to beneficiary ratio. Although it's not currently anticipated, Congress could make changes prior to insolvency and modify the budget to make up any cost shortfall in the Social Security system. There have been proposals that would increase the Social Security Retirement Age, but these proposals have not gained significant political traction.

The make-up of the new Congress starts with four segments, two from each party: from the Republican side, the Tea Party and the "RINOs (Republicans in Name Only)"; from the Democrat side, the Corporate Democrats and the extreme liberals. In order to stop the current gridlock, proposals will need to appeal to at least three of the four segments.

Observing recent polls, current predictions reflect that it is unlikely that Democrats will take over the House, but are expected to pick up 15-20 seats. This will likely mean a larger percent of the House-majority Republicans will come from the Tea Party segment. If he survives a post-election coup, House Speaker Paul Ryan will have two options: 1) only pass proposals along party lines, or 2) sacrifice Tea Party allegiances for potential support from corporate Democrats.

The Senate is much tighter with 47 likely Democratic seats, 46 likely Republican seats, and 7 toss-up seats. Results from this election cycle will likely be based on turn-out, which tends to favor Democrats in Presidential election years.

Regardless of the Congressional election's outcomes, there remains a significant divide due to partisanship. The reason for such a significant divide is a homogenizing of views within each party that is exacerbated by gerrymandering. Although gerrymandering does not appear to be more prevalent now than in prior elections, it is more efficient due to the integration of "BIG DATA". Based on data from voteview.com, issues and partisanship has been pushed

to the right, and the partisan gap is larger than it has been since before World War II.

What we expect from Congress and the Affordable Care Act depends on who is elected President. Under President Clinton, she will likely look to expand coverage and potentially a public option, with cost controls from synergies of banding together. With President Trump, he has promised to repeal and replace, but has not provided details as to what that means. With regard to the Cadillac Tax, it's clear that both parties hate it but at the moment there are no suitable replacements to control costs. Congress will likely delay the effective date, essentially "kicking the can" down the road.

As for retirement, we can expect small changes like we've seen with "MyRA" and other state-offered IRA programs that address employees not covered by a retirement plan, but we are unlikely to see a comprehensive move.

Session 501**CASH BALANCE: CURRENT ISSUES WITH MARKET-BASED PLANS**

Speakers:

- Scott A. Hittner – October Three LLC
- Craig P. Rosenthal – Mercer
- Lawrence J. Sher – October Three LLC
- Session Assistant: William Strange – Fidelity Investments

Speakers address recent developments in the design, accounting and funding for market-based cash balance plans.

It's no secret that cash balance plans have helped slow the decline in defined benefit plans in the last 30 years. The confirmation in the 2006 Pension Protection Act (PPA) that cash balance plans can credit interest based on market returns and the recent completion of the package of final hybrid regulations have spurred significant interest in these market-based designs. This session focuses on issues related to the market-based designs, including plan design, accrual rule testing, nondiscrimination testing, accounting issues, and funding considerations.

The panel of speakers began the session by setting the stage for cash balance plans, including why they have become such a popular vehicle for retirement accumulation. The advent of market-based cash balance plans has brought together the best of defined contribution and defined benefit plans. By crediting a market rate of return to cash balance accounts with the "preservation of capital" requirement, these plans mitigate the primary employer financial risk of traditional cash balance plans (and defined benefit more generally), while providing significant potential upside to employees.

One of the first issues discussed by the panel was accrual rule testing (i.e., 133-1/3%). In contrast with traditional cash balance plans, market-based plans may be forced to test the accrual rules by assuming a future interest crediting rate of 0%, which effectively means that future cash balance pay crediting rates cannot exceed earlier accruals by more than 133-1/3%. The IRS position appears to be that legislation is needed in order to allow a reasonable scale of pay crediting rates that increase by age or service for these types of designs. With respect to projecting future interest credits, the panel also discussed the impact on §415 benefit limits, §401(a)(4) General Testing, §410(b) Average Benefit Percentage Test, and §401(a)(26) minimum participation. Aside from the accrual rules, where the IRS position appears to be that legislative changes are needed to address the aforementioned concerns about projecting future interest credits, the IRS is working on guidance on the treatment of future interest credits with market-based cash balance and other hybrid plans for various qualification requirements.

Market-based crediting rates are not solely limited to the return on the total plan investments, so the panel's presentation then moved into a discussion of crediting market-based interest by sub-accounts of the plan's assets or using outside mutual fund returns, and how to credit market returns that may vary by class of participant, including the possibility of including participant

direction.

Germane to the discussion of projected interest credits in market-based cash balance plans is the important question of whether a market-based plan should be treated like a traditional defined benefit plan, a defined contribution plan, or something else for financial accounting purposes under U.S. Generally Accepted Accounting Principles (GAAP). The case was made that a market-based cash balance promise should have a Projected Benefit Obligation (PBO) and Accumulated Benefit Obligation (ABO) that do not materially differ from the current value of the participant's account. However, it was noted that the Financial Accounting Standards Board (FASB) has not yet addressed this issue. As recent as 2014, the FASB had considered the issue but decided not to proceed with releasing formal guidance on accounting for market-based plans until there are more of these types of plans sponsored by companies that are subject to U.S. GAAP.

The panel closed the session by discussing the application of the funding valuation rules for market-based cash balance plans and valuation of embedded options and any available subsidies. From a pure economic perspective, the liability for a market-based cash balance account may be thought of as the account balance plus (or minus) the value of options above (or below) market rates. Some emerging methods used to value embedded options are stochastic valuation, option pricing and replicating portfolio.

Session 502

PLAN TERMINATION: FROM HIBERNATION TO TERMINATION

Speakers:

- Felix Okwaning – Prudential Financial
- Meryl Feigenbaum – Conduent Human Resource Services
- Stephen Mekenian – Willis Towers Watson
- Donald Widger – Prudential Financial
- Session Assistant: Steven R. Pribis – Dietrich & Associates

Hibernation

Hibernation status occurs when a plan sponsor elects to freeze a plan with the most likely outcome to terminate it at some point in the future. This frequently occurs when a plan sponsor can't afford a live plan, but also can't afford the cost of plan termination (i.e. satisfying all plan obligations). Such a status changes the focus of Human Resources (HR) as it must consider the needs of both legacy and "other" employees. De-risking opportunities are welcome with a vigilant eye on interest rates, investment strategy and regulatory, legal and accounting issues. These issues take on a more prominent role in the day-to-day operations of the pension plan.

Plan sponsors often stay in this mode as they have become comfortable in maintaining a pension plan, although now with different characteristics. They stay there acknowledging the status quo – steady annual contributions, annual reports (including government forms and filings), ongoing communications to participants, the "predictable nature" of events and perceived control of managing the plan, with varying degrees of how volatile the plan environment actually is – with respect to funding and reporting. Risk management takes on a different perspective as well whether from an interest rate, investment, longevity or regulatory perspective.

The maintenance of quality data becomes more important as the recognition of having to locate every participant in the plan becomes more of a reality. There is more of a willingness to locate people, find out more details regarding the participant (such as spouses' dates of birth or death), communicating to participants, knowing that external parties, such as insurance companies or the Pension Benefit Guaranty Corporation (PBGC) may need to learn about them. "Getting it right" takes on added importance. The maintenance of plan documents, Summary Plan Descriptions (SPDs), etc. also takes on more importance, as the plan sponsor recognizes the need for consistency between plan administration and the plan document, as well as the communication of the plan's procedures to participants which all need to be in sync.

Funding strategies take on a new perspective and frequently depend on the plan's funded status. Should funding simply maintain the status quo, move toward full funding, coordinate with plan demographics and liability groups? Is there an end date in mind to work toward full funding? Accounting considerations may tie in with cash/funding issues. Are there settlement or shareholder constraints that may drive the timeframe to fully fund? Who are

the stakeholders and what are their roles(s) in the hibernation/termination process? These could be considered external roadblocks or pitfalls in the day-to-day funding and accounting life of the plan.

De-risking and Pre-termination

After a period of hibernation, the plan sponsor moves toward an end-game strategy that considers cash flow and risk mitigation. An end-game strategy creates time awareness, focusing on and determining the source and timing of future contributions, creates expectations, and enables detail-focusing on issues such as private equity and other ill-liquid investments.

Another look at funded status causes consideration of whether the current interest rate environment is a "new norm." There is a renewed focus on cash (contributions) and the notion of de-risking and partial settlement options such as lump sums and annuity purchases for a portion of the retiree group.

Funding strategies may consider making only the minimum required contribution, avoiding benefit limitations, minimizing PBGC premiums, permitting settlement opportunities or borrowing to fund as much as possible. Asset allocation strategies include moving toward a 100% fixed income portfolio, tying into benchmarks based on duration or projected cash outflow, moving away from or toward Liability Driven Investing (LDI)?

Settlements can play a major role in reducing risks, reducing liabilities and reducing plan size. However, settlements can also produce undesired results – accounting charges or losses, smaller asset pool from which to earn better returns, more administrative time spent on transactional issues as opposed to HR issues. The plan sponsor must weigh pros and cons, being aware of accelerated funding consequences, accounting thresholds, and expansion of groups for settlement opportunities.

