General Session #1 (9:15-10:30)

Leadership, Listening & Professionalism
Mike Lombardi, FSA, CERA, FCIA, MAAA, President, Society of Actuaries

Session Description:
SOA President Mike Lombardi will provide insights on professionalism specific to the work of actuaries. In addition, he will provide updates on the SOA's 2017-2021 Strategic Plan, and will answer your questions and ask for your thoughts about the SOA's strategic direction and initiatives.

Mike Lombardi, FSA, CERA, FCIA, MAAA, serves as president of the SOA. He is president of MLBC, an actuarial consulting firm providing insurance companies with advice on business strategy, mergers and acquisitions, reinsurance, and corporate actuarial challenges. Lombardi has served as senior vice president and chief actuary at Prudential Assurance Company, managing principal of the Willis Towers Watson (Tillinghast) Canadian Life and Property Casualty insurance consulting practice and executive vice president at RGA. He was also president of the Canadian Institute of Actuaries (CIA).

Breakout Sessions #1 (11:00-12:00)

A: Risk Budgeting and Longevity Insurance: Strategies for Sustainable Defined Benefit Plans
Amy Kessler, Senior Vice President & Head of Longevity Risk Transfer, Prudential

Session Description:
After years of intense market volatility and dramatic increases in life expectancy, many defined benefit ("DB") pension funds are seeking a lower risk future. Their goal is to meet the obligation to support plan participants for as long as they live and no matter what happens to the assets. A DB Pension Sustainability Model may be emerging in the best practices of a few pension plans that are actively engaging in risk budgeting and disciplined risk management, combined with new techniques to insure longevity risk. These techniques can be used to sustain more pension funds, provide retirement security for plan participants and safeguard the health of the plan sponsors.

Amy Kessler is senior vice president and head of Longevity Risk Transfer within Prudential's Pension Risk Transfer business. In this role, Amy leads Prudential's longevity reinsurance business globally and serves on the senior leadership team for Prudential's pension risk transfer efforts in the United States. In 2011, Amy led Prudential's successful launch of its longevity reinsurance product and, together with her exceptional team, has closed more than $45 billion in international reinsurance transactions since, covering members of nearly 200 pension funds in the United Kingdom, including British Airways and Rolls Royce.

In 2014, Amy led Prudential's reinsurance team in the largest and most innovative longevity risk transfer transaction on record for the BT Pension Scheme – this transaction was recognized as "Deal of the Year" by Risk Magazine and earned Prudential top honours as "Reinsurer of the Year," an honour they received again in 2015 and 2016. With nearly 30 years of experience, Amy is an innovator whose work helps pension funds proactively manage longevity risk and create retirement security for their members.

B: Surviving the Data Revolution
Christine Hofbeck, FSA, MAAA, Board Member, Society of Actuaries

Session Description:

What is all the "buzz" around big data and predictive analytics? What is big data, and why should we care to embrace it? What exactly do we mean by analytics and predictive analytics? In this session, the speaker will answer these questions, including sharing examples across industries of how data analytics has been shown to successfully drive business outcomes. Potential applications for insurers' use of big data are also covered. At the conclusion of this session, the attendee will have a big picture idea of how to survive the tidal wave of data analytics which could (and should?) eventually seep into most aspects of our actuarial work.

Christine Hofbeck specializes in building predictive analytics and advanced pricing capabilities for large global insurers. Her work in this space has been featured in publications including *The Actuary*, *Sync Magazine*, and National Geographic's documentary television series *Breakthrough*. Christine began her career as an employee benefits retirement consulting actuary and also spent several years in the P&C space optimizing automobile and homeowners pricing models using predictive analytics techniques and new sources of data. She holds degrees from both the University of Pennsylvania and MIT, and currently serves on the SOA Executive Board of Directors and Predicting Analytics Advisory Group.

