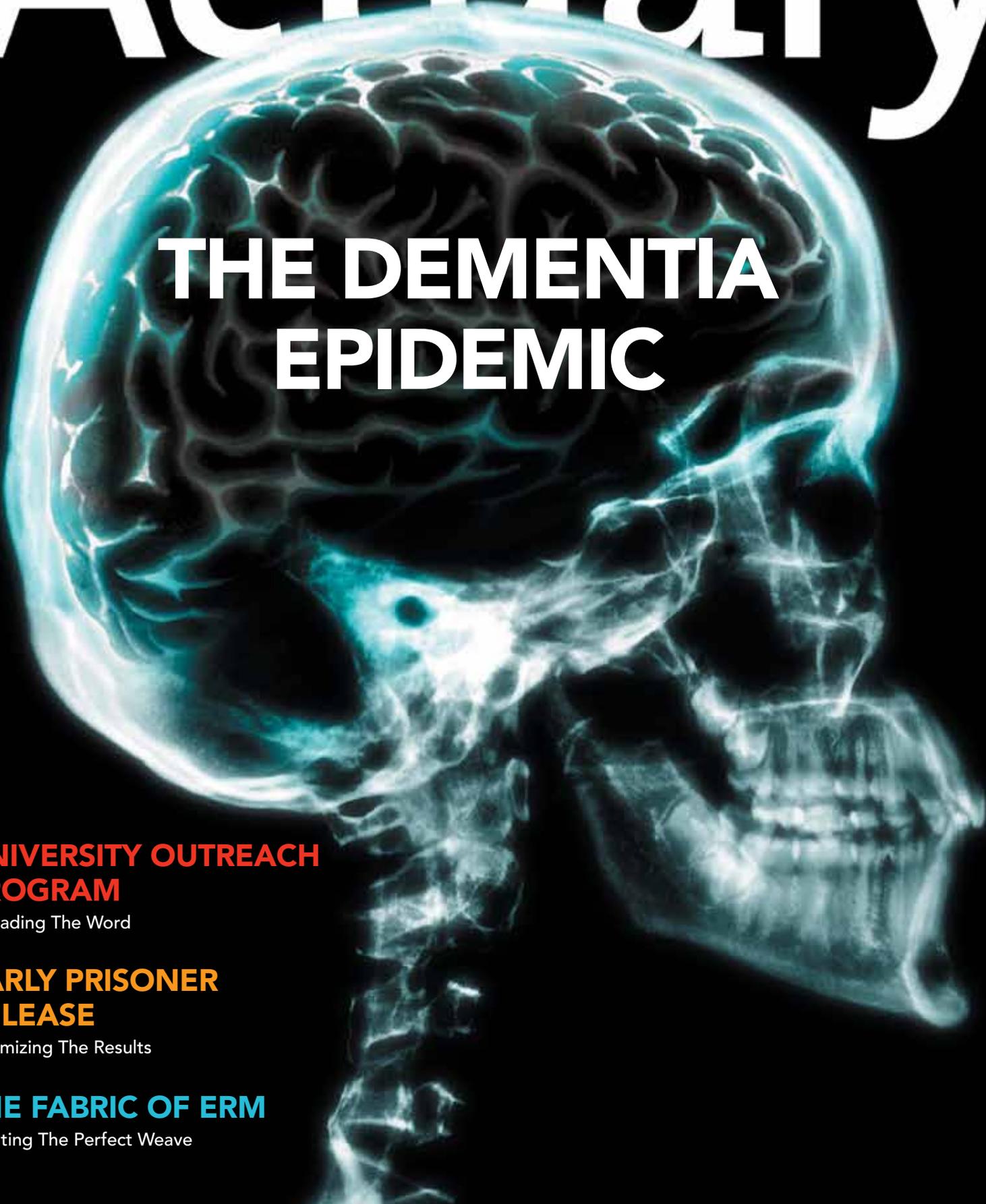


# The Actuary

SOCIETY OF ACTUARIES

DECEMBER 2010/JANUARY 2011 VOLUME 7 ISSUE 6



## THE DEMENTIA EPIDEMIC

### UNIVERSITY OUTREACH PROGRAM

Spreading The Word

### EARLY PRISONER RELEASE

Optimizing The Results

### THE FABRIC OF ERM

Creating The Perfect Weave

# Attest Today!





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**Attestation for 2009 – 2010 closes Feb. 28, 2011.** You must attest compliance with the SOA CPD Requirement or be considered non-compliant. If you have questions, contact SOA customer service ([customerservice@soa.org](mailto:customerservice@soa.org)).

# Dec '10 / Jan

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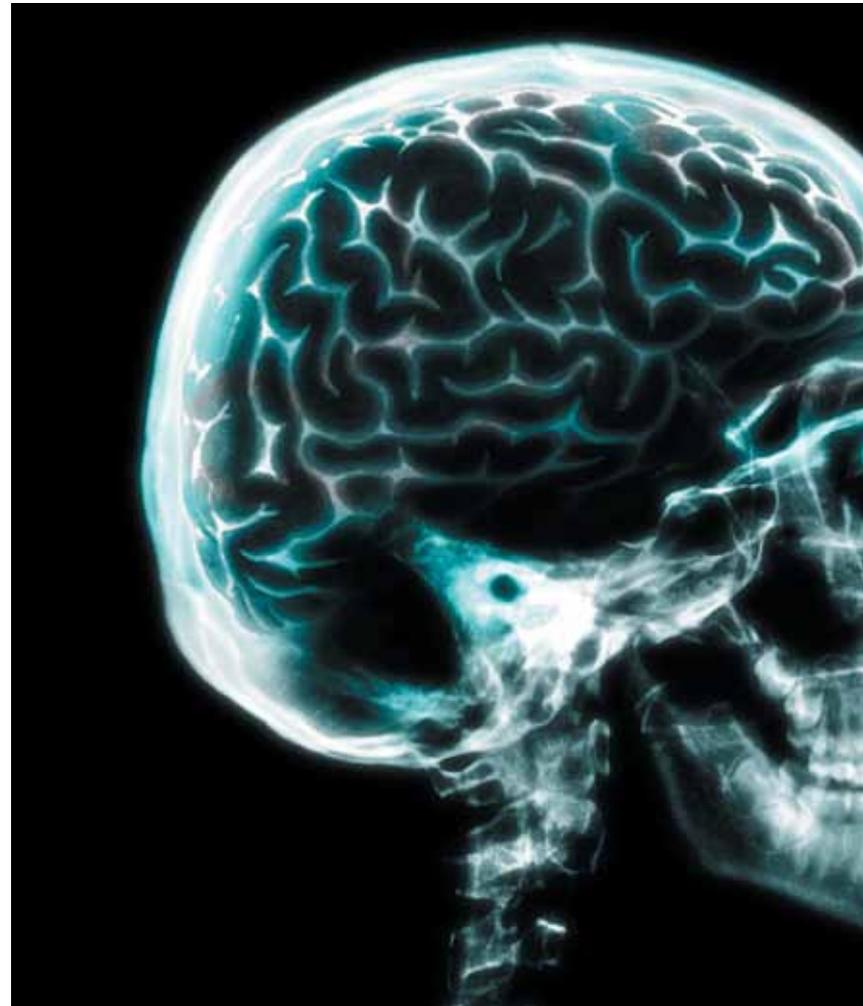
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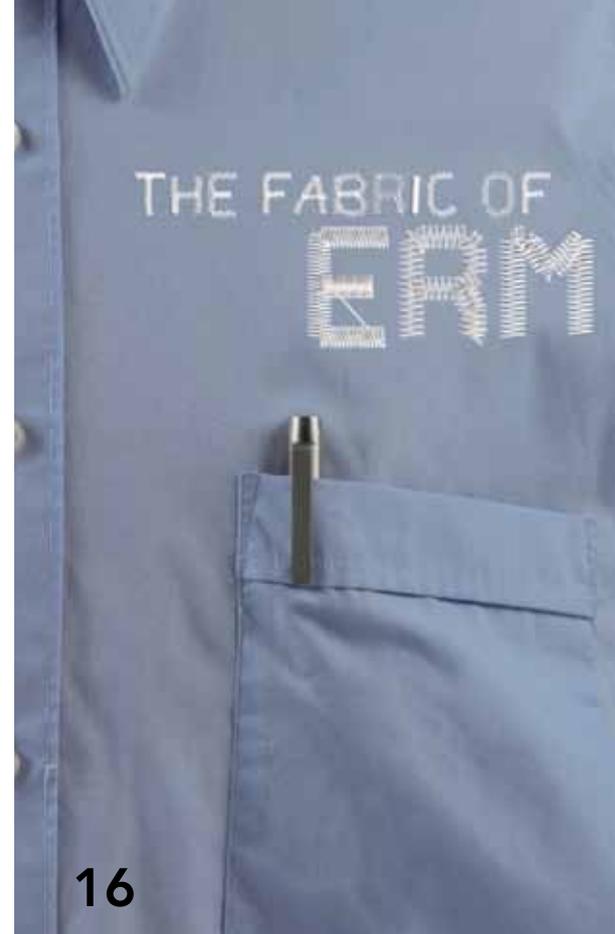
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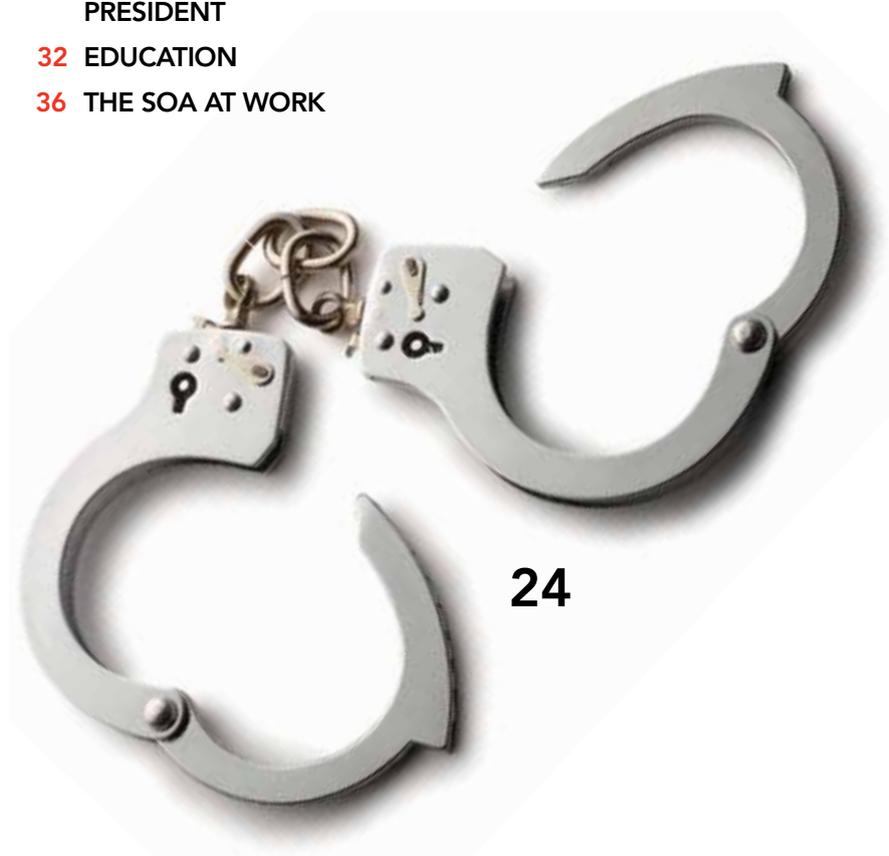
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# A FOND FAREWELL



Sue Reitz



Sudha Shenoy



Max Rudolph



Narayan Shankar



Ronald Poon-Affat



Steve Easson



Ty Wooldridge

**BY SAM PHILLIPS**

**THE CONTRIBUTING EDITORS** for this magazine do a lot of work behind the scenes. They each keep a watchful eye on their area of expertise and make sure the readers of *The Actuary* stay informed on the important developments in those areas. They also make decisions about the appropriateness (too technical, too basic, etc.) of unsolicited articles. Their role is integral to the success of *The Actuary*. We would not be able to provide you with the high-quality content that packs each issue of *The Actuary* without the help of the contributing editors.

