

The Actuary

JUNE/JULY 2011 VOLUME 8 ISSUE 3

THE PLUSES **AND** MINUSES

of the Long-Term Care Insurance Market




THE TOMORROWLAND OF LONGEVITY

A report from the Living to 100 Symposium

EMERGING MARKETS AND ERM

How the Middle East is implementing
risk management



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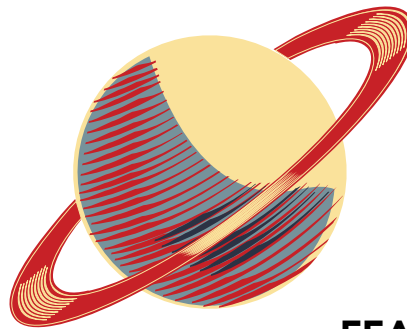
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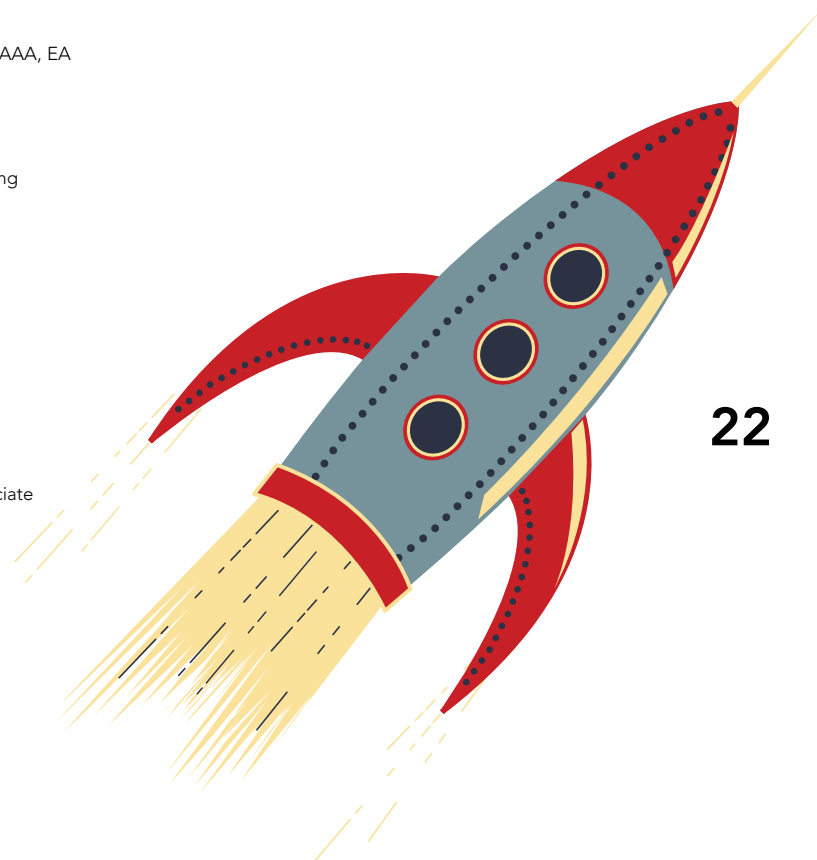


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Editorial

TOWARDS A RISK MANAGEMENT PROFESSION

BY DAVE INGRAM

DURING THE DOZEN OR SO YEARS that I have been volunteering for SOA projects relating to ERM, I have heard many, many actuaries say that all their work is about risk—risk measurement and management. But risk management has been changing and evolving over that same time period. Company practices have evolved. There are new developments on the regulatory front. The actuarial profession first responded with a new educational certification, the CERA, and is now working towards professional standards of practice.

Insurance solvency regulation is moving into new territory. Insurer and reinsurer management and boards will now be required to issue a statement that reflects their judgment about the firm's viability, including its capital adequacy. This is an abrupt shift from the longstanding practice where regulators specified the exact basis for assessing insurer solvency. This will require management and the board to develop new thinking about risk, risk management and capital. They will need to agree upon the risks, the risk management capacity, and the necessary capital as well as the impact of future plans of each insurer, instead of

operating in the safe harbor that is specified by the regulator.

This change is due to an agreement in October 2010, by the international insurance regulatory community to adhere to a set of Insurance Core Principles (ICPs). This new requirement for solvency, ICP 16, is titled Enterprise Risk Management. ICP 16 calls for an Own Risk and Solvency Assessment (ORSA). This ORSA requirement was already embedded in Solvency II within Pillar 2. In the United States, the National Association of Insurance Commissioners (NAIC) has issued a proposal to implement the ORSA, which was recently under comment. It seems clear from the NAIC's approach and language that they are not looking for opinions about *whether* to implement the ORSA requirement, but were soliciting suggestions with regard to the specifics of implementation.

Prior solvency standards, such as the NAIC's Risk-Based Capital regime, imply that an insurer is deemed to have enough capital if it passes a certain dollar amount. The critics point out that large U.S. banks were meeting the Basel II solvency standards when they

experienced very large losses and needed bailouts to stay in business. By making management and the board responsible for certifying solvency, the expectation is that they will do a better job of reflecting and monitoring the actual risk position and capital needs of the insurer.

ICP 16 requires that five elements of a risk management system be reflected in the ORSA opinion: identifying risks, measuring risks, a risk feedback loop, a risk tolerance statement, and a risk policy.

Actuaries can and will have a major role in this emerging process. Some firms will need assistance in building the processes needed to measure and manage risks, some will need help in documenting and explaining the processes that they already have in place, and a few are already well prepared. Much work is needed for actuaries to be ready for a major role in accepting the responsibilities of these new requirements. A major part of that process is education. That work is well underway with the addition of the CERA credential and related syllabus materials. This coursework provides actuaries with the educational background needed to

operate as risk management professionals. To obtain a CERA, a student must master the methods that are used for risk management. Another part of that process is developing professional standards that define for practitioners, potential employers and others, such as regulators, what an actuarial risk management work product will include. The Actuarial Standards Board (ASB) has started work on that as well.

In 2010, the ASB commissioned a task force to look into whether a need existed for a new standard or standards for ERM practitioners. That task force has come back with a pair of discussion drafts that were posted for comments to the ASB website in March. Separate documents cover risk evaluation and risk treatment.

If you agree that all your work is about risk measurement and management, then no matter what your area of practice, please make the effort to read the discussion drafts on risk evaluation—they may have a significant impact on your practice.

If you are reading this as one of the many SOA members who practice outside the United States, you might be thinking that this applies only to U.S. actuaries. You may be

surprised here. The International Actuarial Association (IAA) has a process to develop model standards of practice that may be adopted by any member association for use in its country. The IAA recently empanelled an ERM task force to develop one or more model standards on ERM. These new ASB discussion drafts may well be the starting point for the IAA work, so your attention to them is important.

The newly developing ORSA requirement of the regulators is a natural reaction to the failures of regulation and risk management of the financial crisis. The actuarial profession is keenly placed to step up and provide uniquely well-educated and professional assistance to this process. Creating a standard of practice in a developing field such as risk management is a new challenge for the actuarial standards setting process. A spirited debate is expected to result from the discussion drafts.*

At a recent session discussing ERM standards of practice at the ERM Symposium, Bob Mark, a well-known author and Professional Risk Managers' International Association (PRMIA) board member, remarked that he did not know of any organization that was working on standards of practice for individuals

practicing in the risk management field. This vacuum provides an opening for actuaries to establish the first set of such professional standards in the field of risk management. At this point in time, the entire actuarial profession is a small fraction of the total number of people who are practicing risk management. But with the educational standards as expressed by the CERA and the professionalism that will be codified by the new standards, actuaries will certainly be seen as the source of some of the best risk management work available. **A**



Dave Ingram

*Comments on the discussion drafts are requested by June 15. The discussion drafts can be found at <http://bit.ly/kIRLGc> or by using the QR code below. Comments can be sent to discussion@actuary.org.



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QR CODES IN THE ACTUARY

IN AN EFFORT TO MAKE THE ACTUARY even more beneficial to you, we have begun placing QR codes next to some of the items in the magazine. The handy little black and white squares with the funky design allow you to quickly and easily get more information about the item they are accompanying. To use the QR codes, you must download a QR reader app to your smartphone. This can be easily done by visiting get.neoreader.com on your smartphone. Once you have the app downloaded, use it to take a picture of the QR code. As soon as you do, your smartphone Web browser will automatically be taken to the free, extra information. Have fun!

Letter From The President

STRONGER TIES

BY DONALD J. SEGAL

**“GOOD COMMUNICATION IS AS STIMULATING AS BLACK COFFEE, AND JUST AS HARD TO SLEEP AFTER.”—
Anne Morrow Lindbergh**

Hashtags, tweets, Flip, blogs? Ten years ago we barely heard these terms, if at all, and now they're becoming part of daily communication.

Like any association, the SOA wants to build stronger ties with members and candidates.

With financial, geographic and time restric-

tions, social media has become a quick, easy, affordable way to share ideas. This year we are focusing on social media tools so they become a more visible way of sharing info and starting a dialogue among members.

