HEALTH CARE REFORM
The first in a four-part series

SUCCESS AS A NICHE PLAYER
An industry speech from the future

SOA’S YEAR IN REVIEW
Accomplishments, financials and more

CERA GOES GLOBAL
An Enterprising Approach to Risk.

Learn more about the CERA credential at www.ceranalyst.org/The Actuary
An Enterprising Approach to Risk.

Learn more about the CERA credential at
www.ceranalyst.org/The Actuary
COVER STORY

12 CERA GOES GLOBAL
History was recently made with the signing of the global CERA treaty.
By Chaundra McGill

FEATURES

16 RESPONSIBLE HEALTH CARE REFORM
The first in a four-part series about the ideal components of a health care reform package.
By Mac McCarthy and Michelle Raleigh

20 SUCCESS AS A NICHE PLAYER: AN INDUSTRY SPEECH FROM THE YEAR 2020
A reflection from the future about what it takes to succeed as a niche player in the life insurance industry.
By Sharon Giffen

24 BALANCE
A discussion about weighing your PD options so you can best shape your career.
By Glenda Maki

29 YEAR IN REVIEW
An in-depth look at all that went on at the SOA in 2009.
By SOA

DEPARTMENTS

6 EDITORIAL
8 LETTER FROM THE PRESIDENT
27 THE SOA AT WORK
BY RONALD POON-AFFAT

JOHN NAISBITT, in his best-seller *Megatrends*, defined a megatrend as a general shift in thinking or approach affecting countries, industries and organizations. An actuary is a professional that uses mathematics, statistics and financial theory to study uncertain future events. Such professionals evaluate the likelihood of those events and design creative ways to reduce and/or manage the risk of adverse events.

So it would appear that the actuarial professional could be counted on to offer an informed opinion about megatrends.

Let us first consider some examples of what is not a megatrend. According to PricewaterhouseCoopers’ Insurance Banana Skins 2009 Report, the top three identified risks were liquidity, credit risk and credit spreads. However these are basically short-term issues that probably have more to do with “not delivering” annual budgets (reading between the lines—not receiving annual mega bonuses) rather than long-term creeping financial issues.

Another example of what’s not a megatrend is the oldie but goodie story about the relationship between the farmer and the turkey. If the turkey were to extrapolate his past relationship with a farmer, he would infer that the farmer is his best friend as he is provided with food, shelter and health care with no strings attached. Until of course Thanksgiving comes around. The turkey naturally would be dead wrong regarding any forecast made in its lifetime.

John Maynard Keynes said, “It is better to be vaguely right than precisely wrong,” and this is where I am convinced that actuaries have the distinct upper hand compared to bankers, lawyers and accountants. Actuaries are still more comfortable being vaguely right. We can still be in our comfort zone pricing whole life policies which include long-term financial, economic and actuarial assumptions. Of course we are often accused of being like the guy standing at the back of a fast-moving train with a high-powered telescope; precisely analyzing where we came from but having no idea about where we are going or even where we are at the moment; a useful reminder that our job description includes peering into the future.

I recently gave a presentation on megatrends and discussed the following:

1) The possible effect of longevity. Everyone thinks that we are all going to be a generation of centenarians, so I decided to shake things up a little bit by referring to the marked rise of diabetes, obesity and pandemics which have the potential to temper future mortality improvements.

2) The increasing financial clout of the older consumer. We need to cater for this growing economic force and alter underwriting and benefits to accommodate this increasing cohort of potential clients.

3) The increasing cost of capital. I undertook a historical tour starting in 1776 when William Morgan undertook the first actuarial valuation of the United Kingdom’s Equitable Life all the way to Solvency II, noting that the cost of capital was a lot less expensive in 1776 and going forward it was not going to get any less expensive, and

4) The consolidation of insurance companies all over the world. Even in the most competitive markets, the top 10 companies still occupy 75 percent of the market share. I urged the smaller companies to consider reviewing their product ranges and distribution channels so as to avoid competing head-on with the industry’s giants.

After that presentation, I came across an interesting and provocative actuarial paper by John Gordon, FIA. John is an actuarial consultant and emerging best-selling author. The paper challenged “the role of the actuary in a changing world.” In his wide-ranging paper John identifies some real megatrends...
which include risks that pose global threats and threaten societal collapse; issues that hold the key questions for tomorrow.

John thought that it would be rather interesting if actuaries gave a shot at including the following off-the-charts factors within their risk maps and discussed their potential impact. For example, the following:

1) Continuing global population growth,
2) Global warming,
3) The risk of alternative fuels not being able to compensate for the end of oil. Global fuel shortages and an ensuing energy crisis,
4) Shortage of food and potable water,
5) Escalation of conflict, and
6) The end of continuing economic growth as we know it.

There is always a lot of discussion of the role of the actuarial skills in a wider social context. Why is it that we do not consider such risks within our models or academic discussions? Is it that we think that we are not qualified (if not us, then whom)? Is it that we believe it is not in our profession’s mandate to do so? Is it that we think that such risks are unimportant? I reckon that if we started to address such global issues, then we would get an invitation to appear on Fox News, quicker that Bill O’Reilly can say, “the spin stops here.”

What could be more important than the analysis of risk factors mentioned above? Let’s allow ourselves the luxury to daydream a little. Imagine if the slighted, brainy guy in a future Hollywood summer blockbuster is an actuary. He correctly identified the risk that was threatening the world’s existence and projected the ultimate consequences. He then designs a creative way to reduce the likelihood and decrease the impact of such an adverse event. Our actuarial hero then ends up saving the world and gets the beautiful girl.

Ronald Poon-Affat, FSA, FIA, MAAA, CFA, is the Life & Health Director of Munich Re Brazil and a board member of the SOA. He can be contacted at spoonaffat@munichre.com.

For more discussion and information on John Gordon’s paper “On the Role of the Actuary in a Changing World” visit www.acturage.com
Letter From The President

BROADER ROLES FOR ACTUARIES

BY MIKE MCLAUGHLIN

WITH THIS BEING my first column of the New Year, I thought it would be a good time to take a look at opportunities for the members of our profession.