This is the last issue for the current contributing editors as the new year will bring with it a new set of contributing editors. But it is with much heartfelt thanks that I say, Sue, Sudha, Max, Narayan, Ronald, Steve, and Ty, all your efforts, both individually and as a group, have been greatly appreciated. You have done a wonderful job!

Take care and good luck in the future.

Sincerely,

**Sam Phillips, *The Actuary* staff editor** 

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## Letter From The President

# WHY ATTESTATION IS IMPORTANT

BY DONALD J. SEGAL

**THANKS TO THE MANY MEMBERS AND FRIENDS** who have welcomed me to my new role as the 62nd president of the Society of Actuaries (SOA). It was a pleasure to see old friends and meet new faces at the 2010 Annual Meeting in October.

I'm very excited about the possibilities that we will face in the coming months as— together—we seek to strengthen the profession and the numerous services that we provide. I look forward to working with you, listening to you and, most of all, achieving with you.

### SIGNIFICANT STEPS

My commitment is to continue the significant steps in our strategic plan to ensure that the SOA and its members remain leaders in the actuarial profession. As a reader of this magazine, you've likely seen that for the past few years each issue features a "President's Column" that typically covers the work we're doing together to achieve our goals.

One important item happening this year is the launch of the attestation compliance with

the SOA CPD Requirement. Attestation, and the public disclosure of compliance with the Requirement, was implemented to generate trust among those who rely on our services. If we are to preserve the market value of the SOA credential, then we must ensure public trust in our credential.

I was a member of the volunteer committee that designed the SOA CPD Requirement. We had long conversations with the Board on what our responsibility was to the public with regards to the CPD Requirement. We concluded that the public attestation of compliance with the SOA CPD Requirement enhances the profession's reputation for being trustworthy, and it showcases our high ethical and technical standards. If employers, clients or potential clients have a question or reservation about a member's skills, they no longer have to rely solely on our reputation that SOA members meet existing standards. Now, interested parties can go to the membership directory, where a member's compliance status will be revealed. With a formal attestation process and public disclosure, we are assuring peers, colleagues, employers, the public and other users of actu-

arial services that SOA members meet continuing education standards, and they can provide the up-to-date, reliable expertise that various individual clients require.

The current attestation period opened on November 1 and closes on Feb. 28, 2011. To those of you who have already attested, thank you for doing so. To those of you who haven't, there's still plenty of time to take care of this very important matter.

Contrary to what some of you may think, attestation is quick, easy and necessary. If you know your compliance path, have tracked your CPD credits and are sure the SOA has your e-mail address, then you're ready to attest. To complete the process, there are three simple steps: (1) log on to the SOA membership directory and click the SOA CPD Requirements button on the main page; (2) indicate whether you have met the SOA CPD Requirement; and (3) identify which method of compliance was used. If there are questions, contact SOA customer service ([customerservice@soa.org](mailto:customerservice@soa.org)).

## TRANSPARENCY

As I stated earlier, it's not just important that members attest to the SOA. It's important that those people who use or might use your services are aware that you met or did not meet the SOA CPD Requirement. Members who attest compliance will be shown in the directory as "Compliant." Those members who don't attest will be listed in the member directory as "Non-compliant" (unless you are eligible for reduced dues on account of retirement, in which case your status will be indicated as "Retired").

Further, any member who is not compliant is required to notify anyone who relies on his/her actuarial services that he/she has not complied with the SOA CPD Requirement. This could include your employer.

Although I don't anticipate such a situation developing, members should be reminded that anyone who falsely asserts compliance with the SOA CPD Requirement is subject to disciplinary action under the actuarial Code of Professional Conduct.

My passion for continuing education is well known, and I hope you'll share with me the promise of new horizons to be gained through lifelong learning and a passionate commitment to our profession. **A**



**Donald J. Segal**

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**Donald J. Segal, FSA, FCA, MAAA, EA**, is president of the Society of Actuaries. He can be contacted at [dsegal@soa.org](mailto:dsegal@soa.org).





# SPREAD THE WORD UNIVERSITY OUTREACH PROGRAM

BY LISAMARIE LUKAS

The SOA's **UNIVERSITY OUTREACH PROGRAM** continues to evolve. Read how the program is connecting with the next generation.

**A**S CHILDREN, MANY OF US probably dreamed of becoming police officers, doctors, or even the president of the United States. And then, our skills developed and we learned what we really loved to do—prompting us to take another look at what we actually wanted to be when we “grew up.”

When did you decide that you wanted to be an actuary? Maybe you were lucky and you found your love of math when you were young and had someone in your life who introduced you to the actuarial profession. But, we know that for many, decisions about future careers are usually made in college—students choose a major (and maybe a mi-

nor or two) and that starts them down their eventual career paths.

Armed with this knowledge, the Society of Actuaries has actively been engaging with students on college campuses across North America. Our visits, which are conducted on behalf of the profession, are a great way

# What a few of our featured actuaries have to say

**Simeon Ling**, consultant, *Towers Watson*; **John Horvath**, director, *UnitedHealth Group*; **Steve Vernon**, president, *Rest-of-Life Communications*; and **Sunit Patel**, senior vice president, *Fidelity Investments*, commented on the benefits of the University Outreach Program.

**Q:** How did you get involved in the program?

**A: SP:** The SOA was going to my alma mater and I thought it would be a great way to give back to both my school and the SOA, both of which were very important to my career.

**Q:** What about the students you've met has most surprised you?

**A: SL:** The members of the actuarial club have strong camaraderie and aid one another in the exam process. Last year, one of the candidates that had passed an exam hosted a mini-seminar to help other students who were

taking the same exam at a subsequent date. It is great to see future actuaries seeing themselves as on the same team, rather than competing opponents.

**JH:** The diversity. It was great to see that the actuarial professional has piqued students' interest with a variety of backgrounds.

**Q:** What do you think is the biggest benefit of the program?

**A: SV:** Students were able to talk with actuaries to hear what a "day in the life" is like, and to get career planning advice.

**SP:** It gives students a chance to find out first-hand what it is like to work as an actuary and it gives the SOA an opportunity to dispel some of the stereotypes that still exist about the profession

**SL:** Helping the students obtain a clear understanding of the SOA and its overall purposes and outlook. Students can see

the SOA as more than just an administrator of difficult exams! Also, providing the students with an official roadmap of the exam process is helpful for the students who only hear about

**THE STUDENTS I MET HAVE ENERGY, AMBITION AND WILLINGNESS TO TRY NEW THINGS—ALWAYS A GOOD COMBINATION FOR THE PROFESSION. – STEVE VERNON**

it through the rumor mill or through online forums.

**Q:** What's the one piece of advice you always share with students?

**A: SV:** Ask as many questions as you can—become an informed "consumer" of your career.

**SP:** Be as well rounded as possible. As you go through different experiences, you'll figure out better where your greatest interests are and it will be easier to pursue them if you are well-grounded in various disciplines.

**Q:** Having met with students, what do you think about the future of the profession?

**A: JH:** The branding campaign has clearly paid off. It was amaz-

ing to see so many students interested in the profession. The profession will see a great deal of up-and-coming talent over the next few years.

**SL:** I am looking forward to collaborating and working with these aspiring actuaries as they enter the profession and bring their strong work ethic, technological know-how and energy to the profession.

**SV:** The students I met have energy, ambition and willingness to try new things—always a good combination for the profession. ▣

to connect with students. Since the program started in 2007, we've met with more than 1,300 students, talking with them about the profession and its opportunities—and dispelling some commonly held myths about the education system and exam process along the way. Staff from the SOA's education and marketing/communications teams host the visits, joined by a practicing actuary (or two)

who graciously gives his or her time to help students understand what it's really like to be a member of the actuarial profession.

The results speak for themselves—in a post-event survey sent to each participant, we consistently hear that students appreciated our visit, feel more informed about the education and exam system and are likely to

recommend that a friend attend a similar session. And, the word must be getting out, as each year the number of requests we receive from schools wanting us to visit far exceeds the number of visits we're able to make.

To meet this increasing demand, we continue to take our "show on the road." This year we visited campuses from California to

# What students we have met have to say

**Joseph P. Feinberg**, *University of California at Santa Barbara, class of 2010, is now an actuarial analyst for WellPoint, Inc.*; **Sarah Schachet**, *senior at Wharton, secretary of the Penn Actuarial Society*; and **Matthew Berg**, *senior at Wharton, treasurer of the Penn Actuarial Society*, took a lot of interesting information away with them. They share their thoughts here.

## **Q: What made you attend the presentation?**

**A: JF:** I decided to attend the presentation because I was interested in a new perspective of the actuarial field. So far in the actuarial club we had had presentations from the companies telling us why their company would be the best to work for, and we had presentations from senior level actuaries (retired or otherwise) who would tell us what kind of challenges the actuarial firms and companies encounter on a large scale. What I had not yet heard, and was interested in hearing from the SOA, was what an actuary

does on a task level. Although my schooling prepared me for some of the actuarial exams, we did not yet have any classes that were geared toward teaching actuarial work.

**SS:** I wanted to attend the presentation to find out more about the professional organization that is responsible for the exam process and for maintaining the credibility and integrity of the FSA designation.

## **Q: What was the most helpful insight offered?**

**A: SS:** The greatest insight offered during the presentation was about the resilience of the actuarial profession during lean economic times such as the recent recession. In times such as these, it is exciting and fitting to be studying in a field that helps identify, quantify and mitigate the financial impact of risks taken in the business world.

**MB:** One of the most interesting insights was that this is a profession that, now more than ever, is critical

to the mitigation of risk throughout the financial industry. It will be fascinating to see how the actuarial profession evolves as risk management increases in importance.

## **Q: Did the presentation dispel any myths?**

**A: SS:** The presentation did an excellent job dispelling the idea that actuaries are number-crunching automatons. Instead, the presenters emphasized that actuaries are a group of powerful contributors and leaders in their workplaces because of a depth and breadth of knowledge coupled with strong business acumen.

## **Q: Was there any advice or information that surprised you?**

**A: JF:** I think the number of companies hiring actuaries was the most shocking piece of information I learned from the presentation. There was a moment when the speakers listed several companies in each of the actuarial fields. Without hesitation, they

were able to name about 20 companies, and seemed as though they would have done another 50 had they not had other important things to discuss.

**SS:** I was impressed by the presenters' thorough explanation of the rationale for the components of the ASA and FSA credentials, particularly about the modules and the DMAC. It's reassuring to know that the SOA makes improvements to the exam process based on the evolving skills necessary for professional success as an actuary.

**MB:** The real-world experience given by the featured actuary was somewhat surprising in that he was able to easily move from pension work, to actuarial consulting, and then to investment management.