Annuity activity has gained traction and attention. More insurance companies are getting into the action which creates more competition and capacity. Plan sponsors are beginning to understand that it's not an "all or nothing" transaction. While these opportunities can be attractive, they also can leave behind a concern that there may be fewer alternatives down the road. The remaining plan population may be too heavily weighted towards deferred-type liability that insurance companies are shying away from. Annuity purchases have almost exclusively been of the "buy-out" variety. "Buy-in" annuities are more popular outside of the US. Some interest in the "buy-in" option is occurring in the US, though. There remains some concern as to whether the "buy-in" approach

leaves the plan sponsor vulnerable to the “safest available annuity” down the road (i.e., when the annuity becomes “bought”).

Plan Termination—the Plunge

The final step of the process is a formal plan termination which can take from one to two years. Dollars take center stage in terms of administrative cost, fully funding the plan, and accounting charges. A word to the wise was given – shy away from giving the client a single number representing the cost to fully fund the plan; rather, give a range; the client always remembers “the number.” Two other drivers of the process are time, especially direct client involvement, and data clean-up.

Considerable discussion focused on the details involved in the process including the scope, components, time frame and associated project plans. These include the utilization of both key internal and external resources. The client must be aware that this is not a quick and easy process. Mandated and regulated requirements, especially if the client is waiting for an IRS approval, will require patience.

A case study example followed 4,000 participants (roughly 30% in pay status) with no prior de-risking. As expected, lots of cash, including large accounting losses, was involved. Estimates given to

the plan sponsor were carefully caveated and tied to interest rate sensitivities. Estimates also included differing take rates on the lump sum offerings. Depending on the plan sponsor’s willingness to use discount rates (for Projected Benefit Obligation (PBO)) which could approximate market rates, they could then get a better grip on the “true” cost of fully terminating the plan. Other illustrations were provided, including cash flow projections of 5 -10 years under a status quo environment.

The client was willing to engage in a 3-year contribution/ investment strategy (end-game) to fulfill its objective to terminate the plan in a purposeful way. This plan enabled a detailed project plan that included assignment of tasks, time frames and deadlines. Key tasks included employee communications (not too much, but don’t overlook necessary items), locating missing participants, and numerous versions of the Notice of Plan Benefits. In the end, the consultant was able to communicate effectively with the plan sponsor and the insurance companies; the efforts resulted in a sizable savings relative to the initial quotes. Key to this whole process is clean data, strict adherence to details and deadlines, frequent and honest and open communications to all interested parties and a thorough understanding of the plan and its administration.

Session 503

MULTIEMPLOYER PENSION REFORM ACT: PAST, PRESENT, AND FUTURE?

Speakers:

- Jason L. Russell – Horizon Actuarial Services, LLC
- Edward F. Groden – New England Teamsters & Trucking Industry Pension Fund
- Sarah M. Adams – Groom Law Group
- Session Assistant: Russell Niswander – Nestle USA Inc.

Multiemployer pension plans have received a lot of attention over the past couple years. From the passage of the Multiemployer Pension Reform Act (MPRA) at the end of 2014, the submission of benefit suspension proposals by some multiemployer funds, the rejection of the proposals by the Department of Treasury (some are still pending) and the outcry for new solutions and Congressional action, there has certainly been a lot to consider with respect to these plans. How did we get here, what is the latest on the recent activity, and where do we go from here?

The Past

One of the cornerstones of the Employee Retirement Income Security Act (ERISA) from its passage in 1974 was that accrued benefits cannot be reduced, but as dozens of multiemployer plans have reached the brink of insolvency, what was once thought of as untouchable has come to be challenged.

In 2006, the passage of the Pension Protection Act (PPA) brought in some changes for multiemployer pension plans. A new traffic light system (green, yellow, red) was created to bring more clarity

to a multiemployer plan’s financial condition. Plans in the red zone were required to enact a rehabilitation plan. These rehabilitation plans allowed plan trustees to reduce certain aspects of the participant’s accrued benefits through reduction of features such as subsidized early retirement and optional form factors.

The financial crises of 2008 further exacerbated funding issues for many plans and new proposed solutions started to emerge. An organization of employers and unions known as the National Coordinating Committee for Multiemployer Plans (NCCMP) created a proposal that would allow the trustees for a critical status red zone plan to reduce the actual accrued benefit of plan participants to the extent needed to maintain solvency.

Despite a great deal of controversy and opposition from some key groups, the bill, known as MPRA, passed Congress in late 2014. The bill allowed for the reduction of accrued benefits under very specific conditions, included an extension of the traffic light funding system passed under PPA that was set to expire, adjusted withdrawal liability calculations, provided new partition and

facilitated merger authority for the Pension Benefit Guarantee Corporation (PBGC) and increased PBGC multiemployer plan premiums.

Plans that apply for benefit suspensions must have an actuary certify that the plan is in critical and declining status. These benefit suspensions are optional and a plan can only use them if it can be demonstrated that they will help stave off insolvency. Benefits can't be reduced to less than 110% of PBGC limit, certain classes of participants are protected, and suspensions must be allocated "equitably."

All applications for suspension must be approved by the Department of Treasury (DoT). The applications have specific key requirements. This includes the "Goldilocks rule" where it must be shown that the benefit cuts are not too great to unduly harm participants nor too little so that they will not accomplish the goal of staving off insolvency. Actuaries must help the trustees carefully select assumptions for this purpose. For large plans, a 30-year stochastic projection is used to demonstrate with greater than 50% probability that insolvency is avoided.

The Present

As of October 15, 2016, six applications for suspensions and two for partition and suspension have been submitted to the DoT. The application with the most attention was for the Central States Teamsters Pension Fund. They were the first to apply and it quickly became clear that it was a politically-sensitive issue with many organizations and lobbyists becoming involved in the process.

Ultimately, the DoT rejected the application. Four reasons were provided:

- The investment return assumption of 7.5% was deemed unreasonable.
- * The DoT indicated that the assumption was not appropriate for purpose of measurement because the fund needed to be more defensive in its investment strategies due to the negative cash flow it is experiencing. (Additionally, in its analysis, the DoT referenced the Horizon Capital Market assumptions survey which showed most multiemployer plan investment advisors would expect a rate of return of 6.4% in the first 10 years.)
- The new entrant profile assumption was deemed inappropriate because it did not reflect an appropriate mix of new entrant demographics.
- The distribution of benefit suspensions was deemed inequitable, in particular, because of how they were allocated amongst former UPS participants.
- Participant notices were not written in a way that were easily understood by participants.

Following the rejection of the application, the Central States trustees announced they will not reapply because they felt they had passed the point of no return and that ultimately insolvency could not be avoided even with the benefit suspensions. Since then, one additional application has been rejected, this one on behalf of the

Road Carriers 707 pension plan. Ultimately their application was suspended because the future contribution income assumption was deemed too optimistic. All other submissions are still pending.

The Future

The key learning for actuaries as we review the rejected applications: we must be able to support all of our assumptions. It is still not clear what the ultimate outcome of the MPRA legislation will be. There is still much opposition to it and it is still not clear what needs to be included in what the DoT will consider to be a successful application.

In the meantime, there continues to be political wrangling to identify different solutions than what MPRA provides, but as of yet bills have not managed to make their way out of any Congressional committee.

The PBGC multiemployer program itself looks like it is also on the brink of insolvency with a recent report stating that based on current premium levels there is a 50% probability that it is insolvent by 2025 and a 98% probability by 2035. Some ideas for increasing the PBGC's revenues include increasing PBGC premiums, allowing the PBGC to apply variable rate premiums to multiemployer plans, creating exit premiums on withdrawing employers, bailing out the PBGC with taxpayer dollars and taking PBGC premiums from participant benefits. All of these ideas have so far received some opposition.

Some groups feel that composite plans are the future for the multiemployer system. Composite plans are modeled after the Canadian pension system and take features from both defined benefit plans and defined contribution plans. Under these plans accrued benefits can vary with plan experience (including investments, and gain/loss from actuarial assumptions). An actuary would annually certify to a targeted 120% funded status and "realignment" would apply if the funding percentage fell short. There would also be a legacy component to address past funding for any grandfathered defined benefits under current plan formulas. In addition, these plans would exist outside of the PBGC insurance program and would not be subject to PBGC premiums. It is still unclear if composite plans will gain traction in Congress in order to become a reality in the U.S.

Many different ideas and proposals have been suggested to address the severe funding concerns for these severely stressed multiemployer plans. Actuaries have been and will continue to play a large role in determining the ultimate solution.

Session 505**HEALTH PLAN 2.0: HOW NEW MARKET ENTRANTS ARE RE-SHAPING THE HEALTHCARE LANDSCAPE**

Speakers:

- David M. Tuomala – Optum
- Andrea Christopherson – Axene Health Partners
- Session Assistant: Dan Hoffman – Optum

The Affordable Care Act (ACA) created many federally funded co-ops that were intended to compete with established insurance carriers. In addition to the co-ops there have been several new privately funded insurance companies that have been set up to compete for the individual and small group enrollment. Presenters analyze some of these new entrants and provide perspective on what it is like working at a startup insurance company.