Actuarial skills and methods have been under-utilized in the business world, and there are many new areas in which we can use our knowledge. In the last issue, I discussed the changes taking place in the traditional markets we serve. These changes are making it even more important to look at new areas of growth—or opportunity—for actuaries. In this article, I’ll give examples of the kinds of work opportunities that are out there, and then I’ll cover the kinds of skills we need to be successful in new areas.

AN ACTUARIAL CONTRACT

Let me give you an example of a complicated contract in which a price is needed:

These contracts are sold individually, but they number in the thousands. Sales are made over the Internet, or face-to-face with the customer in an office. Either way, the contracts carry a high acquisition cost made up of sales commission, new business/administration department expenses, and costs of third parties.

The acquisition cost is recovered out of recurring monthly charges. The contracts are profitable, so we don’t want to report a loss at issue—instead, we’ll hold an intangible asset, which amortizes over time. The contract typically runs several years, so we have to consider the time value of money. The contract may end prematurely before running its full term, due to mortality or lapse, so we have to consider multiple decrements. The customer may voluntarily terminate the contract, in which case we assess a surrender charge.

Several different plans are offered, with longer or shorter terms. Optional extras can be added to the plan, such as insurance, at extra cost. Additional family members may be included. If multiple features are added, we would give a volume discount. Many contracts include price guarantees for a period of time, after which repricing may occur. And of course the price is subject to competitive pressures!

The monthly fee recoups acquisition costs, and pays administrative expenses, taxes and the cost of capital, over time. Interest rates are unpredictable, so hedging may be necessary. Sound complicated? Sound like an actuary would be needed to price and reserve for such a contract? Absolutely! But this is not an insurance contract. This is a typical cell phone contract. It carries many of the same complexities that affect insurance contracts—if not more! Telecommunication and technology companies that serve customers directly, such as cable TV companies and Internet service providers, all need actuarial skills, knowledge that our profession already has. Technology companies are also notoriously capital intensive—could actuaries play a role in forecasting, modeling and capital management there?

In a few countries—Australia and Mexico come to mind—actuaries are already working in technology companies. One colleague of mine served a major telecommunications company in Australia, working on new product development, pricing, analyzing churn patterns, understanding multi-product customer behavior, bundled offer pricing, customer profitability studies, comparative distribution channel economics, cost allocation and business cases for major expenditures. Why don’t actuaries do this in North America?

CUSTOMER VALUE STUDIES

Picking up from the technology example above, many industries serve customers directly, with long-term relationships—insurers, banks, telecommunications, utilities, even the government. Customers sign on, sign off, need services, pay recurring fees, and behave in complex ways, some rational and some not. In serving these customers, most businesses use some level of analytics, and the techniques used can be rudimentary, compared to actuarial methods.

Actuaries use embedded value (EV) methods (or derivatives of EV methods) to determine company value. In this simplified example of
an actuarial appraisal approach (see Chart 1), enterprise value is shown as the horizontal dotted line. It is composed of capital and surplus, plus the value of customers. In this model, the value of customers has been allocated to individual customers, based on the profitability of the contracts they own, or are likely to purchase. Customers paying a higher price, or with low-risk characteristics, will contribute relatively more value. Individual customers are then ranked in descending profitability order, and plotted horizontally.

Customers who contribute larger profits cause the curve to increase rapidly at first. Customers who contribute little profit cause the curve to increase more slowly, and then level out. Customers who contribute to losses, those toward the right-hand side of the curve, actually destroy enterprise value. This kind of analysis points the way to better underwriting, more accurate pricing or increased fees for services to the least valuable customers.

A MORTALITY STUDY—AT A GAS UTILITY

Some years back, I worked on a project for a major gas utility. They had installed thousands of pieces of equipment underground—pipes, joints, valves, switches, meters and more. They were seeking a rate adjustment, and needed to calculate the average lifetime of the various pieces of equipment. Depreciation costs were a major component of the utility rate.

The company had written records of every piece of equipment installed, going back to 1902. The records were legible and accurate. The records showed a code for each type of equipment, the date installed, and the date removed from service, if it had been removed. My team performed a classic mortality study. The date of installation was the “date of birth” and the date removed from service was “death.”

The data was very well behaved, and the results were smooth and credible. The lx function curve was typical of mortality curves—relatively rapid decline early on, with relatively high defect rates initially. Then in the middle years the curve leveled out. Finally, in later years, the curve became steep again, as mortality rates rose to high levels. We determined the average lifetime of one of the main pipe sizes as 54 years.

The alternative approach to determination of average lifetime was an engineering method. Labeled the “rust pit depth” method, the method involved excavating a hole in the ground, measuring the depth of rust pits on the pipe or valve in question, and extrapolating as to how long before it would need to be replaced.

In this particular actuarial study, the client company did not like the results, because it had estimated the average lifetime as 33 years. Our results meant lower depreciation costs than estimated, hence less justification for an increase in utility rates! But our results were highly credible. This is a classic application of actuarial methods, and it seems to me this would have wide application in manufacturing or certain other industries.

PREDICTIVE MODELING

Actuarial training includes statistical methods, and almost all actuaries are very capable of multiple regression analysis. This tool identifies correlations between the variables affecting an outcome. Now more commonly called predictive modeling, there are many applications in insurance.

For example, P&C actuaries use predictive modeling for underwriting purposes, to better match the actuarially sound rate with corresponding acceptable risk parameters on both commercial and personal risks. For example, classification ratemaking in auto insurance has extended not only to causal risk parameters such as the driving record of the insured, but also to perceived non-causal relationships, such as the insured’s credit score. In this case, predictive modeling has signaled significant correlations with an insured’s credit score and an insured’s propensity to be in an accident.