## **Q: Are you still interested in the profession?**

**A: SS:** I am still very much interested in the profession and excited about the opportunities available to actuaries. ▣

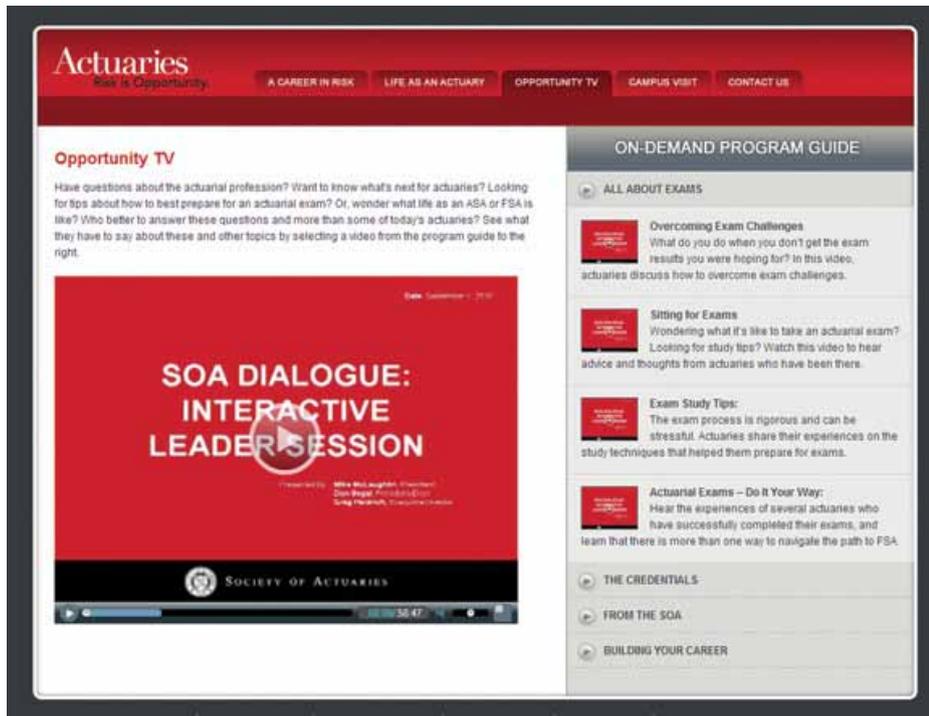
New York City and we've also started building a "virtual" visit program to increase the resources available to students online.

How are we doing that? Over the course of two days of filming, we've captured the contents of a typical visit, which will be used to create a University Outreach video that will be available for download on [www.riskisopportunity.net](http://www.riskisopportunity.net).

Just as we do during our in-person visits, this video will highlight opportunities for actuaries, share information about the exam and education pathways and offer students the chance to hear directly from practicing actuaries. It's an exciting growth of the University Outreach program that will enable us to introduce even more students to the actuarial profession—and hopefully encourage academically talented,

math-oriented college students to pursue their actuarial credentials.

But, the filmed visit won't be the only new material added to the website. We know the way students demand content has evolved—and so we're evolving the website to meet these changing expectations. First, we plan to soon launch an "Opportunity TV"



section of the website, bringing videos like Actuarial in Action and others onto this site so that students have an opportunity to watch them (See illustration above). This content will be a great complement to the filmed visit, allowing students to hear directly from even more actuaries and enabling us to share existing content in a new way.

On the note of connecting students to practicing actuaries, we know that's something they most value about our program. So in the coming weeks, we're launching a new series called "Day In The Life Of" on [riskisopportunity.net](http://riskisopportunity.net).

This series will feature actuaries at various stages of their careers, from different

practice areas and locations, talking about what a day in their life is really like. Students love this perspective, as it helps them understand what it's like to be an actuary in a way that taking exams can't. The participants will share their stories using either a "faux" Twitter account or Outlook calendar—and eventually maybe by recording short videos, too.

And finally, we'll help students learn even more about the SOA University Outreach staff by posting short biographies of the team that attends visits or is featured in the video. It is important to us that students understand the SOA team is approachable and excited about opportunities to talk directly with students and candidates.

Curious? Stay tuned to [riskisopportunity.net](http://riskisopportunity.net) during the coming weeks to learn more and see first-hand the new content we've developed! And of course, we'd love for you to get involved in helping us to build our University Outreach program. If you know a school that might benefit from a visit, let them know about our program and encourage them to reach out to us. And, if you're willing to be a featured actuary or to share a day in your life with students, we'd love to hear from you! Finally, if you've done anything to connect with university students, it'd be great to hear from you—maybe you'll have the next idea for ways we can continue to build this program. **A**

**Lisamarie Lukas**, is director of Communications for the Society of Actuaries. She can be contacted at [llukas@soa.org](mailto:llukas@soa.org).

## STUDENTS ARE LISTENING

Our University Outreach program continues to grow and has proven to be a valuable way for us to connect with future members of the profession. What we've learned is that students really appreciate the opportunity to talk with practicing actuaries.

Hearing from one or two actuaries is great, but we want to be able

to provide an array of insights and perspectives. So, we're asking—what advice do you have? What's one thing you think we need to make sure to tell students as we travel around the country?

Share your thoughts! Join the conversation at [blog.soa.org](http://blog.soa.org).



# LIVING to 100

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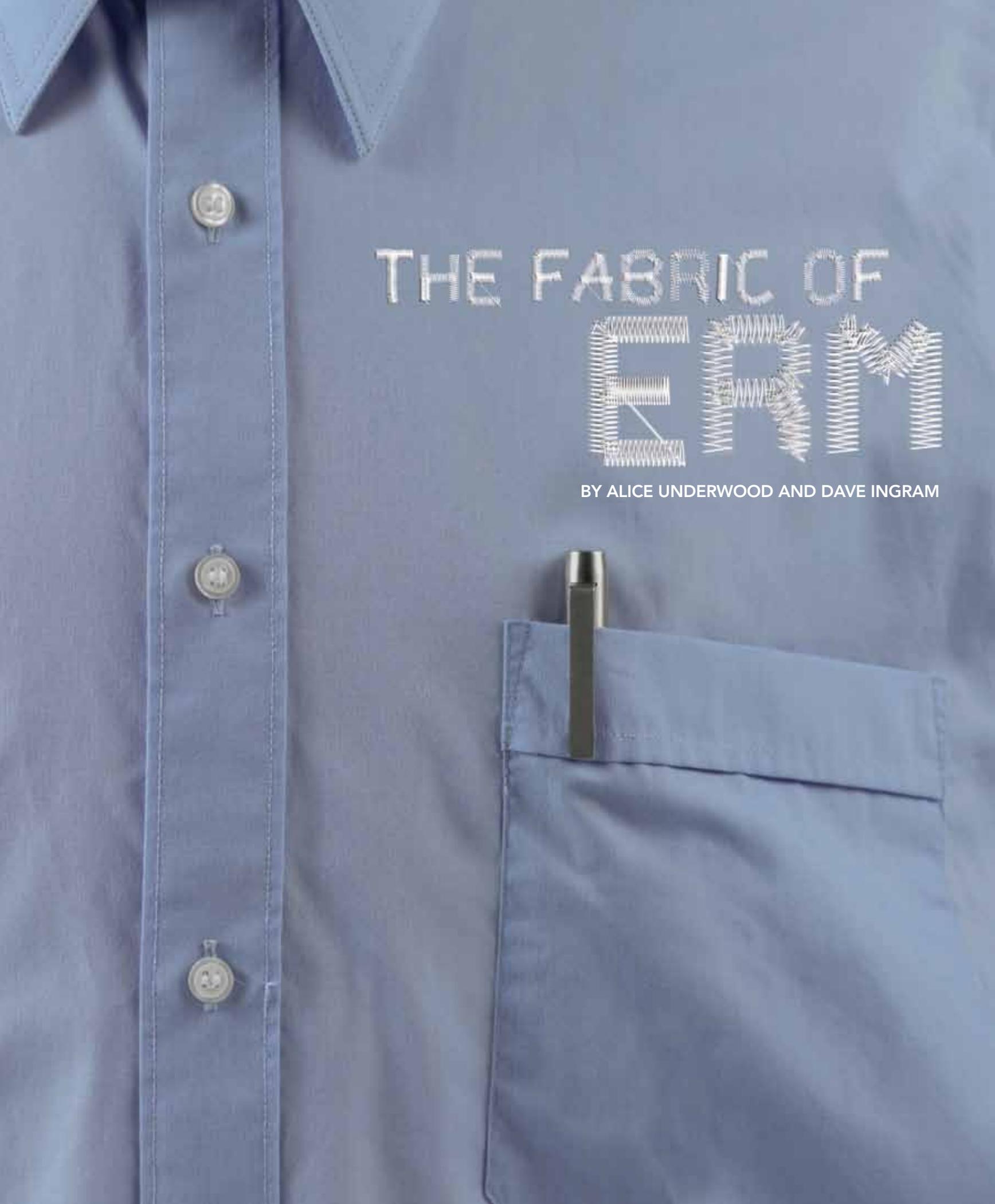


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THE FABRIC OF  
ERM

BY ALICE UNDERWOOD AND DAVE INGRAM



## FOR A COMPANY to get the most out of ERM, it needs to find the right weave of the four ERM perspectives to best suit itself.

**IF ENTERPRISE RISK MANAGEMENT** (ERM) is what it claims to be, then it is at its core the discipline of managing risk across an entire enterprise. But there are many different types of enterprises, from the pin-striped financial world to the tough, blue denim collars of manufacturing.

Banks believe they invented ERM, as the antidote to their out-of-control trading desks. Insurers see risk management as their birth-right—but the underwriters and actuaries whose uneasy truce defines the sector have very different ideas of what risk management means. Long-lived firms in other business sectors are comfortable that their own approach to risk is all that is needed. Basel II/III, Solvency II and COSO/ISO31000 are the fundamentally inconsistent roadmaps to these divergent approaches. And to the enduring consternation of disciples of each of these styles of ERM, a number of firms flaunt the dictates of all three, yet continue to survive and sometimes thrive.

From this tangle, we can identify four distinct approaches to the management of enterprise-wide risk. These four ERM strategies can be called Diversification, Loss Controlling, Risk Trading and Risk Steering. We will consider each of these in turn, demonstrating that each represents a complete management system, with its own sensible way to accomplish different goals.

Are each of these strategies really ERM? Yes—in the sense that each can be used to manage risk across an entire enterprise. That proposition gives some practitioners pause. But recognizing that ERM is a fabric woven from four different threads can help every firm to weave them together in the manner

that suits them best; there's no need to be constrained to the off-the-rack plaids and stripes that are the standard offerings.

### DIVERSIFICATION

Many ERM practitioners see diversification as the non-strategy strategy. Those who follow a diversification approach may appear simply to be rejecting organized ERM. But diversification is part of the risk management strategy of many—perhaps most—firms, and it can absolutely be applied in an enterprise-wide fashion.

When concentrations of risk are monitored at an enterprise-wide level, this is Diversification-based ERM. To moderate its risk profile, the firm seeks to undertake a broad range of activities whose risks are unrelated, and to maintain an appropriate balance among these activities. The key limit applied is a concentration limit. The best practitioners of this approach constantly monitor their risks, staying alert for any change that would markedly increase the risk of one of their ventures and thereby skew the spread of risk.

The popular investment strategy of periodic rebalancing is at its core a diversification strategy. Buying and selling the losers and gainers is intended to keep the risk of the portfolio at a predetermined balance.

Diversification is also the fundamental idea behind insurance. It is the principle that enables insurers to assume risks from many individuals, whereas those individuals cannot bear the risk alone. Following the law of large numbers, diversification is best achieved with a very large pool of independent risks of similar size and risk characteristics. When

insurance companies send a fraction of their biggest risks off to a reinsurer, they are motivated by the desire to maximize the benefits of diversification.

A very few insurance firms explicitly apply diversification at the strategic level, as a major theme of their ERM process. Modern conglomerates, on the other hand, have elevated this approach to become their driving principle.

### LOSS CONTROLLING

Loss Controlling is a fundamental risk management activity that seeks to restrict exposure to potential losses or risks. Almost all businesses do this to some degree; the internal audit function and other ways of controlling operational risks typically fit this category.