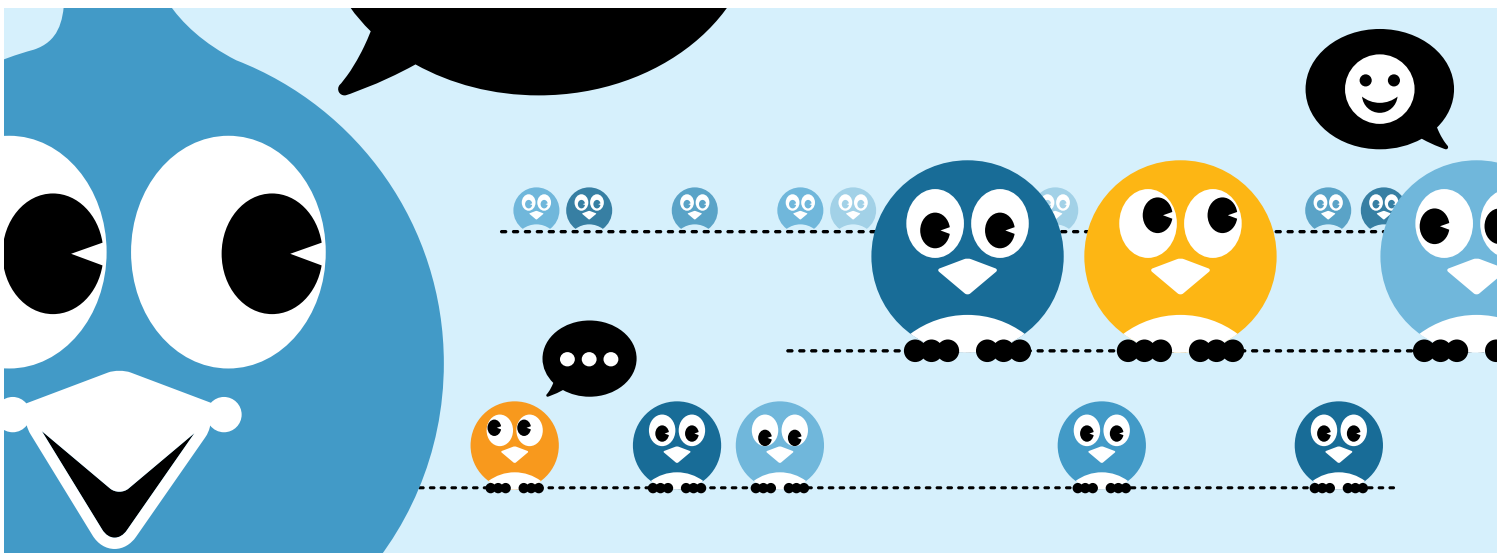
LINKING IN

Are you on LinkedIn? LinkedIn is a great professional networking tool. The SOA group on LinkedIn already has more than 3,000 members, and I encourage you to join the group if you haven't already. Recent discussions include things like acting in the public interest,

prescription drug programs, and pension risk transfer. Several SOA sections also have their own groups on LinkedIn. This is an easy way to interact with other actuaries and future actuaries on topics of interest to our profession.

TWEETING

We are also launching an official SOA Twitter account (watch SOA website for announcement) in addition to my own ([Twitter.com/TheDonSOA](https://twitter.com/TheDonSOA)). Twitter is an easy way to hear what your colleagues are saying about the profession and topics relevant to our work





Donald J. Segal

like retirement, health care, insurance, etc. For the first time, several members will be “live tweeting” at the SOA Health Meeting. If you’re there, join in and tweet your perspectives on what you’ve learned at sessions, who you’re meeting with, and even the weather in Boston! And if you can’t be there, you can follow along on Twitter with the hashtag #SOAHealth11.

BLOGGING

We’re also gearing up to post more articles, news, updates and videos more regularly on the SOA blog, *Speaking of Actuaries* (blog.soa.org). Recent posts have run the gamut from election policies, to CPD, to the little QR codes that we’ve begun using in this magazine. The blog is a great place to engage in a discussion of issues affecting our profession, and I encourage you to join in!

VIDEO

Speaking of video, we plan to have more of that coming your way as well. If you’re at one of our larger meetings and see someone with a mini video camera, don’t be shy! It’s a great way to share your thoughts about the meeting, sessions you’ve attended, and even the people you’ve met, with your fellow members.

WHAT? NO FACEBOOK?

Not yet, but coming soon! Later this year the SOA is planning to launch an online community for candidates on Facebook. We know that our candidates are heavily involved in social media—so much so that they are more likely to get their news through an online feed than by reading a newspaper! The creation of this community on Facebook will allow candidates to engage in dialogue and get regular updates from the SOA.

IMPROVING THE SOA EXPERIENCE

We’ll be mixing a variety of these social media tools into the experience at our larger meetings to boost member involvement, whether you’re at the meeting or at your desk. I already mentioned how members will be tweeting live at the Health Meeting. This will also include blog posts live from meetings, video and more—all to create an enhanced learning and networking experience for members.

ACTUARIAL CLUBS

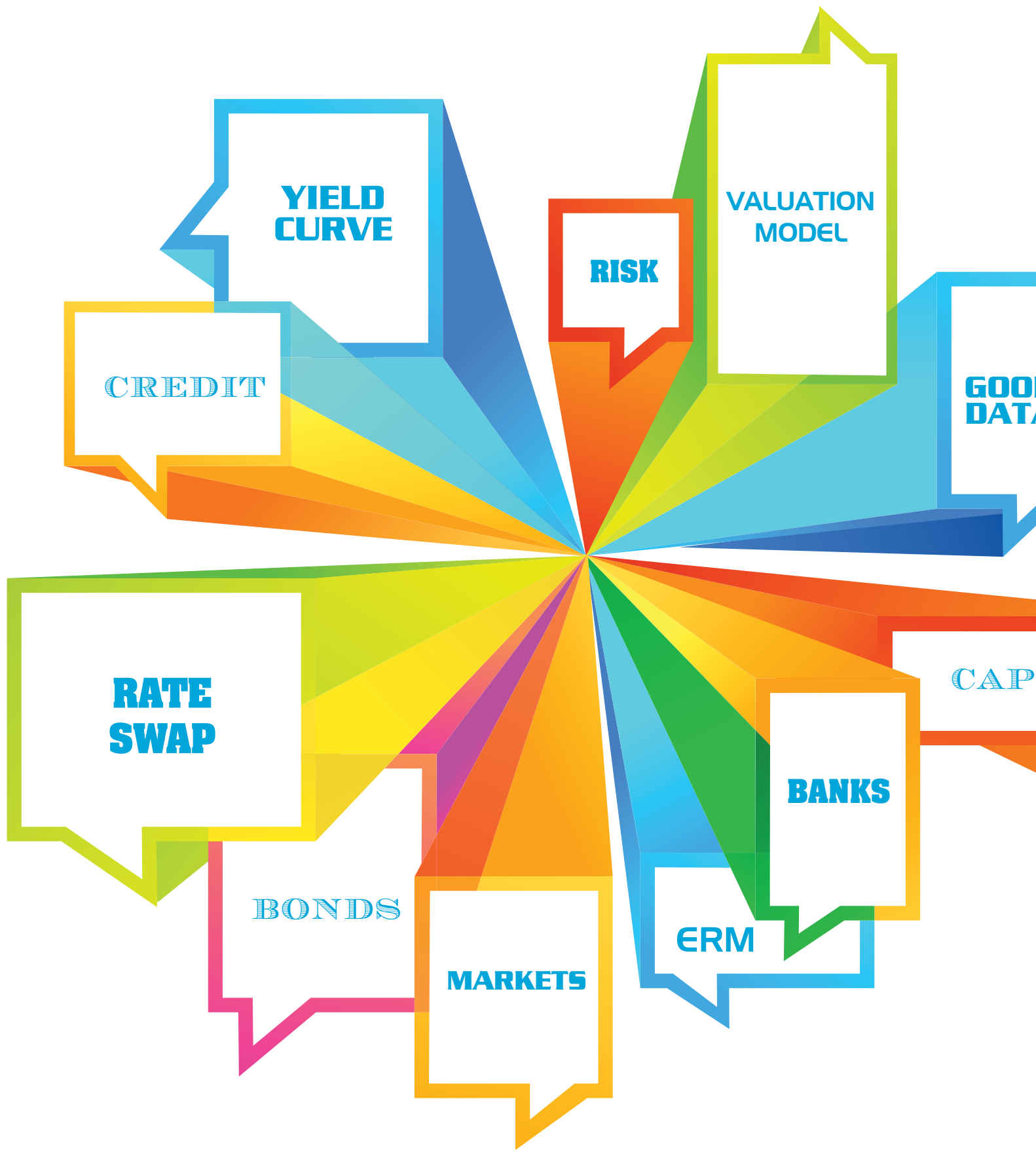
One of the best ways for actuaries to network is through their local actuarial club, and the SOA wants to be a greater resource to these groups. SOA staff, with an advisory team of club leaders, is developing ideas for a menu of services

and service standards that the SOA can provide to actuarial clubs.

I’ve spoken to several actuarial clubs throughout the year, and each experience reminds me of how unique and supportive our profession is. And with the inquisitiveness and enthusiasm of our candidates, the future of our profession is indeed bright!

Social media tools are great. However, like the Lindbergh quote in the beginning of this article, I’ve come to realize that it’s not the tool used, but the conversations produced that provide the most value. **A**

Donald J. Segal, FSA, FCA, MAAA, EA, is president of the Society of Actuaries. He can be contacted at dsegal@soa.org.





A FRIENDLY CONVERSATION



**EMERGING MARKETS—ENTERPRISE RISK MANAGEMENT
WITHIN THE BANKING INDUSTRY** BY JAWWAD FARID

“This article captures both [THE STATE OF RISK MANAGEMENT PRACTICE](#) in the Middle East as well as the perspective of an actuary working outside of the insurance sector in financial services risk management.” – Dave Ingram, *The Actuary* contributing editor

THE MIDDLE EAST is filled with interesting cities and paradoxes; none more interesting than Dubai. For a city estate with fewer than 3 million souls, it boasts more banks than neighboring nations with many times the population. Once upon a time in a different world, the profitability generated by regional banks in the union of city states known as the Emirates surpassed

the combined profitability of the same banks in India, Pakistan, Sri Lanka and Bangladesh.