In addition, P&C actuaries are also using predictive modeling tools to aid in claim settlement purposes. By looking at prior claim history and considering many factors,
certain claims can be classified as being more or less complex, more or less likely to be fraudulent, or more or less uncertain as far as ultimate settlement is concerned. Using these tools, claims can be more appropriately managed. Some claims may be assigned to an expedited process, while the relatively few, more difficult claims would be assigned for detailed review. As such, predictive modeling not only enhances the effectiveness of committing the appropriate resources to the claim adjudication process, but also enhances the traditional actuarial role in loss reserving accuracy.

Similar techniques are now being applied in life insurance. Of course, life insurance has much lower claim frequency than, say, auto or homeowner’s insurance! But there are many underwriting risks that are amenable to predictive modeling techniques. Predictive modeling is also used for marketing and customer retention purposes.

As an example, an engagement team compared traditional underwriting risk classification to a predictive modeling technique. The predictive modeling approach used company-provided basic demographic information (name, address, no social security number, no medical information) for several thousand customers. This first step was to amass as much data as was available on these individuals. The engagement team then matched the basic identifying information as provided to external data sources. The sources were publicly available for a very small fee, when purchased in quantity. The sources included public records on property ownership, driving record, credit history and purchasing patterns. Lifestyle patterns were identified from small-area (e.g., zip code) characteristics. Income, investments, net worth, employer, occupation and level of education could all be derived from the external sources. Any such match of external data, of course, contains inaccuracies or incomplete data points. However, the number of actual and derived data points number in the several-hundreds. With that much data, reliable trends could be found.

In the second step the engagement team ran the analysis and classified customers into 10 groups, or deciles, of increasing risk. The customers were also classified into 10 groups in accordance with full medical underwriting, in which the client company had access to medical history, family history, medical (or paramedical) examination, build, body fluids, telephone interview and treadmill tests.

The similarity of the classification was remarkable. Most contracts were classified in the same decile. Very few were classified more than one decile differently. The disparity in cost was equally remarkable! After initial setup, the cost of additional analysis was marginal. The predictive modeling technique allowed simplified underwriting at low cost and high speed, with few data inputs, to be applied to the top six deciles. Full individual medical underwriting was used where the models indicated lowest four-decile ranking.

ENTERPRISE RISK MANAGEMENT

Actuaries and ERM, actuaries and ERM, go together like a horse and carriage. Well, maybe I’m not a songwriter, and it definitely doesn’t rhyme, but it’s true. Actuaries have managed risks for years, including risks such as mortality, morbidity, property/casualty and changing interest rates. Our risk management resume is pretty impressive. In the midst of the greatest financial crisis in decades, few insurance companies have failed thanks to conservative regulation and generally good risk management.

Actuarial risk management over the years has quantified risk, mitigated it and exploited it by charging a premium over the cost of the risk and expenses. As actuaries we estimate and hold capital in proportion to the risk exposure, gradually reducing capital over time as we are released from risk. Now, with ERM, we’re looking at a wider range of risks, and looking at risks in totality. ERM is a logical extension of time-tested actuarial methods. It’s a great opportunity to extend the reach of our profession outside the traditional areas of pensions and insurance.

WHERE ELSE CAN WE USE OUR SKILLS?

There are many other areas in which we can use our actuarial skills. Actuaries have expertise in expense analysis. We might make great sports statistics analysts. Airline ticket pricing structure is very complex—could actuaries optimize the process? Where did operations research go?

I know of a few pioneering actuaries who have broken through the fences and are grazing in fresh pastures. This magazine has featured several pioneers in our profession, such as Laura Bennett, FSA, who is CEO and founder of Embrace Pet Insurance. Rudy Karsan, FSA, developed software to help companies retain valued employees. Another actuary, David Braun, FSA, manages $14 billion of funds for insurers.

Our profession does not yet have much practical experience outside of insurance and pensions. But with more knowledge and experience in different industries, we could apply our existing technical skills much more broadly. I’m convinced that there are huge opportunities here. What opportunities do you see for our profession? I invite you to share your ideas at membercomms@soa.org.

Mike McLaughlin, FSA, CERA, MAAA, FIA, is president of the SOA. He can be contacted at mmclaughlin@soa.org.
Life & Annuity SYMPOSIUM
NEW DECADE. NEW DIRECTIONS.

MARRIOTT TAMPA WATERSIDE
TAMPA, FL
MAY 17-18, 2010

Two full days of offerings
Variety of session lengths
In-depth coverage of important topics
More networking opportunities
An optional third day with seminars

SEMINARS
MAY 19, 2010

How Will PBA Rock Your World?

Pricing in 2010 and Beyond: The New Frontier

Predictive Modeling for Life Insurance: How Actuaries can Participate in the Business Intelligence Revolution

BE THERE. MAY 17, 18 AND 19. TAMPA.
Visit the SOA.org Web site for more information.
HISTORY WAS RECENTLY MADE in India. The SOA’s Chartered Enterprise Risk Analyst (CERA) credential was accepted globally, bringing more prestige to those who have achieved a CERA designation.

In November 2009, 14 actuarial organizations from around the world converged in Hyderabad, India, signing a global treaty establishing the CERA credential as the globally recognized enterprise risk management (ERM) credential. This is the first time in any profession that multiple organizations have banded together to offer their members and candidates a specialized credential. This is the second time the Society of Actuaries has made history with the CERA credential.

The first time was in 2007 when the SOA launched the CERA credential, the Society’s first new designation in 58 years. The SOA’s vision for the credential was to broaden the reach of the actuarial profession and provide the global marketplace with a preeminent standard of ERM practice. “Our profession is relatively small, compared with, say, accounting, or other professions that may provide risk advisory services,” explained Mike McLaughlin, FSA, CERA, president of the SOA. “Although we are highly trained and well recognized, we work mostly in the insurance sector. As we grow in number, we can reach outside the insurance sector, expanding into broader financial services and other industries.”

The signing of the global treaty is a major historical event for the actuarial profession. SOA leaders collaborated with the like-minded leaders of participating actuarial organizations to broaden this vision. “This move is a strong endorsement by the global actuarial profession of the need for an international ERM credential,” said McLaughlin. “It sends a strong message to employers and candidates that the skill set of actuaries provides...
significant insight and risk management expertise, especially in this time of increased globalization.”