C: Artificial Intelligence and Machine Learning: What are they? How can we adapt to them?
Dave Snell, FALU, FLMI, ASA, MAAA, CLU, ChFC, ARA, ACS, MCP, Technology Evangelist

Session Description:
How AI is rapidly changing our world, what implications this may have for insurance, and how actuaries can adapt and thrive in this new era. The media is filled with hype about AI and machine learning (ML). What are they; and how do they differ from the classical tools and techniques that actuaries have been using for decades? This session will clarify some of the terms you hear in AI, ML, predictive analytics, and associated new and shiny jargon phrases. It will relate them to classical actuarial skills, when similar, and show the differences, in places where our current toolkits are deficient. It will also give a glimpse at the future of insurance, and offer some advice for continued viability of the actuary in the future.

Dave Snell recently retired from a long career with RGA Reinsurance Company, where he had various roles as an actuary, VP of technology development, data scientist, and inventor. He currently is a council member and editor for the SOA Predictive Analytics and Futurism section and a council member (and past editor) for the Actuary of the Future section. Dave was co-inventor and the original architect of an AI underwriting expert system used in over a dozen countries and translated into several languages, and co-inventor of a more recent patent to combine human and machine intelligence for underwriting. He currently teaches AI machine learning at Maryville University, in St. Louis, MO; and he has over three dozen published articles relating to predictive analytics and futurism.

Dave has been an inventor for various U.S. and international patents on the use of predictive analytics and AI in the insurance industry. He is a frequent speaker at SOA meetings and a former President of the St. Louis Actuaries Club.

D: VM20 and 2017 CSO Table for the Pricing Actuary
Bill Mehilos, FSA, MAAA, Consulting Actuary, Milliman

Session Description:
Many changes are coming to life insurance reserves. VM20 has introduced new reserve methodology at the same time that the 2017 CSO mortality table is being implemented. Changes such as these typically of interest to valuation actuaries, but there are many implications to pricing actuaries as well. The speaker will discuss considerations to various sections of VM-20 including the ability to use prudent best estimates. The speaker will also briefly discuss some considerations in complying with the 2017 CSO table.

Bill Mehilos is a consulting actuary in the Milliman-Indianapolis office, and has been with the firm for 5 months. Bill consults on life insurance and annuity products, including UL with secondary guarantees and LTC riders. Prior to Milliman, Bill spent 15 years at an insurance carrier working with their voluntary worksite life products.

Breakout Sessions #2 (1:15-2:15)

A: Women's Leadership Forum (And Men Please Come, too!)
Panel Members:
   Christine Hofbeck, FSA, MAAA, Board Member, Society of Actuaries
   Olga T. Jacobs, FSA, MAAA, Vice President, Actuarial Pricing Strategy & Operations
   Amy Kessler, Senior Vice President & Head of Longevity Risk Transfer, Prudential
   Mike Lombardi, FSA, CERA, FCIA, MAAA, President, Society of Actuaries

Moderated by:
   Kelly Hennigan, FSA, CFA, Vice President & Head of Actuarial Transformation, Voya Financial

Session Description:
This personal and insightful forum will focus on the challenges faced by female actuarial leaders and how gender diversity in leadership roles can be increased. The speakers include both men and women - the president of the SOA, the chair of the SOA Inclusion and Diversity Committee, and other industry experts and experienced SOA volunteers.

Christine Hofbeck specializes in building predictive analytics and advanced pricing capabilities for large global insurers. Her work in this space has been featured in publications including *The Actuary*, *Sync Magazine*, and National Geographic's documentary television series *Breakthrough*. Christine began her career as an employee benefits retirement consulting actuary and also spent several years in the P&C space optimizing automobile and homeowners pricing models using predictive analytics techniques and new sources of data. She holds degrees from both the University of Pennsylvania and MIT, and currently serves on the SOA Executive Board of Directors and Predicting Analytics Advisory Group.