The year was 2006. I had just stepped into the treasury of one of the largest banks in the Middle East. The treasurer I was meeting was a referred lead. Our conversation started off pleasantly, but then I mentioned that I built and sold risk systems for a living.

“You are wasting your time in the Middle East. Every single bank in this city is overcapitalized, we hardly ever see any defaults and we are all cash rich. Why would anyone in his right mind throw away good money to buy capital adequacy, risk management and liquidity software? Even if I did buy the software, who would run it? Where would I get the data to work and calibrate these models?”

“How about bank regulation and regulators as an incentive?” I countered.

“You have me there, but you still can’t help me with the data and your models break down every time my markets sneeze so I still don’t see the value in them.”

When I started working as a risk consultant the mind-set represented by the above conversation used to stump me. Clients basically said:

- a. Risk systems are for dummies and the only reason anyone would buy them is the push by the banking regulator for the enforcement of Basel II regulations. Other than regulation, there is no business case.
- b. You need talent, experience and data to configure and run risk platforms and all three are missing in markets that can at best be described as illiquid, inefficient and incomplete.
- c. In a culture where intuition and experience were given heavier weight, a broken, inaccurate model would only go so far in a management committee meeting.
- d. You can’t run a credit relationship off a model. There is a reason why it is called a relationship.

Over the last eight years a few things have changed. On the negative front, given market, credit and operational risk losses realized in 2008–2010, banks in the Middle East are no longer overcapitalized. Margins are significantly lower, asset write-downs (provisions or increase in reserves) are higher and the financial services sector has been hit by a wave of defaults across retail and corporate segments. Where stringent immigration entry/exit controls are in place and expatriates cannot take exposure to real estate, retail defaults have been controlled

by what one would call non-banking measures. But in cities like Dubai, Ajman and Sharjah, customers simply walked away from cars, properties, jobs and lives and went back to their own countries. Liquidity finally became an issue as banks cut their lines in response to forced rollovers, counterparty defaults and rising losses in investment portfolios.

From a governance and data point of view, significant challenges still remain. Good data is a problem for reasons that we will discuss in just a moment. Compliance and governance frameworks are missing teeth and bite and the mind-set around risk is very much checklist and compliance driven.

WHY IS RISK MANAGEMENT DIFFICULT IN THIS PART OF THE WORLD?

Let us look at the biggest issue that comes up on a daily basis—data.

While market or price risk is only a small part of the overall exposure of a bank’s balance sheet, the absence of good data impacts asset liability decisions, the banking book, transfer pricing and, by definition, the interest rates that get charged to credit customers. Absence of good data doesn’t just impact the investment portfolios; it questions the assumptions on which the bank is run.

Good data is dependent and linked to the depth and activity in secondary markets and transparency and record keeping by the central bank in interbank activities.

The common component across market risk is the availability of prices at which securities trade and exchange ownership in secondary markets. A challenge in the developing world is the availability of this data for treasury and corporate debt as well as listed

securities. Treasury markets become doubly important because without a treasury term structure it is difficult to build a treasury yield curve, and without the yield curve you can’t build zero and forward curves or price swaps, caps, floors or swaptions. Some markets have addressed the thin trading problem by creating mechanisms for quoting indicative rates and prices.

For example, in one of the countries where we work with clients, the daily turnover in the three- and six-month maturity treasury bill is about U.S. \$200 million. Yields range between 10- to 13-percent on the three-month paper depending on liquidity, coverage, demand and market sentiments. The two papers (three- and six-months) are the most liquid instruments in that market and the bid-offer spread (the difference between buying and selling prices) is a few basis points. In the same market three-, five- and 10-year bonds also trade on a daily basis but with much thinner volumes—thin to the extent that a million-dollar order can move yields by 25 to 50 basis points. And while 20- and 30-year bonds get auctioned at every bond auction, there is no liquidity at all in the secondary market for long bonds.

How do we fill in the gaps in the yield curve? The local association of treasury professionals, in collaboration with the central bank, banks and broker community, publishes a daily yield curve on an indicative basis that starts from overnight rates and ends at the 30-year bond. While this works and solves 80 percent of the issues, these rates are generally unstable for larger orders. If you want to buy or sell \$10- to \$20-million worth of longer maturity bond, there is a good chance that you will move the market significantly since the curve is indicative in nature and not based on trading data.

From a derivative pricing and valuation point of view this creates bigger problems since the notional business that you would write would ultimately need to be backed by some physical tangible bond. And if daily liquidity in markets hovers around a million dollars, by definition your appetite for writing interest rate swaps, caps and floors is limited by the dollar amount you could safely hedge in the underlying security market.

These markets are relatively better markets because you have some data and a community-wide effort to fill in the blanks. There are other markets where there is no sovereign debt traded or issued per a regular schedule. No information is gathered or shared by the central bank on yield curves, auction participation, bid patterns and trends. There are no auctions, no indicative yields, volumes or visibility.

Imagine running an asset liability committee meeting without a firm market-based

yield curve. From a transfer pricing point of view, the decisions you make on pool rates are estimates based on intuition and personal opinions. When the time comes to place or raise that deposit, will the market accept your intuition?

The good data problem is not just limited to fixed income securities. In market after market, from equities to commodities, the principal issue is trading volume and liquidity. Oil is another great example. The primary crude oil blends that you can trade and work with in terms of derivative products are WTI (on NYMEX) and Brent (on ICE). Clients in the Middle East and the Asia Pacific have exposure to Dubai Oman, Aramco, Iranian Heavy and Arab Light. While you can get price data on the underlying blends, exchange-traded contracts on the above blends either don't exist or have very limited volumes and participation. An alternate is to track correlations with WTI and Brent for each of the above blends, but the correlations are also

not stable and can break down faster than you can unwind a position.

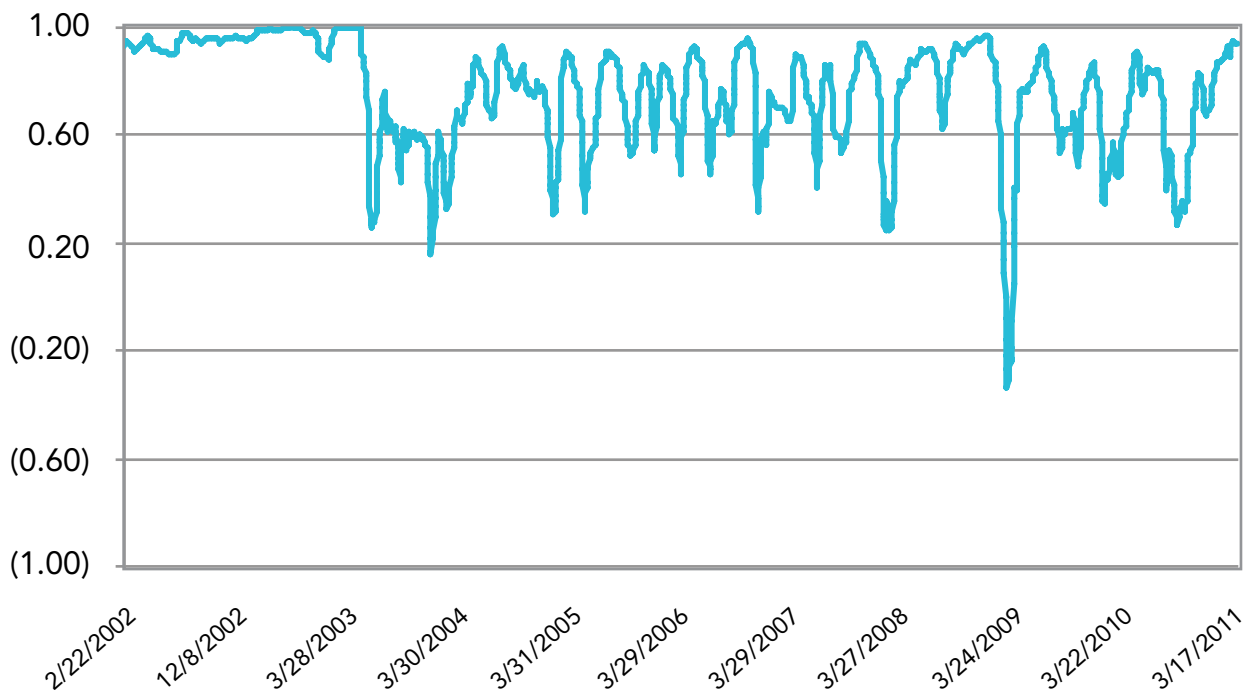
The graph below tracks the trailing correlation of the Saudi Arabia light with Brent. While the average trends between 60- to 90-percent, there are instances where correlations drop significantly at short notice and stay that way.

GOVERNANCE ISSUES

But perhaps the biggest issue, even bigger than data, is control at the board and management committee levels.

While matrix reporting is common in multinational banks, most domestic banks in emerging markets still work with a linear reporting structure. In a matrix structure the country treasury reports to the regional treasury and the country risk group reports to the regional risk group. And while there is some administrative local reporting, incentives are aligned in such a fashion that the

Saudi Arabia – Light with Brent





local country and business head has only limited influence on the local risk function.

In many emerging markets domestic banks are just that—domestic banks. Hence a linear reporting line that starts with the board, flows through the executive committee, at times the board risk committee, followed by the CEO or president, followed by business heads. The chief risk officer (CRO) and the risk management function at times report to the board and at times work with the president as their direct manager. The budget for the risk function and approval for its expenses and resources comes from the business side. And while the business side may not necessarily intend to sabotage or curtail the risk function, anything that does not contribute directly to business volume is simply overhead that needs to be reduced.

The problem with this approach is that to survive, the risk function learns to align its incentives with the business side. The alternate is isolation, replacement or substi-

tution. Eight years ago, I used to advise clients thinking of escaping from the finance function to escape to risk. The work was different; the models were more exciting. Today I tell them to stay with the business side unless they are sponsored by a powerful board that will give them the teeth to do their job.