Globalization was indeed a key impetus in the creation of the CERA credential. The landscape of risk management has become more complex, primarily due to businesses expanding their operations beyond the confines of one country or continent. Internationally, actuaries identified the need in the marketplace for ERM expertise based upon the fundamentals of actuarial science. The global financial crisis reinforced the need for proper risk management to mitigate economic catastrophes, only increasing the sense of urgency. “The financial crisis has shown us that we are truly working in one world,” said Dave Ingram, FSA, CERA, senior vice president at Willis Re, Inc. “What occurs in one part of the world impacts the rest of the world.” So what better way to accommodate the increased globalization and need for ERM best practices in the marketplace than the actuarial profession responding in kind?

THE GLOBAL TREATY IS MUCH MORE THAN 14 ACTUARIAL ORGANIZATIONS AGREEING ON A COMMON SET OF STANDARDS. …

The Global Enterprise Risk Management Designation Recognition Treaty itself embodies the crucial tenets of ERM: holism, integration and focus on the future. The global treaty is much more than 14 actuarial organizations agreeing on a common set of standards to render a singular credential. It is an inflection point in the evolution of the actuarial profession. The participants of this treaty, as stated in its preamble, “consider that developing and facilitating the international mobility of members of the actuarial profession and the exchange of ideas, knowledge and actuarial scientific experience will lead to a more capable, robust and influential actuarial profession.” This consideration demonstrates the value of each participating organization’s insight and contribution to the further development of ERM knowledge and best practices, propelling the actuarial profession as leaders in the global ERM arena. Furthering this commitment to ERM and the profession, the participating actuarial organizations utilize the four fundamental elements of a successful integrated ERM framework: Strategy, Operations, Reporting and Compliance.*

STRATEGY

In order for an organization’s ERM program to thrive, it must encompass high-level goals that align with its mission. The primary objectives of the global treaty are to facilitate free movement of actuaries internationally and increase the influence of the actuarial profession in the sphere of ERM. This agenda is affirmed by Francis Sabatini, CERA, the SOA representative to the Global Steering Committee. “The credential will be recognized globally, which is very significant because it will allow CERAs to continue practicing all around the world, but with an increased recognition,” said Sabatini. “One of the SOA’s objectives for the CERA is to increase the number of credential holders. This will further motivate fellow actuaries to obtain the credential.”

OPERATIONS

To ensure the effective and efficient use of resources, a Treaty Board has been established. Each of the participating actuarial organizations will be represented by an appointed member, who will serve a three-year term. “The SOA will be actively participating in establishing and maintaining the governance of the new global credential,” said Sabatini, who will serve as the SOA’s first Treaty Board member. “All participating actuarial organizations involved in creating the global credential were proponents of strong governance around expansion of the credential. We will have an active role in maintaining quality and managing the CERA brand.”

REPORTING/COMPLIANCE

A Review Panel has been established to ensure a strong quality assurance program in accordance with the global treaty to maintain the value of the CERA credential. The initial evaluation process, conducted by trained external reviewers, will include review of participating associations’ processes used in qualifying candidates for the credential and a thorough review of the learning objectives, syllabus and learning materials on which the award will be based. This initial process will be followed by an annual review, which will include testing processes, pass rates and an assurance of quality process. To further ensure the quality of the credential, an in-depth review will be conducted every three years. Each participating organization will not only abide by the educational standard
set forth by the global treaty, but the brand strategy for the credential.

Upon the launch of the CERA credential, the SOA established a brand strategy to ensure that the credential is recognized as the preeminent standard of ERM expertise. The global treaty reinforces the importance of an internationally consistent, yet locally responsive brand approach by requiring all participating actuarial organizations to comply with the established brand guidelines. This branding effort will deliver a clear, consistent message internationally, but will also strengthen the credential’s brand recognition in the North American market as three additional actuarial organizations—Canadian Institute of Actuaries, Casualty Actuarial Society, Colegio Nacional de Actuarios A.C. (Mexico)—will promote the CERA credential brand.

“The SOA will benefit from a stronger brand and increased intellectual capital,” said McLaughlin. “We’ve already gained global recognition for our pioneering role in creating the CERA credential. We are now also learning from other actuarial organizations. For example, as ERM learning objectives evolve, over time we are likely to add content related to property and casualty risks to our CERA syllabus. This will further enhance our credential.”

The new global CERA credential not only provides a platform for increased learning among actuaries, but will help alter the view of actuaries. “Actuaries will have a world-wide perspective on enterprise risk management and can be acknowledged as ERM leaders around the world,” said Ingram. “This will help actuaries to be viewed as one united profession.”

Chaundra McGill is marketing and communications project specialist—CERA for the SOA. She can be reached at cmcgill@soa.org.

“The integrated enterprise risk management framework referenced was issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) to help businesses and other entities assess and enhance their internal control systems.
**COST CONTROL/EFFICIENCY**

1. Reduce Incentive for Overutilization
   - patient
   - provider
2. Malpractice
3. Reduce Re-Admissions
4. Error Reduction
5. Price and Quality Transparency
6. Payment Reform
7. Cost Shifting and Uncompensated Care
8. Health Information Technology
9. Accountable Care Organizations and Networks
10. Improve Personal Health
11. Role of Public Health

**FUNDING/FINANCING**

1. Role of:
   - Medicare
   - Medicaid
   - other safety nets
2. Paying for Coverage for the Currently Uninsured
3. Taxation
   - unhealthy foods
   - high-cost benefits
4. How to Capture Cost Savings of Other Initiatives
5. Government Subsidies

**ACCESS TO CARE**

1. Access to Insurance Coverage
   - mandates
   - adverse selection
   - risk rating
   - minimum benefit packages
2. Access to Health Services
   - primary care
   - technology
   - urgent care
   - non-physician professionals
3. Barriers to Access
   - geography
   - wealth
   - ethnicity
4. Patient Responsibility and Education
5. Government Subsidies
6. Public Option or Alternatives
An interesting thing happened last November at the Conference of Consulting Actuaries’ (CCA) Annual Meeting in Tucson, Ariz. A diverse group of actuaries, approximately 40 in number and mostly from the health care discipline, gathered in a room for one hour and 15 minutes to discuss health care reform. That, in and of itself, would not be unusual given that practically everybody in the United States seems to be engaged in the debate over what they like, and dislike, about the various reform proposals coming out of Washington.