New Market Entrants

In 2015 and 2016, most of the federally funded co-ops became insolvent. In addition, many large companies announced reduced presence in the ACA markets or even exited the ACA markets completely in 2016. Despite the contraction of several players in the ACA market there have been several new venture-backed health plans that formed with focus on ACA individual markets. Some of the remaining co-ops have received private equity funding. The question that remains is what is driving venture capital to invest in this space despite all of the contraction by other market participants? And will it continue?

The venture capital backed entrants include Oscar Health, Harken Health, Bright Health, and Canopy Health. These new entrants have been able to raise substantial capital to get started and have had some success in attaining membership through the exchanges. Each company has its own key features that they are using to distinguish themselves from their competitors. Oscar Health is trying to simplify the process and “make insurance suck less”. Harken Health is trying to distinguish itself by offering free primary care at owned physician clinics. While the key features of these plans may be unique and may have attracted members, the financial results have recently shown financial losses.

In addition to the health insurance new entrants there has also been a significant amount of new technology related to healthcare. With advances in smart phones, the devices that we carry around each day have powerful technology that allow individuals to install healthcare apps that are intended to do everything from monitor personal exercise habits to manage medication adherence. In addition, these devices and apps are gathering data such as daily routines and user’s likes and dislikes. With all that these health apps are doing today the future could bring much more, including monitoring vital signs that could be used to improve healthcare.

Inside Perspective of a New Market Entrant

Working for a startup often requires employees to wear many hats. An actuary will likely have the typical actuarial responsibilities like monthly reserving, financial projections, and pricing, but will

also need to be involved with product development and other areas that are not typical for an actuary to be directly involved in.

Startups often begin with many the right people on the bus, but not necessarily in the right seats. Many team members will move around from one role to another because understanding the company is more important than any given role’s required skills. It is often beneficial to include a wider team when discussing pieces of work to make sure a complete set of perspectives is brought to bear when evaluating a problem and developing a solution.

Working with startups can be difficult. Actuaries are generally very precise in their calculations that are based on data. At a startup the data that is available is often limited so trying to be as precise as possible is not always worthwhile. Actuaries will have to evaluate what work is adding accuracy and spend their time there. For example, developing an elaborate trend study to pick between 6.5% or 8.0% is not worthwhile if network discounts could possibly be off by 15%. With the lack of information, the environment can be very fluid. When information does come in things can change very quickly. Obtaining membership might be very good in open enrollment but when claims are higher than expected, small companies could run into trouble quickly.

Session 506

CAPTIVATION FEVER

Speakers:

- Wilfredo J. Gaitan – Aon Hewitt
- Jason Swann – Aon Hewitt
- Miguel Santos – Aon Hewitt
- Kathleen Waslov – Willis Towers Watson
- Joseph Pitra – Coca-Cola Company
- Session Assistant: Rachel Gilmore – Alcoa Inc.

Presenters provided information on the use of captives for financing employee benefits. The “fever” in the session name is reflective of the high interest on the part of companies in using captives as a risk management tool for employee benefit financing and improved governance.

Presenters began with information on what a captive insurance company is and the typical captive structure. In the United States captives are regulated by the states, but elsewhere they are generally regulated by the insurance authorities in the country of captive domicile.

Aside from lowering overall benefit costs, a captive provides the advantage of allowing premium funds to stay within in the company, as these are paid to the captive and hence the funds are channeled to an entity controlled by the plan sponsor organization. The result is conservation of cash. In some instances, the role of a captive in regard to employee benefits can be quite complex especially in a multinational organization, including acting as reinsurer for a set of fronting carriers directly insuring the employee benefit risks. There are various reasons why companies are forming captives, including the ability to control the underwriting process and risks as well as cost control. Captives have grown significantly over the past 10 years to about 7,000 today globally. Organizations typically choose the domicile that can accommodate the captive’s objectives. Property and Casualty (P&C) risks constitute the predominant lines of captives’ business. A minority of captives include employee benefit risks such as life, disability, medical benefits and medical plan stop loss lines of business.

The session continued with discussion of the use of captives for U.S. employee benefits. Use in the U.S. requires some extra effort as a Department of Labor (DOL) exemption will need to be obtained. However, no approval is needed for medical stop loss in a captive. Captives provide a means for self-funding life insurance and providing tax deductibility of captive premiums. Savings on medical stop loss generates from the reduction in the applicable expense load. Life and Disability are the easiest to move to a captive. Dental and Short Term Disability (STD) are rarely held in captives since most are self-insured. In some instances, captives have been used for post-retirement medical funding.

Key characteristics of a typical multinational company were then reviewed. Due to staff fragmentation, non-efficient markets and country-based laws and regulations, pricing outside the U.S. can be quite complex thus leading to the need to find more efficient

means to manage these insured benefits. A diagram illustrating the financing structure of a multinational using a captive for non-U.S. employee benefits was reviewed. Companies may own the captive or “rent” a captive. Renting may be desired if the initiative is not a long term strategic objective, however it is quite rare that a multinational would rent a captive. There are multiple financial advantages of using captives for non-U.S. employee benefits including lower net cost, reduced claim volatility, taxation improvement and cash conservation. The captive could also be used as a solution to restrictions applied by local underwriters. However, there are some disadvantages as the headquarters needs to take on a more active role, due to less access to administrative support services and some sensitivity from local subsidiaries.

Premium rate setting and reserving challenges were discussed next. Two options exist: fronted reinsurance or direct issue. Direct issue generally presents fewer issues. In direct issue, the fronting company sets the rates and reserves, and the captive either accepts or rejects the rates. In setting rates, it is important to have arm’s length pricing so as to avoid transferring profits from one domicile to another and also to have objective documented rationale for price setting. To ensure credibility and certainty in small pools, at inception captives usually go with the network underwriter’s rates as there is little to no historical claims data available. In countries where rating tables are not available, consider starting with core base table and adjusting for differences by country. The owners should also determine the purpose of the captive including whether the captive will have profits, whether risks will subsidize others, and how gains and losses will be allocated. Best practice is to document and communicate the philosophy and strategy. Lastly, it is important to determine at inception how the captive will handle reserves at termination and what formula will be applied to such.

For Coca-Cola, use of the captive improved management and financing of risk benefits as well as reduced the cost of insurance benefits. Their captive allowed for provision of certain benefits that are normally not available in the local market, for example all-risk life insurance in South Africa. Coca Cola Company’s structure of the captive for reinsurance was reviewed. In addition to using captives for insurance-based benefits, they have also used captives for consolidation of pension plan assets to centralize control of investment strategies and risk management. Lastly, they have also moved international pension plans to the captive.

Session 508**TOTAL WELLNESS – INTEGRATING PHYSICAL, EMOTIONAL AND FINANCIAL WELLNESS**

Speakers:

- Anna C. Budnik – Willis Towers Watson
- Dimitra (Demi) Hannon – The Boeing Company
- Steve Rubino – Financial Engines
- Session Assistant: Erica Sorg – Willis Towers Watson

The presenters aimed to provide insights into employee wellness—integrating the emotional and financial aspects with the physical for a higher standard of total wellness. Findings from employee attitude surveys and case studies were shared to demonstrate changes implemented by companies, including strategies, outcomes and future considerations.

The initial focus of the discussion was on the financial wellness aspects of a recent employee survey (the Willis Towers Watson 2015/2016 Global Benefits Attitudes Strategy). Some key findings of the study show that while there were improvements in financial wellness confidence from the previous study, the survey continues to reflect that a key finding that Millennials are a significant concern for organizations.

An important outcome is that Millennials express an interest in taking a pay reduction for retirement security. This detail is critical as it shows their concerns are driven by the lack of security they witness for their parents and their drive to ensure security in their futures as an agent for change. The survey results show a link between financial well-being, general health (physical and emotional) and work engagement (including increased absenteeism for employees with poor financial well-being). Addressing the concerns emerging from the survey results requires incentivizing engagement from the organizations and employees, and demonstrating return on investment (ROI) to top leadership.

The Boeing Company recognizes that a one-size-fits-all approach will not work in the current market, and in particular in the digital age. Boeing has experienced a significant uptake in participation in their programs due to their targeted global programs and communications, with strong reliance on internal application tools which continue to evolve. Organizations will need to consider the business case for making these changes via ROI (e.g., assessing reduction in costs due to emotional wellbeing and reduced musculoskeletal issues). However, they generally will find employees have increased productivity and engagement due to less distraction from their financial-driven concerns.

A key driver for success at the Boeing Company is the support of top leadership. They have been recognized for top honors for their well-being programs and expect progress to continue as they build enhanced digital applications with increased accessibility for families of employees.

Financial Engines has been an important partner to the Boeing Company for many years. The company's focus is on helping both plan sponsors and companies, acting as a fiduciary to both, and

bridging financial wellness with financial planning. While their scope of support includes retirement, it is considerably wider, helping employees plan for all aspects of life and offering different service levels at each participant's direction.

Financial Engines provides one-on-one participant sessions, which are highly valued by participants in "putting it all together", and group training sessions which are typically filled to capacity. Case studies demonstrated positive feedback from clients and participants including appreciation of their "straight talk" lessons, the integration of all of a participant's information for a complete picture, and providing integrated support by phone at their convenience.

The partnership between the Boeing Company and Financial Engines has enhanced the overall financial wellness of the engaged participants, providing participants with the financial security they desire throughout all important moments of their lives.