For instance, some of the most powerful CROs that I have worked with do not have the title of the CRO. They are CFOs and COOs with access to the board, and who, despite the inherent conflict, took the risk function under their protection and made it work.

In most linear reporting structures, the business side prevails and generally has a bigger stick or better credibility with the board compared to the risk function. It takes a very powerful and savvy board to create incentives that align correctly between the business side and the risk function. And while it is a challenge with matrix reporting, it is a much bigger challenge with linear reporting lines.

SO HOW DO WE WORK WITH ALL OF THESE IMPERFECTIONS?

The Control Function

Michael Lewis put it perfectly in *The Big Short*. The risk is not in price volatility. The risk is the stupid trade that never should have happened. While no control function can stand in the way of a determined trader to do the trade he wants to do, an effective control function can increase the threshold of deter-

The Joint Risk Management Section

BECOME A PART OF THE JOINT RISK MANAGEMENT SECTION: The Society of Actuaries (SOA), Casualty Actuarial Society (CAS) and Canadian Institute of Actuaries (CIA) jointly sponsor the Joint Risk Management Section. Keep up to date on important risk management news, network with your peers and be a part of a group that works to further the education and research in the area of risk management and establish leading risk management techniques. Just go to SOA.org and click on Find a Section. Once you become a member of the section, head over to the JRM's LinkedIn group to chat about this and other hot topics in ERM. Just go to LinkedIn.com and search for Joint Risk Management Section. ■

mination required to break it and detect stupid trades when they get executed.

The first thing we focus on is the limits function and its ownership. If the limits function originates from risk, it will not work. The risk function cannot drive the car from the backseat.

The trading function has to own the limits mechanism and it has to participate in how they are defined, set and implemented. The limit mechanism is an immunization booster. Unless the patient takes the injection, it is useless.

The primary issue in these discussions is boundaries, damage control, face and blame shifting. Treasurers and traders don't like losing money or booking losses, and they dislike being hauled in front of the board or the management committee to explain the logic of every trade to someone who doesn't understand their markets or the trading function. And yes, the implementation of the risk function is also dependent on the composition of the board and professional experience of board risk committee members.

A well-balanced limits and control function focuses on detecting and avoiding the stupid trade which minimizes unnecessary face time with the board and eliminates witch hunts. It realizes that in the end the trade will kill the bank because of incentives and controls, not because of market or price volatility.

Education

How do you convince the trading function to own the limits and control mechanism or the board to put the right profile of professionals in the board risk committee? By educating key influencers.

We start off acknowledging the vulnerability of risk models, our dependence on inaccurate or indicative data, and the sensitivity of our models to market movements and assumptions. The objective is to build the right level of skepticism in our audience and highlight the importance of detecting, reporting and managing exceptions.

The reason why we put board members to sleep is because they can't follow the language and terminology of risk or see the relevance of our approach. Some of this gets fixed by sessions focused on walking them through notation and frameworks while the rest gets addressed by reviewing cases where their bank lost money or had a near miss and what the board can do to learn from its mistakes.

Qualifying Models

Qualifications on valuation and fair value opinions of vanilla as well as complex derivative transactions have become an important part of our work. Qualifications are important not just for limiting professional liability but also for acknowledging the elephant in the room, which is my model is broken and will only work in instances when markets do not misbehave. Qualifications become even more important in emerging markets when all we have is indicative data. Following is a standard set that we use as part of our opinions.

- a. Valuation models for such products vary in terms of approaches and the choice of assumptions can result in a broad range of valuation results.
- b. Prices from such models are indicative in nature and may differ from market prices due to changing market, liquidity, interest and foreign exchange rates environment.
- c. The indicative valuation is also based on a mark to market based approach

and will differ from execution prices since it makes no adjustments for bid-offer spreads which will vary from one counterparty to another.


- d. The valuation will change from one day to the next with changes in the underlying valuation parameters.

CONCLUSION

Since I started this article with a conversation, I think it would be appropriate to end it with another conversation.

This time though the city is Karachi, Pakistan, my home town; the year 2007. The bank is a small institution in turnaround mode being run by a president who himself had been a treasurer, supported by a CFO who had recently doubled as a CRO.

When the call came in for a proposal and a presentation we hardly expected it. When the sale happened and the implementation became one of our smoothest in history I asked the CFO how he justified the expense and resources associated with our risk platform. Where was the business case? I still remember the response he gave.


“One day this bank will recover and enter the markets again. We don't want to start building our risk capability when that day arrives. We want to build it now so that when we finally have capital to risk we also have the systems, the resources and the discipline to manage that risk. And if that means your system runs for a year waiting for our risk appetite to get back to normal, so be it.” 

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THE PLUSES **AND** MINUSES

of the Long-Term Care Insurance Market



A woman with a friendly expression, wearing a maroon cardigan over a white top, is shown from the chest up. She is holding a large, solid red cross symbol in her open palm. The background is plain white.

The current state of the LONG-TERM CARE INSURANCE MARKET has quite a few people wondering about its viability. But are these concerns warranted?

BY ALLEN SCHMITZ

THE LONG-TERM CARE INSURANCE (LTCI) MARKET has had its share of media attention recently—or perhaps more than its share. From relatively rapid growth in its early days to declining sales in the late 2000s, LTCI has consistently been portrayed as a market with great potential. Recently, the market has attracted some high-profile news stories with several carriers raising in-force business premiums or ceasing sales of new LTCI business altogether. What is behind these stories? Do they paint the whole picture? What does the LTCI market really need to turn the corner?

Regardless of conditions at any given time, the market’s potential is apparent. The aging of society in the United States, and in many other countries for that matter, will create significant challenges and opportunities with respect to long-term care (LTC). As the saying goes, demographics is destiny. The cost of care continues to grow as shown in the graph in Figure 1.

Medicaid is the primary payer of LTC in the United States. According to 2008 CMS data,¹ Medicaid pays for about half of LTC expenditures, Medicare pays for 22 percent, LTC insurance and other private sources pay about 9 percent, and the rest is covered by other public sources and out-of-pocket expenditures. The value of informal care provided by friends and family members is not part of these cost estimates, but some estimate that the value of informal care is at least equal to the total value of formal care. While Medicaid pays for most LTC in the United States, the tremendous pressure from state budgets is such that Medicaid will not be able to fund the lion’s share in the future. Currently, many states are looking for ways to scale back their LTC programs. The need for privately funded LTC is clear and persistent. Unfortunately, many people today do not have a plan for

managing their LTC needs. So when an event happens, they scramble to determine what to do and how to pay for care. In many of these situations, Medicaid ends up paying the bill—either after asset spend down or lenient Medicaid rules that allow individuals to shield assets and qualify for Medicaid. Addressing this issue and getting more people to develop a plan for future LTC needs would reduce budget pressure on Medicaid.

HISTORICAL GROWTH

LTCI experienced several years of robust growth in its early existence. For several years, however, new sales have declined, and have been much lower than anticipated by many in the industry. Total sales for the industry were almost \$700 million in 2010.² Figures 2 and 3 (on page 19) show historical new business growth rates for the individual and group market segments, respectively. The group market comprises about one-third of the total in-force lives, but only 20 percent of the total in-force premium—this difference is largely because the group market is primarily sold to younger individuals with an average issue age in the lower 40s versus

upper 50s for the individual market, and the average premium for younger individuals is much lower.

Despite not performing up to its potential, the market is not insignificant or small as some think. As of the end of 2010, the LTCI market included almost \$11 billion of in-force premium and covered more than 7 million people.³ The American Association of Long Term Care Insurance currently estimates that the total potential market for LTCI is about 15 million to 18 million people.

In the past couple of years, general economic weakness undoubtedly shares at least part of the blame for slow sales. Individual buyers have less income to spend on a form of insurance that they largely view as discretionary (at least until they approach retirement age). Employers, one of the stalwarts of LTCI growth through sales of group policies of various kinds, have cut back on employee benefits of all kinds including LTCI. The explanation can’t rest there, however, since LTCI market declines started long before the 2008 economic crisis.

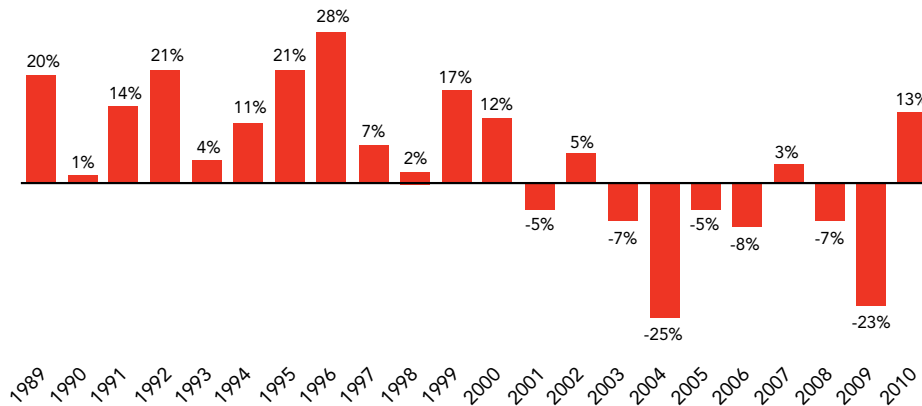
Figure 1: Average Daily Rates by Type of Care
Trend Data (2004 – 2010)