What was different at this workshop, besides the fact that the participants were uniquely qualified to address health care issues, was that the purpose was not to argue over the merits of a particular bill in the House or Senate. Rather, the purpose was to allow ideas to be shared about what actuaries see as ideal components to be included in any reform package. The participants were asked to build a reform package from an actuarial perspective, starting with a clean slate and suggesting ideas for fixing what most agree is a flawed system.

Of course, there was no way such a monumental task could be confined to a mere 75 minutes, so we took notes and carried the discussion over to the CCA’s Health Reform Taskforce (HRT), which has been meeting by conference call on a weekly basis. This

FOOTNOTES:

1 As of the date of the workshop, the House of Representatives had just passed America’s Affordable Health Choices Act, and Senate leadership was still struggling to merge the HELP committee bill and the Finance Committee bill.
Either way, a public plan could introduce inefficiencies in the market that would lead to unnecessary added costs, which will be paid by the working public either through higher taxes or higher premiums.

Possible ways to provide a public plan that avoids these concerns include expansion of the current Medicaid program or enhancing (or emulating) the Veterans’ Administration system to provide care to the uninsured through a system of public hospitals and community care clinics.

The concept of subsidies for low income Americans to purchase private insurance was discussed, but there was much concern over the ability to adequately set premiums and over unintended consequences of government requirements for plan design that are usually associated with such proposals.

In addition, the group discussed the access to care issues that exist now and are projected to get worse in certain provider sectors, especially primary care physicians. This shortage is contributing to the long existing issue of the public using the emergency room for nonemergency reasons. The group discussed the benefits of retail clinics and urgent care centers and the need to have after-hours access to such facilities.

One recommendation for dealing with this was to initiate a system where the government stipulates, and funds, a standard minimum package of benefits, to be provided by private carriers. Insurance carriers would administer the benefits and be free to enrich the standard package and to set their final premium rates. Each individual would select the plan best for him or her on the basis of benefits, premium rates and provider network. This could operate much like the current Medicare Advantage program.

**COST CONTROL/EFFICIENCY**
It was generally agreed that any reform effort must include, as core elements, measures that have a reasonable expectation to lower health care costs.

The opportunities for eliminating waste in the system seem to be many and varied. These include:

- Reducing medical errors, through initiation of, and adherence to, data-backed clinical guidelines;
- Reduction in the number of unnecessary and possibly harmful tests and procedures through tort reform, coupled with elimination of perverse financial incentives in the current payment system;
- Greater efforts to weed out fraud and abuse;
- Changing the way providers are reimbursed so focus is placed on improving the health of the patient;
- Public health initiatives to address the burgeoning incidence of obesity and inactivity, and other societal/cultural issues that contribute to health costs;
- Greater transparency of provider prices and, most especially, quality measures; and
- Increasing personal responsibility for unhealthy behavior and unnecessary use of medical resources through plan design and education.
Health information technology and electronic medical records were offered as keys to provide the necessary data to develop, monitor and refine the above initiatives.

Additionally, the group discussed how increasing access to care by providing insurance would reduce the number of Americans that are uninsured and, therefore, decrease the country’s uncompensated care. This will reduce the need of the providers to cost shift where traditionally the enrollees who purchased private insurance pay more to cover the provider expenses not covered by those in public programs.

FUNDING/FINANCING
There was agreement on one other concept: financial constraints dictate what we can and cannot afford to do. Many in the room were of the opinion that cost control initiatives should be given first priority and only as savings from these are realized does expanded access for the uninsured become economically feasible. Others felt that some expansion should take place in the first phase, but generally agreed that the government should not require rich and unlimited benefits to all individuals. Opinion was divided as to whether priority should be given to a safety net in the form of high deductible insurance to protect families from bankruptcy, or to an aggressive, preventive maintenance program to head off avoidable illness.

Regardless of the priorities and scope of a reform initiative, the group was realistic in expecting that there would likely be significant additional costs that must be funded from outside the health care system. Taxing health insurance, or certain health care components, may support certain policy objectives, but will result in increases in the overall cost of health care, frustrating efforts to lower it. There were advocates for taxing unhealthy foods (for example: those with high fat and sugar content or with low nutritional value), which would promote healthier diets. While these may be appropriate goals, such taxes are likely to be insufficient and difficult to administer, not to mention somewhat regressive with regard to income. Some form of broad based tax option will probably be necessary, either income/payroll based, like Social Security, or a general tax on goods or services.

CONCLUSION
Sometimes it seems that there are as many actuarial opinions as there are actuaries in the room. The session was successful in that we were able to openly share ideas and work through alternatives. Intelligent discourse on difficult topics by knowledgeable individuals is the key to finding solutions that work and are sustainable. We are sure that many were exposed to sides of the issue that had not previously occurred to them. Some opinions were altered if not reversed; others felt vindicated that they are not alone in their positions.

The next step is to use this new knowledge or validation to become proactive in helping legislators, businesses and health care providers find ways to improve the health status of our fellow Americans. Whatever your position, actuaries have the perspective and tools to make a positive difference, but we must speak out not only as a group, but also as individuals. Bear in mind that health care reform will not end if and when Congress passes a bill—the health care system is the best candidate for continuous quality improvement that can be imagined.

Note once again that this article was written from the authors’ perspectives. Others in attendance may have perceived the discussions differently. We invite those actuaries to share those views with us so they can be incorporated into the dialogue.

