SOCIETY OF ACTUARIES

The Actuary

AUGUST/SEPTEMBER 2013 VOLUME 10 ISSUE 4

LESSONS FROM LEGACY BLOCKS

Better product delivery, systems and ways to service our clients

JOYS OF VOLUNTEERING

How you can make a difference

PEAS IN A POD

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Aug/Sept'13

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The Actuary
SOCIETY OF ACTUARIES

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August/September 2013 issue of *The Actuary*

DEPARTMENTS


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Editorial

THE SOA, THE COMMON GOOD AND NAKED ACTUARIES

BY JAY M. JAFFE

IN THE FEBRUARY/MARCH 2013 EDITION of *The Actuary*, SOA President Tonya Manning wrote to the membership about "Collaboration, Community and the Common Good." She highlighted the SOA's updated mission:

> The SOA, through research and education, advances actuarial knowledge and improves decision making to benefit society. We enhance the ability of actuaries to be trusted financial and business advisors on problems involving uncertain future events. We provide and ensure the integrity and relevance of our credentials.

In my opinion, this statement definitely marks a very substantial and positive transformation in the relationship between the SOA and the public.

The SOA has always been committed to working in areas which will benefit society, and we should now take this commitment to a new level. In the SOA's current strategy map, our vision includes "establishing actuaries as business leaders." As a profession, if we find more ways to give back to our communities, this will help us reach our concurrent goals for improving our positions as both business leaders and professionals.

Recently I read a new book titled *Naked Statistics* (by Charles Wheelan, published by W.W. Norton). I read *Naked Statistics*, not only because I was intrigued by the title, but I also knew that I could use a refresher course on statistics as well as earn CE credit. I highly recommend the book to all actuaries if only to better understand ways to convey statistical data to non-quantitatively inclined people.

The connection between finding ways to benefit society and *Naked Statistics* is found in the final chapter of the book where Wheelan voices his opinion that statistics also have a role in contributing to solving societal issues. To demonstrate his belief, he suggests five specific areas as examples of societal problems where help is needed and statistics can be used to help find answers:

- Understanding more about the risks in sports such as football and hockey where severe brain injuries occur
- Determining the cause or causes underlying the dramatic increase in autism
- Identifying and rewarding good teachers and schools
- Selecting the best tools for fighting global poverty
- Deciding who gets to know what about you.

Some of Wheelan's topics are clearly of direct interest and concern to actuaries because they deal with health-related matters, but the others have an impact on actuaries either as professionals, parents and/or citizens.

The SOA, or any single organization by itself, is neither able nor responsible for addressing all societal issues. But let's embrace Wheelan's challenge to improve society as one of the motivations for implementing the SOA's commitment to become engaged in broader societal areas, and use our actuarial knowledge not just to price insurance products or set funding levels for pension plans, but to contribute to solving some of the non-actuarial problems facing society.

Creating an atmosphere of public service work is certainly a long process. To begin this process, let's consider expanding the strategy map to include using the talents and resources of the SOA and its members to contribute to public projects which extend beyond areas where actuaries traditionally work. If the SOA's Board of Directors adopts this new addition to the strategy map, the first order of business is to select the areas where we can implement the vision and provide the necessary resources to implement the projects. Of course, the effectiveness of the SOA's plans will depend on being able to recruit dedicated people to various projects, as well as creating an atmosphere where working on community projects is part of the SOA's DNA.

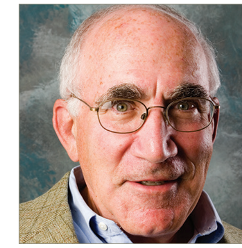
I think it would be beneficial if the SOA encouraged working on projects in collaboration with non-SOA groups, not only because the projects themselves will benefit by having the involvement of researchers from multiple disciplines and experiences but also because it will expand the awareness of the actuarial profession's talents and expertise to a wider group of people. To make members and the public aware of our work, the SOA should periodically publish and distribute materials about our community oriented projects.

From time to time there may be opportunities to select specific projects for the SOA as a whole so that the expertise and resources of SOA members are concentrated in one area. The chosen area of inquiry could become the SOA's *le sujet de l'année*. The concentrated approach should increase the possibility that we contribute in a meaningful way to help solve a problem facing society.

Individual members should be encouraged to propose societal projects. Possibly some sections may have insight into areas where the expertise of their members can be useful and choose to address such projects as a unit. No matter whether we decide to work as individuals or in groups, making a contribution to a societal problem will expand our horizons both as actuaries and members of our greater communities.

Wheelan cited autism as a major problem which needs attention from a variety of thinkers. Autism not only personally impacts some of our members, but this condition is expensive to society in terms of health and other costs. If autism was chosen as the SOA's first societal project, as part of this endeavor, we could offer to contribute our actuarial expertise in collaboration with health researchers, academics, public health experts or others to help better pinpoint and understand the causes of this condition.

Even if we fail to find any new ways to cure or deal with autism (or other initiatives or causes we decide to pursue), I strongly expect that we will emerge as having helped our organization and its members to become both personally and collectively more effective and empathetic.



Jay M. Jaffe

Other professions have made *pro bono* projects by their members a basic tenet of their organizations. Why shouldn't we make "collaboration, community and the common good" an integral element of the SOA's culture? Let's enthusiastically voice our support for this type of activity and, when the opportunity presents itself, join one of the SOA's special project teams. If we're successful in lending a hand to solve some of society's vexing problems, we might want to change our name to the Society of Naked Actuaries to remind ourselves that our role extends beyond our daily actuarial responsibilities and to pay tribute to Wheelan. Our new name might expand attendance at our meetings (who wouldn't want to see naked actuaries?) and help recruit more workers for our societal projects. A

As a profession, if we find more ways to give back to our communities, this will help us reach our concurrent goals for improving our positions as both business leaders and professionals.

Jay M. Jaffe, FSA, MAAA, is president, Actuarial Enterprises Ltd. He can be contacted at *jay@actentltd.com*.

Letter From The President

A CLEAR AND CONCISE DIRECTION FOR OUR PROFESSION

BY TONYA B. MANNING

"SIMPLE CAN BE HARDER THAN COMPLEX: YOU HAVE TO WORK HARD TO GET YOUR THINKING CLEAN TO MAKE IT SIMPLE. BUT IT'S WORTH IT IN THE END BECAUSE ONCE YOU GET THERE, YOU CAN MOVE MOUNTAINS."—STEVE JOBS

AS IMPORTANT as our actuarial work is, of equal importance is the way in which we communicate that work to our colleagues, clients and other business audiences. These communication skills are of paramount importance to our success, both individually and collectively as the greater community of actuaries.

According to the SOA's most recent employer survey, actuaries are seen as being trustworthy, detail oriented and superior with regard to applying quantitative skills. The ability to communicate effectively, however, was viewed as an area for improvement. So, what do we do?

Communication has always been important, but today's business challenges bring about a need to constantly re-evaluate and rethink how we communicate. Should we change our delivery? One could argue that effective communication skills should top our list of priorities, knowing that these skills spill into all areas of our work. Clear, concise communication has become an imperative to many of our clients and an invaluable skill-set to call upon. The need to be concise is driven by the client's desire to know the bottom line—NOW. The need for clarity is key as we expand into new areas of practice, where the traditional actuarial report and jargon must be reworked to best serve new audiences and new purposes.

The current business environment has ushered in a new emphasis on transparency with regard to financial matters. Clients want and demand access to all the numbers and can have at their fingertips access to mountains of data via access points that didn't even exist five to 10 years ago. Thanks to the Web, it takes less than a second to have a plethora of rich, and sometimes conflicting, information brought to our desktops, tablets or mobile phones. Access to this information is terrific; however, it puts the onus on actuaries to foster trust in those very same individual clients, businesses, organizations and consumers. Those audiences should know that we are the ones they can rely on for informed perspective, accurate analysis and the business advice they need to be successful.