Session 601

NONDISCRIMINATION TESTING AND PROPOSED REGULATIONS

Speakers:

- Robert W. Bruechert – Willis Towers Watson
- Audrey Cervas – Conduent Human Resource Services
- Yehuda Benjamin Haber – Willis Towers Watson
- Maria M. Sarli – Willis Towers Watson
- Carol E. Zimmerman – Internal Revenue Service
- Session Assistant: Alice Hicks – Willis Towers Watson

The presenters sought to help consulting actuaries understand how the Internal Revenue Service (IRS) proposed regulations provide relief for closed pension plans as well as make it easier to “cross-test” defined contribution plans on a benefits basis.

The presenters began with an overview and some historical information. The purpose of the proposed regulations is to help plans which have been closed to new participants and plans that have changed from a traditional formula to a hybrid formula (such as cash balance). The proposed relief can help such plans by making it easier to aggregate defined benefit (DB) and defined contribution (DC) plans and test the combined group on a benefits basis for the general test. Charts presented showed that over the past 18 years plan sponsors have been moving away from open traditional DB plans, closing or freezing their DB plans, and moving more towards defined contribution arrangements. Data was presented to show that in general, longer service employees are on average higher paid than shorter service employees, which over time can lead to nondiscrimination testing (NDT) issues as the DB plan covers a higher percentage of highly compensated employees (HCEs).

Some insights were offered as to the IRS’s rationale in issuing the proposed regulations. Due to the increased concentration of HCEs in closed DB plans, they were having trouble passing NDT. Furthermore, as the total retirement benefits offerings were becoming less “primarily defined benefit in character,” plan sponsors were having trouble passing through one of the gateways in order to be able to test the DC plans on a benefits basis. Due to these issues, plan sponsors were threatening to just freeze their plans altogether if the IRS did not issue some sort of relief. This was not an optimal solution as freezing the plans would harm the non-highly compensated employees (NHCEs) still being covered by plans. Thus, the IRS issued the Proposed Relief to help alleviate this situation.

The discussion continued with a review of the main areas of relief offered by the proposed regulations. It was noted at the onset that while the proposed regulations do provide relief for both coverage (410(b)) and amounts (401(a)(4) testing, there is no relief for the 401(a)(26) requirements that a defined benefit plan cover the lesser of 50 employees or 40% of employees. This is because these requirements are set forth in the Internal Revenue Code (“the Code”) itself, and thus the IRS has no authority to change them.

The first type of relief discussed aggregating DB and DC plans and testing on a benefits basis (i.e., cross testing) for closed DB

plans. Currently, plan sponsors are allowed to test combined DB/DC plans on a benefits basis if it can pass through one of three gateways: the benefits must be “primarily defined benefit in character,” the DB/DC plan must consist of “broadly available separate plans,” or the DB/DC plan must meet the minimum aggregate allocation gateway (MAAG), which requires a combined equivalent normal allocation rate of up to 7.5% for each NHCE. As noted above, the most popular one of these gateways, that the benefits under the combine plan must be “primarily defined benefit in character,” gets more difficult for closed plans to pass over time. Thus, the IRS issued temporary relief for closed plans which is available through 2017. This temporary relief allows combined DB/DC plans to test on a benefits basis without meeting one of the gateways if the DB plan was closed before December 31, 2013 and either each DB plan in the combined plan met the gateway rules in 2013, or the closed DB plan passed NDT in 2013 without aggregating with any DC plan.

The proposed regulations also allow closed DB plans to ignore the testing gateway beginning with the first plan year that starts at least five years after closure in order to be aggregated and cross-tested, as long as the plan benefit formula and coverage were “generally unchanged” during the five-year period. However, the way the regulations are currently drafted, many benign amendments will not satisfy. The IRS has been asked to relax this requirement for the Final Regulations. In addition, during the five year wait period, the closed DB plan would have to pass on a benefits basis without aggregation with a DC plan, aggregate with a DC plan and pass on a contributions basis, or aggregate and satisfy one of the current gateways, other than the MAAG gateway. Finally, under the proposed regulations, use of the temporary relief outlined in the preceding paragraph does not count towards satisfying the five-year requirement. However, the IRS is considering whether or not to allow it to count in the Final Regulations.

The proposed regulations also include relief for all DB/DC tests to be cross-tested, not just closed plans. However, this relief will not be available until the regulations are finalized (unlike the relief for closed plans, which is currently available). The proposed changes would allow an aggregated DB/DC plan to be tested on a benefits basis, without meeting one of the gateways, as long as using a 6% normalization rate, rather than the outdated 7.5%–8.5% under the current regulations. The proposed regulations would also allow up to 3% of matching contributions to be counted towards

the MAAG, so long as they are in the same plan as nonelective contributions. Furthermore, the proposed rules would allow DC allocations to be averaged for the purposes of the MAAG (currently already allowed for DB equivalent allocations), but would limit the DB and DC averaging options in order to prevent outliers from skewing results.

The proposed regulations also offer relief to DC plans that offer Defined Benefit Replacement Accounts (DBRAs), which are DC nonelective contributions that replace DB accruals. This relief is available beginning with the 2014 Plan Year. Currently, in order to test a DC plan on a benefits basis (without aggregation with a DB plan), the plan must either offer broadly available allocation rates (disregarding DBRAs), have a gradual age or service allocation schedule, or the DC plan must meet a MAAG of either 5% for all NHCEs, or 1/3 of the highest HCE rate if lower. Previously, DBRAs had not been widely utilized, primarily because the previous regulations suggested DBRAs must target full replacement of lost DB accruals on an individual by individual basis. However, the proposed regulations clarify that DBRAs are allowed to partially replace DB accruals and must be determined in a consistent manner

for all similarly situated employees. Also, under the proposed regulations, DBRAs may be ignored in determining whether the plan meets either the gradual age or service allocation schedule or the broadly available allocation gateways. Furthermore, the replacement allocation may not be amended after the DB plan is closed, and the group with the replacement allocation must meet the 410(b) coverage requirements (other than the Average Benefit Percentage Test, or ABPT) for five years after the DB plan closure.

There is also some relief for benefits, rights, and features (BRFs), also available beginning with the 2014 Plan Year. No testing of grandfathered DB BRFs is required starting five years after closure, the BRF was in effect for five years prior to the closure without change, provided the BRF is not amended after closure, and the DB plan undergoes a significant change to formula. Furthermore, BRF testing is not required on DBRA matches for those frozen in a DB plan, as long as the match rates are not amended after closure.

The session closed with a review of several specific examples and, for each one discussed, the likely testing challenges the plan would face, whether or not it would be helped by the temporary relief and/or the proposed regulations, and any other relevant comments.

Session 602

COST ACCOUNTING REIMBURSEMENT FOR GOVERNMENT CONTRACTORS

Speakers:

- Craig P. Rosenthal – Mercer
- Suzanne Hughes – Conduent Human Resource Services
- Deborah A. Tully – Pine Cliff Consulting
- Alex Landsman – Willis Towers Watson
- George Matray – Defense Contract Management Agency (DCMA), Contractor Insurance/Pension Review (CIPR) Center
- Session Assistant: Melissa Kemmer Verguldi–Lockheed Martin Corporation

Is your client a government contractor that is subject to the Cost Accounting Standards (CAS)? If so, their pension, post-retirement benefit and deferred compensation programs are subject to reimbursement rules that differ from Employee Retirement Income Security Act (ERISA) and Generally Accepted Accounting Principles (GAAP). Unfortunately, there is far less formal CAS guidance, so the panelists provide background on the rules and discuss several of the open issues and pitfalls.

How CAS Works

The Federal Acquisition Regulations (FAR) determine the allowability of costs; that is, whether or not costs can be reimbursed by the government. The CAS determine allocability of costs; that is, how you measure cost and allocate it to contracts. The FAR and CAS apply to federal contracts where employee benefit costs are imbedded in the price of goods or services.

The Cost Accounting Standards Board (CASB) details the calculation of assignable cost for government reimbursement

with the goals of consistency in estimating and reporting, and matching, costs to government contracts. The goals and rules of CAS cost determination differ from ERISA and Financial Accounting Standards (FAS) or GAAP. Until the late 1980s, ERISA funding and CAS recoverability were about the same. In subsequent years ERISA was amended but CAS recoverability was not changed and recoverability and funding began to diverge.

CAS Harmonization

The Pension Protection Act (PPA) of 2006 that amended ERISA's funding rules directed the CASB to harmonize government cost accounting with the revised ERISA. The final CAS Harmonization Rule was published December 27, 2011. CAS Harmonization was generally applicable beginning in 2013 with a five-year phase in through year 2017. Harmonization introduced a measure of pension liability and normal cost similar to PPA. Post-Harmonization CAS cost is closer to ERISA funding but still has differences including an amortization period of 10 years for gains and losses

with a potentially longer period for plan amendments (up to 30 years) versus ERISA's 7-year period. There are also gray areas such as how funding relief [including Moving Ahead for Progress in the 21st Century Act (MAP-21), Highway and Transportation Funding Act of 2014 (HATFA), and Bipartisan Budget Act (BBA) of 2015] should apply to CAS cost calculations and whether the Society of Actuaries (SOA) release of the Retirement Plans (RP) year 2014 and Mortality Projection (MP) year 2016 mortality tables should be incorporated.