In banks and insurance companies, the major Loss Controlling activities include risk underwriting and the establishment of exposure limits. Exposure limits for nonunderwriting risks, such as interest rate and equity exposures, can be enforced by using asset-liability matching and hedging. In nonfinancial firms, Loss Controlling adds a physical dimension. This is addressed by safety and industrial engineering programs—as well as by insuring physical property risks to set a limit on potential exposure. Supply chain and raw materials risks are managed by a variety of techniques, including but not limited to hedging. And in all types of firms, Loss Controlling strategies help to manage foreign exchange and liquidity risks.

Traditionally, each of these risks was managed in isolation. But Loss Controlling be-

comes an enterprise-wide approach when all the firm's risks are measured on some comparable basis. Then management can decide whether to retain or reduce exposure to certain risks based on a view of the firm as a whole.

The development, maintenance and interpretation of comprehensive risk models that can be used to evaluate all risks on the same basis are relatively new phenomena. Often, when such a model is first deployed,

(the ratio of claims plus expenses to premiums). Health insurers often have the same Risk Trading focus. They consider premium inadequacy their main risk—and, in fact, many firms in these sectors have failed to maintain adequate premium levels over a period of years.

When these firms shift to an enterprise focus for their risk management programs, they start to think about using economic capital and a cost-of-capital approach to standard-

Steering ERM. At a macro level, information obtained from ERM systems can be used to optimize the company's risk portfolio. Proposals to grow or shrink parts of the business, and opportunities to offset or transfer different portions of the total risk position, can be viewed in terms of risk-adjusted return. Some firms employ this approach only for major ad hoc decisions on acquisitions or divestitures; others use it all of the time.

This top-down risk management process typically uses an economic capital model as its key reference point for risk, and the key limit applied is the amount of economic capital any one activity is allowed to consume. The planning cycle then will include a capital budgeting process that incorporates the capital requirements and expected return on capital associated with planned future business. Consideration of a business plan is evaluated as a potential allocation of capital to support that business activity, and financial results are measured on a risk-adjusted basis. This includes recognition of the economic capital necessary to support business risks—as well as the risk premium, loss reserves, and duration issues for multi-period risks such as credit risk or casualty insurance. A few firms that are using a Risk Steering ERM process have also created an incentive system tied to the risk-adjusted financial results.

Taken together, these activities can be seen as broadly similar to strategic asset allocation processes that allocate investments among classes to achieve the optimal return for choices along the efficient frontier. In fact, some insurers that use Risk Steering do employ the efficient frontier concept and plot their businesses on a risk versus reward graph using economic capital instead of standard deviation as the risk axis.

## A STRONGER ERM FABRIC—WOVEN FROM ALL FOUR STRATEGIC STRANDS—SHOULD HELP FIRMS AVOID EMBARRASSING EXPOSURES IN THE FUTURE.

and management sees the company's actual risk profile, they realize that some risks are managed very tightly while others are essentially ignored. In the context of a Loss Controlling approach to ERM, risk models are most often used to conduct stress tests that help prepare the firm for the worst-case situation.

### RISK TRADING

Modern ERM can be traced to the trading businesses of banks. Hard lessons from uncontrolled trading led to the development of improved management processes and standards. A major element in these systems is the valuation—in other words, pricing—of risks. Management of risk through Risk Trading activity can be applied on a transaction-by-transaction basis. But applying a consistent view of risk pricing across all risks leads to a Risk Trading form of ERM.

Many property and casualty insurance and reinsurance companies are pure Risk Trading firms. They focus on their combined ratio

ize their pricing risk margins. These firms may also establish risk limits that relate to the amount prices may deviate from the “standard” by-the-book rates.

Life insurers often use a Risk Trading ERM strategy if universal life or deferred fixed annuity products comprise a significant portion of their portfolio. For such products, there is a target interest rate margin and a regular discretionary process for setting the interest rates that are credited to their customers. These firms sought a comprehensive approach for managing interest rate risk when they began to vary the required margin between investments and liabilities based on the credit quality of the investments.

### RISK STEERING

The activities most commonly described as ERM today are those that incorporate risk considerations into a comprehensive process for firm-wide risk capital budgeting and strategic resource allocation, with an eye to enhancing firm value. We call this Risk

## HYBRID APPROACHES

Firms that try to follow only one of these approaches to risk management will find their system lacking at one time or another. Banks found that their risk trading systems failed to prepare them for adverse situations that occurred much more frequently than their models had suggested, so they began to augment with some stress tests out of the loss controlling sphere. But without an understanding of the differences in perspective underlying these divergent risk management systems, many managers felt as though they had been asked to put socks on a fish.

Gaining an understanding of each of these risk management systems—and recognizing that each can be applied on an enterprise-wide level—offers practitioners better perspective on how the different strands can be woven together.

## USING ALL FOUR SYSTEMS

The strongest ERM systems leverage the ca-

pabilities of all four approaches. Each strategy may come to the fore for a particular type of risk or a particular market environment.

For example, until someone develops a market for operational risks, those risks will be best managed using a loss controlling approach—leaving the price-focused trading approach to risks that are actually traded, and applying model-centric steering to risks that the firm can actually choose not to take.

At the strategic decision-making level, a view of the current risk environment may influence which of the four approaches takes center stage (see “The Many Stages of Risk” in the December ‘09/January ‘10 issue of *The Actuary*). This four-fold approach can be thought of in terms of a four-page risk dashboard, with one page for each of the four approaches to ERM. In this context, a major responsibility of the chief risk officer is to select the best order for these four pages at any point in time, based on the current and most

likely emerging environment. (This is the process called Rational Adaptability in “The Full Spectrum of Risk Attitude” in the August/September 2010 issue of *The Actuary*.)

In the immediate aftermath of the 2008 financial crisis, some felt that the emperors of ERM had no clothes. We suggest instead that their ERM garments were not constructed from the best cloth. A stronger ERM fabric—woven from all four strategic strands—should help firms avoid embarrassing exposures in the future. **A**

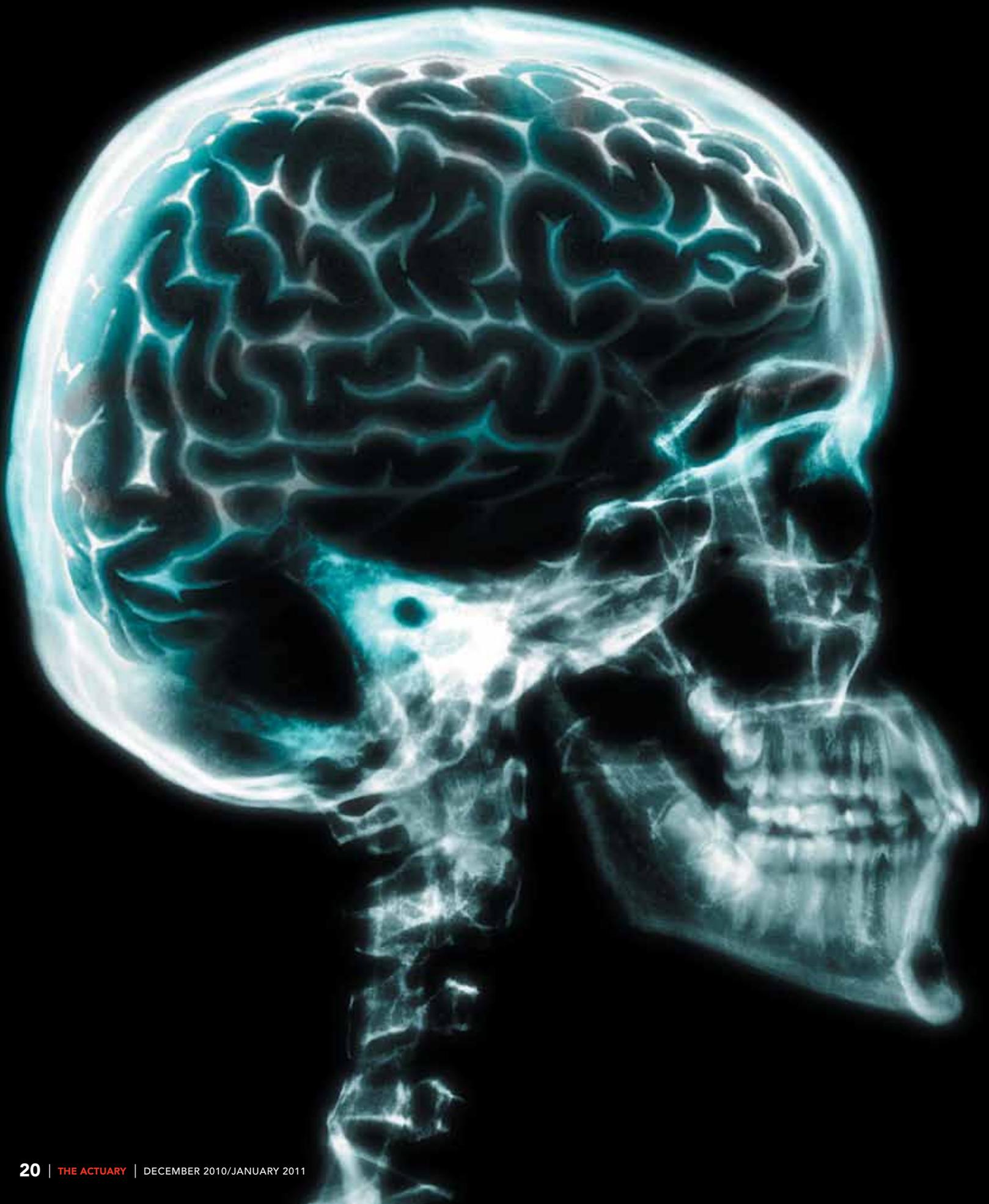
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# THE DEMENTIA EPIDEMIC ARE WE READY?

BY KAREN HENDERSON

**ALZHEIMER'S DISEASE, THE MOST COMMON FORM OF DEMENTIA AMONG OLDER ADULTS, IS A PROGRESSIVE, FATAL BRAIN DISEASE.**

**A**LZHEIMER'S DISEASE WAS FIRST DIAGNOSED by Dr. Alois Alzheimer in 1906 in Frankfurt, Germany. The symptoms of Alzheimer's—memory loss, cognitive and language deficits, auditory hallucinations, delusions, paranoia and aggressive behavior—were usually referred to as “senile dementia” and generally considered a normal part of aging.

We now know better—unfortunately. As scientists began to realize that Alzheimer's was a disease characterized by plaques and tangles in the brain, the Alzheimer Society of Canada—the first organization of its kind in the world—was founded by Madeleine Honeyman in 1978. Madeleine cared for her husband who suffered from dementia and when she asked for help or guidance, she was abandoned by the medical industry who told her that her husband would be dead in three years and to think only about herself. She is now 98 and has not stopped advocating for those who suffer from this terrible affliction.

Alzheimer's Disease has no known cause and no cure; the medications available may slow the progression of the disease in some but will not stop it.

In January 2010, the Alzheimer Society of Canada released an alarming report titled, “Rising Tide: The Impact of Dementia on Canadian Society.” In the report the Society

## Additional Stats

If dementia care were a country, it would be the world's 18th largest economy. If it were a company, it would be the world's largest by annual revenue exceeding Wal-Mart (US\$414 billion) and Exxon Mobil (US\$311 billion). *The World Alzheimer Report 2010*

	CANADA	US	THE WORLD
<b>NUMBER OF PEOPLE SUFFERING FROM DEMENTIA NOW</b>	500,000	5.3 million	35.6 million
<b>IN APPROXIMATELY 20 YEARS</b>	1,125,200	7.7 million	65.7 million

Stats sources: Canada: Alzheimer Society of Canada; United States: Alzheimer Association; World: Alzheimer Disease International.

CONTINUED ON PAGE 23

# What About The Caregivers?

BY KAREN HENDERSON



**A**S OUR POPULATION rapidly ages, more of us are being called upon to become caregivers. In our society this is a thankless job; caregivers receive no formal training, too little community support and of course no financial compensation for taking time off work or indeed, quitting entirely, which too often happens when the care receiver has dementia and needs 24/7 care and supervision.