Our efforts to be clear and concise begin with clarity—especially on the part of our clients. They want us to get to the heart of their matter. This is often a challenge in these days of market complexity and volatility. It becomes even more difficult to respond to a stakeholder's plea, "Just give me the number, please." Much of what we do requires discussions of scenarios, ranges and possible result variations. It might be better to anchor the initial discussion with one possible scenario and make sure we "finish the conversation," explaining the "what-ifs" and how that anchor scenario would change if assumptions varied. Finishing the conversation is critical and will lead to better analysis and decisions, but you should first engage them with a scenario that acts as a compelling starting point.

Expanded disclosure requirements have also had an impact on the clarity of our communications. We all need to learn new ways of meeting these requirements without losing the message. Layering our message is a good option. We start with the headline, and follow with the executive summary, analysis, supporting information and additional disclosure. The idea of layering actuarial communications was encouraged by Gabriel Bernardino (chairman of the European Insurance and Occupational Pensions Authority) when speaking at the International Actuarial Association's meeting this May.

The second part of the clear and concise equation—concise—is the other quality we as actuaries need to bring to the table. Our clients' ability to access mountains of data and the ability to make critical decisions based on it, are two very different things. It is the latter of these for which our clients truly turn to us. Concise means boiling all that data down to its essence. What does it MEAN to them? They are looking for a recommendation, a solution, not just a fair analysis. Often, while we may deliver a well-thought-out analysis for our clients, we steer clear from making a recommendation because that is not thought of as an actuary's responsibility. For the profession to stay relevant, I think it is time for us to be bold and make that recommendation based on our analyses, and add caveats and considerations as needed. We can't be afraid to take a position. We are solution-oriented professionals and because of our rigorous training, people will respect our recommendations.

Just as important as the right message is choosing the right method of delivering it to your audience. With so many options, this choice can be daunting. Should we send an email? Should key members of a major organization receive the full report or a summary of the key highlights? Maybe distributing a discussion guide would be more effective than a presentation to key clients.

We need to make sure that the messages we are delivering are presented using the most effective communications format appropriate to the audience. One format does not fit all. While tweeting our actuarial report may be a tad extreme, it's not a stretch to say the tolerance for lengthy documents is long gone. Our clients, colleagues and business partners want to receive digestible information faster, and, of course, they still want all the supporting details. It can be a lofty balancing act to deliver both, but not impossible.

Tonya B. Manning

Effective communication is critical to our professional relevance, as we continue to service our current clients, and especially as we expand into new areas of practice, where we can aspire to impress these new audiences with the clear and concise ways in which we communicate to help them in their financial challenges.

You'll find valuable sources of communication information in the sidebar, "Sharpen Your Communication Skills." The SOA offers e-courses and podcasts, and you will definitely want to check out our new Tools for Actuaries website for resources on business and communication skills. If you know of good seminars, webcasts, infographics or books to recommend on the topic of communications, or ways that you have changed the way you communicate that have proved successful, please share them. Write to *theactuary@soa.org*. We can all grow and benefit from sharing ideas.

Warm regards! A

Tonya B. Manning, FSA, MAAA, EA, FCA, is president of the Society of Actuaries. She can be contacted at *tbmanning@soa.org*.

Sharpen Your Communication Skills

New FSAs benefit from the SOA's Decision Making and Communications course. Visit ***www.soa.org/ecourses***.

Take advantage of SOA online courses to sharpen communication skills. Visit ***www.soa.org/pdcalendar.aspx*** for meetings, webcasts, e-courses and podcasts.

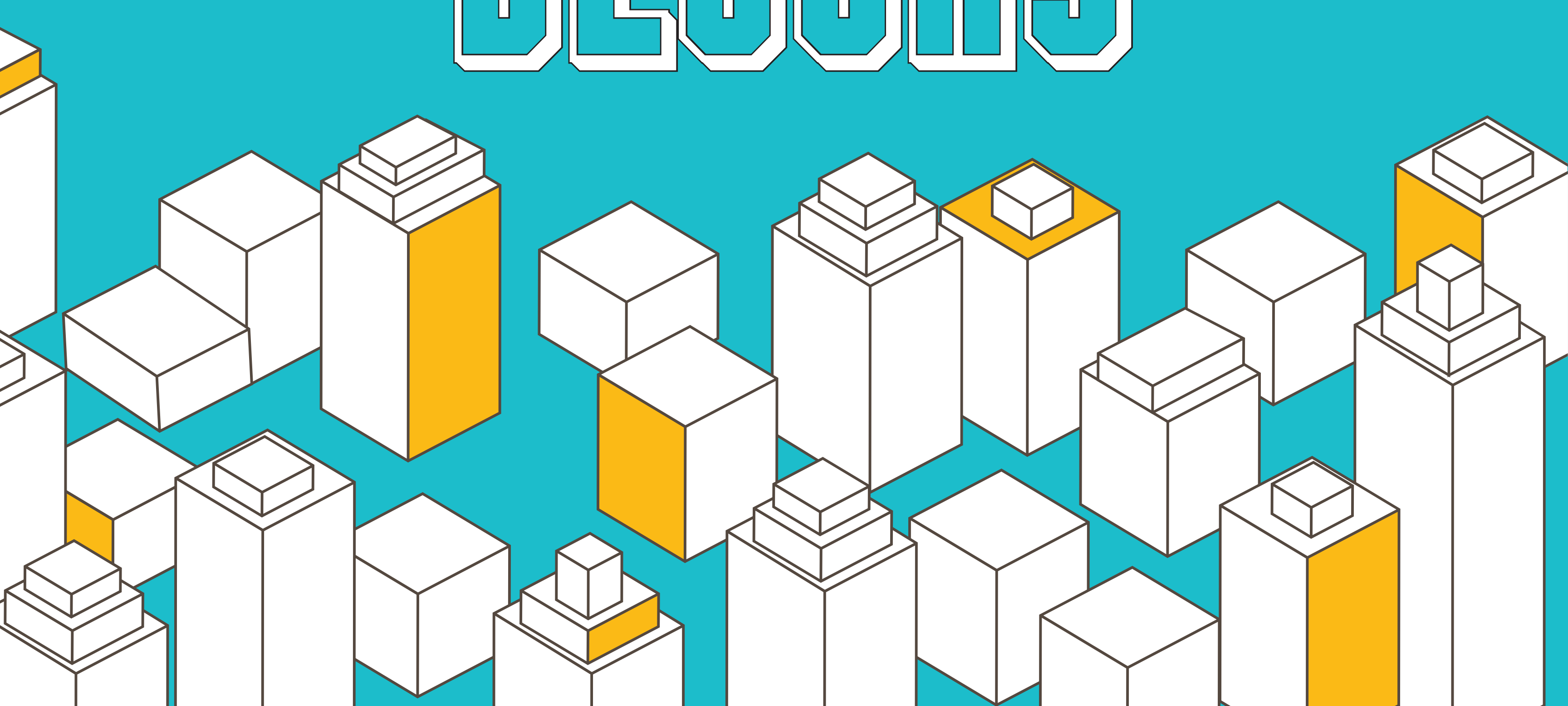
Check out our new Tools for Actuaries website for books and courses on business and communication skills. Go to ***http://toolsforactuaries.org/***.

Dan Roam is the best-selling author of *The Back of the Napkin* and *Blah, Blah, Blah: What to Do When Words Don't Work*. Roam will be the opening general session keynote speaker at the SOA 2013 Annual Meeting. Visit ***http://www.soa.org/event-calendar/2013-annual-meeting/***.

Susan B. Weiner offers some great tips on writing good emails, report drafts and other business topics. Read her blog at ***http://investmentwriting.com/blog/***.

Google "infographics." There are several good sites that explain how to create graphics quickly and easily to help present detailed or complex information in an understandable way.