Olga T. Jacobs, FSA, MAAA is Vice President, Actuarial Strategy and Operations at United Healthcare. Olga has over 25 years of actuarial experience, predominantly in pricing, product development, rate filings, and regulatory rating compliance of group medical products. Olga has had various leadership roles in Actuarial and Underwriting, including the role of Regional Actuarial Vice President, where her team provided actuarial pricing guidance for an $8 Billion block of commercial medical group insurance. Olga spent a few years specializing in Public Marketplace strategy, advocacy and implementation and continues to provide strategy, advocacy and implementation planning on commercial health care reform. Olga's latest challenge is to drive Operational Excellence within the Employer & Individual Actuarial Pricing organization.

Olga is co-founder of UHC's Actuarial Leadership Development Program and currently serves on the Steering Committee. She also serves on the Penn State Actuarial Science Alumni Advisory Board. Olga is an elected member of the Society of Actuaries (SOA) Board of Directors. She is Chair of the SOA Inclusion & Diversity Committee. Olga previously served on the SOA Health Section Council and was the former Chair of the SOA Leadership & Development Section Council. Olga has been a member of the SOA Examination Committee for over 18 years and currently serves on the Faculty of the Fellowship Admission Course. Olga recently joined The Actuary as a Contributing Editor. Olga received the SOA Outstanding Volunteer Award in 2013.

Amy Kessler is senior vice president and head of Longevity Risk Transfer within Prudential's Pension Risk Transfer business. In this role, Amy leads Prudential's longevity reinsurance business globally and serves on the senior leadership team for Prudential's pension risk transfer efforts in the United States. In 2011, Amy led Prudential's successful launch of its longevity

reinsurance product and, together with her exceptional team, has closed more than $45 billion in international reinsurance transactions since, covering members of nearly 200 pension funds in the United Kingdom, including British Airways and Rolls Royce.

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Mike Lombardi, FSA, CERA, FCIA, MAAA, serves as president of the SOA. He is president of MLBC, an actuarial consulting firm providing insurance companies with advice on business strategy, mergers and acquisitions, reinsurance, and corporate actuarial challenges. Lombardi has served as senior vice president and chief actuary at Prudential Assurance Company, managing principal of the Willis Towers Watson (Tillinghast) Canadian Life and Property Casualty insurance consulting practice and executive vice president at RGA. He was also president of the Canadian Institute of Actuaries (CIA).

Kelly Hennigan has 20 years of experience in the financial services industry in both asset and liability roles. She is Vice President and head of Actuarial Transformation at Voya Financial. Prior to this role, since joining Voya in 2007, Kelly worked within the Insurance Investments department where she was responsible for the governance around Voya's general account investments, as well as within Voya Investment Management's portfolio management and product development areas. Kelly previously worked with Hartford Investment Management Company where she was a credit research analyst for the consumer asset backed securities portfolio. Kelly began her career with Hartford Life's actuarial program. Kelly received an M.S. in Mathematics with a concentration in Actuarial Science and a B.A. in Spanish from the University of Connecticut. She is a Fellow of the Society of Actuaries, a contributing editor for The Actuary magazine, and past Chair of the SOA's Leadership & Development Section Council. Kelly also holds the Chartered Financial Analyst designation. Her community activities include serving as a mentor to students in the University of Connecticut's Leadership Legacy Program.

B: Fixed Index and Hybrid Annuity Product Trends
Tom Buckingham, Chief Operating Officer, The Phoenix Companies
Nicholas Carbo, FSA, MAAA, Senior Consultant, Oliver Wyman Actuarial Consulting

Session Description:
The FIA and hybrid annuity markets have seen significant growth over the last 5+ years. In this session the speakers will discuss the annuity product trends, features and risks for the increasingly popular FIA and hybrid annuity products.

Tom Buckingham is chief operating officer of The Phoenix Companies, Inc., a Nassau Re subsidiary. He is responsible for all product- and service-related functions including product development, implementation and management, and operations. Mr. Buckingham joined Phoenix as an actuarial assistant in 1999 and served in increasingly senior corporate, product development and operational positions. Mr. Buckingham holds a Bachelor of Science in Mathematics and an MBA in Management from Rensselaer Polytechnic Institute. He is chairman of the board of Foodshare and serves on the board of Saint John's High School.