Caregivers are primarily spouses, which is not ideal because they, too, are usually coping with age-related issues. Typically the second most common caregivers are the daughters of the patient, who must often juggle the demands of caregiving with the demands of a career, children and otherwise busy lives.

Unfortunately caregivers take on the burden with little complaint. This accepting attitude has allowed governments to ignore their plight and happily accept the \$25 billion<sup>1</sup> a year in unpaid labor, often allowing the caregivers to destroy themselves physically, emotionally, socially, and financially while doing the right thing by their loved ones.

The burden is huge. In 2008, 231 million hours of care were spent in Canada by the families of people suffering from Alzheimer's. The Rising Tide study anticipates that this will be 750 million hours in 2038.

The Canadian Institute for Health Information (CIHI) issued a report in late August called, "Supporting Informal Caregivers:

The Heart of Home Care." It showed that one in six people caring for ailing seniors at home is in distress. The number shoots up to one in three if the senior has cognitive problems such as Alzheimer's Disease; one in two if the senior is aggressive or abusive.

Nearly 40 percent of family members caring for a loved one with dementia suffer from such signs of distress as depression, rage and an inability to cope.

And what if a person suffering from dementia can no longer stay at home because the caregiver is burned out or the dementia sufferer has become violent or dangerous? The Rising Tide report stated that although the number of long-term care beds in nursing homes is forecasted to grow from approximately 280,000 beds in 2008 to 690,000 in 2038—10 times the current demand—there will be a projected shortfall of more than 157,000 beds. Families are waiting months, even years now for a long-term care bed; how will they survive in the future?

Once again, there is no national strategy to support caregivers, although this has been "discussed" for years.

Caregiving until the end of life leaves few untouched. In most cases the death of a loved one allows caregivers to heal and move forward, wiser in the knowledge that the circle of life continues as it always has. Dementia, however, imposes its own set of unique sorrows upon caregivers because when the dementia journey is supposed to be over, it's not over. After this unspeakable injustice has robbed us, daughters and sons, of those we love, after we are finally able to shake off the shock, the fatigue and the disbelief over what we have managed to live through, what remains is the dark terror that we will follow in our parents' genetic footsteps. **A**

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#### FOOTNOTE:

<sup>1</sup> M. J. Hollander, et al., "Who Cares and How Much?" *Health Care Quarterly* 12, 2 (2009): pp. 42-49.

warned that the number of Canadians living with Alzheimer's Disease or dementia is expected to swell to epidemic proportions within a generation. About half a million Canadians are now affected; the Society predicts that within 25 years, the number of cases of Alzheimer's or a related dementia will more than double, ranging between one million and 1.3 million people. It is seen in all cultures, but affects more women. Women account for 72 percent of Canadians with Alzheimer's Disease.

### ECONOMIC BURDEN

The current cost to Canadians for dementia care is \$15 billion; over the next 30 years dementia is expected to cost society over \$872 billion in direct health costs, unpaid caregiver opportunity costs and indirect costs associated with the provision of unpaid care.

"These new data only reinforce the fact that Alzheimer's Disease and related dementias are a rising concern in this country, an epidemic that has the potential to overwhelm the Canadian health care system," Ray Congdon of the Alzheimer Society said in a statement.

### DEMENTIA IS STRIKING A GROWING NUMBER OF BOOMERS

The report also stated that of the half-million Canadians affected by various forms of dementia, about 71,000, or almost 15 percent, are under 65. Of those, 50,000 are 59 or younger.

"We know that we're finding far more individuals in their 50s and 60s who have dementia," said Society CEO Scott Dudgeon. "We're talking about dementia generally, including Alzheimer's Disease."

### WHAT SHOULD WE BE DOING TO PREPARE?

At this time Canada does not have a national strategy to cope with the oncoming crisis. Only a handful of governments have national dementia or Alzheimer's policy strategies—France, England and Australia do, but the United States and many developing nations do not.

The Canadian report recommends the following:

1. Accelerate investment in all areas of dementia research
2. Recognize the critical role that fam-

ily caregivers play; provide them with information, education and financial support

3. Recognize the importance of prevention and early intervention
4. Place greater emphasis on care integration
5. Strengthen Canada's dementia workforce

### WHO IS SOUNDING THE CALL?

We read the papers. We watch the news. We know there is a problem. But who is taking action? The dementia crisis is not a priority for the Canadian government. Individuals and families are reluctant to take the time to plan for aging and long-term care planning. The majority of professionals who advise aging citizens—financial, legal, accounting—are uneducated about aging and dementia and resist stepping up and discussing the issues.

So it is up to individuals to respond and react. Become aware and become educated. Recognize the need for long-term care planning now! **A**

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## LET'S START A CONVERSATION!

The information presented here focuses on the Canadian perspective of Alzheimer's Disease, the most common form of dementia among older adults.

There has been much written about this brain disease. We know it's progressive and fatal. We know that today there is no cure. We also know it's not just a disease that affects the elderly. It can strike people in their 40s and 50s.

Armed with that knowledge, it's important to know what's being done, not just in our own backyards, but throughout the world as well. In short, what are we doing to prepare for this oncoming crisis?

As actuaries, what is your perspective about this growing epidemic? How will it affect the work you do? How will it affect the health care industry? What will be the impact on long-term care? On life insurance?

Please share your views with us. Your feedback is important and may be included in an upcoming issue of *The Actuary*. Send an e-mail to [theactuary@soa.org](mailto:theactuary@soa.org).

We welcome your comments. Let's start a conversation!

# RIGHT MAN WALKING?

**OPTIMIZING EARLY PRISONER RELEASE**

BY NICKOLAS J. ORTNER





## This article is adapted from the **FIRST-PLACE WINNING ESSAY** of the Entrepreneurial Actuaries Section's essay contest. The essay was declared the winner for its innovative use of predictive modeling/business analytics.

**O**VER THE LAST 20 YEARS, the second fastest-growing state budget expense is managing prisons. Not only are 1 percent of American adults in prison, but those prisons are overcrowded (state prisons are above 100 percent of their designed capacity) with accompanying annual spending growth averaging 7 percent for decades.<sup>1,2</sup> At the same time, tremendous spending pressures face those same states, with 40-plus states struggling to close shortfalls when adopting budgets for fiscal year (FY) 2011 while similarly projecting gaps for FY 2012 and shortfalls for FYs 2009 and 2010.<sup>3</sup>

With the current funding crunch, it's assumed that average annual spending increases of 7 percent for prisons are not sustainable. Simplified money-saving release criteria/programs incorporated by many states (recent examples include Illinois, Nebraska and Wisconsin)—the early release of groups of prisoners convicted under various definitions of “nonviolent” and “minor” offenses—may ease the overcrowding and dampen the budget strains, but such pro-

grams face heightened scrutiny, resistance and ultimately elimination if executed arbitrarily and inflexibly with outcomes that harm society or are otherwise unquantifiable.

Early prisoner release programs can play a meaningful role in balancing budgets while helping society—but only with a rigorous, merit-based approach that the general public can confidently expect to demonstrate favorable outcomes for both itself and the released prisoner.

### OVERVIEW

An optimized process for evaluating and quantifying the perils associated with freeing candidates eligible for early release would encompass an individualized assessment and quantification of those risks that captures the nuances of prisoners' personalities. Though simplified early release programs currently in place treat all prisoners with the same history as equal, this optimized process recognizes the need for greater nuance. This program's greater complexity is expected to result in minimized—and ultimately eliminated—chances for recidivism, accompanied by maximized gains to both society and the released prisoner.

### PROPOSED EVALUATION FRAMEWORK/SCORECARD

At the heart of this optimized process is a wide-ranging evaluation framework/scorecard relying on various expert ranks (experts from a vast spectrum of fields to serve as the foundational evaluative criteria and tool on which this proposal is built). Such a scorecard—comprised of predictive elements and

opinions from a diverse array of sources—would demonstrate the comprehensive risk assessment and mitigation process demanded for the program's absolute success by drawing the most complete picture of the candidate under consideration for early release.

Perhaps just as importantly, the following framework is intended to be a quantifiable, living and breathing, and dynamic (rather than unchanging and static) template and tool. Ongoing reviews and oversight (with quarterly overviews and annual rigorous assessments of each line item and the underlying weighting scheme) will serve to optimize the applicability and efficacy of the evaluation process.

The framework is organized into four broad categories: the prisoners' background/history, support system, behavioral and skill development and modification, and other professional evaluations. In unison, with a number of interrelated elements underlying those four broader categories, this program is expected to better craft a more complete profile of the early release candidates than do current release programs.

The background/history and support system components capture vital information related to the prisoners' criminal history, the voices and rights of the victims, and post-release infrastructure and personal support systems in place. The behavioral and skill development and modification, and other professional evaluation pieces, rely even more heavily on expert assessments to more

#### FOOTNOTES:

<sup>1</sup> Source: Motley Fool Stock Advisor (<http://newsletters.fool.com>) Volume 9 / Issue 3 / March 2010 Report – Corrections Corporation of America

<sup>2</sup> Source: USA Today ([www.usatoday.com](http://www.usatoday.com)) July 19, 2010 – “Job Squeeze is Felt Behind Bars” – validation of #3 (current federal prison system overcapacity) Statistic citation of federal prison system running 37% over capacity Author: Kevin Johnson

<sup>3</sup> Source: Center on Budget & Policy Priorities ([www.cbpp.org](http://www.cbpp.org)) 7/15/2010 Report – “Recession Continues to Batter State Budgets, State Responses Could Slow Recovery” Authors: Elizabeth McNichol, Phil Oliff, and Nicholas Johnson

fully complete the understanding of the evaluated prisoners.

Expert ranks will categorize the chances of unfavorable or favorable outcomes upon early release. As an example, narrowly limited to “background/history” with the “criminal and imprisonment history ...” subcategory described more fully below, a prisoner with no prior criminal history or imprisonment would be expected to score higher, indicating a favorable background related to success upon release, whereas an individual with a multiple repeat offense and imprisonment history would be expected to score much lower.

The quantifiable and expert-reliant nature of the elements of the framework demands the normalization for evaluator tendencies within the tool, with evaluators’ rating biases (i.e., certain evaluators may be expected to be lower or higher graders or to have certain other tendencies) substantiated and a normalizing adjustment incorporated into the scoring process to ensure equitable treatment of all evaluated prisoners.

The initial framework assigns equal weight to each of the established criteria. That said, an important element for the ongoing success of this program is periodic, continuous and rigorous reviews of this framework to either confirm the enduring applicability and efficacy of the underlying weighting scheme, or catalyze revisions to the current scheme.

A relative total ranking/“score” is required to rank the underlying prisoners’ risk. For the ease of understanding for a broader audience, the prioritization scheme will be recalibrated to a 100-point scale as the means for establishing who may be released early and prioritizing the order in which they may be released.

Candidates eligible for early release are to be graded against that scale to not only establish who scores at or above the (to be determined) minimum benchmark (“floor”) required to activate early release, but also to prioritize the timing of all candidates deemed eligible for early release as a result of their scoring above the underlying benchmark floor. Those failing to achieve the cumulative to-be-established minimum score would not be eligible for early release, but could be reassessed at a future time (though turnaround time on a reassessment should be sufficient to ensure the evaluated prisoner demonstrates sufficient progress in areas where progress is needed). Those landing above the benchmark floor but scoring the minimum within a particular subcategory would require reassessment prior to release—to be confident that the minimum score in a specific category is a risk that the program is willing to shoulder.

#### **BACKGROUND/HISTORY**

Kicking off the prisoners’ evaluation, the nature of the crime that led to the current imprisonment must be a primary consideration, with experts’ ranks considering the violence, criminal behavior pattern (including whether any crimes were premeditated and/or repeated), and probability of recidivism associated with the crime that led to the current imprisonment.