LESSONS LEARNED FROM LEGACY BLOCKS



WOULD LIFE INSURANCE COMPANIES BE BETTER SERVED BY FOCUSING ON BETTER WAYS TO DELIVER OUR PRODUCTS, BETTER SYSTEMS TO GUARD AGAINST ANTI-SELECTION (CLAIMS MANAGEMENT AND UNDERWRITING), AND BETTER WAYS TO SERVICE OUR CLIENTS TO IMPROVE PERSISTENCY? "ABSOLUTELY," SAYS THIS AUTHOR. BY RONALD KLEIN

I am always fascinated by the lack of understanding in the general population of an actuary's first love—statistics. While there are many examples that can be seen every day on television or in the newspapers, I would like to share with you a few of my favorites.

BRAINERS AND NO-BRAINERS

In a local newspaper that I used to read while living in the United States, there was a column written by Marilyn vos Savant called "Ask Marilyn." For those of you who have never heard of Marilyn, she was once listed in the *Guinness Book of World Records* as the woman with the highest IQ—190. The great thing about her column was that many of the questions were scientific or mathematical in nature.

There is one question that I will never forget: "I am always confused by the weather forecasts when the meteorologist says that there is a 20 percent or a 30 percent chance of rain. Either it rains or it doesn't. Isn't there always a 50 percent chance of rain?" Now, this is a guy we want to purchase our insurance policies. "Hey! Do you want to buy a one-day life insurance policy? The face amount is $1 million, and the premium is $400,000. Either you die tomorrow or you don't, so it is a good deal!"

Another of my favorite examples is when I was working for a reinsurance company, and a group of investors in the life settlements market called to offer me a great deal. All I had to do is take on the longevity risk of the policies that these investors purchased two years after the life expectancy of a policyholder was reached. "Yo, Ronnie, it is a no-brainer. This is a full two years after life expectancy, so how many people will live that long?"

(Not ever professing to having a brain, I am always confused by the term "no-brainer." Does this term mean that you can understand the offer only if you don't have a brain, or is it that the person making the proposal has no brain?) I actually had to explain to this group of investors that the odds of living past your life expectancy is about 50 percent, so they might want to review their investment.

LEGACY BLOCKS

But it is the third example that leads us to the theme of this article—*Lessons Learned from Legacy Blocks*. I read a *Wall Street Journal* article some years ago, and although I cannot remember the exact headline, it was something like "Study Shows that 50 Percent of Life Insurance Company Acquisitions Better for Seller." Wow! That is an interesting fact. You have two extremely sophisticated parties entering into a large financial transaction—one wins and one loses. Who is surprised that half the time the buyer wins and half the time the seller wins? One day, someone can explain to me the win-win scenario.

Legacy blocks of business are typically created in numerous situations including the following:

1. A company simply decides to exit a line of business to focus on core businesses
2. A product line was introduced but sales did not meet expectations, so management decided to exit this line of business
3. Regulations changed, causing a specific product or products not to be viable any longer or
4. A product line is underperforming due to policyholder behavior, poor assumption setting, or economic conditions.

It is this last situation that we will use to define legacy blocks for the purposes of this article. The lessons learned should be how to avoid developing products that will become legacy blocks in the future.

DEALING WITH LEGACY BLOCKS

With the current and sustained low interest rate environment, many blocks of business are becoming legacy blocks. As these blocks of business begin to underperform company expectations, there are a few courses of actions that a company may take:

1. The company may continue to sell the product in hopes that the interest rate environment will improve
2. The company may continue to sell the product, but reprice it so that the product is profitable under the current market conditions
3. In addition to category 2, the company may attempt to raise rates on the in-force policyholders to whatever extent possible
4. The company may cease selling the product and
5. The company may attempt to sell off the poorly performing block of business to commute its losses.

At the 2013 ReFocus Conference, with more than 450 people in attendance representing almost every major U.S. life insurer (and every U.S. life reinsurer), an audience response question asked what your company has done to mitigate the effects of low interest rates on product profitability. Amazingly (to me) a large percentage of replies fall into category 1—continuing to sell the product in hopes that the interest rate environment will improve!

If interest rates continue at their record lows for a few more years as predicted by many governmental organizations around the world including the U.S. Federal Reserve, many more legacy blocks will be found on company balance sheets and many more up for sale. This is good news for the ever-increasing number of reinsurance brokers and intermediaries trying to make a commission by matching up a buyer and a seller.

If your company is in the business of looking for "bargains" during this period of low interest rates, beware of the statistic in that *Wall Street Journal* article. About half the time you will make a poorer than expected return on that investment! Burying your head in the sand and hoping things will get better could be a dangerous strategy. Selling off blocks of business at the worst possible time could be even more dangerous. While taking corrective action quickly is a good solution, avoiding the creation of legacy blocks is a clear winner.

SO HOW DID WE GET HERE … AGAIN?

The largest contributors to poorly performing blocks of business are the products with fixed interest rate guarantees. We all know about the guaranteed interest rate products sold in the United States; however, many of these

REPORTS OF INTEREST

HERE ARE SOME RELATED RESEARCH reads for managing blocks of business that focus on policyholder behavior that may be of interest.

RESEARCH STUDIES

- Policyholder Behavior in the Tail Risk Management Section Working Group UL with Secondary Guarantee 2012 Survey Results
- Policyholder Behavior in the Tail: Variable Annuity Guaranteed Benefits—2011 Survey Results
- Behavioral Simulations: Using Agent-Based Modeling to Understand Policyholder Behaviors

For more reports, visit *www.soa.org/Research* and click on Completed Research Studies.

EXPERIENCE STUDIES

- 2007-09 US Individual Life Persistency Update
- Lapse and Mortality Experience of Post-Level Premium Period Term Plans

For more reports, visit *www.soa.org/Research* and click on Completed Experience Studies.

investment-type products are sold outside of the United States, where it is quite common to offer an interest rate guarantee on deposits with a small additional benefit on death—say, 1 to 10 percent of the fund value.

Many of these products were sold in times of higher interest rates, so the product guarantees reflected the current interest rate environment. I have seen guarantees of 3, 3.5, and even 4 percent on some of these products. While this in itself is not the problem, it becomes a problem if insurance companies did not match their liabilities well. Given that these products may have a duration in excess of 30 years, perfect matching was not possible.

Companies are now faced with two issues:

1. Reinvestment rates that are well below the guaranteed minimum interest rate in the product and

2. Having to set up reserves using a regulatory interest rate that can be lower than the actual investment yield.

Even if a product is perfectly matched, reserving can be a major issue. While some countries have relaxed reserving requirements in fear that the entire industry would be considered bankrupt, other countries have created new additional reserving regulations. Germany, for example, has instituted the Zinszusatzreserve (ZZR), which requires insurance companies to hold additional reserves for the present value of the difference between guaranteed interest rates and current government rates. This puts a huge strain on companies (although, due to a participating fund in Germany, some companies actually view this regulation welcomingly).

What makes insurance companies sell investment-type products in times of higher interest rates, with a relatively high minimum return? One theory is that insurance companies want to be more like banks. For those insurance companies' CEOs I have one comment: Be careful what you wish for! These same CEOs are now "returning to protection products." Why we ever left protection products, I will never know.

The lessons learned should be how to avoid developing products that will become legacy blocks in the future.

Insurance companies are in a unique position to take on risks that other organizations run from. Insurance companies should profit from the ability to take on risk. There is always the fear looming that if insurance companies become more like banks, they will be taxed like banks and lose the tax-free status on cash values. Having worked for multiline insurance companies during the past 20 years, I am always amazed at how our non-life brethren seem to be able to make profits on medical insurance and accident and health insurance. Could it be the short-term, reviewable rate nature of this line of business?

NOTHING LASTS FOREVER

The low interest rate environment should teach us, once again, that interest rates go up and come down. The stock market goes up and comes down. Company expenses go up and … well, let's just say they go up. In other words, markets are volatile, and offering unhedged guarantees can be quite costly.