2013 Government Accountability Office (GAO) Study

At the request of the U.S. Senate, the GAO analyzed the defined benefit (DB) plans for the ten largest Department of Defense (DOD) contractors and peer group companies. DOD contractors are among the largest defined benefit pension plan sponsors and pension costs have affected DOD contract costs. CAS pension cost has increased considerably over the last decade and is expected to increase further due to CAS Harmonization. The DOD concurred with several of the GAO's recommendations including that DOD provided guidance on reasonableness of the DB benefit included in executive compensation.

CAS from a Contractor's Point of View

There are three different sets of rules for determining pension cost for government contractors including CAS (costs recoverable under U.S. government contracts), FAS (for U.S. GAAP financial reporting), and cash funding (for determining minimum cash contribution requirements under ERISA). Each measurement results in a different amount, and there is focus on each cost measurement independently and in relation to the other.

CAS represents cost recovery on government contracts so it is both a cost and revenue to the company. The difference between FAS and CAS, (the "FAS/CAS adjustment" or "delta") is separately recognized to true up the cost included in contracts to the FAS expenses required for U.S. GAAP. The difference can be either income (if FAS is less than CAS) or expense (if FAS is more than CAS). The difference between cash funding and CAS ("net cash") represents cash inflow (when cash funding is less than CAS) and cash outflow (when cash funding is more than CAS).

A government contractor must submit an annual Incurred Cost Submission to actuarially certify the CAS cost calculations for the year. They also annually prepare a Forward Pricing Proposal that projects cost for multiple years since government contracts are typically multi-year. A CAS disclosure statement providing details on the cost determinations and pension plans is maintained and submitted by the contractor. The Defense Contract Management Agency (DCMA), the Contractor Insurance/Pension Review (CIPR) Center, and the Defense Contract Audit Agency (DCAA), review the cost submission and forecasts for reasonability and consistency.

CAS 413 Events

CAS 413 events include a CAS 413 curtailment such as a plan amendment in which the pension plan is hard frozen and no further material benefits accrue or a CAS segment is closed. These events are subject to a CAS 413 settlement as of the curtailment date where the difference between the market value of plan assets

and actuarial accrued liability represents an adjustment to pension costs. The adjustment needs to be reflected in future assignable cost calculations and incurred cost submissions.

In most cases, a plan is not 100% government reimbursable. To determine the actual adjustment amount between the parties, the CAS 413 Government Share Ratio is applied to determine the government reimbursable portion. The CAS 413 settlement amount, after reflecting the CAS 413 Government Share Ratio, needs to be paid to the affected party, either the government or contractor, regardless of it being a surplus or deficit. The amount may be an indirect cost element included in affected contracts if funds are not exchanged.

In practice, the best way to ensure proper treatment of a CAS 413 curtailment event is for the parties to draft an Advance Agreement that is executed in accordance with FAR 31.109 Advance Agreements. The agreement should contain key clarifying language of the measurement. CAS 413 has not yet been updated for CAS Harmonization and the measurement will need to comply with the CAS Harmonization Rule when it is completed.

Session 603**KEYS TO A SUCCESSFUL DC PROGRAM**

Speakers:

- Michael Clark – P-Solve
- Dan Morrison – Empower Retirement
- Julie Vickery – Willis Towers Watson
- Session Assistant: Tiffany Mouton – Prudential Retirement

Four Factors with the Most Influence on Retirement Preparedness

There are four factors shown to have the most influence on retirement preparedness, according to Empower's 2016 Lifetime Income Score research, a survey conducted on more than 4,000 working Americans, age between 18 and 65. These factors are:

1. Having access to a workplace retirement plan: according to the survey, employees who have a workplace savings plan are on track to replace 79% of income, while those without access to a workplace savings plan have a replacement rate of 44%.
2. Having a professional financial adviser: individuals paying for advice are on track to replace 87% of income, compared to those without a paid adviser having a replacement rate of 57%.
3. Having automatic deferral escalation inside the Defined Contribution plan: the difference is nearly 25%.
4. Using financial wellness tools: the individuals who used financial wellness tools on average had a 44% better outcome than those that did not.

In addition, the survey revealed that the savings rate is the dominant drive of success: 56% of plans have auto enrollment at 3%, which is generally insufficient to replace a significant portion of current income. Households that save at 6% or higher are on track to replace 62% of current income at retirement.

New Ideas in the 401(k) Space

Historically, the 401(k) dialogue was focused on investment lineup, participation rates, plan design, Qualified Default Investment Alternative (QDIA) and benchmarking fees. While these areas remain important, there are five new ideas that change the conversations in the 401(k) space:

1. Refocus: use personalized Lifetime Income experience for each employee and focus on providing immediate tangible views of anticipated income replacement. For an example, suggest the necessary increase saving rate to achieve specific retirement goal.
2. Big data: data analytics can help personalize content, target populations and improve results.
3. Healthcare: early education on likely healthcare in retirement is proven to inspire higher savings rates.
4. Social comparison: behavioral science can and should play a larger role in both plan design and motivate savings.

5. Plan design: refreshed plan design with improved defaults can help employees achieve retirement success.

Decumulation Is the Key

Another important aspect of retirement is decumulation, or how money is spent in retirement. According to Willis Financial Institutions 2025 Risk Index, greater innovation will be required to find ways of delivering returns and offering individuals more flexibility in how they access their money. Technology will modernize the investment management process. Significant opportunity exists in the market to provide access to quality advice. Providers recognize the market potential and are moving to develop decumulation solutions for retirees. Therefore, new products and tools in lifetime income and insurance are important to providers' competitive positioning in the future.

Retirees' Choices Are Diverse

Retiree choices are highly personalized due to differences in risk attitude, views on life expectancy, life style choices, healthcare concerns, liquidity needs, etc. According to Willis Towers Watson participant focus groups 2015 study, employers are trusted by plan participants to help provide participants advice when retiring. Plan sponsors would be wise to evaluate and possibly integrate methods that help participants most effectively draw down their assets.

Slow Transition to Income Focus

Currently, the income options vary greatly in terms of portability, participant complexity and administrative complexity. In the 2016 Willis Towers Watson Life Income Solutions Survey, only 23% of the 196 respondents have already adopted Lifetime Income Solutions and 53% expressed they may consider it in the future. Fiduciary risk and cost are the top key barriers holding employees back. The key stakeholders (e.g. Executives, Investment, and Human Resources) broadly seem to recognize longevity as a concern. Survey respondents also indicated a wide range of concerns about insurance-backed solutions. All of these contribute to a slow transition to income focus.

Session 606**GLOBAL DELIVERY MODELS FOR HEALTHCARE AND SOCIAL SECURITY**

Speakers:

- James Jones – Deloitte Consulting LLP
- Miguel Santos – Aon Hewitt
- Rucha Vyas – Alliant Employee Benefits
- Session Assistant: Al Phelps – Arthur J. Gallagher & Co.

Global healthcare continues to be a major issue, with spending estimated at 12% of global Gross Domestic Product (GDP) and healthcare costs doubling every eight years. Factors include an aging population, chronic lifestyle disorders, overuse of medical services, cost shifting and expensive new treatments. Primary causes are cardiovascular disease and cancer, and the greatest risk driver is high blood pressure.

This session looked at healthcare systems based on four criteria for high performance: quality of care, access and equity, efficiency of care, and opportunities for innovation and improvement. The primary financing methods used for healthcare are general taxation, social insurance contributions, private health insurance, and direct payment by the consumer for healthcare. The employer relationship to social insurance can be separated into four categories: primary coverage, duplicate coverage, coverage on top of what's provided by the government (complementary), and supplementary benefits not covered by public programs.

United States

The U.S. is one of the few countries where the employer system is primary. Healthcare spending accounts for almost 17% of GDP with per capita cost of USD \$9,451. Employees pay a significantly higher share of the cost than many other countries.

United Kingdom

The employer system is both duplicate and supplemental to the public system. The population is older than the U.S., but spending only 10% of GDP and USD \$4,015 per capita cost. Healthcare is considered a right and financed funded by sales and income taxes. The public systems work relatively well, especially for serious conditions. The biggest complaints are long waiting times for routine care and access to better facilities. Only 10%-12% of the population has private healthcare. Increasingly supplemental healthcare is part of a flexible benefits arrangement. Typically plans pay 100% with a small deductible. Employer-paid premiums are imputed income for the employee.

France

Employer plans are mandatory for employees and provide both complementary and supplemental coverage. The population is older than both U.S. and U.K., with spending of 11% of GDP and per capita cost of USD \$4,415. The number of hospital beds per person is more than double that in the U.S. The state sets reimbursement levels for social insurance, with financing mostly from the employer, plus a 7.5% social tax. Private insurance provides coverage for expenses not covered by the public system, with the employee

paying 40%-60% of the cost. Private coverage continues for retirees, disabled employees and layoffs, with higher cost charges based on age. Private medical premiums are taxed at 13.27%.