Beyond the circumstances attached to the current imprisonment, the criminal and imprisonment history preceding the crime that led to the current imprisonment must also be contemplated, with

experts’ ranks taking into account the violence, criminal behavior pattern (including whether any crimes were premeditated and/or repeated), and probability of recidivism associated with the cumulative prior criminal history.

Victims’ voices must also be heard, giving weight to victims’ and victims’ families’ receptivity to release and sufficient consideration to the number of victims, the impact on victims, and victims’ receptivity.

#### **SUPPORT SYSTEM**

The prisoners’ background and history is just one important element of the overall evaluation. Though it is assumed that the infrastructural support is in place to ensure the released prisoners’ successful transition back into society, this is explicitly men-



tioned to confirm that the necessary infrastructural support and resources are also in place in the forms of monitoring, counseling, training/education/placement, and access to other relevant services required to sustain a successful release.

Beyond the infrastructural support, personal support systems are imperative for the successful transition of released prisoners. Supportive (as opposed to destructive/encouraging of a return to a criminal

success of those prisoners released early, experts' evaluations will also play an important role in more prospectively forecasting the chances for success. Counselors, psychologists, spiritual or other advisors, and any other professionals with expertise in those areas will be asked for meaningful guidance and evaluations related to a number of prisoner characteristics:

- **Assaultive tendencies**—focusing on the presence or elimination of assaultive

## AT THE MORE PERSONAL LEVEL, THE PROPOSED PROGRAM IS ANTICIPATED TO SERVE THE GREATER GOOD. ...

past) relationship building blocks must be in place—family, friends, spiritual advisors, supervisors/bosses—to optimize the prisoner's return to society.

An element in this measure may include the volume and diversity of visits to the currently imprisoned individual. For example, is the individual's network one person on which the individual may be entirely reliant for a successful release (such that the loss of that person greatly jeopardizes the release's success), or is there depth and breadth of the individual's connections (such that the diversity of those connections minimizes exposure to the risk of any one weakened or lost connection endangering the chances for a successful release)?

### BEHAVIORAL AND SKILL DEVELOPMENT AND MODIFICATION

While the background/history and support system elements serve to capture retrospective and present elements, respectively, that are expected to be predictive for the

tendencies and adherence to behavioral learning and retraining regimens;

- **Cognitive development/maturity**—assessing the prisoners' progressing cognitive development and emerging maturity;
- **Contributable skill development/job training**—addressing the level of educational development, job/skill/career training, prior transferable skill development, and other learning;
- **Emotional and relational development/maturity**—measuring the presence and growth of favorable emotional and relational development and emerging maturity;
- **Suicidal tendencies**—judging the presence and/or elimination of suicidal tendencies and adherence to behavioral learning and retraining regimens; and

- **Spiritual element/development/maturity**—accounting for the presence of (or maturing) spiritual view may be anticipated as an indicator of emerging favorable change.

### OTHER PROFESSIONAL EVALUATIONS

While the expertise of counselors, psychologists and spiritual or other advisors with knowledge in those areas is valuable, other professionals' evaluations will also add insight to the evaluative process. Attorney evaluations may help to answer such questions as whether this person stood out in any way—favorably or unfavorably—in the eyes of the prosecutorial team. Related, but from the perspective of the other side (subject to attorney/client privilege), can defense attorneys lend any further insight into the chances for success upon the prisoners' release?

Guards, police officers (arresting or familiar with the individual) and other law enforcement evaluations may also be insightful—from their perspective, did this person stand out favorably or unfavorably in any way, demonstrate any favorable or unfavorable tendencies, or otherwise show anything the evaluation team should be aware of?

Lastly, prison work supervisor evaluations may similarly shed some additional light—did this person stand out favorably or unfavorably in any way, demonstrate any favorable or unfavorable tendencies, or otherwise show anything the evaluation team should be aware of?

As just described, evaluations from professionals with wide-ranging expertise are an important complement to assessments of the prisoners' background, history and support system for optimizing the selection of, and anticipated outcomes for, candidates for early release.

## BEYOND THE FRAMEWORK

The establishment of a meaningful framework for evaluating prisoners who may be candidates for early release is an important starting point, but such a framework, in and of itself, does not mean the program will be successful. The costs and benefits must be assessed and quantified in order to optimize the program's chances for success.

## COST/BENEFIT ANALYSIS

### Costs

Quantifiable start-up costs include personnel and technology, systems and equipment. The right people with the right expertise, working on the right (cutting edge) equipment, are required to design, implement, monitor and refine the plan on an ongoing basis. Necessary roles may include pre-release evaluations and post-release monitoring, counseling/training/placement, outcome measurement and quality management of the evaluation process.

The right technology, systems and equipment play an important and complementary role to the right people, recognizing that this systemic infrastructure must remain cutting edge on an ongoing basis to sustain a leadership role in this industry and deliver value not provided in current, otherwise similar, government-run programs.

### Benefits

Though the program's costs are expected to be significant, the benefits and opportunities in establishing a viable alternative to current state programs may be limitless. As previously alluded to, the ongoing management of prisons and prisoners is big business.

The business opportunities to deliver favorable results are spread across not only the state and federal prison landscapes, but

may also similarly exist at both the federal level and at the more granular city and county jail levels—given that all levels of government seem to be facing ever-mounting financial pressures.

Even with the personnel and infrastructural investment required for such a program, the accompanying savings when compared to current costs that would otherwise be required to fund a similar government-run program are anticipated to be significant, achieved via sustainable total reward (salaries and benefits) costs and anticipated workplace and technology efficiencies.

At a practical level, the expected reduced prison spending will save taxpayer money (a message that particularly resonates in the current environment), free up funds for other programs that may be in greater demand by the public (each citizenry's priorities will be different), and ease at least some of the tough spending choices that governments are currently being forced to make. The dual messages of more effective programming, coupled with reduced required funding, should echo loudly with government officials seeking to dampen the criticism they currently face from the constituencies they serve.

At the more personal level, the proposed program is anticipated to serve the greater good for both the general public and the released prisoners.

For the general public, funds are expected to be available for reallocation to other programs—programs that may be expected to more meaningfully serve more citizens through the reduction of the currently significant costs associated with housing prisoners and maintaining facilities by releasing those who will contribute to, rather than drain funds from, society without negatively impacting that society.

For the released prisoners, a rigorous program created to optimize their transition back into society will enable and maximize their (and their circle of friends and family) chances for success, sense of well-being, and understanding of what it means to be and what it takes to be a contributory, productive and law-abiding member of society.

## RISKS

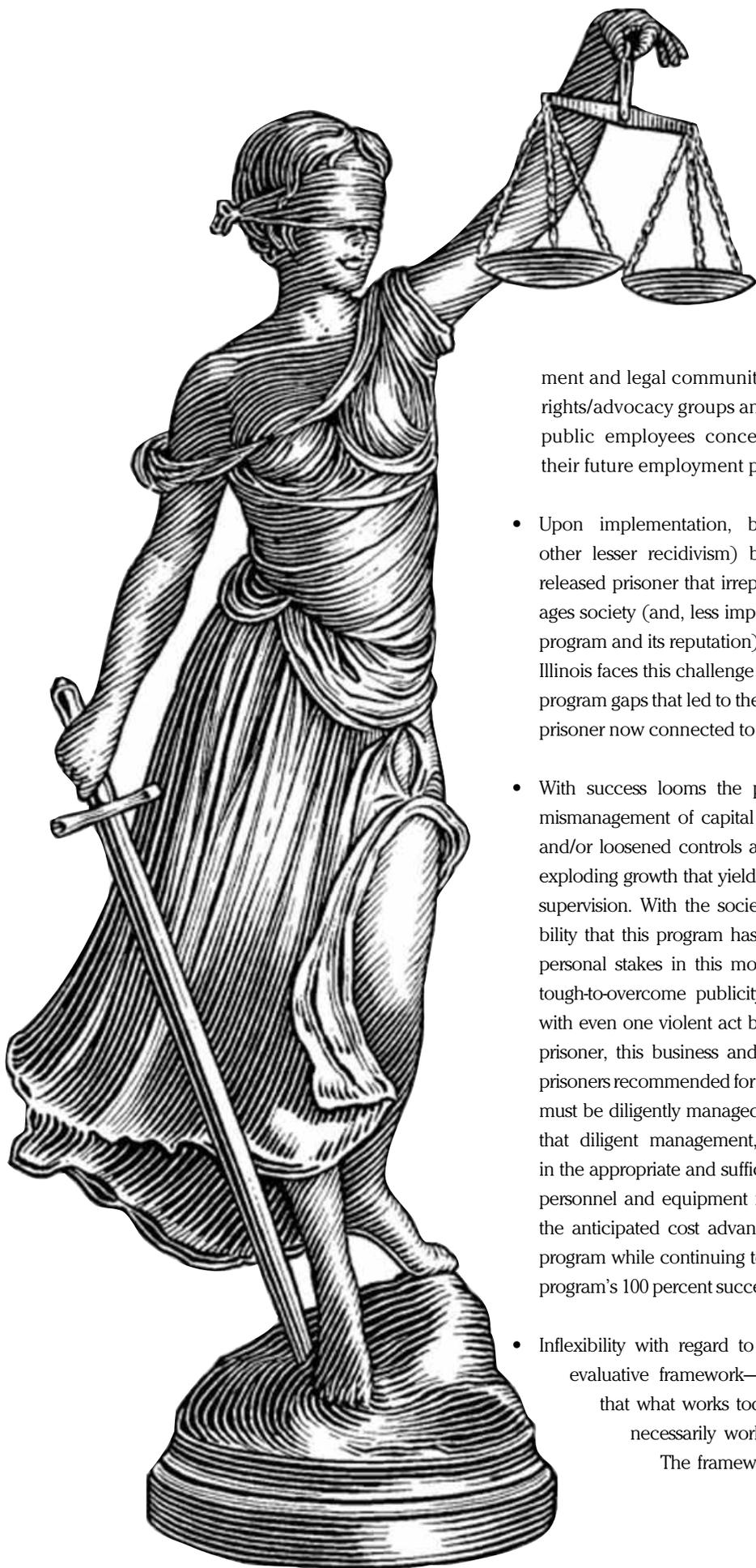
Establishing such an evaluation program and managing the program to universally successful outcomes can only be accomplished by anticipating, accounting for and overcoming a number of meaningful risks:

- Derailment before the program ever gets traction or has a chance to demonstrate its efficacy, from the failure to get the necessary buy-in from any number of potential stakeholders including politicians (especially those on the opposite side of the aisle from the party currently in charge), thought leaders in the media, the law enforce-

## COST PER INMATE

The average annual operating costs per state and among facilities operated by the Federal Bureau of Prisons are nearly

\$24,000 per inmate. For additional stats visit: <http://www.jailovercrowding.com/index/the-problem>.



ment and legal communities, victims' rights/advocacy groups and impacted public employees concerned about their future employment prospects.

- Upon implementation, brutality (or other lesser recidivism) by an early-released prisoner that irreparably damages society (and, less importantly, this program and its reputation). Right now, Illinois faces this challenge arising from program gaps that led to the release of a prisoner now connected to a murder.
- With success looms the potential for mismanagement of capital investments and/or loosened controls as a result of exploding growth that yields insufficient supervision. With the societal responsibility that this program has, along with personal stakes in this model and the tough-to-overcome publicity risk faced with even one violent act by a released prisoner, this business and the clients' prisoners recommended for early release must be diligently managed. Alongside that diligent management, investment in the appropriate and sufficient level of personnel and equipment must sustain the anticipated cost advantages of this program while continuing to ensure the program's 100 percent success.
- Inflexibility with regard to the current evaluative framework—recognizing that what works today may not necessarily work tomorrow. The framework must be

robust, dynamic and responsive to environmental changes. An inability to tell the program's story via metrics that demonstrate the program's efficacy—those metrics being outcomes that improve society and the lives of the released prisoners, while simultaneously delivering meaningful fiscal savings—may similarly cut short the life of the business model.