The liability part of the balance sheet of many companies is littered with blocks of business that are closed to new business due to market conditions. These legacy blocks include variable annuities with guarantees, investment-type insurance products with minimum interest rate guarantees, and equity-based products with guarantees. With the U.S. stock markets at all-time highs, will it be long before the industry reinvents new equity products with guarantees?

The main thing to learn when reviewing your legacy blocks of business is that things do not last forever. For example, look at 10-year U.S. Treasury rates during the last 140 years (rates taken on Jan. 1 of the year). From 1871 to 1935 rates varied by 1 percentage point around 4.5 percent, never really going below 3.5 percent and never really topping 5.5 percent. From 1935 to 1950, rates never were above 3 percent and dipped below 2 percent in 1941.

After 1941, a dramatic increase in interest rates began that peaked at about 15 percent in 1982 (just about the time I bought my first house with my first huge mortgage). These rates stayed in double digits through 1985 and above 8 percent through 1991. As an actuary entering the field of insurance in 1980, I would never have dreamed that interest rates would ever be below 2 percent again—let alone for such an extended period of time.

In fact, given the opportunity, I would have developed a product with a minimum guaranteed interest rate of 4 or even 5 percent. Luckily I was in the disability income department at that time developing own-occupation riders!

Have we already forgotten just a few years ago when our 401(k) accounts turned into 201(k) accounts? Just because the market is back to record-high levels, does that mean that it will continue to go up? Products need to be developed without these financial guarantees that are better left to banks. Isn't it enough that we guarantee mortality rates in our products though guaranteed premiums?

Life insurance companies will continue to change strategies by entering or leaving markets. This will create blocks of business in runoff. These blocks can be strategically sold (if in a separate company) or reinsured with or without administration performed by the reinsurer. What the industry should avoid is the creation of legacy blocks of business due to unsustainable guarantees and options.

Would life insurance companies better be served by focusing on better ways to deliver our products, better systems to guard against anti-selection (claims management and underwriting), and better ways to service our clients to improve persistency? While not sexy, these straightforward methods are sure to produce results. In fact, they are a no-brainer!

LET'S MAKE A DEAL … BUT NOT BRING HOME A GOAT

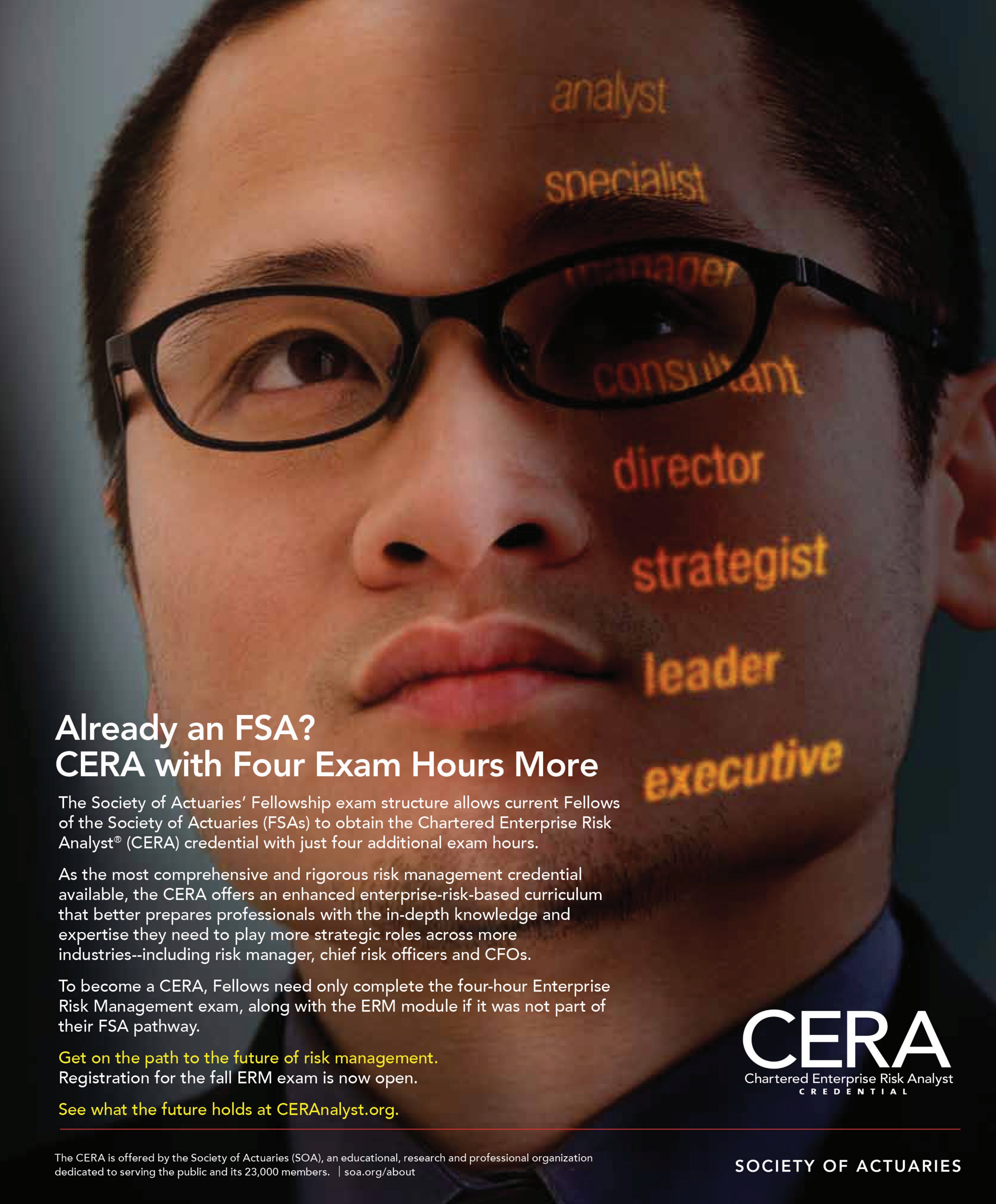
I would like to end with Marilyn's most famous column topic—the Let's Make a Deal scenario. You all know this one, but I will restate it briefly. You have the choice of one of three doors. Behind one door is $100,000. Behind the other two doors are goats (actually, I now live in Switzerland, and a goat would be a much more efficient and environmentally friendly way to mow my very small lawn).

You choose one door, and then the master of ceremonies reveals a door that contains a goat. You now have the choice to switch to the other door or stay with your original choice. What should you do to increase the odds that you will win the money?

Basically, the population is split between staying pat and switching. I am firmly in the camp of switching. Let me know where you stand. I will keep a running tally and send the results to the Society of Actuaries to post on its website.

In the end it is simple: Let's try to stay away from creating legacy blocks of business and winning goats! It's a no-brainer. A

Ronald Klein, FSA, MAAA, is head of life reinsurance for Zurich Insurance Group, Ltd. He can be contacted at *Ronald.Klein@zurich.com*.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SOCIETY OF ACTUARIES

Two Peas

PARALLELS BETWEEN ERM

DO ERM AND VALUE INVESTING LIVE IN PERFECT HARMONY? THIS AUTHOR BELIEVES THAT THE TWO SHARE MANY OF THE SAME CONCEPTS. DO YOU? BY MAX J. RUDOLPH

For many years I have been struck by the many similarities between the building blocks of enterprise risk management (ERM) and value investing. While attending a CFA Nebraska seminar focused on value investing, I heard star investors hint at the parallels between these two topics. This led me to write a white paper titled, "Value Investing and Enterprise Risk Management: Two Sides of the Same Coin."[1] I used the IAA report, *Note on Enterprise Risk Management (ERM) for Capital and Solvency Purposes in the Insurance Industry,*[2] to capture the primary components of ERM. To provide contrast between methodologies used for value investing and ERM, I started with material from well-known value investors. This article will

in a Pod:

AND VALUE INVESTING

summarize these findings. Some will find the points obvious, and I hope others will consider these concepts. No matter what practice area is your specialty, I believe there are nuggets of wisdom here that will help you make better decisions and add value.