Future articles in this series will separately address access, cost control and financing in greater detail, taking into account HRT discussions and feedback from this article. We encourage readers to share their thoughts on these three major themes, or other health care reform related ideas, and we will attempt to incorporate them into the upcoming articles in the next three issues of The Actuary. Please send your comments and suggestions to Sara Teppema, staff fellow for Health at the SOA at steppema@soa.org.

L.J. (Mac) McCarthy, FSA, MAAA, FCA, is president of McCarthy Actuarial Consulting, llc. He can be reached at Mac@McCarthyActuarial.com.

Michelle Raleigh, ASA, MAAA, FCA, is managing member of schramm.raleigh Health Strategy. She can be reached at michelle.raleigh@schrammraleigh.com.
It is with great pride that I speak to you about our fraternal benefit society, The American Society for Sustainable Living—or Sustain. Before I answer the question that is the impetus for this speech, “How did we surpass our own expectations for success over the past decade?” I need to give you some background. Sustain sells life insurance to support our members’ families in times of great need; in turn, the tax-free profits we generate are dedicated to furthering our mission of enhancing America’s desire and ability to lead lives that will nourish our planet. Re-greening of the earth is a goal we can all relate to today; Sustain sponsors activities, programs and education to engage member families to change their daily lives. Living a greener life has become increasingly popular since the turn of the century—people are willing to volunteer and to pay more for goods and services that support sustainable living.
In the last 10 years, virtually every facet of our business has changed—distribution and administrative operations and, importantly, how we assess and manage risks to better use our capital.

In 2010, we committed to truly align every activity to our mission. Our market demographic is the Internet generation who transact their personal business and social lives online, and who want to contribute to preserving our earth for future generations. This is the middle-income market—ordinary people with straightforward insurance needs. With a low average face amount and premium and a limited product line including term and whole life insurance, we had to become a low-cost provider to survive.

Armed with that vision, we retooled our new business and administrative processes to automate everything possible. In 2011, we introduced electronic applications—the application is completed online during the sales call. We used tele-underwriting during the application process along with electronic underwriting tools. With that, we achieved about 50 percent of issues requiring no further intervention. In 2013, we introduced artificial intelligence (AI) into the process, reducing to 5 percent the applications that cannot be processed automatically. For those cases, the judgment of a skilled underwriter is needed; we buy that expertise from a service provider on a variable cost basis. In 2015, we eliminated the need for a sales intermediary—applicants can complete forms themselves and now 75 percent of applications are submitted directly. With real-time processes, once the application is complete and pre-authorized deductions from their bank account are set, clear cases are issued electronically. Formal contracting is complete upon receipt of their biometric signature using the retinal scan software that has become standard for online identification. Compliance monitoring is easy; AI won’t misbehave, and electronic records are complete. Misrepresentation is reduced, as AI is persistent to ensure consistency of electronic health data and answers to questions. Post-issue service is almost exclusively self-service, online in real time—but there are exception cases. In addition, we have legacy business, administered on an old system, requiring some service staff. We built some automation to front the old system, and will let it run-off there.

To achieve all this, we have invested significantly in technology and AI. Looking for early payback, we found that in-sourcing allowed us to increase volume quickly. Today, we are one of the leading industry providers of the electronic application-through-issue process. Our partner companies are typically small. We can charge a variable cost above our marginal cost, but still below industry average. Our partners retain in-person services, keeping control of live customer interaction.

Distribution has evolved in concert with our processes. Only a decade ago, we were in the independent agent market, competing with other providers for market share. Our mission was interesting to them, but not sufficiently compelling to sell at a higher price or to reduce their commission demands. We were incurring high marketing costs including the travel necessary to attract distributors. This was not well-aligned with our mission and is no longer a source of sales.

A small group of brokers embraced our mission and became dedicated to us. These personal producing general agents (PPGAs) sell to and service our customers who want the personal touch, generally delivered by voice or video, and they assist in their local communities to deliver the Sustain programs. For this, we are happy to pay their commission expectations.

Early on, we experimented with social networks, such as Facebook. These avenues provided some success at raising awareness—people were drawn to our mission—but few sales resulted. That changed in 2015 with the commercialization of Second Life, the virtual online world that was introduced as a social network in 2003.
We established a presence in the Sustainable Living Pavilion in Second Life. We had an overwhelming number of visitors, and we were able to sign many up as non-insurance members. We then expanded our presence so visitors to the pavilion also knew that we sell insurance, and that buying from us would support the cause. Our online processes were well-aligned with these folks—it is their preferred way to do business. Even so, early on, we stumbled. Each avatar in the Pavilion was a staff member—like other avenues of sales, we couldn’t scale to meet demand. When AI was expanded to include the sales process in 2018, we reached near unlimited scalability for new business.

Now, there is more to running a profitable organization than highly cost-effective administration and distribution. The advent of a principle-based approach for reserves and capital and International Financial Reporting Standards in the early part of the decade caused us to review our reporting methodologies, too. Importantly, we wanted and needed to have a better way to model and assess risk that could also be used in everyday business decisions.

In 2010, we retained a consultant to build a data store to feed a comprehensive model of our business. From there we layered business intelligence that is executive friendly, allowing executives to examine any dimension of the business, resulting in broad and deep understanding of the cost structure and profitability of each product.

The projection model is built for stochastic-on-stochastic projections. These give us reserves and capital under the principle-based approach. Rapidly, we recognized the need to develop in-house expertise in running the model. Now our risk managers run comprehensive sets of stochastic scenarios, providing a very rich data store. Sampling became necessary to get results at a level of detail that is useful. Now AI controls sampling to access those runs and can provide quick estimates, with appropriate ranges of outcomes based on the results of the larger body of data. This is accessible for timely operational decision making. We focus our risk analysis on the tails, both in economic conditions and in the behavior of our insureds. We no longer discard any economic outcome as tail-risk—anything is possible!