Nicholas Carbo is a Senior Consultant with the Actuarial Practice of Oliver Wyman and is based in Hartford. His primary responsibilities are to provide actuarial consulting services to various insurance entities and organizations with a focus on the Fixed Annuity and FIA markets. Prior to joining Oliver Wyman he was an Actuarial Director leading Annuity Product Management and Pricing at MassMutual. He also held several roles at various companies including hedging, experience studies, product monitoring, financial modeling, and administration configuration.

Nicholas holds a Bachelor of Science in Actuarial Science from the University at Albany. He is a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries.

C: FASB Technical Improvements
Russ Menze
Tom Chamberlain, ASA, MAAA, Senior Manager, Deloitte Consulting LLP

Session Description:
TBD

Tom Chamberlain is a Senior Manager with Deloitte Consulting in the Actuarial, Rewards, & Analytics practice with over 22 years of experience in the life insurance and pension industry. As part of the Core Actuarial team of Deloitte Consulting and assists companies in evaluating complex financial reporting requirements across US GAAP, Statutory and Tax guidance. Tom co-leads a Technical Excellence team that investigates, models and trains the Actuarial practice on new and current technical issues and evaluates and updates processes, systems and controls impacted by change. Tom is an Associate of the Society of Actuaries (ASA), and a Member of the American Academy of Actuaries (MAAA). He is a co-author of Model Governance Survey and co-presenter at August 2017 SOA webcast on Insights and Evolution of Actuarial Model Governance. Recent presenter at both the 2017 SOA Annual Meeting and 2017 SOA Valuation Symposium on FASB Targeted Improvements in Boston.

D: Opportunities in the Employer Stop Loss Market
Mehb Khoja, Consulting Actuary, Milliman

Session Description:
The employer stop loss market is a $15 billion industry and poised to grow based on trends seen from the Kaiser Family Foundation study which tracks the prevalence of self-insurance. The growth of the market is creating opportunities for health plans that write stop loss as well as for third party carriers who focus on stop loss and other employee benefit coverages like life insurance and disability. Milliman recently conducted a survey of 24 employer stop loss carriers (12 health plans and 12 third party carriers) to understand differences in underwriting, product development, and distribution. They will share their results as well as provide some background on the employer stop loss market.

Mehb Khoja is a healthcare actuary with the Chicago office of Milliman. He joined the firm in 2016. His areas of expertise include employer health and welfare consulting (evaluation of medical, prescription drug, dental, vision, and other welfare programs). His primary responsibilities include health plan strategy, vendor procurement, utilization and cost review/projections.

Mehb is also an expert in various risk management strategies including stop loss and captives. He has consulted to over 500 employers on their stop loss coverage (policy and procurement) and has also consulted to stop loss insurers on product differentiation, distribution, mergers and acquisition, and other strategic and actuarial projects.

Prior to joining Milliman, Mehb spent nearly thirteen years as an employee benefits consultant to several mid-market employers where he assisted on benefit design, flexible benefits pricing, vendor procurement, data analytics, evaluating private exchanges and understanding the impact of health care reform on employee benefit programs.

Breakout Sessions #3 (2:30-3:30)

A: Replacing the Replacement Rate: How Much is "ENOUGH" Retirement Income?
Bonnie-Jeanne MacDonald, PhD, FSA, Senior Research Fellow, Ryerson University

Session Description:
For years, the standard for measuring retirement income adequacy has been the final earnings replacement rate (usually targeted at 70%). Financial planners, actuaries, pension plan advisors, academics and public policy analysts all use this benchmark. It's the measure that underlies our pension systems, drives the research that determines whether populations are prepared (or not) for retirement and serves as the backbone of retirement planning software.

But the question is, does it work? Will 70% of a worker's final annual employment earnings actually sustain his or her living standards after retirement?

This presentation examines whether workers who hit this target actually can expect to maintain their living standards in retirement. Bonnie-Jeanne will also discuss an alternative, more accurate, basis for assessing how well a worker's living standards are maintained after retirement - the Living Standards Replacement Rate.