RISK AND RETURN—A BALANCING ACT

Experience teaches us that risk balances return, and return balances risk. Value is added by creating favorable imbalances in a risk profile. The risk manager with high returns and average risk has succeeded, as has the investor reporting average returns and low risk.

Risk can be defined based on the degree of uncertainty or the impact of downside events. Risk managers have historically focused on the mitigation of downside risk. Other risks can potentially be traded and optimized. Progressive ERM definitions, such as the one adopted by the SOA, consider upside risk. *Risk is Opportunity* is not our slogan for nothing! Best practice ERM incorporates strategic planning and opportunistic risk seeking, considering decision making at all levels and interactions between risks.

An investor adds value by understanding risk interactions, emerging risks and tracks a company's culture and risk appetite.

> *"Outstanding investors, in my opinion, are distinguished at least as much for their ability to control risk as they are for generating return."*—Howard Marks

FINDING THE SIGNAL AMONGST THE NOISE

When the herd moves in unison, reacting to each new piece of information, the intelligent contrarian turns to fundamental analysis. Has anything really changed, or is the current zig likely to be followed by a zag? It may be a trading opportunity for those willing and emotionally able to wait out the market's gyrations.

Intrinsic value is the present value of a set of contingent cash flows. While the risk level impacts discount rates, the method is consistent across liabilities and asset classes. This is roughly the same methodology used by risk managers to calculate levels of economic capital. Both types of analysis look at aggregate values and consider higher-order interactions. The first-level thinker considers the world to operate directly, in a straight line, while second-level thinkers gain a comparative advantage by considering higher-order interactions. Humility and considering the possibility of being wrong are rarely recognized for the risk mitigation tools they are. Experience aids the analyst's assumption choices.

The value investor seeks to build conservatism into the purchase decision, finding companies with low market values relative to intrinsic values. Using concepts described by Nate Silver, the investor thinks of intrinsic value as the signal and fluctuating market prices as the noise.[3] The analyst with a long time horizon can practice time arbitrage, where perceived riskiness scares away those with a short time horizon.

If the signal is the intrinsic value, then the noise represented by market prices is opportunity.

Best practice ERM incorporates strategic planning and opportunistic risk seeking, considering decision making at all levels and interactions between risks.

In an oft-repeated parable, Mr. Market gives you a price at which he will take either side of a trade and allows you to choose when to take advantage of this opportunity.

> *"When things are going well and prices are high, investors rush to buy, forgetting all prudence. Then, when there's chaos all around and assets are on the bargain counter, they lose all willingness to bear risk and rush to sell. And it will ever be so."*—Howard Marks

TEMPERAMENT

The successful investor and risk manager have similar traits. They both tend to be humble, more likely to talk about past failures than triumphs. They are wary of overconfidence and the shortcomings of taking information at face value. They are more likely to independently dig into a report than to assume it is true and are very aware of the perceived ethics at a firm. Concentrations of risk, where exposures are high relative to a diversified firm, require additional analysis. This is especially true for extreme outcomes or when combined with leverage. Concentration risk can be driven by exposures due to product, region, asset class, customer, counterparty, culture and decision making. Good risk managers and investors both consider dependencies between variables and how different risks and events interact. Sometimes patterns develop. Many economists now think bubbles are encouraged when the Federal Reserve keeps interest rates artificially low for an extended period. Other times unintended consequences can be positive, resulting in Charlie Munger's lollapalooza effect. This occurs when several decisions align in a positive way, and success stories such as the Ford Model T and Apple's iPhone result. Some refer to this as luck, "being in the right place at the right time," but there is often an underlying plan, like Apple's goal to improve design and make gadgets user friendly for everyone.

Analyst temperament and emotional stability overwhelm IQ when making risk and investment decisions. While some continue dancing, contrarians wait for the pendulum to swing too far and mean-revert. This mindset is comparable to that used by risk managers, mitigating risks that would exceed a stated risk tolerance during stable times (seeking out those unknown unknowns) while expanding tools for use during the next crisis. In other words, they buy hedges when they are cheap.

> *"Temperament is also important. Independent thinking, emotional stability, and a keen understanding of both human and institutional behavior is vital to long-term investment success."* —Warren Buffett

COGNITIVE BIAS

Human behavior impacts risk management and investing. Resources are limited, and priorities need to be set. Not every opportunity can be pursued. Behavioral economics, driven by prospect theory, has led us to better understand that humans are not rational when dealing with finances and prefer to follow the herd. We have a variety of cognitive biases that cause us to revert back to our basic instincts developed as hunter-gatherers. Scientists are learning more about these tendencies through the study of neuroscience, but for now value is gained by recognizing these faults in ourselves.

> *"In any great organization it is far, far safer to be wrong with the majority than to be right alone."*— John Kenneth Galbraith

SHINING A LIGHT ON RISK

Transparency allows practitioners to use informed common sense and results in better oversight. It is said that risk grows in the dark, when there is little transparency, and shrinks in the light, when models can be built to manage it.[4] Transparency leads to consistency and a longer time horizon built into decision making. Investors can reduce the discount rate used in models if they understand the risks underlying the model. Risk managers can automate the basic risk management process, allowing them to focus more on seeking out emerging risks and risks where there is a sustainable competitive advantage.

A variety of perspectives allows someone to talk through alternatives, improving decision making. Risk managers should have at least rudimentary knowledge of all product lines, and a sense for growing risks. Investors should stay within their circle of competence.

> *"The received wisdom is that risk increases in the recessions and falls in booms. In contrast, it may be more helpful to think of risk as increasing during upswings, as financial imbalances build up, and materializing in recessions."*— Andrew Crockett

MODELS VERSUS REALITY

The economy tends to move through periods of stability interspersed with crisis. During the stable portion of the cycle, more managers define risk as volatility and believe mathematical models can mimic the true relationships between risk and reward. Investors and boards of directors relax their risk appetite constraints and increase volatility in approved risk policy statements. They forget that volatility, especially when driven by leverage, can lead to insolvency. Time is not on the side of those who borrow heavily.

Models need to be continually revisited. Proxies can save lots of time, but historical rules of thumb need to be tested for reasonableness during each decision-making cycle. Models work until they don't.

Risk appetite can act as a filter for decision making. A formal risk policy will guide pre-determined constraints. This provides a margin of safety around decision making. A written policy or formal investing process also helps maintain a circle of competence to filter out the options where it is too hard to determine probabilities of success.

Both risk managers and investors utilize models. Best practices include skepticism and understanding the current state of evolving model complexity.

> *"It's frightening to think that you might not know something, but more frightening to think that, by and large, the world is run by people who have faith that they know exactly what's going on."*—Amos Tversky

LATTICEWORK

Not all models are complex. Qualitative models based on experience can often do a really good job, and also provide oversight when set alongside purely quantitative models. Whether it is fuzzy logic (high/medium/low) or a round number that provides an idea of whether the magnitude is 10 or 100, this helps direct decision makers. Investors are more likely to use these types of methods as they lack access to the detail available internally. Mental models capture the essence of lifelong learning by continually adding to knowledge accumulated previously. You may be trained as an actuary, providing a broad knowledge base, but through continuing education you can become multidisciplinary in your thinking. This does not mean that you need an advanced degree in each subject, just that you understand the main features of the discipline. This type of approach helps to recognize problems as they might be approached by someone expert in each field and choose the best of each. Knowledge reduces risk, and lifelong learning increases knowledge.

A multidisciplinary method is sometimes referred to as a liberal arts or latticework approach to investing. This method takes the best each field has to offer and focuses on understanding how these models interact. It starts to take on the methods of a detective solving a mystery. This defines mosaic investing theory, and these tools are shared with risk management best practices. Information is collected and pieced together into a coherent story using a bit of informed common sense.