I should comment briefly on some other aspects of our business. We have made a practice of outsourcing to experts any function that requires specialized skills in limited quantities. We cannot afford to attract and retain these professionals and provide the back-up necessary to reduce our dependence upon a handful of individuals. As mentioned, underwriting is one such skill. Additionally, we’ve retained an investment firm to handle our assets—we provide modeled cash flows and duration targets, and monitor performance to agreed-upon benchmarks. Internal audit, payroll and human resources are other examples of outsourced activities.

So, ladies and gentlemen, that is how we exceeded our own expectations of success—we aligned the right mission and investment with the right technology for the time. Because of this we have seen phenomenal sales growth, with unit costs of both acquisition and maintenance shrinking. The income from in-sourcing activities funds ongoing technology research, as we strive to cost-effectively keep up with the interaction preferences of our members. Our investment in risk modeling has paid for itself many times over, as we have strictly managed within a fairly narrow risk appetite and avoided some of the losses experienced in the industry due to changing customer behavior in volatile economic times that are the new normal. Lastly, we enjoy tremendous loyalty from our customers—they want to see us succeed, because that means their beneficiaries, their children, will inherit a better planet along with their insurance proceeds.

To wrap up, I want to comment on our most pressing issues. First, how do we keep satisfy-
BALANCE

BY GLENDA MAKI
When it comes to your professional development, each year you might attend a meeting or two, participate in webcasts and take advantage of employer-sponsored training. But have you really thought about how your professional development choices affect your career?

You've heard it before—your education does not conclude when you receive your credential. Professional development is truly a continuum of education that helps you acquire new skills and stay on top of the latest developments and techniques in your field.

This is where the SOA Competency Framework comes in.

You've (hopefully) read about the Competency Framework in previous issues of The Actuary.

Here's an explanation of how to weigh your professional development options so you can best shape your career.

The result of the process is the Competency Framework, which consists of eight competencies (knowledge, skills and abilities) required for the actuaries of today and tomorrow. Those competencies are:

- Communication
- Professional Values
- External Forces and Industry Knowledge
- Leadership
- Relationship Management and Interpersonal Collaboration
- Technical Skills and Analytical Problem Solving
- Strategic Insight and Integration
- Results-Oriented Solutions

The SOA recently conducted research among employers to better understand the competencies and capabilities required of risk management professionals.

The executives interviewed said strong communication skills, business experience, and diversity and breadth were as important as having technical and quantitative skills.

“Essentially, all of the competencies are opportunity makers or door openers for success,” says R. Dale Hall, FSA, CERA, MAAA, vice president and chief actuary at COUNTRY Financial. He adds that using a competency framework to guide your career creates balance by allowing one to couple actuarial skills with the other competencies needed for success.

To put the Competency Framework into action, the SOA has taken a twofold approach:

- Providing a basis for the SOA to develop and deliver a comprehensive professional development program for its members, and
- Providing a structure for an individual’s professional lifelong learning.

The SOA Competency Framework is now the blueprint for all of the SOA’s professional development efforts.

This includes developing and reorganizing the SOA’s 2010 professional development programs to cover the range of competencies, beginning with the new Life and Annuity Symposium this May.

The Life and Annuity Symposium was created in response to the professional develop-
ment needs of members. By combining the Life Spring Meeting and the Product Development Symposium, the SOA is now able to offer two full days of offerings to include extended sessions, in-depth coverage of important topics, more networking opportunities and an optional third day of seminars.

**SKILLS LIKE COMMUNICATIONS AND RELATIONSHIP MANAGEMENT ARE IMPORTANT COMPETENCIES IN ANY POSITION.**

The new Life and Annuity Symposium—and all future meetings—will offer a greater selection of programs and areas of skill development. In addition, members will be able to easily identify sessions and the competencies to which they pertain.

However, the Competency Framework doesn’t just apply to meetings—the SOA is integrating its principles into all curricula, including all meetings, webcasts and e-courses.

Of course, the SOA can’t (and shouldn’t) be the source of all professional development needs. Opportunities for professional development are everywhere—and they aren’t necessarily in a traditional classroom or session format.

It can be as simple as reading and taking notes on a few one-page articles, or as complex as a weeklong executive development program. Or, as Hall says, “It’s about finding ways to get yourself around the people who exhibit the skills you need, and learning from them.”

**STRUCTURE FOR LIFELONG LEARNING**

“My mantra to all job candidates is that you need to be the CEO of you, and take a proactive stance in your career,” says Margaret Resce Milkint, managing partner at The Jacobson Group.

Skills like communications and relationship management are important competencies in any position. Milkint adds that with many of the competencies, proficiency can’t be conveyed through a resume, but when it comes time for the interview or advancement, those skills will set you apart from the rest.

How do I identify my own strengths and gaps? Of course, strengths and gaps vary from person to person. The Competency Framework is designed to help individuals determine where their own gaps are and then formulate a plan to fill those gaps.

In early 2010 an online self-assessment tool will be available which will allow you to rank your proficiency among a series of skills.

Once you determine where your own strengths and gaps lie, you will then be able to create a professional development plan designed to enhance your skills in specific competency areas.

Companies from McDonald’s to 3M to Allstate and COUNTRY Financial have competency frameworks in place to ensure growth and develop talent. Steve Marco, ASA, CERA, MAAA, vice president and managing actuary at Genworth Financial, is in the process of developing a competency framework at Genworth. He adds that not only is it important to get to learn new skills, but often the benefit is in the follow-up and reinforcement rather than in the learning itself.

**CONCLUSION**

The process of building the Competency Framework identified that professional development is about much more than staying current on the latest models and regulations.

Competency for today’s risk professional is about a complete package of skills that includes qualitative skills and, just as importantly, business skills such as leadership, communication, strategic insight and analytical thinking—all are necessary to create and implement results-oriented solutions.

After all, as Marco says, the business world is changing. “It’s not like the old days. Future growth is not assured once you get your FSA.”

Glenda Maki is a senior communications associate at the SOA. She can be contacted at gmaki@soa.org.