Based on ten years of research and analysis in industry, academia, and government, this presentation answers the often posed but never answered question "how much is ENOUGH retirement income?"

Bonnie-Jeanne MacDonald, PhD FSA is the Senior Research Fellow of the National Institute of Ageing (NIA) at the Ted Rogers School of Management, Ryerson University. She is also a Fellow of the Society of Actuaries and the resident scholar at Eckler Ltd.

Her research focuses on the retirement and health programs available to Canada's aging population with the goal of advancing the financial retirement security landscape. Bringing together leading industry experts and building on academic best practices coupled with innovative research, her insightful perspectives continue to help people better prepare for retirement.

In 2014, Bonnie-Jeanne's research created the concept of the Living Standard Replacement Rate (LSRR). That research garnered the 2014 Pension, Benefits and Social Security Scientific Committee Award Prize for Best Paper at the 30th International Congress of Actuaries. Already helping sponsors and members of retirement plans in the Canadian retirement service industry, the LSRR work is also informing professionals as it has been added to the Society of Actuaries Fellowship examination requirements for new actuaries.

A recipient of the 2001 Gold Medal in Actuarial Science (Hon BSc) at the University of Western Ontario, Bonnie-Jeanne received her FSA in 2004, and also holds a PhD in Actuarial Mathematics from Scotland's Heriot-Watt University. In 2011, she was chosen one of the Canada's top young economists and attended the Lindau Nobel Laureate Meeting in Germany.

B: Investment Frameworks for Corporate Pension Plans and Insurers
Frank Cataldo, FSA, MAAA, CFA, FLMI,   Director, Life and Health Strategic Advisory, Conning and Company
Amy Trainor, FSA   LDI Team Co-Chair, Global Multi-Asset Strategist & Portfolio Manager, Wellington Management Company

Session Description:
Is the success of your corporate DB plan's return-seeking portfolio dependent on a "clear skies" environment where equities outperform and rates increase? How can you insulate your return-seeking assets from other environments that can leave funded ratios vulnerable to drawdowns? Amy will share an investment framework aimed at building a return-seeking portfolio that can better weather the periodic storms that buffet corporate DB plans.

Insurance company portfolio allocations differ greatly from those of typical DB plans. Frank will discuss the factors that drive the differences in allocations between DB plans and P&C, Managed Care and Life Insurance companies.

Amy Trainor helps corporate pension sponsors set strategic asset allocation policy. She also manages customized multi-asset portfolios, including glide path approaches. She co-leads the Wellington's LDI Team and partners with the Fixed Income team to implement LDI solutions.

- 23 years of prof experience, including roles at Hewitt Associates (Aon Hewitt) and Towers Perrin (Willis Towers Watson)
- Wellesley College, BA in economics and mathematics
- Chair of Wellington's Retirement Benefit Plans Oversight Committee and a member of the Corporate Governance Committee

Frank J. Cataldo, FSA, MAAA, CFA, FLMI, is a Director at Conning where he is responsible for providing asset-liability and integrated risk management advisory services to life and health insurance company clients. Prior to joining Conning in 2001, Mr. Cataldo was an Actuary for the Travelers Insurance Company, responsible for pricing and asset/liability management for institutional investment products. Mr. Cataldo graduated from the University of Connecticut with a degree in Actuarial Science with Honors.

C: Paid Family Leave
Jennifer Fleck, FSA, MAAA, Consulting Actuary, Milliman

Session Description:
New York is introducing paid family leave in 2018. California, New Jersey, and Rhode Island already have similar plans. Other states and the federal government are talking about adding it. How do they work? How are they different? How is paid family leave different from state disability plans and FMLA? This session will help demystify some of these regulations and help you understand what it means to you and your company.