THE PLUSES AND MINUSES

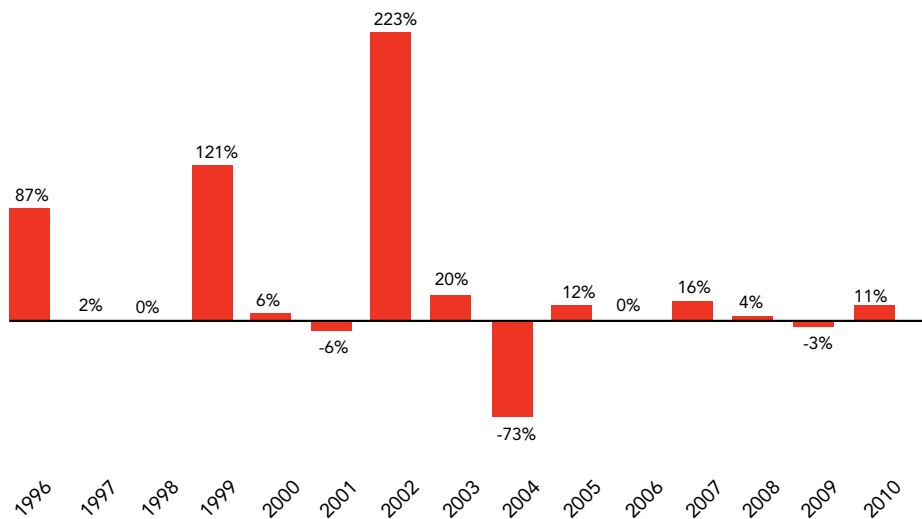
of the Long-Term Care Insurance Market

Figure 2: Individual Long-Term Care Insurance Sales Trends*



*Percent change in premium
Source: LIMRA, *Individual Long-Term Care Insurance Annual Review*, preliminary 2010 data

Figure 3: Group Long-Term Care Insurance Sales Trends*



*Percent change in premium
Source: LIMRA, *Individual Long-Term Care Insurance Annual Review*, preliminary 2010 data

Mispricing is probably one major factor in the downward trend. When LTCI first came on the market, carriers did not have experience with lapse rates and therefore used assumptions from products in the nearest adjacent space, such as other health products. These

lapse assumptions turned out to not fit very well for LTC insurance policies, as more people than originally expected kept their policies due to the value the policies provide—resulting in more policies in force to claim benefits. Also, many policies were sold with

lifetime benefits, which have been shown to have very poor experience for most carriers (this is due to adverse selection towards plans with richer benefits and because individuals have no incentive to conserve their benefits as they do with a smaller benefit period). Many policies were also priced based on interest rate expectations that turned out to be too high, especially given today's historic low rates. Insurers also face an increasingly tight regulatory environment, reducing their flexibility and making it more difficult to manage their LTCI business. Over time, new business pricing increased in response to carriers' experience, reducing LTCI's attractiveness to potential buyers. For example, according to the annual Brokers World survey, the average annual premium from the top 10 carriers based on 2009 sales for a three-year benefit period, 90-day elimination period plan with inflation for a single individual issue age 60-year-old was \$1,707 in 2009 and \$1,428 in 2004. Premium levels vary significantly by issue age and plan; for example, the average annual premium for the same plan above without inflation coverage was \$714 in 2009.

MANAGING RISK

Carriers face limited options when trying to manage the risk created by mispriced in-force policies. Those that wish to sell their block of business may find a less-than-vibrant market for their in-force business, particularly if expected future premiums are low relative to expected future claims. The result is an unattractive potential transaction, particularly in cases where the carrier selling would need to book a large loss on the business for the sale. A similar story follows for placing business with reinsurers.

The discrepancy between expectations and results reached a state of crisis for a number of carriers. Several have announced that they would stop selling new LTCI policies,

THE PLUSES AND MINUSES

of the Long-Term Care Insurance Market



way to go, awareness of LTCI as an asset protection strategy has grown significantly as more individuals begin to understand the need to take more responsibility for their future LTC needs. With the “baby boom” generation turning 65, the potential LTC market is vast. And, in a hopeful sign, LTCI sales have seen an uptick in the past year.

CLASS ACT IMPACT

One major unknown factor going forward is the impact of the Community Living Assistance Services and Support Act (CLASS Act), part of the 2010 Patient Protection and

at least temporarily. Others have applied for significant rate increases of 40 percent or more for in-force policies. These events garner headlines and add to buyers’ sense of uncertainty. Matters are not helped by news stories about denial of claims on older policies due to stricter requirements than are common today.⁴ All of this negative press might be fueling the apparent carrier exodus, as insurers wonder if their peers know something they don’t.

However, just because some carriers have chosen to exit the market doesn’t mean the market is not viable. Despite the risks—low interest rates, persistency, morbidity, regulatory changes, and the long tail inherent in policies that may stick around for decades—there is still a market for LTCI and that market has its good points. Items such as persistency, that have led to rate changes, are much better understood than they have been in the past. The exit of big market players actually creates significant opportunity for others who are willing to learn from past growing pains. As the economy continues its recovery, individual buyers will have more disposable income to spend on LTCI. While education has a long

Affordable Care Act. The CLASS Act creates a government-administered LTCI program that is both voluntary and guaranteed issue. The combination of these two features leads many to believe that the program is likely to be unsustainable in its present form. Voluntary guaranteed-issue insurance programs are inherently unstable because they enable individuals to join when they are at greatest risk of needing benefits without paying into the program long enough to fund those benefits.

Changes may be made to the CLASS Act that will make it more viable, it may be scrapped, or it may fail partway through its life. If it gets up and running, it might open opportunities for private insurers through increased consumer awareness about LTCI and potentially through supplemental coverage. Insurers are watching the matter closely and waiting to decide how to react.

FUTURE OUTLOOK

More broadly, there are several things that must happen in the LTCI market for it to move in a positive direction. Efforts to educate consumers and employers about the value of LTCI should continue. The industry needs to con-

tinue to look for innovative ways to design products that are sustainable, yet sufficiently affordable to be attractive to a wide variety of potential buyers. Combination products that include LTC coverage as part of a life or annuity plan are one potential bright spot that could grow beyond a niche market. Insurers also need some leeway to manage risk; if regulations become too strict, carriers will not be able to react with enough agility to market changes. The number of agents that sell LTCI has been declining; the market needs more agents. Health care reform may drive some health insurance agents toward other products such as long-term care insurance because of the need for health insurers to cut expenses such as agent commissions to lower loss ratios and be in compliance with the medical loss ratio requirements under health care reform.

Just as with any other investment, psychology plays a big role in the LTCI market. When one carrier exits, others wonder if they should stay in the market or cut their losses. Beyond the sound bites that sell papers, organizations should make an informed decision based on the fundamentals such as growth potential, profitability, and competitive advantage to determine how—or whether—to participate in the LTCI market today and tomorrow. ■

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ENDNOTES

- ¹ CMS data as analyzed by Conning Research and Consulting Insurance Segment Report on Long-Term Care – 2010.
- ² LIMRA, *Long-Term Care Insurance Annual Review*, preliminary 2010 data.
- ³ LIMRA, *Long-Term Care Insurance Annual Review*, preliminary 2010 data.
- ⁴ “The Latest Long-Term-Care Snafu,” *Wall Street Journal*, Jan. 22, 2011, <http://online.wsj.com/article/SB10001424052748703951704576091983237454732.html>.

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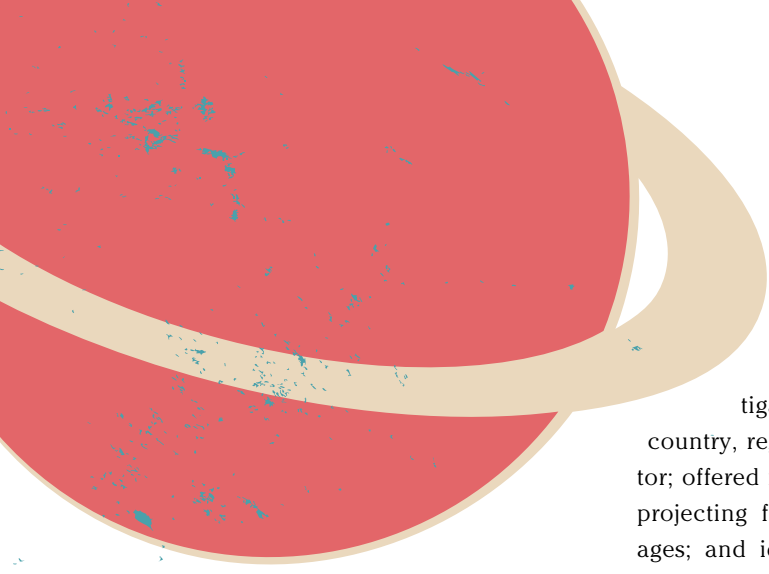




THE TOMORROWLAND OF
LONGEVITY

BY RONORA STRYKER WITH CONTRIBUTIONS FROM STEVEN SIEGEL

THE 2011 LIVING TO 100 SYMPOSIUM explored the latest scientific theories on how and why we age, examined possible predictors of long life and offered new models and methods for projecting future mortality at the older ages.



EARLY THIS YEAR I traveled to Orlando to attend the Society of Actuaries SOA Living to 100 Symposium.

But before the symposium began I visited the Magic Kingdom at Walt Disney World. This was my first sojourn to the theme park since childhood. Unlike my earlier trip, one of the highlights for me was the sense of community I felt when I walked into the park. People from all over the world had a similar interest and purpose to mine. While the park was very crowded and the lines were long for the attractions, time went by quickly as I and my new international friends whom I met waiting in lines shared our thoughts and experiences with each other.

Several days later when Tim Harris, co-chairperson of the symposium organizing committee, welcomed attendees in some of their native languages, I had a similar feeling to my Walt Disney World experience. Although there were not tens of thousands of people in attendance, conference participants were from 17 different countries and varied professional backgrounds. Yet we had a common goal. We wanted to know about future human life expectancy and if it will continue to increase like in the past.