> *"Any year that you don't destroy one of your best-loved ideas is probably a wasted year."*—Charlie Munger

COMPARING OPPORTUNITIES

Charlie Munger employs a checklist (see "An Investing Principles Checklist" on page 23) when investing that would be appropriate for risk managers. He does not consider opportunities in isolation but rather compares holdings prior to acquisition against the holistic set of holdings after acquisition. This incorporates interactions between risks. His list includes measuring risk, independent analysis, lifelong preparation, intellectual humility, analytic rigor using the scientific method, proper allocation of capital (opportunity cost of alternatives), patience, decisiveness, recognizing change, and focus of priorities.

> *"Several things go together for those who view the world as an uncertain place: healthy respect for risk; awareness that we don't know what the future holds; an understanding that the best we can do is view the future as a probability distribution and invest accordingly; insistence on defensive investing; and emphasis on avoiding pitfalls. To me that's what thoughtful investing is all about."*—Howard Marks

CONCLUSIONS

ERM is an evolving practice area. ERM practitioners focus on process development and holistic analysis to incorporate both risk and return in their review. Other practitioners look at many of these same areas. This enables better collaboration and leads to better strategic results. Value investors compare current market prices against the intrinsic values they have calculated, seeking signal using contingent future cash flows to generate a present value. Uncertainty due to management shortcomings, culture and an unclear environment shows itself through conservatism built into the cash flows as well as the discount rate.

One might argue that ERM is an internal process while value investing looks at a company from the outside, and they would be correct when viewed using top-down analysis. But both use bottom-up techniques to calculate intrinsic value or economic capital, and the underlying tools and thought process used for this are similar.

Many concepts are shared between ERM and value investing. When defining risk, which is generally unique to the individual, the analyst considers uncertainty, downside risk and optimization. Value investors consider conservative assumptions, margin of safety, and asset allocation.

The actuarial skill set seems particularly well set up to move seamlessly between investing and ERM projects. The skills do not come exclusively from actuarial training, but learning about probability, financial engineering and contingencies certainly provides a framework for success. Those who are good at either risk management or investing have shown the skill set to succeed in the other. Additional training would focus on the mental aspects of decision making.

In the future, analysts will continue to calculate intrinsic values based on discounting contingent events. This can be applied to investing, evaluating risks, or combinations of the two. Actuarial Standards of Practice 46 and 47 cover topics specific to ERM but may also prove valuable to investors. Charlie Munger's investing checklists similarly will prove valuable to risk managers.

As Warren Buffett said, *"I am a better investor because I am a businessman and a better businessman because I am an investor."* You can't anticipate every risk or risk interaction, but risk must be accepted to earn a return. A proper balance between risk and reward is necessary. An analyst needs to be aware of motivations and wary of success that blinds management to growing risks. Both ERM and investing as processes are constantly evolving. The modeling, knowledge and temperament necessary to succeed make each a training ground for the other. They truly do have compatible skill sets. A

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END NOTES

1. *http://www.soa.org/Research/Research-Projects/Risk-Management/2013-value-investing-erm.aspx.*
2. *http://www.actuaries.org/CTTEES_FINRISKS/Documents/Note_on_ERM.pdf.*
3. Silver, Nate. *The Signal and the Noise.* The Penguin Press, 2012.
4. Ingram, Dave. Risk and Light. *http://www.ermsymposium.org/2009/pdf/2009-ingram-risk-light.pdf.*

An Investing Principles Checklist*

THIS CHECKLIST summarizes talks given by Charlie Munger and can be found in Peter Kaufman's *Poor Charlie's Almanack* on pages 61 through 64.

- **Risk** (especially reputational)
  - Margin of safety
  - People/ethics
  - Get paid to take risk
  - Inflation and interest rate exposures
  - Avoid big mistakes
- **Independence**
  - Independence of thought can lead to objectivity and rationality
  - If your analysis is correct the herd does not matter
  - Regression to the mean results from mimicking the herd
- **Preparation**
  - Work hard and hope to have a few insights
  - Lifelong self-learner attitude
  - Will to prepare beats the will to win every time
  - Mental models from major academic disciplines
  - Ask why
- **Intellectual humility**
  (wisdom comes from acknowledging what you don't know)
  - Circle of competence
  - Identify and reconcile evidence that differs from your expectations
  - Beware of false precision
  - Never fool yourself
- **Analytic rigor (scientific method)**
  - Recognize that value is different than price
  - Progress differs from activity
  - Wealth differs from size
  - More important to remember the obvious than grasp esoteric
  - Business analyst (broad) is better than limiting yourself
  - Second order and above impacts matter—totality (holistic) of risk and effect
  - Think forwards and backwards—invert
- **Allocation of capital**
  - Number one job for investor
  - Consider opportunity cost
  - Bet heavy when odds are in your favor
  - Don't fall in love with an investment
- **Patience**
  - Utilize compound interest
  - Avoid transactional/frictional costs
  - Be alert for luck
  - Enjoy the process
- **Decisiveness**
  - Contrarian—be fearful when others are greedy and greedy when others are fearful
  - Seize opportunity when it arrives
  - Opportunity meets the prepared mind
- **Change**
  - Recognize and adapt
  - Challenge and amend your best ideas
  - Recognize reality—especially when you don't like it
- **Focus**
  - Reputation and integrity are your most valuable assets and can be quickly lost
  - Guard against hubris and boredom
  - See the forest despite the trees
  - Exclude unneeded information
  - Face your big troubles

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* Kaufman, Peter D. *Poor Charlie's Almanack: The Wit and Wisdom of Charles T. Munger.* PCA Publications, 2005, pp. 61–64.

FINDING A SAFE PLACE

BY DAVE INGRAM

EVERYONE WANTS to operate in a safe place and to have a plan to stay safe.

All else being equal, almost everyone would want their safety to be more secure. Absolute safety and security is unobtainable, and even near absolute safety and security is extremely expensive. Risk managers help organizations to find their safe place from which they can operate with an acceptable and affordable degree of safety. The risk manager leads a dialogue about the trade-offs between safety and the objectives of the organization.

However, if your organization's objectives involve taking on other people's risks so that they can find their safe place, safety and security is not your only risk goal. In fact, to make a business of risk-taking work, you need some pretty complicated goals for your risk taking:

- **Diversification**—Business theories that firms should concentrate only on what they do best can be ruinous for an insurer. Diversification is the first and most important idea for a risk-related business.
- **Risk selection**—Diversification needs to be limited to those risks where the firm has enough expertise to make money over time. Underwriting of risks needs to be practiced at both the micro- and the macrolevel for risk-taking work.
- **Control cycle**—Even if the risks are selected carefully, it is quite possible to accept too much aggregate risk. The control cycle is a process to keep the aggregate risk within bounds.
- **Consideration**—The amount that the risk-taking firm is paid for taking the risks is something that needs to be carefully examined and is often part of the risk selection and control process. Usually the firm ends up with some risks that they are not being paid for that must be managed on a cost benefit basis.
- **Provisioning**—More often than not, the risks accepted extend over time into the

ERM Sessions Offered at SOA 2013 Annual Meeting & Exhibit

JOINT RISK MANAGEMENT SECTION LUNCHEON
Monday, Oct. 21,11:30 a.m. – 1:30 p.m., Session 31

Learn about the rating agency view on risk management and ORSA, the approach of an external party to get comfortable with companies' ERM programs, and the impact on rating of a robust ERM program.This luncheon is open to all meeting attendees. There is a nonrefundable fee of $10 for Joint Risk Management Section members and CERAs and $30 for all others. Please include the additional fee with your registration.

ERM—WHERE IS THE VALUE?
Tuesday, Oct. 22, 3:45 – 5 p.m., Session 124 Panel Discussion

Take a critical look at current enterprise risk management (ERM) practices and results in light of recent history. Examine why ERM succeeded in some instances or may not have always added the value expected in others.

Get the full list of ERM sessions at ***SOAAnnualMeeting.org***.

future. Provisions for expected losses in terms of reserves and for possible extreme losses in terms of risk capital should be determined and should also be an important consideration in the selection, control and pricing for risks.