No program of this nature is without risks, but with the evaluative framework described earlier in this article as a starting point and ongoing assessments of the efficacy of that framework to drive meaningful transformations to that structure in real time, we may expect to minimize the recidivism risk.

#### CRITICAL SUCCESS FACTORS

Aligned with the aforementioned risks, critical success factors for this program include:

- The ability to rally and maintain support from various affected constituencies through a variety of potential approaches, including:
  - Communication with politicians, effectively done through avenues such as regular teaching sessions or briefings, regarding the program's benefits to demonstrate a mature understanding of the gravity of the situation and the importance of the absolute success of this plan;
  - Promotion of the plan's benefits with media thought leaders—seek out opportunities to go on the “talk show circuit” to answer questions and correct misperceptions;
  - Feedback gathering from the law enforcement and legal communi-

## A LITTLE HISTORY

According to <http://law.jrank.org>, the first state penitentiary, originally called the Walnut Street Jail, came into existence in 1790 as a

result of the Quaker group Pennsylvania Prison Society. It was the Society's goal to reform the horrible prison system of the time.

ties to be confident there are no gaps in the business model, while simultaneously ensuring their engagement and acceptance of the program;

- Engagement of victims' rights groups and the general public in a proactive and transparent manner to ensure their voices are heard. One example may be to place the proposed prisoner evaluation characteristics on a public website to encourage the community to state their priorities and provide constructive criticism;
- Rigorous and repeated duplication of the above steps to ensure understanding of the program's goals, deliverables and personal success stories; and
- Effective clarification of the opportunities that are expected to be available for displaced public employees—dynamically serving the public in a new and exciting environment.
- Given the stakes—lives potentially at risk, with even one misstep—a level of conservatism may be required, particularly in the program's infancy, to opti-

mize the chances for success, allow time for evaluation and minimize the risks to society.

- A relentless focus on sustainable growth that compromises none of the intended controls/supervision, clients or the program's reputation. Recognizing the societal responsibility that this program has and the personal stakes in it, coupled with the potential for investment misallocations/losing the technology edge and/or weakened supervision if growth explodes beyond a controllable level, will be the foundations that this model is built on to ensure ongoing cost advantages and the "0 percent prisoner relapse" success of the program.
- Flexible thinking related to, and unrelenting quality management of, the evaluation framework/tool and the personnel managing it and responsible for its upkeep. Such an approach will proactively and dynamically capture, measure and appropriately weight only the criteria relevant for inclusion in the framework described to ensure the absolute post-release success for the former prisoners.

- Track every release and diligently trace their paths to document and personalize for the program's clients the numbers and stories that they may relay to their citizens—where the released prisoners are, what jobs and other societal roles they've taken on, and how the underlying support program has minimized recidivism and empowered the released prisoners to live better and law-abiding lives.

The list of critical success factors may be daunting, but the importance of the topic demands the toughest of scrutiny so as to ensure the program's success and to meet the justifiably high standards sure to be demanded by all affected parties.

### CONCLUSION

Rather than serving as an advocacy piece for early release programs, this article is intended to describe the framework and strategy needed for mitigating the risk of such programs and optimizing those programs' outcomes. Instead of implementing such programs as a means of saving money via the application of arbitrary standards to blocks of prisoners without individually assessing the potential risks involved, governments owe it to their constituencies to implement a more rigorous program that consistently assesses and monitors the individual risks involved and dynamically changes in order to sustain the best outcomes from such programs. **A**

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## Education

# DOUBLE, DOUBLE TOIL AND TROUBLE

BY KATHLEEN R. WONG

**OR, SHOULD I SAY, DOUBLE YOUR PLEASURE,** double your fun! I guess it all depends on your point of view.

What am I talking about? Of course, I'm referring to the upcoming initiative to offer all fellowship-level examinations twice per year.

The SOA is taking a giant step forward in addressing one of the persistent complaints of fellowship-level candidates—the fact that most of the examinations are available only once per year. The pre-associateship examinations are already offered at least twice per year, and more often for those exams available through computer-based testing. But the intensive volunteer and staff effort required to develop fellowship exams has been an obstacle to increasing the frequency of those exams.

For the exam development volunteers, it will be “double the toil” to build twice as many exams in the one-year time frame. But we are gearing up for the task ahead with enthusiasm and a willingness to do what it takes to “double your fun” for candidates.

### WHAT'S CHANGING?

We are pleased to announce that, beginning in the fall of 2011, we will offer all FSA-level examinations in both the fall and the spring sessions. This means that the exams normally given in the spring

(CSP-Group/Health, CSP-Individual Life and Annuity, CSP-Retirement, Advanced Finance/ERM and Advanced Portfolio Management) will also be given in the fall beginning in 2011. The exams traditionally offered in the fall (DP-Group/Health, DP-Individual Life and Annuity, DP-Retirement, and Financial Economic Theory and Engineering in the Finance/ERM and Investment tracks) will also be offered in the spring beginning in 2012.

The education committee took the first step toward twice per year FSA exams in 2008 when the Advanced Finance/ERM (AFE) exam was offered in both the fall and the spring sessions. AFE is one of the requirements for the CERA designation, and the SOA's Board of Directors wanted to provide additional opportunities for candidates who were working to obtain the CERA designation, including current fellows who can obtain the CERA designation by completing the AFE exam and one module.

The AFE exam was successfully offered twice in 2008 and has continued to be given two times per year in 2009 and 2010. The efforts of the AFE exam committee served as a pilot to develop a process that other examination committees can emulate, or modify as appropriate, in order to reach the twice per year goal.

### RATIONALE AND BENEFITS

The Board of Directors asked the education committee to undertake this extensive effort as part of a strategic initiative to better serve the needs of one of our major stakeholder groups—the candidates.

Candidates should benefit from the extra exam administrations in several ways:

- **Increased flexibility in planning their studies**

For some candidates, work commitments make it difficult to study for examinations during certain times of the year. Right now, if a given exam is offered only in the spring session, for example, candidates need to devote intensive study time during the March/April timeframe. In some practice areas, that might be a busy work period.

Personal circumstances might also make a particular exam session inconvenient for a candidate. Being able to skip a session without losing a full year's momentum should give candidates more flexibility.

- **Reduced travel time to FSA**

Candidates who fail a fellowship exam under the current system must wait a

year before re-taking the exam. This can be especially frustrating for candidates whose only remaining requirement is the failed exam!

During that year, the candidate will either sit out one of the exam sessions or may attempt the other fellowship exam in his track. In the former case, he has likely increased his travel time by six months due to the idle session. In the latter scenario, the candidate may be able to avoid skipping the session, but will need to switch gears and study different material.

In either case, when the candidate returns to studying for the exam previously failed, she likely will need to spend a longer time refreshing her memory than if she had been able to re-take the failed exam without the extra six-month wait.

It is important to keep in mind that the reduced travel time is being accomplished with no reduction in syllabus requirements or qualification standards. We are just allowing the candidates to plan out their exam preparation more efficiently.

- **Improved educational experience**

Another positive result of this change is that the education committees can now recommend the order in which candidates should attempt the fellowship exams and modules within their tracks. We do not expect to set absolute prerequisites requiring that one exam be taken before the other. But we do intend to rely on candidates being familiar with the material included in any requirements (exam or mod-

ules) that are recommended as preceding that exam.

From an educational standpoint, this will allow curriculum and e-Learning committees to work with a single body of knowledge for the specialty track and present it in the way that makes the most sense. It may be possible to remove redundant material that had been included on a given syllabus just to ensure that candidates had enough background to understand the rest of the syllabus.

The **recommended order**, effective for examinations and modules completed after July 1, 2011, is available on the SOA website.

- **Comparability among tracks**

As noted earlier, the AFE exam has been offered to Finance/ERM candidates twice per year since 2008. We think it's time that candidates taking the other specialty tracks receive the same opportunity.

## OTHER ENHANCEMENTS

The education committee is continually working to improve the SOA's educational system and the exam experience for candidates. We listen to candidate responses to our surveys; we brainstorm among the senior volunteers who review our exams; we solicit feedback from academics and professional educators; we talk directly with candidates as part of our university outreach visits. All this input has resulted in the following initiatives undertaken over the past two years.

- **Consistent standards for examinations across tracks**

Candidates should be choosing their fellowship specialties based on their areas of interest or their job requirements, not because one track is perceived to be less rigorous than another. One of our goals on the education committee is to ensure that tracks remain consistent in terms of the amount of reading material,



**Kathleen R. Wong**

## DID YOU KNOW ...

There are currently over 850 volunteers in the education system.

In addition to the benefits to candidates listed above, the SOA believes that the change will be attractive to employers, who may benefit from the increased flexibility and the improved educational approach for their trainees. The increased exam frequency will also bring the SOA in line with other major actuarial organizations around the world, many of which offer their fellowship exams twice per year.

the level of difficulty of the questions, and the passing standards required.

Within the curriculum committees we are developing improved page count methodology and bringing greater discipline to the management of syllabus volume. For the examination committees we have set requirements for questions that test higher cognitive skills rather than just memorization, and we have continued to refine our content-based passing standards.

# Recommended Order

## FOR TAKING FSA EXAMINATIONS AND MODULES BY TRACK

Effective for examinations and modules completed after July 1, 2011

The fellowship-level examinations will be offered two times per year beginning in the fall of 2011. With this increased frequency the SOA can now provide candidates with the benefit of a recommended order for the completion of fellowship-level requirements. The recommendations are effective for all exams and modules completed after July 1, 2011.

There remain no formal prerequisites for taking the SOA's fellowship-level examinations and modules.<sup>1</sup> Candidates are permitted to choose the order in which the requirements are attempted. However, the Education committees believe that these recommendations provide the most effective guide for candidate success. After July 1, 2011, an examination/module may assume familiarity with material that is covered in any requirement that is recommended to come before that examination or module.

The recommended order of requirements for each track is shown below.

*Note: The following recommendations address only the two FSA examinations and three FSA modules required for each track.*

### Finance/Enterprise Risk Management Track Recommendations

- Financial Reporting module may be taken at any time
- Operational Risk module should be taken before the AFE examination
- Financial and Health Economics module should be taken before the FETE examination

#### FOOTNOTE:

<sup>1</sup> The Decision Making and Communication (DMAC) module and the Fellowship Admissions Course (FAC) each have their own unique requirements.

### Investment Track Recommendations

- Your choice of the Operational Risk module or the Financial Reporting module may be taken at any time
- Financial and Health Economics module should be taken before the APMV and FETE examinations
- Investment Strategy module should be taken after both the APMV and FETE examinations

### Individual Life and Annuities Track Recommendations

- Financial and Health Economics module may be taken at any time
- Regulation and Taxation module should be taken before the DP examination and before your choice of the Operational Risk module or Financial Reporting module
- DP examination and your choice of the Operational Risk module or Financial Reporting module should be taken before the CSP examination

### Retirement Benefits Track Recommendations

There is a specific recommended order for the five requirements:

1. Social Insurance module
2. Financial and Health Economic module
3. Operational Risk module or Investment Strategy module
4. DP examination
5. CSP examination

### Group and Health Track Recommendations

There is a specific recommended order for the five requirements:

1. Financial and Health Economics module
2. Health Systems Overview module
3. DP examination
4. CSP examination
5. Pricing, Reserving and Forecasting module

#### • Detailed commentary for candidates in model solutions

Candidates often comment that they do not have a good understanding of what constitutes a complete and appropriate response to written answer questions. Over the past two years, we have been phasing in a new approach to model solutions. Future

model answers will not only provide an example of a well-organized, full-credit response; they will also include commentary about what is being tested, what the supporting syllabus sources are, what the cognitive level of the question is, and, where appropriate, an indication of where candidates had trouble with the question.