Of course, no one knows what the future will bring, but a range of ideas and observations about aging and the societal implications was presented. The 2011 Symposium, the fourth in the Living to 100 series: explored the latest scientific

theories on how and why we age; examined possible predictors of long life; investigated mortality differences by country, region and socioeconomic factor; offered new models and methods for projecting future mortality at the older ages; and identified and addressed the challenges individuals and societies face in managing post-retirement risks.

... the *SCIENCE OF AGING* is on the brink of being able to treat aging as a disease.

This article summarizes our interpretations of just a few of the intriguing questions addressed and hopefully will whet your appetite for a series of articles scheduled for future issues of *The Actuary*. This series will explore a number of topics from the symposium and provide an in-depth perspective on each of them. Look for a discussion on the implications of increasing longevity on financial and other systems in the next issue.

IS IT POSSIBLE TO SLOW AGING THROUGH THE USE OF PHARMACEUTICALS?

Stephen Austad, professor of cellular and structural biology at the Barshop Institute for Longevity & Aging at the University of Texas Health Science Center, San Antonio, led off the symposium with an explanation of this question. In his captivating presentation, he illustrated why aging research is at the beginning of what he calls the “Pharmaceutical Era.” Although there currently is not a drug that has proven to slow the aging process in humans, the science of aging is on the brink of being able to treat aging as a disease. Therefore, it is a realistic expectation for the future that such a drug will be found.

He explained there were three reasons for his belief. Unlike earlier days, “bad science” is quickly revealed because people read the studies and when they see something “bad,” they call attention to it. Second, there are rigorous testing protocols to confirm study results. Third, the understanding of the basic biology of aging is advancing rapidly. For example, scientists have identified more than 200 genes that,

when altered in animals, have been shown to extend their lives. Each of the genes is a potential target for a drug that could possibly make humans live longer.

One drug showing promise in slowing the human aging process is rapamycin. This is an immunosuppressant drug already used in human medicine to suppress organ rejection. Austad is currently testing the drug in mice and preliminary results have shown that the drug delays the onset and slows the progression of: Alzheimer’s Disease; cardiovascular disease; cancer; and helps protect immune function in late life. He warned not to run out and ask doctors for a prescription quite yet as more testing is needed using animals more closely related to humans such as monkeys.

Not all speakers shared Austad’s views. Leonard Hayflick, professor of anatomy at the University of California, San Francisco, School of Medicine, does not believe the aging process can be treated like a disease because it does not exhibit the same characteristics as a disease. Unlike any disease, age changes occur in every animal that reaches a fixed size in adulthood; occur in all spe-

cies after the age of reproductive maturation; occur in wild animals protected by humans even after that species probably has not experienced aging for thousands or millions of years; increase vulnerability to disease and death in all animals; and occur in the molecules of both animate and inanimate objects as molecules lose structural integrity and functional capacity over time. Instead, he believes that biological aging is the spontaneous, random, systemic loss of molecular function that eventually exceeds repair or maintenance capacity after reproductive maturation.

While he indicated delaying, slowing or eliminating the causes of death attributable to disease or pathology will increase human life expectancy, age changes will still continue. Even when all age-associated diseases are resolved, the increase to life expectancy would only be 15 to 20 more years. In fact, if a cure was found for Alzheimer's Disease, it would only add about 19 days to life expectancy.

Hayflick feels that the chances of slowing the aging process in humans are small as there needs to be more research about the fundamental biology of aging. He pointed out that, in the United States, the focus of aging research is not on understanding the biology of aging but on disease prevention, diagnosis, cure and care.

WILL THERE BE ENOUGH DOCTORS, NURSES AND HOSPITALS FOR AN AGING POPULATION?

In addition to the scientific and technical sessions, there were sessions at Living to 100 on the practical implications of aging. Given the changing demographics in many of the developed countries around the world, one session focused on the increasing health

care needs as populations age and whether the needs will be met by increasing numbers of health care providers. Several country perspectives were presented on the future supply and demand for physicians and nurses.

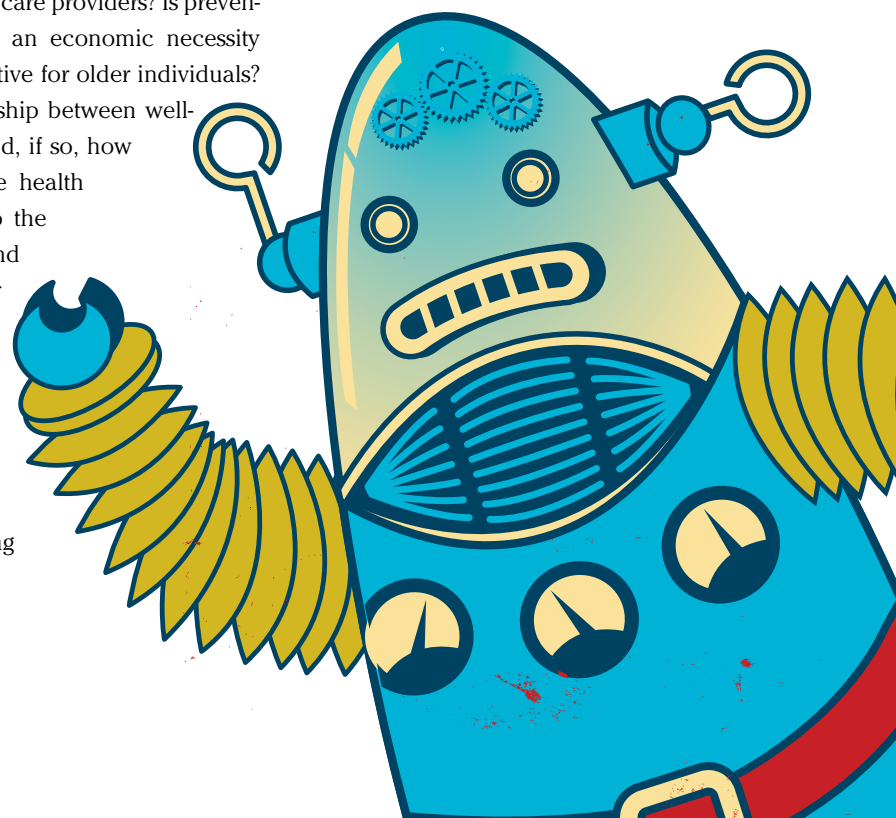
In the United Kingdom, Noreen Siba, managing director of the International Longevity Centre—U.K., mentioned while there has been a gradual increase in the number of doctors per 1,000, the United Kingdom's National Health Service (NHS) is believed to be understaffed compared to other international health systems. Given rising health care costs and NHS wanting to save funds, Siba opined that it is likely there will never be enough doctors and nurses to cope with the demographic change.

Siba raised interesting considerations that societies must face in trying to meet the future demand for health care services. How important are the changes in provider quality and quantity to obtaining improvements in the health and well-being of older individuals? As populations age, do increasing health needs have to be met by increasing numbers of health care providers? Is preventative health care an economic necessity and is it cost-effective for older individuals? Is there a relationship between wellness and work, and, if so, how might preventative health care contribute to the employment and well-being of older individuals? How will best practices and efficiencies that emerge from developed countries cascade down to developing countries?

Doug Andrews, a member of the Canadian Institute of Actuaries Health Committee, provided a Canadian viewpoint to the future demand and supply of health care providers. While Siba thought the United Kingdom will likely not have enough providers to handle demand, Andrews didn't know if Canada would be in the same predicament as there are a number of factors affecting this situation. While it is impossible to include all of Andrews' observations in this overview, a few of the factors he mentioned follow.

The size of the waiting list for health care services impacts provider supply. Since provincial governments do not want residents to go elsewhere for services, governments will likely be involved in managing the waiting lines and determining appropriate lengths. This suggests there might always be a sufficient provider supply for demand.

Among the Organisation for Economic Co-operation and Development (OECD) countries, Canada has the highest index



of geographic concentration of the population in small regions. This makes it difficult in delivering health care on a uniform basis among the population. An issue in determining whether provider supply is sufficient is how health care services get distributed across the population.

Another factor affecting the number of providers is that the education and licensing of doctors and nurses is dependent on governmental support. As of 2008 there were 1.95 physicians per 1,000. This might be considered a shortage as typically two physicians per 1,000 is considered adequate. The number of registered nurses (RNs) appears adequate at about 10 RNs per 1,000. If government provides more funding, there could be an increase in the number of providers.

Dr. William Peck, a physician and director of the Center for Health Policy at Washington University, discussed the U.S. landscape. Similar to Andrews, Dr. Peck is not sure that there will be a shortage of health care professionals for the increasing demand. Peck did note, though, many reasons to believe that there will be a shortage in the United States including the following:

- Demand for health care services continues to increase with the emergence of chronic illness.
- There is also evidence that there currently is a shortage of primary care physicians and this is where the shortage is believed to be most significant in the future.
- It will be difficult to expand the primary care physician workforce as there are fewer medical school graduates in America going into primary care.
- Expansion of the primary care physician workforce is dependent upon the federal government as they provide the funding for the number of residencies.

However, he also pointed out that while the demand for services is increasing, the practice of medicine will likely change significantly over the next 20 to 30 years and no one knows what the impact of this will be on physician supply. Panelists offered insight into what the future practice of medicine might look like, indicating RNs might play a larger role than today in an individual's health care management.

HOW WILL INDIVIDUALS ADAPT TO LONGER LIVES IN TERMS OF WORK AND RETIREMENT?