These five goals are called *risk management* if they are given any label at all. Sometimes they are called *traditional risk management.* To the modern risk manager, these are sometimes seen as "Old School." But modern "Enterprise Risk Management" completely relies on the strong base that comes entirely from this "Old School" risk management. In fact, the first task for a new corporate risk officer (CRO) in a risk-taking organization like an insurer or pension plan should be to make sure that these five goals are being met for each of the top insurance and investment risks of the firm. Shortfalls found in that kind of review may be why CROs often have an odd traditional department or two reporting to them.

The "New School" ERM adds two largely new goals to risk management:

- **Portfolio**—Some risk-taking firms are extremely entrepreneurial and can make plans to adjust their portfolio of risks to take the best advantage of the opportunities in terms of the combined risk-adjusted returns. Other firms are more institutional but could still benefit from planning their risk and reward portfolio.

- **Future Risks**—Preparing for the Unknown Unknowns, Black Swans, and Emerging Risks is the final goal for risk taking. A risk taker needs to be clear when they are being paid to take these extreme and extremely uncertain risks and make sure that they are not caught completely unawares if these actually emerge as losses.

These two new ERM goals represent almost polar opposites in terms of thinking about risk. The Portfolio principle suggests that the risk manager can know so much about risk, the potential rewards for risk taking, and especially the interactions among a wide variety of risks that they can help their firm to "optimize" their portfolio of risks. The Future Risks are defined by some who work with Solvency II as those risks that are not well known enough to be included in the risk model that supports the Portfolio process.

The risk manager will find that they need to concentrate their efforts. They will need to create the safe place for their firm with a strong emphasis on only three or four of these seven risk principles. Those will be the topics that take up the risk manager's time and will be on the agenda for top management and the board. Which three or four are chosen will differ from firm to firm.


Dave Ingram

To many, ERM is concerned almost solely with the Portfolio principle of optimizing risk and reward. Firms that are doing an excellent job with the other six items are deemed to be deficient at ERM if they do not optimize their portfolio. That should not be the primary concern in defining the priorities for an ERM program, because the rest of this list cannot be taken for granted.

The firms that concentrate primarily upon their risk portfolio optimization will eventually find that they have two existential problems. The first is that the models upon which the portfolio optimization depends will be unreliable. Many users of complex models forget that one of the basic assumptions behind the use of statistics is homogeneity. When a company does not carefully attend to underwriting, pricing and reserving, then the data from the past will likely at some point not be a good predictor for the future or, especially, a good basis for developing a model of the future variability of potential experience.

The risk manager should periodically look at a list such as that provided above and make sure that they are aware of the level of quality of the application of all these principles at their firm. If one of the principles that was not a priority falters, the walls of the firm's safe place may at some point simply cave in. A

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Education

JOYS OF VOLUNTEERING

BY JIM MANGE

***Volunteers are unpaid, not because they are worthless, but because they are priceless*—ANONYMOUS**

How often are you asked to tell someone about yourself and, when you respond proudly that you are an actuary, you receive a blank stare? The conversation grinds to a halt briefly as you try to offer an explanation that your new acquaintance will understand.

Of course, none of us are just actuaries. We are students, managers, or business leaders. We are fathers or mothers, sisters, or brothers. Some are caregivers for family members. Others are accomplished artists or musicians. And many are volunteers.

The need to make a positive, long-lasting difference is rooted deep in our psyches. We all seek to imbue our lives with meaning.

The Actuary's "Out of the Office" feature highlights actuaries who devote countless hours to their passions. For some, that passion is volunteer work. We've learned in recent months that Steve Fredlund addresses the issues of sub-Saharan Africa. Nathan Worrell is a high school basketball referee. Thomas Hull maintains natural habitats in his spare time. Jennifer Gillespie judges figure skating competitions. David Ruiz is a volunteer leader in the Boy Scouts of America. The list goes on, and everyone on that list has found a passion, a purpose, in their volunteer work. Through their work, they derive a sense of well-being or personal satisfaction. In short, they have found their bliss.

Many members of the SOA devote hundreds of hours of their time volunteering for the SOA itself. Some members offer their talents as researchers supporting, for example, the SOA's highly regarded experience studies or serving as research project leaders. Others participate as leaders of their sections, and, of course, hundreds of members volunteer as part of the SOA's Education System, in either prequalification or continuing education. But why? Why do they, and why might you, volunteer for the SOA? One reason lies in the SOA's very reason for being.

The SOA's recently updated Vision Statement is the following:

> *The SOA is the leading provider of globally recognized credentials establishing actuaries as business leaders who measure and manage risk to support financial security for individuals, organizations and the public.*

Our Vision tells us:

- **Who we are**—We're business leaders.
- **What we do**—We measure and manage risk.
- **Why we do it**—We support financial security for individuals, organizations and the public.

What incredibly important work. Millions of people, thousands of organizations, and society as a whole depend upon us to pursue our work with care, passion and dedication. We must often sweat the "small

Benefits of Volunteering at the SOA

YOU CAN MAKE A DIFFERENCE. Volunteering at the SOA provides you with the opportunity to make a meaningful impact on your profession. You will grow personally and gain new skills that can be taken back to your workplace. What's more, your volunteer work can be tailored to you, offering opportunities that interest you and flexibility around your schedule.

WHAT YOU GAIN

- **Leadership skills,** such as agenda planning, delegating, strategic planning, decision making, and managing virtual teams
- **Collaboration and communication skills,** such as brainstorming, negotiating, and developing presentations
- **Competitive advantage,** by working on key issues facing the profession
- **Important connections,** through professional networking
- **Direct, hands-on experience,** in a controlled, supportive environment
- **Continuing Professional Development (CPD)** credit for certain volunteer activities

GET ON THE PATH TO LEADERSHIP AT THE SOA

If you are interested in expanding your volunteer experience, you can pursue leadership opportunities at the SOA by serving on committees and elected section councils and in elected board positions.

VOLUNTEER TODAY!

No matter how you choose to volunteer, there's something for everyone at the SOA. Volunteer and watch a world of opportunity unfold. Log on to the SOA website at *http://www.soa.org/volunteer* to volunteer today!

stuff" because, in the long run, the small stuff sometimes matters a great deal. And most people and organizations don't even know we exist. Nonetheless, we can be proud of the work we do to ensure that a person's or organization's sense of financial security is not just perception; it's reality. Volunteering for the SOA offers you the opportunity to extend the knowledge of measuring and managing risk, to influence the direction of actuarial research, to network with other business leaders, or, perhaps most important, to have an impact on the next generation of actuaries.

Jim Mange

Daniel Wolak, FSA, MAAA, puts it this way: "Volunteering, be it to serve a three-year term on the Health Section Council, a writer for an article or a chapter for a textbook, or a presenter at an industry meeting has naturally required additional time from an already busy schedule. For me, though, the benefits from doing so have outweighed the efforts in that it increased my awareness of professional matters as well as was a great way to network with my actuarial peers. It is also a privilege to be asked to support our profession in these different ways."

Diana Montigney, FSA, and Kathleen Wong, FSA, MAAA, CERA, are both former chairs of the SOA's Education Committee. Montigney joined the Education Committee "as a new FSA out of curiosity on the exam development process and a desire to develop actuarial relationships outside of my own company." Wong has always had a passion for adult education. Volunteering for the Education Committee enabled her to indulge that passion and brought her "in contact with many other actuaries, some of whom were top leaders in the profession."

Daniel Pribe, FSA, MAAA, who is a general officer on the SOA's Education Committee, states that volunteering "is a great way to stay current," improve skills, expand tool sets, and gain exposure to "a broader set of topics than one may get in their current job." He adds that it's a great way to earn continuing education credits.

Some years ago we surveyed the SOA's Prequalification Education Committee's volunteers. Among the questions we asked were why they originally volunteered and why they continue to volunteer. The reasons respondents volunteered included:

- Travel opportunities
- Networking opportunities
- Someone, perhaps at their Fellowship Admissions Course, asked them
- Keeping up with actuarial practice
- Giving back to the profession and
- Making a difference in the education of future actuaries.