#### • Increased volunteer training

Volunteers working on the fellowship-level examinations and modules put in many hours of effort creating examination questions, reviewing and modifying questions, developing grading outlines, creating and grading e-Learning assessments, and grading exam candidate papers. To support their efforts, over

the past two years we have developed intensive, hands-on training sessions for item writers and e-Learning assessment graders. Similarly, we provide webcast training each exam session for those who will be grading examinations for the first time and in-person feedback sessions for all graders.

- **Increased staff resources**

In conjunction with the initiative to offer FSA exams twice per year, the Board allocated funding to provide more staff support to the education and exam effort. In-house SOA actuaries now participate as members of the curriculum committees and assist examination committees with question development and review. These professionals bring continuity and technical expertise to the process.

The SOA staff also provides excellent administrative support to the education committees—handling meeting logis-

tics, obtaining syllabus materials for committee members, typing examinations, managing the printing process, receiving and distributing papers for grading, producing statistical reports, and assisting in ways too numerous to mention. The Board approved an increase in budget to provide additional administrative support as well.

- **Forthcoming courseware pilot**

A pilot study is being undertaken to create specially designed study guidance to enhance candidates' ability to prepare effectively for the FSA examinations. One part of this project will focus on general guidance, applicable to all FSA specialty tracks, about how to study for and answer questions on written-answer examinations. A longer-term goal is to provide exam-specific guidance on how to approach the material when preparing for a particular examination. The education committee is using the AFE

and FETE examinations as a pilot for this longer-term project. If the pilot is successful, the SOA expects to develop study guidance for all examinations.

The education committee currently engages more than 850 volunteers in running the SOA curriculum, e-Learning and examination committees. Many volunteers find their involvement extremely rewarding on both a personal and a professional level, one reason that a significant number continue to serve year after year. With the expanded offerings of the FSA-level exams, the need for volunteers will be even greater in the next few years. If you are interested and would like more information on the variety of volunteer opportunities available, please visit the **Volunteer Interest** page of the SOA website or contact Kathy Wong directly. 

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**Kathleen R. Wong, FSA, CERA, MAAA**, is vice president and actuary for AXA Equitable Life Insurance Co. She can be contacted at [kathleen.wong@axa-equitable.com](mailto:kathleen.wong@axa-equitable.com).

# Competency FRAMEWORK

DESIGN *your future.*

**Learn about the new Society of Actuaries (SOA) Competency Framework—a valuable tool, developed by actuaries for actuaries!** Use the Framework as a guide to help determine your own career by choosing SOA events that will help develop any or all of these eight competencies:

- Communication
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- Relationship Management & Interpersonal Collaboration
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- Strategic Insight & Integration
- Results-Oriented Solutions

Visit [SOA.org/competency-framework](http://SOA.org/competency-framework) for more information.

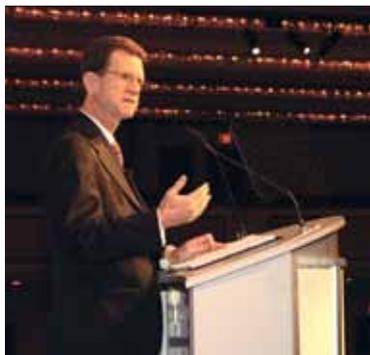


# ANNUAL MEETING HIGHLIGHTS

## I WANTED TO TAKE A FEW MINUTES

to thank all our members who attended, planned, prepared, and conducted the SOA 2010 Annual Meeting and to share some highlights from the meeting:

- Turnout for the meeting was among the highest ever. The members I spoke with were very enthusiastic about the meeting, the educational sessions, and the meeting facilities.
- Mike McLaughlin completed his presidential term and Don Segal began his. Both were very happy with the meeting and with the transition of presidential terms.
- The SOA's Board meeting was a success. Members received an e-mail within hours of the meeting's conclusion describing key outcomes from the meeting, which was followed on November 3 by the SOA's third Interactive Leader Session of 2010, in which Don Segal and Brad Smith, SOA president-elect, discussed key outcomes and answered members' questions (Visit [www.soa.org/ILS](http://www.soa.org/ILS)). In addition, we had a number of leaders of the profession attend the Board meeting, representing the International Actuarial Association, the United Kingdom Actuarial Profession, Actuarial Society of South Africa, Canadian Institute of Actuaries, Casualty Actuarial Society, and American Academy of Actuaries.
- We held our first-ever formal recognition of the Society of Actuaries James C. Hickman Scholars. We organized a special reception for the first two classes of Hickman Scholars, featuring Margaret Hickman, widow of James Hickman, and their son Charles Hickman. Mrs. Hickman spoke movingly of the pride her family has in the honor the SOA has given her late husband through this program.
- We recognized our Center of Actuarial Excellence (CAE) schools,



providing them a special booth in the exhibit hall to meet representatives of the profession and, we hope, some new students (or, more likely, their parents). We also helped the University of Michigan Actuarial Science program organize and host an alumni reunion at the meeting, focused on bringing together graduates of that prestigious program. We hope to see more schools taking advantage of the annual meeting in the future to build their alumni communities.

- We continued our mission of promoting the actuarial profession's brand in the media by organizing a series of important media visits for members active in our Viewpoints and Visibility teams. These media outreach visits, like many before them, continue to build actuaries' collective reputation as a source of highly informed, intelligent and unbiased thinking on some of the most important issues facing society today.

If you missed this year's annual meeting, make sure you mark your calendar now for next year's meeting in Chicago—you don't want to miss all the excellent opportunities the SOA annual meeting provides. So, be sure to make your plans to be in the Windy City October 16–19. **A**

— SOA Executive Director Greg Heidrich

## THE ACTUARIAL PROFESSION IN THE NEWS

The SOA is focused on raising awareness of actuaries in the media. Recent efforts have been successful. Here are just a few examples:

### 20 Highest-Paying Jobs

Dale Hall, FSA, CERA, featured in *CNN Money* article; actuaries ranked among highest-paying jobs. Visit <http://money.cnn.com>. Search term: Dale Hall.

### Seven Steps To A Sound Retirement

FSA Noel Abkemeier and retirement risk report referenced in *MarketWatch*. Visit [www.marketwatch.com](http://www.marketwatch.com). Search term: Retirement Risk Report.

### 2010 Risk Innovator™ Winners:

#### Financial Services

Frank Sabatini, FSA, CERA, named among winners. Visit [www.soa.org/newsroom](http://www.soa.org/newsroom). Search term: Risk Innovator Winners.

### The Retirement Savings Menu: A Visual Take on How Much You Should Save

Read FSA Steve Vernon's recent column about saving for retirement. Visit: <http://moneywatch.bnet.com>. Search term: Retirement Savings Menu.

### Top 10 Most Costly, Frequent Medical Errors

Actuary Jon Shreve talks about findings from the SOA report on medical errors. Visit [www.soa.org/newsroom](http://www.soa.org/newsroom). Search term: Top 10 Most Costly.

### Member Jim Toole Interviewed on PBS' Nightly Business Report

Jim Toole, FSA, CERA, discusses the SOA study on medical errors. Visit [www.soa.org/newsroom](http://www.soa.org/newsroom). Search term: Jim Toole PBS.

View all of these articles by going to [www.soa.org/newsroom](http://www.soa.org/newsroom) and clicking on the Profession In The News link. 

## MEDICAL ERRORS TOP \$19.5 BILLION ANNUALLY IN NEW SOA RESEARCH REPORT

A new report authored by the Denver office of Milliman, Inc. and sponsored by the SOA's Health Section pegs measurable medical errors at \$19.5 billion per year. The Milliman team used an extensive claims database to estimate the frequency and cost impact of medical errors on the health care system and the U.S. economy. The work was guided by a diverse team of actuarial professionals, some with clinical and regulatory backgrounds, and also included a physician, health risk manager

and an assistant dean of a medical college, active in medical disaster prevention and relief. To date, the report has garnered significant media attention including an interview on the *Nightly Business Report* with Jim Toole, who chaired the project oversight group, and coverage in the *Wall Street Journal*.

The report is available at: <http://www.soa.org/research/health/research-economy-measurement.aspx> 

## PROFESSIONAL DEVELOPMENT OPPORTUNITIES

### ENTERPRISE RISK MANAGEMENT TECHNIQUES AND PRACTICES

December 7–9  
Phoenix, Ariz.

### 2011

#### LIVING TO 100 SYMPOSIUM

January 5–7  
Renaissance Hotel at Seaworld  
Orlando, Fla.

#### REFOCUS CONFERENCE

February 27–March 2  
Four Seasons Hotel  
Las Vegas, Nev.

#### ERM SYMPOSIUM

March 13–16  
Swissotel  
Chicago, Ill.

#### INVESTMENT SYMPOSIUM

April 11–12  
Millennium Broadway  
New York, N.Y.

#### LIFE INSURANCE CONFERENCE

April 11–13  
Caesars Palace  
Las Vegas, Nev.

#### RETIREMENT INDUSTRY CONFERENCE

April 13–15  
Caesars Palace  
Las Vegas, Nev.

#### 2011 LIFE AND ANNUITY SYMPOSIUM

May 16–17  
Sheraton New Orleans Hotel  
New Orleans, La.

View all Professional Development opportunities by visiting [www.soa.org](http://www.soa.org) and clicking on Event Calendar.

## ATTENTION READERS!

If you have an idea for an article you think should appear in *The Actuary*, or a response to something you have read in these pages, tell us about it by sending an e-mail to [theactuary@soa.org](mailto:theactuary@soa.org).



## NEW SOA STUDY IDENTIFIES BARRIERS TO FINANCIAL PLANNING ADVICE

Many experts predict that even after America emerges from its present economic problems a more formidable financial challenge looms just over the horizon as its citizens have fallen behind on saving for retirement. With professional guidance, a generation of future retirees could correct their course before it's too late, but many are not seeking that help. Results of a new study sponsored by the SOA's Actuary of the Future Section and the Product Development Section highlight the need for more access to affordable, quality financial advice for non-affluent U.S. consumers, those of moderate or low net worth. While Americans' responsibility for retirement has

increased, their financial knowledge has not kept pace. As a result, many workers approaching retirement are realizing they do not have enough retirement savings accumulated and are not equipped to solve this problem. There is a widespread lack of both financial knowledge and formal, long-term financial planning among the middle class. The findings from this study, "Barriers to Financial Advice for Non-Affluent Consumers," uncover 10 barriers to financial advice and help address the gaps in knowledge. To view this study, please see <http://www.soa.org/research/research-projects/life-insurance/research-barriers-consumers.aspx>. **A**

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Using your credit card and our easy-to-use online payment system, you can pay your dues, renew section memberships or sign up for new section memberships. For your convenience, you can also sign up for IAA special interest sections at the same time you renew your SOA membership.

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*Where Cutting Edge Theory Meets State of the Art Practice*

More than 400 senior executives, directors, and risk management experts gathered at the 2010 Enterprise Risk Management Symposium in Chicago to present the latest on ERM thinking and practices. Make sure you don't miss the next opportunity—our 2011 ERM Symposium—to learn from industry leaders about this emerging discipline and expand your ERM skills.

Highlights include:

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and with collaboration of the Asociación Mexicana de Actuarios, Colegio Nacional de Actuarios, and Enterprise Risk Management International Institute.



# SOA 2010

Annual Meeting & Exhibit

Oct. 17–20, 2010  
Hilton New York  
New York, NY

The Society of Actuaries would like to acknowledge and thank the 2010 SOA Annual Meeting & Exhibit event partners and exhibitors for their support, leadership and commitment to the actuarial profession.

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