A panel of distinguished experts tackled this and other questions in one of the highlights of the symposium. Moderated by Robert Powell of MarketWatch, the panel discussed the concept of phased retirement and phases of retirement as well as potential paradigm shifts for retirement. The panel included:

Donald Segal, FSA, FCA, MAAA, EA—president of the SOA and a vice president with Aon Hewitt,

Paul Laporte, ASA—consultant, formerly with LIMRA International,

Anna Rappaport, FSA, MAAA, EA—owner of Anna Rappaport Consulting, and

Andrew Peterson, FSA, FCA, MAAA, EA—retirement staff fellow at the SOA.

The common denominator for all panelists except Peterson is that they are examples of phased retirees. In simple terms, phased retirement is a process of leaving the workforce in a gradual manner, rather than all at once. Segal led off by explaining that he retired from his full-time job about five-and-a-half years ago to take a part-time job where he essentially works three days a week. As Segal noted, he wanted to cut back from full-time work, but was not ready to stop completely. For Laporte, an opportunity to retire from LIMRA International sparked a second career that he phased into by partnering with his son in a financial planning business. Wanting to have time to pursue artistic interests and spend more time with family prompted Rappaport to open her own consulting firm and retire from full-time consulting. In this way, she has phased into a lifestyle where she is not on-call full-time and can take on assignments that she finds meaningful.

Clearly, the panelists implied living longer will make instances of phased retirement more common and desirable as individuals find more opportunities to balance work and free time. However, this trend may be somewhat moderated as retirees experience diminishing physical and mental capabilities as they progress through what is commonly referred to as the phases of retirement. Phases of retirement refer to distinct stages where retiree limitations can become progressively more inhibiting and make the possibility of working completely impractical.

LEARN MORE

Learn more about the **LIVING TO 100** initiative and symposium at <http://livingto100.soa.org>.



The panelists noted that the interaction between phased retirement, living longer, and the experience of different stages of retirement will impact stakeholders in different ways. For instance, employers will need to determine how they can best retain the talent they need, while balancing an appropriate mixture of younger and older workers. Businesses will need to find different ways to use people, employ them, reward them, and provide benefits. Panelists looked at this as both a huge challenge and an opportunity.

The panelists were also asked about the retirement issues that presented the biggest challenges based on what they heard at the symposium or in the news. Laporte noted the issue of Social Security and primarily the potential for raising the retirement age. He further commented that the actuarial

profession had proposed this as an actuarial solution to what was deemed as an actuarial problem. Whether or not this proposal is embraced remains to be seen. Rappaport said that society needs to create its own game-changers by developing new job options as one way to address the challenges that lay ahead. Finally, Segal commented that a great challenge is posed by the quality of the additional years of life that may be experienced. He quoted a passage from *Metamorphoses*, by Ovid, "I grabbed a pile of dust and holding it up foolishly asked for as many birthdays as the grains of dust. I forgot to ask that they be years of youth." An apt description for the issues discussed by the panel and the entire symposium.

The three questions explored in this article only touch the surface of the multitude of

global topics covered at the 2011 symposium. A good way to learn more is to visit the online monograph of papers presented at the conference expected to be available later this year.

The Living to 100 Symposium strives to bring longevity science predictions of tomorrow to audiences of today. Perhaps, on my next visit to Walt Disney World, the symposium will have inspired a new exhibit—the Tomorrowland of Longevity. **A**

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Education

SOA EXAMS THEN AND NOW

BY DANIEL P. CASSIDY

“Life was simpler in the old days.” This adage could be used to describe the actuarial education and examination system of old. Pass 10 exams, become an actuary—friends at cocktail parties could understand that. Now, an actuary, particularly those of a certain “vintage,” may have difficulty describing what it takes to become an actuary. This article is focused on comparing the “old” system to the new.

“You may ask yourself, well, how did we get here?” – Talking Heads, Once in a Lifetime

The education system seems to have been in constant flux for more than two decades—I should know, having been involved as a volunteer for more than 15 years. First the change to the Flexible Education System (FES), then the 2000 redesign. Elements of these prior systems included the 10-credit exam on executive compensation, professional development projects, and others.

Now, after all this self-imposed change, the Education Committee believes we have the architecture for an education system that will more easily handle future needs of the profession, without the need of a full revamp. This does not mean there won’t be changes, but that the elements we currently

employ are flexible enough to accommodate needed updates and enhancements. This is evidenced by the relatively minor changes noted in the article, “Broadening ERM Horizons,” published in the April/May 2011 issue of *The Actuary*.

In summary, our current education system breaks down into five categories: Validation by Educational Experience (VEE), preliminary examinations, e-learning modules, fellowship examinations, and professionalism courses. To help understand each one, I have included:

- **The primary purpose**—the basic reason why it’s in our system; and
- **Numbers**—since we’re actuaries, it is hard for us to resist calibrating anything we discuss.

The five different categories have specific purposes, educational objectives, etc. I think it best to compare each one of these five categories and compare it to prior SOA education systems to see how things have changed.

VEE

Validation by Educational Experience (VEE) was born out of the desire to focus the SOA’s limited resources on core actuarial education. Three topics

(Economics, Corporate Finance and Applied Statistics) were determined to be required knowledge for actuaries; however, there is nothing “actuarial” about them. Candidates comply by showing completion of SOA-approved courses. This frees up SOA resources to focus on those topics core to our mission.

VEE has no counterpart in prior SOA examination systems but some of the topics used to be part of the examinations (e.g., Corporate Finance). It is interesting to note that Calculus—long a part of the SOA examination system—is no longer examined or even among the VEE requirements. Calculus is now treated as a prerequisite to our entire system. We tell candidates, “A thorough command of the supporting calculus is assumed.”

PRELIMINARY EXAMINATIONS

There are five exams that make up our preliminary examinations. Candidates know them by their initials (P, FM, MFE, MLC, and C). All are multiple-choice exams with P, FM and C being offered through computer-based testing (CBT)—MFE will be joining them in May 2011.

Compared to old multiple-choice exams, these exams look on the surface to be very similar; ask a question, give candidates



Daniel P. Cassidy

five possible answers—A, B, C, D, and E. However, the examination committees now focus candidates on using their mathematics training to help answer questions they will face as actuaries, not simply to answer interesting mathematics questions with no specific business context.

In addition, CBT exam administrations provide candidates with several advantages including:

- More opportunities (up to six times a year for Exam P) to take the exam

rather than two days a year (November or May); and

- Immediate feedback at time of exam with unofficial results.

CBT administrations provide the SOA with significant advantages including:

- Consistency across time periods; and
- Possibility of adding new examination tools, e.g., spreadsheet access that would not be possible under standard paper and pencil exams.

In our efforts to constantly improve our exams, we also recently added an additional step during exam preparation—pre-testing. We pre-test the entire exam with a select group of volunteers. This provides the exam committees with concrete feedback on the questions before releasing them on the exams.

The topics included in the Preliminary Examinations are core to all actuaries and are examined at a high hurdle rate, i.e., candidates must demonstrate significant understanding in order to pass the examination. As mentioned, with CBT-administered exams, we can be more confident that our pass rates are consistent over time—a critical goal for all our stakeholders.

E-LEARNING MODULES

Like VEE, there is no counterpart to e-learning modules in any prior SOA education system. E-learning modules move far beyond the self-study approach of our traditional exams. Adopting new, powerful instructional design methodologies and instructional technologies, we use a wide range of interactions and assessments (multiple-choice self-check questions, thought questions, scenarios, case studies, Excel files, end-of-module tests, end-of-module exercises and rigorous performance assessments) to deliver e-learning modules to our candidates. The modules enable higher cognitive levels of application, evaluation and synthesis for a wholly new educational experience for candidates.

Operating under an examination-only model, education committees would get feedback from examination committees and candidates like:

CATEGORY	PRIMARY PURPOSE	NUMBERS
VEE – Validation by Educational Experience	Topics important for actuaries to understand, but no particular actuarial expertise—i.e., save SOA resources for topics core to actuarial work	Typically, six three-hour university courses
Preliminary Technical Examinations	Financial math and modeling needed by all actuaries with rigor of examination	15 ½ hours of exam time
E-learning Modules	Practical training in actuarial models and techniques, as well as communication skills, that are best taught in an interactive mode rather than self-study followed by examination	An eight-module course with two assessments at ASA level and four FSA-level modules
Practical Fellowship Examinations	Practice-specific advanced topics with rigor of examination	12 hours of exam time (with some variation by track)*
Professionalism Courses	In-person seminars focused on business issues, professionalism and communication	Half-day Associateship Professionalism Course and three-day Fellowship Admissions Course

*14 hours for those choosing an option that grants both FSA and CERA (effective July 1, 2013).

- “Great topic, really important for candidates to know, but no way could we write a question on it.”
- “Great question, but we would need to give the candidates an Excel spreadsheet to really answer this.”
- “Good answer, but the really interesting part is when you change this one parameter—then see what happens.”
- “You made us read this 20-page paper, but you have never asked a question on it in the last five years.”

In our new system, e-learning modules provide the space for education to take priority over examination. For example, communications and business skills are introduced as part of e-learning in the Decision Making and Communication (DMAC) course—these topics are also taught in our professionalism courses.

While maintaining examination rigor through formal assessments at critical stages, e-learning modules take full advantage of the Internet to help us deliver education to actuaries now and, just as importantly, in the future. The entire architecture of our e-learning modules provides a very flexible platform for future changes in the SOA’s education program. For example, this same technology is being used to support continuing professional development educational opportunities.

FELLOWSHIP EXAMINATIONS

On the surface, the advanced examinations seem to be the most comparable to the prior systems. In fact, these examinations are vastly different both in terms of questions asked as well as grading. Some of the significant changes include:

- **Case study**—Many fellowship exams include a case study. This provides

a real business context for exam questions;

- **Cognitive level**—Specific focus on the cognitive level needed to answer questions with examinations more focused on the highest level of synthesis and recommendations;
- **Integrated questions**—Leveraging off the case study, exam committees are encouraged to ask integrated questions, which we define as questions that span across individual syllabus material. It would be unusual for a fellowship exam question to simply be a regurgitation of a list from one source, which was a common situation in the former system;
- **Question writing/grader training**—Significant effort has been put into providing training for all volunteers involved in our exams; and
- **Sorting**—For many fellowship exams, an independent grading process that we call sorting is performed. This provides the committees with additional feedback both on questions and candidate papers from an independent source.