Jennifer Fleck is a Consulting Actuary at Milliman specializing in disability and group life insurance. Her areas of expertise include product design, pricing, reinsurance, and financial modeling. Prior to joining Milliman, Jennifer had over 20 years of experience working in a variety of actuarial roles. She has experience pricing and managing various products, from both a direct and a reinsurance perspective, including group disability, life, retirement plans and health, and individual disability, life and annuities. Jennifer is a graduate of Ithaca College, with a bachelor's degree in mathematics, and is a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries.

D: Current Issues in Dental Insurance
Joanne Fontana, FSA, MAAA, Consulting Actuary, Milliman, Inc.
Tom Murawski, FSA, MAAA, Actuary, Milliman, Inc.

Session Description:
This session will cover a range of dental insurance topics, including an industry overview and a discussion of key current issues facing the industry that pose challenges for actuaries. At the conclusion of the session, attendees will be able to describe the current marketplace for dental insurance and current industry issues.

Joanne Fontana is a consulting actuary in the Health practice of Milliman's Hartford office. She has been with the firm since 2006. During that time her clients have included insurance companies including several major dental carriers, employers, government entities, and other organizations. Over the past several years she has worked closely with the National Association

of Dental Plans, the California Association of Dental Plans, the American Dental Association, and other dental clients to assess the impact of health care reform on the dental industry. She has worked with carriers and employer groups on the dental insurance procurement process, and has done core actuarial dental pricing and underwriting work for many dental carriers. Prior to joining Milliman, Joanne spent more than ten years as an actuary with Cigna, where she held various healthcare financial leadership roles. Joanne is a Fellow of the Society of Actuaries and holds a Bachelor of Arts in mathematics and economics from Cornell University.

Tom Murawski is an actuary with the Hartford, Connecticut, office of Milliman. Tom provides consulting services to wide variety of clients in the U.S. healthcare system including insurance companies, stop loss carriers, employers, provider groups, government entities, and advocacy groups. Tom's focus has been on advising clients in understanding the impact and strategic implications of the ACA. His experience includes pricing health benefits, estimating reserves, and projecting financial results. Tom also has significant experience with dental plan pricing for both commercial and Medicaid populations. He has been involved in studies and analyses of the impact of the ACA on dental insurance, experience analysis studies for large employers and insurers, and review of provider fee schedules. Tom graduated from the University of Connecticut with a degree in mathematics and actuarial science.

General Session #2 (4:00-5:00)

Integrating ERM into Strategic Planning and Other Decision Making
Sim Segal, FSA, CERA, President, SimErgy Consulting

Session Description:

The promise of ERM is to better inform business decision making. Unfortunately, most ERM programs are only able to support mitigation decisions. In this session, we reveal the design flaws in common ERM frameworks that result in the inability of ERM programs to support upside decision making in general. We then present a value-based ERM approach that synthesizes ERM with value-based management and discuss how this supports the full range of risk-reward decision making processes. Finally, we discuss how a value-based ERM approach enhances the strategic planning process.

Learning Objectives

1. Identify common ERM framework design flaws inhibiting the support of upside decision making
2. Learn a value-based ERM approach that synthesizes ERM and value-based management
3. Understand how a value-based ERM approach can be applied to enhance strategic planning

Sim Segal is president and founder of SimErgy, a consulting firm specializing exclusively in ERM. With 30+ years of experience in measuring and managing risk, Segal is a globally-recognized ERM thought leader with ERM experience in a variety of sectors, such as insurance; banking; credit cards; technology; consumer goods; biotech; telecommunications; hospitality; energy; services; timberland; education and research; non-profit organizations; and government bodies. Segal is author of *Corporate Value of Enterprise Risk Management* (published by Wiley), which is required reading on the syllabi of the SOA and leading universities in the U.S., Canada, the U.K., Australia, China, Italy, Croatia, and Egypt. Segal also serves as academic director of ERM programs at Columbia University. He is also host of Risk Radio™, a weekly radio program featuring discussions and interviews on ERM topics. Segal has also published numerous ERM research studies. He is a Fellow of Society of Actuaries (FSA) and a Chartered Enterprise Risk Analyst (CERA).