For more information on the SOA’s Competency Framework and professional development opportunities, visit www.soa.org/professional-development/competency-framework.
The SOA At Work

SOA RESEARCH GOES TO WASHINGTON

THIS MONTH’S SOA at Work column describes several important developments at the SOA. First, we’ve completed an important report on lessons learned from the financial crisis and, more importantly, worked with the American Academy of Actuaries to ensure these findings were shared with Congressional staff working on this issue. There is certainly much more the profession can do in this regard, but this is an example of bringing actuarial expertise to bear on an important societal issue through research. As we begin 2010, we anticipate focusing additional research attention on such major social issues, as well as on finding ways to better communicate research findings to those who can best use them.

We also describe the success of this year’s introduction of virtual sessions at several SOA meetings and our plans to offer more such sessions in 2010. As an aside, this is only one of a number of improvements the SOA is looking to offer in its professional development activities in 2010. Recognizing the critical importance of giving members access to high quality professional development opportunities, as well as the ongoing expense pressure our members and their employers face, the SOA is planning an expanded list of webcasts, many featuring anticipated new research results. We’re also forming the new Professional Development Committee which is charged by the Board of Directors with overseeing a range of new developments in the SOAs PD offerings. Expect to see a number of new efforts in this area beginning in 2010.

Finally, we describe our project to combine the Life Spring Meeting and Product Development Symposium. This is another specific example of new thinking we’re applying to our professional development opportunities. We have high hopes for the redesigned meeting and for all our new professional development activities in 2010.  

— SOA Executive Director Greg Heidrich

SOA ROLLS OUT NEW LIFE AND ANNUITY SYMPOSIUM

Moving in a new direction, the SOA has taken the best of two meetings—the Product Development Symposium and the Life Spring Meeting—and combined them to create an event of greater value. This new symposium features two full days of offerings, extended session lengths, in-depth coverage of important topics, more networking opportunities and an optional third day with seminars. Get full details and register at www.soa.org. Just click on event calendar.

2009 VIRTUAL SESSIONS’ SUCCESS MEANS MORE 2010 VIRTUAL SESSIONS

With the great success of the virtual sessions offered for the 2009 Valuation Actuary Symposium and the SOA 09 Annual Meeting & Exhibit, the SOA has decided to hold virtual sessions for its large 2010 meetings as well. While nothing compares to attending a meeting in person, if you can’t make it to any of the biggies—Life and Annuity Symposium, SOA ‘10 Health Meeting, Valuation Symposium and SOA ‘10 Annual Meeting & Exhibit—all is not lost. Plans are currently in the works to stream live several sessions from each of these valuable events, so you can earn CPD credit while learning right at your computer.

The SOA kicked off its first virtual sessions from the 2009 Valuation Actuary Symposium and followed with four sessions from the SOA 09 Annual Meeting & Exhibit, selecting topics believed to be of high interest to members. Registration was offered at tiered levels, with pricing based on the number of viewers per site. More than 2,000 viewers watched from hundreds of sites. To check out our upcoming virtual sessions and to register, visit www.soa.org and click on event calendar.
FINDINGS FROM SOA REPORT ON FINANCIAL CRISIS SHARED AT CONGRESSIONAL STAFF BRIEFING

Taking findings into consideration from an SOA- and Joint Risk Management Section-sponsored report on the financial crisis, the American Academy of Actuaries at a recent Congressional Staff Briefing recommended regulatory improvements to help guard against future crises.

The report, “Financial Crisis and the Lessons Learned for Insurers,” highlighted implications of the financial crisis on the insurance industry and recommended ERM strategies on which financial firms and insurers should focus. Those strategies included key ideas such as:

- creating a strong risk management culture starting at the top,
- using risk management to prevent crises rather than manage them, and
- keeping in mind that the financial system is interconnected, so businesses need to look at what others are doing in the industry, not just their own risks and processes.

View the entire report at www.soa.org. Click on research, research projects and finance.

THE ACTUARIAL PROFESSION IN THE NEWS

CNN.com Article Lists Actuary as Top Paying Job Actuaries came in no. 6 in top moneymaking jobs in America.

SmartMoney.com Quotes FSAs The site interviewed Noel Abkemeier and Scott Witt for an article on annuities.

Life and Health Advisor Cites Findings from Joint Survey The piece recaps results from the SOA, LIMRA, InFRE survey on retirees and savings.

ECommerce Journal Cites Information from the SOA An article on life insurance costs mentioned the cost of premiums for whole life vs. term insurance.

Interview with SOA President Appears in U.K Actuarial Publication The Actuary featured a Q&A with Mike McLaughlin on his career and the profession.

National Underwriter Quotes FSA The publication featured an article based on Emily Kessler’s presentation to ERISA Advisory Council, on the U.S. financial system and retirees.

To view all of these articles, visit www.imageoftheactuary.org and click on Actuaries in the News.

SOA EDUCATIONAL OPPORTUNITIES

REFOCUS
Feb 28–March 3
Las Vegas, NV

INVESTMENT SYMPOSIUM
March 22–23
New York, NY

RETIREMENT INDUSTRY CONFERENCE
April 11–13
Washington, D.C.

ERM SYMPOSIUM
April 12–14
Chicago, IL

THE LIFE INSURANCE CONFERENCE
April 13–15
Washington, D.C.

LIFE AND ANNUITY SYMPOSIUM
May 17–18
Tampa, FL

LIFE AND ANNUITY SEMINARS
May 19
Tampa, FL

View all Professional Development opportunities by visiting www.soa.org and clicking on event calendar.

Annual “Jobs Rated Report” Names Actuary No. 1

Actuary was the top-ranked job of 200 in the United States.
March 22 – 23, 2010
Marriott New York Marquis
New York, NY

• THREE RETURNING TRACKS: Asset Classes, Finance and Investment Risk Management and Investment Strategy

• TWO FULL DAYS of unlimited networking opportunities, hot topics and knowledgeable speakers

• ONE PROGRAM committed to investment professionals moving into the next decade

Visit www.investmentsymposium.org to learn more.