Brazil

Employer plans are both duplicative and supplementary. The population is significantly younger than more developed countries. Brazil's private system is the most expensive outside the U.S., but total healthcare spending is only 6.9% of GDP and per capita cost USD \$1,020. The Constitution states that healthcare is a right of all citizens. The public system has limited access outside urban areas, long waiting times, overcrowded and sub-optimal service. The scope of services is comprehensive with no copayments or deductibles. Funding is via social contributions and general tax revenue. Most employers offer private plans as an alternative, but the government sets the benefits that must be provided. Private plans and providers distinguish themselves via their networks and the levels of reimbursements outside their networks. If employees share in cost of the private plan, then they are allowed to continue coverage following termination or retirement.

China

Employer plans are duplicative for management employees (expanding to others), but complementary and supplemental for other employees. China only spends 5.6% of GDP on healthcare and USD \$731 per capita. Citizens also have a right to healthcare by law, with provincial and city governments having responsibility to implement. Public healthcare for urban formal employees is financed by employee and employer payroll taxes, with other residents funded by the government. Expenses are partially covered and access to care is an issue in rural areas. Private plans for non-management employees complement the public system, while management plans provide comprehensive access to private hospitals and medical facilities.

India

Employer plans are both duplicative and supplementary. India's population is also significantly younger than developed countries. India spends only 4.7% of GDP and has only 0.7 physicians per 1,000 and 0.7 hospital beds per 1,000. Although spending is low, 63 million people have financial problems as a direct result of healthcare costs. Like other countries, healthcare is considered a human right, with multiple systems and responsibility divided between state and central governments. Public systems are working to improve their delivery via a tax-financed single-payer system, incentives for quality care, newborn preventive care, free

drugs and diagnostic services. Private plans primarily focus on inpatient benefits up to a fixed amount, with limited allowances for outpatient, dental and vision benefits.

Japan

Some employer plans are primary (employer contracts out of the statutory fund), but most plans are complementary. With a shrinking population, over 27% in excess of age 65 and the 3rd longest life expectancy in the world, healthcare spending is 11% of GDP, per capita costs are USD \$4,150 and there are over 13.7

beds per 1,000. Japan's healthcare system is universal and publicly financed. Private health insurance is minimal compared to many other countries, with up to 30% coinsurance. Prices for healthcare are set by the government and highly regulated.

Despite differences in public and private systems, healthcare costs will continue to grow as result of the aging population, increases in chronic diseases (such as diabetes, high blood pressure and obesity) and advances in medical technology. All systems are looking for means to address cost containment and improve access, with a general trend toward more universal healthcare.

Session 607

UPDATE ON "MVL" DISCLOSURES FOR PUBLIC PLANS

Speakers:

- Paul Angelo – Segal Consulting
- Gordon C. Enderle – Willis Towers Watson
- Session Assistant: Therese H. Morong – Consulting Actuary

This session addressed the issue of what is the appropriate practice for measuring public pension plan liabilities: is it "level cost" or "market pricing?" Actuaries and economists have been debating this ongoing controversy for ten years. Which of the competing methods is "correct," and can both camps coexist? The presenters discussed the "level cost" and "market pricing" perspectives.

The Methods

The **level cost** model is based on **long-term** methods and assumptions:

- discount rate is the long-term expected return on assets in the plan's investment portfolio.
- cost method is a level cost based on projected benefits (generally Entry Age).
- such calculations are based on established funding practices.

Whereas the **market pricing** model uses **current** methods and assumptions:

- discount rate is based on market yields on low risk bonds (with a default risk comparable to the public pension promise).
- cost method is an increasing cost based on accrued benefits (Unit Credit).
- such calculations are based on "**financial economics.**"

What is "financial economics?" The key tenet of financial economics is that there can be *no arbitrage* (no free lunch) where an investment yields an immediate risk-free profit. Two cash flows identical in amount, risk, etc. must have identical market prices (the Law of One Price), otherwise an arbitrage opportunity will exist. For pension plans, financial economics measures a liability by using the discount rate embedded in an asset portfolio with matching cash

flows (namely bonds, in the view of market pricing proponents). Liabilities should be valued without regard to funding strategy, and expected excess returns should be recognized after they materialize. Focus is on **current** values.

The Back Story

Even for corporate plans, financial economics wasn't always the way to go. With the passage of the Employee Retirement Income Security Act (ERISA) in 1976, minimum funding was based *only* on the level cost model. Market pricing did not arrive until 1987 with current liability under the Omnibus Budget Reconciliation Act of 1987 (OBRA '87) for funding and Accrued Benefit Obligation (ABO) under Financial Accounting Standards No. 87 (FAS 87) for expensing. Market pricing started to take over with the Retirement Protection Act of 1994 (RPA '94). Then 2003 brought the "Great Controversy" at the Society of Actuaries (SOA) meeting in Vancouver, where strict market pricing for corporate pension funding was strongly advocated during the two-day symposium. Finally, with the passage of the Pension Protection Act of 2006 (PPA 2006), level cost funding was eliminated from the minimum funding rules and the conversion to market pricing was complete for **corporate** pension plans.

The Public Plans Debate

Most discussion has been on whether public pension plans should disclose a market pricing type measure. In fact, the three possible applications are (1) to disclose a market value ABO, (2) to fund based on a risk-free rate based ABO, or (3) to invest only in bonds. The rationales for each are as follows:

1. The economic liability is an accrued benefits ABO valued at current market (default) risk-free rates;
2. Funding based on a risk-free discount rate (even if invested

in equities) avoids kicking the “risk” can down the road to future generations of taxpayers; and

3. Investing only in bonds avoids increasing taxpayers’ equity risk exposure.

Should public plans disclose a market pricing type measure using a (default) risk-free discount rate? An alphabet soup of players has weighed in.

The Governmental Accounting Standards Board (GASB) first added the issue to their agenda in 2008. Following an “Invitation to comment,” GASB issued a preliminary views document and two exposure drafts, before releasing final Statements 67 and 68 in August, 2012. In those statements, GASB unequivocally endorsed the level cost model for accounting and financial reporting with the discount rate to be based on expected return (if the plan has assets) and the cost method to be Entry Age.

The Actuarial Standards Board (ASB) began reviewing two key Actuarial Standards of Practice (ASOPs) in 2011. Following numerous discussion drafts, exposure drafts and working drafts, ASOP 4 (Measuring Pension Obligations) and ASOP 27 (Selecting Economic Assumptions) were revised in December, 2012 and September, 2013 respectively.

Incorporating requests from the American Academy of Actuaries’ (AAA) Public Interest Committee (PIC) and Board, the discussion draft of ASOP 4 defined a “market-consistent” present value (MCPV). However, resulting comments argued that the MCPV is a type of measure, not a single measure.

When issued, the final ASOPs 4 and 27 instead stressed the “purpose of the measurement.” ASOP 4 stated: “When measuring pension obligations and determining periodic costs or contributions, the actuary should reflect the purpose of the measurement.” ASOP 27 stated: “The actuary should consider the purpose of the measurement as a primary factor in selecting a discount rate.” Interestingly, both standards included the market-pricing model not only as a type of measurement but also as an example of a purpose of the measurement!

The SOA formed a Blue Ribbon Panel (BRP) in 2013 to take up the issue of public pension plan funding. With heavy representation from market-pricing advocates, the BRP conducted an online survey and individual interviews. Their report issued in February, 2014 recommended that plan liability and normal cost be calculated and disclosed at a risk-free rate. They also recommended that two sets of benefit projections be provided on both an accrued (earned-to-date) basis and a projected benefits basis to allow users to develop their own calculations of plan obligations. The BRP did not, however, recommend a market-value ABO for disclosure, but did urge the ASB to require that financial and risk measures be disclosed in actuarial reports.

In 2014 the ASB called for comments on the relevant ASOPs and on public pension plans funding and accounting. Questions raised were whether public plan ASOPs should remain “principles based” or become more “rules based” (prescriptive), and whether the actuary should produce information useful to individuals other than

the intended user.

In 2015 the ASB asked for input on the disclosure of an **alternative liability measure** for public pension plans. The ASB sought guidance on a “solvency” or “settlement” liability based on the cost to transfer risk to an insurance company. Guidance was also sought on a liability measure based on a Treasury yield curve, on discount rates that reflect the risk to the benefits promised, or on a high quality corporate yield curve.

The ASB’s Pension Task Force (PTF) final report issued in February, 2016 came to the conclusion that an alternative liability measure based on “solvency value” should be calculated and disclosed for funding purposes and that it “may be misleading to show traditional values by themselves.” The report states that an acceptable proxy for this measurement would be Unit Credit with U.S. Treasury rates as the discount rate (with other assumptions determined according to ASOPs 27 and 35).

The balance of the session was primarily a discussion of the appropriate role of such a solvency value disclosure for public plans. The panelists discussed its usefulness either as a measure of investment risk or as a measure of defeasement or settlement costs, as well as the risk of its being represented to the public as the “true cost” of the benefits. While there was no clear agreement between the panelists on these issues, both agreed that this sort of open discussion was valuable to the actuarial profession and to the public we serve.

Session 608**(MIS)UNDERSTANDING LONGEVITY RISK**

Speakers:

- Thomas S. Terry – The Terry Group
- Theodore A. Goldman – American Academy of Actuaries
- Liaw Huang – The Terry Group
- Session Assistant: Andrea Fleser – Willis Towers Watson

It is contended that there is no common understanding of the term “longevity risk” and that without defining exactly what one is talking about when using the term, one is likely to be misunderstood. Different categories of longevity risk and world views will be explored below, along with considerations for communicating such risk effectively.