PROFESSIONALISM COURSES

Under the 10-exam system, there was no professionalism course. You passed the exams and got your FSA. Now, we have two in-person courses. The Associateship Professionalism Course (APC) is completed near the end of the Associate requirements and the Fellowship Admissions Course (FAC) is the final step to becoming a fellow. These courses provide an important capstone experience for candidates as they complete these major steps in their actuarial education. The FAC emphasizes small group discussion of real business cases and ethics as well as requires an oral presentation.

This last requirement directly addresses one of the major concerns about actuaries—that we can calculate numbers, but can’t communicate them.

SUMMARY

“What a long, strange trip it’s been” – Grateful Dead, Truckin’

The SOA’s education offerings have come a long way from the old 10-exam system—through the FES, the 2000 redesign and now finally to our current system, with plans for enhancements in the near future. While the convenience of having a nice simple response to “How does one become an actuary?” is lost, the SOA has gained a system that:

- focuses on actuarial education;
- balances examination rigor with educational experience; and
- uses technology—where appropriate—to facilitate and enhance learning outcomes.

So, if anyone asks you that question, one possible answer is, “We have a five-part education system making use of external course requirements, technical exams, practical exams, online learning and in-person training.” Not as slick as “10 exams,” but a lot more focused on educating the actuaries of the future. ■

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The Society of Actuaries congratulates the following universities on their designation as **Centers of Actuarial Excellence** during 2010.

Spring 2010

- University of Illinois at Urbana-Champaign
- University of Michigan
- Université du Québec à Montréal
- University of Toronto

Fall 2010

- Pennsylvania State University
- Simon Fraser University
- University of St. Thomas
- University of Western Ontario



To become a **Center of Actuarial Excellence (CAE)**, a university program must meet eight rigorous criteria. The SOA Board established the CAE program in 2009 to strengthen the role that academia plays with regard to education, service and research for the profession.

To find out more, visit <http://www.soa.org/cae>.




TO BETTER SERVE YOU

YOU MAY BE WELL AWARE of the SOA's strategic initiatives. However, you may not be aware that the SOA's work plan includes operational initiatives as well. While these operational initiatives are not as well known, they are also important to the SOA's stakeholders. The theme of the operational initiatives is a focus on improving services to members and candidates directly. So, how will this be done? Here are a few examples of what lies ahead for this year.

- The SOA will begin offering the fellowship exams twice a year.
- There will be a content management system put in place at the SOA for the purpose of helping members and candidates more easily find information on our website.
- A PD redesign will offer new professional development opportunities in a variety of ways.

Those are three of the most important operational improvements the SOA will be concentrating on this year. Our focusing on those three initiatives sends an important message to our members that says, "In addition to the strategic initiatives you've heard about, we have some important operational changes we're making that you might not otherwise see. They are about improving the services we provide to you."

The title of this department in the magazine is The SOA at Work. Believe me, the SOA is hard at work for you. We are constantly seeking ways to improve member benefits, whether that be by improving the image of the actuary, improving the education system or simply creating a means for faster communication and easier flow of information. Remember, we can't continue to improve without your input. If you have an idea you'd like to share, please visit www.soa.org/shareidea and let us know what it is. 

— SOA Executive Director Greg Heidrich

E-COURSES

Corporate Finance: Introduction to Corporate Finance E-Course


This e-course covers the corporate finance branch of financial economics—that is, how institutions make decisions about raising and deploying capital. You will learn about the roles of the corporation, debt holders, shareholders and managers and the relationships among each. You will consider what things would be like in an ideal world and examine what factors contribute to corporate financial structures seen today.

Decision Making and Communication (DMAC)

This e-course provides a foundation for making decisions related to complex business problems that require the involvement of many stakeholders and decision makers. There are no standardized definitions of decision making and there are no best practices regarding decision-making processes, however, DMAC presents a decision-making process that is specific enough to provide solid guidance when making decisions yet general enough to be applicable in a wide variety of situations. DMAC also provides instruction on effective communication and presents an overview of other competencies that relate to the decision-making process and are important to your continued professional development and success.

Enterprise Risk Management

This e-course is designed to provide information to actuaries who do not regularly practice in enterprise risk management but want to know more about it to help expand existing skills or meet professional development requirements.

For more information, visit www.soa.org, Professional Development, e-learning. 

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:

Advice from Steve Vernon, retirement planning expert

Steve Vernon talks to Public Broadcast System about retirement-related issues. For more information, visit www.aarp.org, search term Secure Your Future or use the QR code.



Stern Advice: Fixes for the Biggest Retirement Risks

Actuary Lane West talks to Reuters about retirement planning and longevity annuities. For more information, visit www.reuters.com, search term Stern Advice Lane West or use the QR code.



The Cost of Medical Mistakes

Modern Healthcare blog notes SOA report on the cost of medical errors. For more information, visit www.modernhealthcare.com, search term Cost of Medical Mistakes or use the QR code.



Obesity Could be Industry's Calling Card

SOA report on the financial impact of obesity noted in *Bicycle Retailer and Industry News*. For more information, visit www.bicycleretailer.com, search term Obesity or use the QR code.



Risk Managers See Sliding U.S. Dollar As Biggest Concern—Study


Wall Street Journal quotes member Max Rudolph and cites 2010 Emerging Risks Survey. For more information, visit <http://on.wsj.com/hKwGlt> or use the QR code.



Making the Case to Buy an Annuity

The *Wall Street Journal* notes Living to 100 survey findings. For more information, visit <http://on.wsj.com/gH9fKQ> or use the QR code.



View all of these articles by going to www.soa.org/newsroom and clicking on the Profession In The News link. 

PROFESSIONAL DEVELOPMENT OPPORTUNITIES

2011 HEALTH MEETING

June 13–15
The Westin Copley Place Boston
Boston, Mass.

SOA DIALOGUE: INTERACTIVE LEADER SESSION

June 23
Webcast

ERM TECHNIQUES AND PRACTICES

Aug. 1–3
New York, N.Y.

SOA DIALOGUE: INTERACTIVE LEADER SESSION

Aug. 3
Webcast

46TH ACTUARIAL RESEARCH CONFERENCE

Aug. 11–13
University of Connecticut
Storrs, Conn.

INTERNATIONAL FINANCIAL REPORTING FOR INSURERS: IFRS AND U.S. GAAP

Aug. 28–31
InterContinental Grand Stanford
Hong Kong

View all Professional Development opportunities by visiting 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.



Recommended Readings



The following is a list of recommended readings from the contributing editors that they feel will pique your interest and help keep you informed.

From James Ramenda

As part of the implementation of Dodd-Frank, the SEC and CFTC have jointly proposed new rules for reporting by private fund advisers (hedge funds, private equity funds), including reporting of risk measures such as value at risk and sensitivities to key market variables. The information is required of certain managers on proposed Form PF. It is another example of the regulatory world going stochastic! This is primary source material so it is not light reading (skip to Form PF pages 26–28 for most of the risk questions), but it is a good look into how the SEC thinks about risk and an example of Dodd-Frank implementation in action. For more information, visit <http://1.usa.gov/hiDxCg> or use the QR code.



From Ruth Ann Woodley

The Business Market Plays Cloud Computing Catch-Up

Insurance and actuarial work are data businesses, so storage and processing in the cloud will have a huge impact on our day-to-day operations. And it levels the playing field tremendously—you no longer have to be a big company with huge infrastructure investments to have access to vast computing and data storage resources. In fact, it's probably cheaper to access Amazon's cloud services now than to maintain (let alone build) the IT infrastructure some large companies have. For more information, visit <http://nyti.ms/dXM7yH> or use the QR code.



From Dave Ingram

A report from RIMS that provides a summary and contrast of six different ERM standards. Very helpful. For more information, visit <http://bit.ly/hMZfnZ> or use the QR code.



THERE'S AN APP FOR THAT!

THE SOA IS NOW OFFERING MEETING APPLICATIONS

to be used on mobile devices (e.g., BlackBerry, iPhone). These "apps" will be offered for all major SOA meetings and will provide attendees with access to important features of the events, including session information, speakers, handouts and more right from their mobile devices.



Annual Meeting
& Exhibit

Oct. 16-19
Sheraton Chicago
Hotel & Towers
Chicago, IL

SOA 2011

Get ready to get it done in the city that works.

Join us at the SOA 2011 Annual Meeting & Exhibit in Chicago—the SOA's largest networking opportunity. Roll up your sleeves. This is the event where you dig in and get tons of takeaway. More than 100 hearty sessions, full of just what you need for professional growth—and offering loads of CPD credit. Speakers who'll move you to take action. And networking opportunities where you'll find other doers like yourself.

Past attendees said:

"The breakout sessions were terrific—right on target."

"Best retirement plans content ever, especially the DC plan content."

"Lots of good speakers. The complexity science session was impressive and useful."

Ready to get it done? Head to SOAAnnualMeeting.org.



SOCIETY OF ACTUARIES

CPD Compliance

The SOA CPD Requirement has a two-year rolling cycle. 2011 is the second year of the 2010-2011 compliance cycle. Be sure to track & earn your 2011 credits so you are ready to attest compliance as of Dec. 31, 2011.

STEP 1: Know your CPD compliance path.

STEP 2: Track and earn CPD credits.

STEP 3: Attest at year-end.

1-2-3

Visit SOA.org for more information on Continuing Professional Development.