The different categories and views expressed are based on those encountered through research and discussions with other pension experts. This list may not be exhaustive of all the uses of “longevity risk” that exist in practice. Have you observed other uses of “longevity risk”?

Categories of Longevity Risk

Longevity risk can be grouped into the following four risk categories: (1) Individuals outliving their financial resources, (2) Uncertainty about future mortality improvements, (3) Additional cost to a system or to a society at large, and (4) Adverse consequences of individuals living a long time. Solutions for managing longevity risk will vary depending on the category.

Individuals outliving their financial resources is called individual or idiosyncratic longevity risk. This category of risk is centered on the retiree’s life expectancy and the probability that they will outlive their assets. For example, based on standard mortality tables, the standard deviation of the life span for a 65- year-old is generally 9 -10 years, and the probability of that person dying between ages 80-90 around 4%. Financial advisors will often promote risk pooling, such as lifetime income solutions or annuity products, as way to mitigate individual longevity risk.

Uncertainty about future mortality improvements is referred to as systematic longevity risk. This category of risk refers to situations where the actual mortality differs from the expected for the population or, said another way, the uncertainty in the mean, assuming that individual risks have been pooled among the population. Systematic longevity risk can be managed through risk sharing arrangements, such as pension risk transfers, pension buyouts, and reinsurance.

Additional cost to a system or to a society at large occurs when mortality improvements are underestimated. For example, what would be the impact on the system or society if there were a longevity shock of three years? Having more robust mortality assumptions for measuring cost will help to manage and better understand this category of longevity risk.

The fourth category of risk is that focused on the adverse consequences of living a long time. These adverse consequences

include concern about declining health, loss of ability to manage finances, lifetime income risk and long-term care. This risk is perceived as increasing with a person’s age. This category of longevity risk is addressed by considering not only longevity concerns, but a person’s overall well-being.

Perceptions of Risk

Social anthropologists describe four world views in the perceptions of people and institutes, which is called the theory of plural rationality. These world views will vary by individual, and for a given individual, these perceptions can change over time or depending on event. The four world views are: (1) Individualism, (2) Egalitarianism, (3) Hierarchy and (4) Fatalism. These different views can affect how longevity risk is perceived and managed.

Individualism is the optimistic outlook of the world. People with this view respond to longevity risk by self-insuring with market or investment-based solutions to achieve higher investment returns.

Egalitarianism is a group identity where everyone is treated the same and the future is viewed as precarious such that the group should work toward protecting itself against all risks. From this standpoint, risk is mitigated by risk pooling through social insurance for all retirement risks, including longevity, health, and inflation.

Hierarchy involves a structured group setting and well-defined roles for all, and the belief that the world is currently in equilibrium and needs to prepare for potential risk. This view believes that individuals, markets and governments all have different roles in managing longevity risk. Defined social structures that include risk transfers and intergenerational risk sharing are utilized to manage longevity risk.

Under the fatalism viewpoint, everyone has a role but their outlook is short-term and there is no planning for the future. Thus, no actions are taken to mitigate longevity risk.

Communicating Longevity Risk

A significant part of retirement planning is understanding longevity, but communicating longevity risk can be quite challenging given the varying categories of this risk and the world view perceptions described above. An effective communication plan should recognize that there are multiple perspectives, different voices and concerns to be considered, and that a solution may not be optimal for any one entity. Use of visualizations to make the concept of longevity risk more tangible to a person or institute should be considered.

Actuaries Longevity Illustrator

The Actuaries Longevity Illustrator is an online modeling tool at

www.longevityillustrator.org that is a joint project between the Society of Actuaries (SOA) and the American Academy of Actuaries. This model looks beyond the average lifespan, and focuses on the probability that a person would live for longer than expected. It is based on the mortality tables used by the Social Security Administration in the annual Trustees' Report and the mortality improvement scale MP-2015 published by the SOA.

Using the model is easy as the inputs are limited to date of birth

for a person and their spouse (if applicable), assumed retirement age to start the modeling, gender, smoker vs. non-smoker status, and a general health ranking.

The output of the model includes data tables and chart options showing: (1) the probability of living to a certain age, (2) the chance of surviving to various ages over the planning horizon, and (3) the probability of living a specified number of years. This model is one example of showing longevity risk in a more tangible manner.

Session 701

DEFINING A FIDUCIARY

Speakers:

- Paul Nawrot – Fidelity Investments
- Laura Rosenberg – Fiduciary Counselors Inc.
- Timothy Hauser – U.S. Department of Labor
- Session Assistant: Troy Dempsey – Fidelity Investments

Newly issued Department of Labor regulations have redefined who is considered a fiduciary. This session covers some basic knowledge of what it means to be a fiduciary as well as the history of the regulations and how they have changed. Session participants heard about the implications to the roles of consultants, record keepers, sponsors, and participants.

After an introduction, the session started with some general background on fiduciaries. The importance was stressed of continually revisiting the responsibilities and to be aware that just because a process is proceeding smoothly does not mean it is being done properly. The key to managing fiduciary responsibilities is ensuring the plan document is completed correctly and signed/dated – the plan document should be checked on a periodic basis to ensure it still complies.

In addition to the plan document, it is imperative to create and follow policy documents. Examples include:

Investment Committee Charter: The charter outlines committee members, who should be able to attend meetings regularly. Members should be educated on their responsibilities; ignorance is not an excuse. Formal minutes should be kept: who was there, what was said, and what actions were taken.

Investment Policy: A policy should be refreshed regularly. It is important to remain within policy constraints or specify the reason for exceeding the constraints.

Missing Participant Policy: This necessitates more scrutiny by the fiduciary on what sponsors are doing regarding keeping track of missing participants and trying to find them. A policy should be created to outline steps and should ensure adhering to policy.

Service Providers: Requests for Proposal (RFPs) are created to retain service providers so that all potential providers receive the same information and answers when submitting bids. Best practice includes creating a set of criteria beforehand by which all providers

can be objectively graded. A fiduciary does not have to select the lowest cost bid, but should document the reasons why they chose the bid they did.

Some ideas were outlined to keep in mind as you are considering fiduciary responsibilities. Errors are not in themselves a big deal; rather the quick and proper correction of the error is most important. Also, individuals do not need to know all the answers themselves, they just need to know who to ask to get the correct information for the situation.

The next portion led off noting that actuaries are generally not fiduciaries. Since the rules hinge on whether a person is defined as a fiduciary, actuaries therefore don't typically face significant liability. He then discussed the prior set of rules, noted why the Department of Labor (DOL) felt a change was needed, and outlined the new rules.

The old rules were created in 1974 – they laid out a set of five tests; all of which had to be passed to become a fiduciary. The DOL felt like it was too easy to avoid the fiduciary rules, even when it seemed like the person was clearly acting in a fiduciary role. Examples include providing important advice on a one-time basis versus a regular basis, as well as advertisements indicating a trusted relationship with a footnote saying that the advice cannot be relied upon.

In addition, individuals are more in charge of their decisions than in 1974, and they're not necessarily prepared to be. The financial world has become much more complex with the ability for individuals to transact any time with computers. The marketplace has become a lot more conflicted as well – the incentive structure is very complex and it is hard to determine who is getting paid from where for advice they're giving.

The rules were re-written and intended to be simpler and apply more often, particularly for third-party providers. The basic rule that

triggers a fiduciary responsibility is whether someone is receiving a fee for providing some type of advice or recommendation. In other words, if the advice is intended to create some type of call to action it would be included, whereas information, education, or facts would not be included.

Generally, the DOL does not see this impacting plan sponsors since they already have a fiduciary obligation. It will most often affect third-parties that are advising the plan sponsor, which the DOL believes are currently being able to avoid the fiduciary

obligations.

The session was lively with a number of questions asked by the audience. Most questions focused on specific instances where they wanted to know if an actuary could be a fiduciary. Generally, the answer was no, the actuary would not be a fiduciary. The presenters stressed that if someone acts reasonably in a given situation, it's unlikely to be a problem. Audience members continued to show some concern over litigation and reputation risk from the new rules even if acting reasonably.

Session 702

PLAN ADMINISTRATION COMPLIANCE

Speakers:

- Nick Haralambos Meggos – Nyhart
- Michael S. Clark – P-Solve
- Jonathan Stern – Willis Towers Watson
- Session Assistant: Carter Michael Angell – Nyhart

Pension plan administration compliance can be like navigating through a minefield. What are some common areas of concern and how can you avoid the mines?

Plan Documentation

While actuaries are (generally) not attorneys, actuaries may wear many hats and are typically the client-facing consultant. As such, working knowledge of the various documentation requirements is useful. Plan documentation covers the formal plan document, summary plan description (SPD), summary of material modifications (SMM), and board resolutions. SPDs and SMMs are routinely requested during an audit. SPDs and SMMs need to be provided to participants in a timely manner, kept consistent, and kept up-to-date.

The Internal Revenue Service (IRS) recently made a significant announcement (Announcement 2015-19) on July 21, 2015. This announcement eliminated the five-year determination letter remedial amendment cycles for individually designed plans, effective January 1, 2017. This announcement provides immediate elimination of off-cycle determination letter applications. A subsequent notice (Notice 2016-03) eliminates expiration dates on determination letters issued prior to January 4, 2016 (new determination letters will not have expiration dates). Determination letter applications will now only be accepted for initial plan qualification and plan terminations (and some to-be-determined limited circumstances).

Amendments

One all-too-common amendment in the defined benefit world as of late is for a reduction in future benefit accruals. When this occurs, a 204(h) notice must be provided 45 days (15 days for small and multiemployer plans) prior to the effective date of the

amendment. The notice must be provided to affected participants, alternate payees, certain employee organizations, and contribution employers.

Plan Administration

The Employee Retirement & Income Security Act (ERISA) provides the legal framework for plan administration but ever-changing requirements makes it difficult to stay on top of every detail. Typically, problems arise when the administration is done by an outsourced provider where a lack of communication can lead to out of date paperwork and practices. Common pitfalls include eliminating optional forms from paperwork even though a document calls for them to be included (and vice-versa) and not having relative value.

Delayed Retirement

It is common for plan participants, both actively employed and deferred vested, to delay benefit commencement beyond the plan's normal retirement age. If the plan allows for this, keep in mind the plan may require a suspension of benefits notice or an actuarial increase and that required minimum distributions add an extra layer of complication to delayed retirement. Actuarial increases must be provided after age 70.5.

One way to avoid delayed retirement issues is to allow for in-service distributions. As part of the Pension Protection Act (PPA), the IRS now allows for in-service distributions, starting at age 62 (safe-harbor). Keep in mind additional accruals could still be provided.

Fiduciary Issues

A fiduciary is someone, as defined by ERISA, who exercises discretion or control over plan management, plan administration, management or disposition of assets, and paid investment advice. Being a fiduciary is based on actions performed, not by title.

Every plan must name at least one fiduciary. Fiduciary duties may be delegated and there are typically multiple fiduciaries. Fiduciary functions are separate and distinct from settlor and ministerial functions (settlor functions typically deal with plan design and ministerial functions are typically carried out by those who have no authority to make plan policy – they just perform the function).

A best practice to fulfill fiduciary duty is to have a benefits committee. This provides for having some “diversification” in decision-making with multiple decision makers instead of just one. The benefits committee should draft a charter to define scope

of the committee’s authority, name members, and state meeting frequency. Minutes should also be recorded and should be a record, not a transcript.

Finally, while an investment policy statement is not required by ERISA, it may help demonstrate compliance with fiduciary requirements. It should include a brief summary of purpose and reason for the investment policy statement (IPS), an overview of the plan, asset class target allocations, expected rate of return, the policy on plan sponsor’s own securities, performance benchmarks of investment managers, and voting rights policy.

Session 704

CHRONIC CONDITION MANAGEMENT AND ROI

Speakers:

- Tanya E. Sun – Mercer
- Ian G. Duncan – University of California-Santa Barbara
- Brenda Barlek – Alcoa
- Session Assistant: Jennifer Milstein – Lockton Companies, LLC

In a healthcare environment where we’ve exhausted almost all levers for controlling employer health plan costs, many employers are turning to population management programs to help bend the trend. But, are these programs really worth the cost? The presenters offer insights to help the consulting actuary understand which programs are most successful. They use a case study to illustrate that value, or return on investment (ROI), can be defined in different ways.

Are Population Programs Worth It?

The majority of the population programs employed today face many issues. There is a lack of appropriate targeting. In order to achieve results, you cannot cast your net too widely and must be “laser-like” in targeting those individuals for whom interventions will have the most impact. Also, provider groups are trying to manage populations, but they don’t have the expertise and they lack the scale to do so effectively. The advantage of utilizing a population management company is that they have experience dealing with the payers. Many population programs have too many objectives, and therefore can’t be effective at achieving all of the objectives due to lack of focus. Additionally, programs have a long lead-time before achieving results, and most employers aren’t willing to wait. Lastly, measurement of results/impact is very difficult.

There is a common misconception about healthcare spending which has led to the design of many of these programs. It is thought that about 5% of the population accounts for 60% of the cost. While this is true at any given time, the 5% is constantly in flux and changes year-over-year. If a program targets the 5% from one year, it is likely overlooking the majority of high cost individuals in the following year. For this reason, the traditional approach of

identifying high risk members isn’t that successful.

We can use actuarial models to predict risk transition in chronic populations. If we know how long a patient had been in a condition-state (plus certain demographic information), we can predict likelihood of survival in current state (or transition to another state). We can then focus resources on those patients most likely to transition. Then, if we know the expected transitions of a program within a period of time, we can evaluate whether an intervention was successful at preventing transitions to a more severe state.

So, in summary, what does work?

- Small scale, targeted interventions on high-risk populations
- Programs that assess opportunity as part of the intervention
- Programs that leverage technology and workflow to enhance clinical skills

A Case Study: Alcoa’s Wellness Program, Results and How They Define Value

Alcoa maintains that there is more than one way to define value in wellness programs. The organization looks at results in the following areas:

- Participation
- Risk scores
- Costs
- Engagement
- Feedback
- Programs

Alcoa’s approach to wellness includes a comprehensive program with many elements. Some of the most impactful include onsite wellness, wellness coaches, clinical care management programs

and customer care advocacy. Their strategy involves offering multiple programs to attract different members. There is something available for everyone when they are ready to engage. Program determination is based on feedback from employees and their families.

Alcoa is seeing results from their wellness offering:

- In 2015, there was a reduction in high risk individuals and an increase in low risk individuals (based on Highmark study).
- From 2013-2015, there was a positive change in chronic conditions (based on Truven study).
- From 2010-2014, those participating in wellness activities had a lower average per member per month (pmpm) trend (based on Highmark study).
- Alcoa's Global Voices survey shows employees value Alcoa's commitment to their employees' personal health, with an increase in 12% favorable survey results from 2011 to 2015.

Alcoa has determined that, for them, value cannot be defined solely by savings. Value equals an engaged, healthy workforce built by the successes of one person at a time.

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Enrolled Actuaries Meeting

April 2-5, 2017

Both events are held at the Marriott Wardman Park Hotel in Washington, DC. Register online at www.ccactuaries.org/go/eameeting.

Future Meeting Dates

2017 CCA Annual Meeting

October 22 – 25, 2017

**JW Marriott Marco Island Beach Resort –
Marco Island, FL**

2018 Enrolled Actuaries Meeting

April 8 – 11, 2018

**Marriott Wardman Park Hotel
Washington, DC**

2018 CCA Healthcare Meeting

April 11 – 12, 2018

**Marriott Wardman Park Hotel
Washington, DC**

2018 CCA Annual Meeting

October 21 – 24, 2018

**The Broadmoor
Colorado Springs, CO**

NEWS IN OUR PROFESSION

Intersector Meeting Update

On September 14, 2016, the Intersector Group met with representatives of the U.S. Department of Treasury (Treasury Department), the Internal Revenue Service (IRS), and the Pension Benefit Guaranty Corporation (PBGC) to dialogue with them on regulatory and other issues affecting pension practice.

Notes of the meeting are available on the CCA website at <http://www.ccaactuaries.org/archives/notes-from-intersector-meetings>.

The Intersector Group is composed of two delegates from each of the following actuarial organizations: American Academy of Actuaries, Society of Actuaries, Conference of Consulting Actuaries, and ASPPA College of Pension Actuaries; they meet twice a year.

CCA Matching Gift for Donations to The Actuarial Foundation

Through the Conference Matching Gift Program, all CCA member donations are matched, dollar for dollar, up to the \$10,000 cap, as approved by the Board of Directors. Your donation can be of any denomination, or you can choose to donate a full classroom set to a high school of your choosing. All donations are 100% tax-deductible. View details and the waiting list of schools at

<http://www.actuarialfoundation.org/donate/quench.shtml>.

Double your impact and help expand financial literacy; make your CCA matched donation today at www.actuarialfoundation.org/donate/index.shtml.

News from The Actuarial Foundation

Tell a student about the Foundation's scholarships.

Applications are now open for Foundation scholarships. There are several scholarships available for students interested in pursuing a career in actuarial science. Tell a student or a professor you know about these scholarship opportunities. Visit the Foundation's website for more information: <http://www.actuarialfoundation.org/programs/actuarial/scholarships.shtml>

Meet the 2016 Foundation Scholarship Recipients.

The Actuarial Foundation awarded 63 scholarships to college students pursuing actuarial science. Congratulations to all of the 2016 recipients! Meet the recipients by visiting the Foundation's website: <http://www.actuarialfoundation.org/programs/actuarial/scholarships.shtml>

The Foundation and Scholastic release a new program.

The Expect the Unexpected with Math® series, developed with Scholastic, uses dynamic story lines that challenge students while showing them the fun and relevance of math. The latest program, Exploring Expressions and Equations promises to appeal to students' love of adventure with explorations of Mars and a swim through the Amazon River! Teachers will enjoy the flexibility of the program, which focuses on variables and includes an advanced portion on scientific notation. It incorporates online and offline components, including a cutting-edge digital interactive tool that launches students into writing expressions and equations by sending them on a Mission to Mars. Share the Foundation's free math resources with a teacher or student you know. Learn more about this exciting new program: <http://www.actuarialfoundation.org/programs/youth/materials-algebra.shtml>