The need to make a positive, long-lasting difference is rooted deep in our psyches. We all seek to imbue our lives with meaning. Serving the profession and, through that service, serving the public is one way to satisfy that need.

Many volunteers serve for years as members of the Education Committee. When asked why they continue to serve, many reiterated the reasons cited above for joining the Education Committee. Some new reasons joined the list, including the sheer enjoyment of the work—yes, it can be fun to craft exam questions and/or new study material. Others cited the joy of working with a group of talented professionals, both staff and other volunteers. Montigney says that "staying involved allows me to maintain relationships, make new friends, and have fun all while doing my part for the SOA." Pribe describes the SOA volunteers he knows as "extremely intelligent and dedicated." He adds that working with them is "one of the greatest advantages in volunteering."

Years after initially volunteering, then, the need to make a difference still matters, but it is the joy of the work and, especially, the people we meet that sustain us in our volunteer efforts. The SOA's Education Committee is filled with exceptionally talented people. They care deeply about their work, and they challenge you to be at your best. I volunteer with other organizations, and the people I've met as part of the SOA's Education Committee are the most dedicated volunteers it has ever been my pleasure to know.

What is your passion? What is your bliss? How will you affect the lives of future generations? Whatever it is, volunteer or support it in whatever way you are able. You'll be glad you did. A

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Matthew P. Clark

Section Highlights

FINANCIAL REPORTING SECTION

BY MATTHEW CLARK

THE FINANCIAL REPORTING SECTION is continuously looking for ways to serve its membership and the actuarial community. Our outreach has traditionally included the production of the section newsletter, sponsorship of conferences, SOA meeting sessions, research projects, sponsored books and webcasts.

Along with other sections, the Financial Reporting Section added the use of podcasts as an additional medium. I would encourage you to visit iTunes and experience a podcast for yourself. We are looking for new ideas and contributors for future episodes.

Finding a balance between emerging issues and member interests is important to balance where we spend our limited resources. Annually we survey the section members to understand where they would like us to focus our energy. This input was used to redesign the Annual Meeting sponsored sessions. We are excited to bring a fresh perspective on the emerging financial reporting and regulatory environments.

Many of you might not realize that the GAAP textbook was developed by the Financial Reporting Section. The expense and profits of that book have helped support the investments made by the section over the past decade. It is now time to develop a new book to address the emerging regulatory changes. The wheels are in motion, and the excitement is building. This book will serve the insurance community for years to come and provide a revenue stream to fund additional investments by the section.

The Financial Reporting Section is fortunate to have the opportunity to serve professionals across the globe. We realize that our members practice within and across many borders, and identifying opportunities to bring value outside of the United States is a focus of the section. Finally, we actively seek out partnership with the other sections within the SOA. As risk, technology and financial reporting converge, there is a growing need to serve the profession with a coordinated effort. A

Matthew P. Clark, FSA, CERA, MAAA, is principal at Deloitte Consulting LLP, and is 2013 chairperson of the Financial Reporting Section. He can be contacted at *MatthewClark@deloitte.com*.

LEARN MORE about professional interest sections at *SOA.org/sections.*

Out Of The Office

ACTUARIES ON THEIR OWN TIME

Sculptor at Heart

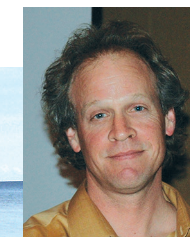
Daniel Durow has an obsession—sculpting. His mediums are sand and snow. He began creating sand sculptures about 20 years ago, when his children were young. "There's not a whole lot to do in our Wisconsin winters, so I started trying snow sculptures in the last 10 years or so," he says.

Winter usually finds a couple of sculptures in his yard, weather permitting. This year's included an Easter Island statue, a shark and a sports car. In sand, Durow has created cars, sundials, and even the Society of Actuaries' logo.

His favorite, though, is just a sand castle. "Everyone is different but people seem to like them," he says. "The largest one I ever made was almost 6 feet tall, and people just kind of stared at it and wanted to touch it because they couldn't believe it was real."

He has won several sand sculpture competitions in Door County, Wisconsin. "One of the state parks we go to used to have a sand sculpture contest every summer that we (my wife 'helps'—mainly to keep kids from wrecking things) had won something for like six years running. With cutbacks and things last summer it was not held." His snow sculptures appear often in his local paper and sometimes on local TV.

"Extreme patience and extreme persistence, something that I needed to get through the actuarial exams, have paid off in making the sculptures," Durow says. A typical sand sculpture requires six to eight hours just for the base and then a few more hours sculpting. "For snow, I calculated that for one thing I made, I moved something like 5 tons of snow to make it. And I wonder why my back is always sore."



Durow's favorite creations—sand castles.

All that work, however, doesn't always last very long. "I spray the sand with water; that helps it last a little longer, at most a day or two. In the snow, I can 'repack' things with slush if it will be cold at night, but it's mainly up to the weather," he says.

Durow doesn't mind that, though. "The temporary nature of them actually is kind of neat. People tend to remember them bigger and better than they actually were."

It's not necessary to have an audience. Depending on where and when he is creating, he might not get one. "At the contest we used to go to, we'd usually end up with quite an audience. Normally in the sand we stay at a fairly unpopulated beach with only a few people walking by each hour, though," he says. "In the snow, people tend to drive by slowly, but the ideal conditions are below-zero temps and lots of snow, so people don't tend to stick around."

When he is not sculpting, his other creative outlet is painting. Durow says, "I have painted a few 'murals' on the walls of my garage and shop, just copying some of my favorite things. I have a Teenage Mutant Ninja Turtles 'poster' I made for the kids a while back; there is a Dali work in my shop on the wall. And the last few years I've been working here and there on doing 'The Last Supper.' It's near the ceiling of the garage so it's going to take a while." A

Daniel Durow, FSA, CERA, MAAA, is AVP and actuary with National Guardian Life Insurance Co. He is a member of the SOA's Smaller Insurance Company Section, and a former council member. For more information on the SmallCo Section, visit their website at *http://www.soa.org/sic/*. Durow can be contacted at *dtdurow@nglic.com*.

The Thrill of the Hunt

Lyle Van Buer is an avid geocacher.

Geocaching involves someone hiding a container somewhere, marking the coordinates with a handheld GPS receiver (GPSr), and then creating a listing for it on the geocaching website, *www.geocaching.com*. The hunter of the geocache then loads those coordinates in their GPSr and goes to look for it.

"The two things that I really enjoy about it are that it gets me up and out and that I have discovered parks and reserves I wouldn't have discovered otherwise," Van Buer says. "There is yet to be a place I've gone that there weren't some geocaches nearby, across the United States and around the world."

His favorite geocaches are those that take him to out-of-the-way places. "My wife and I made a trip to New Zealand and … one day, I took a short side trip to this little park area that had a path following a river that had waterfall after waterfall," he says. "And we did one on Grand Cayman. In town, there is a touristy area called 'Hell' with this small area of unusual rock formations. … On the south side of the island, there was a huge area of similar formations with no one around where we went to look for a cache.

"The really interesting places that you go to are those about which you can say 'I never would have visited here if it wasn't for geocaching,' and this is something most geocachers have said at least once; if someone says that about a hide I made, I take it as a compliment."

The best part, however, is the thrill of the hunt. "Finding the hidden cache out in the middle of the woods, especially if it's well hidden, can be exciting. And finding one hidden in an urban setting, where there could be a lot of people around, requires stealth. I guess it can feel like a secret club," he says.

Geocaching takes Van Buer to some out-of-the-way places.

When you find a geocache, the most important part is to sign the log book to show that you found it, according to Van Buer. Geocaches come in all sizes, from large Tupperware and metal ammo boxes down to small magnetic containers about the size of a pencil eraser. The bigger ones might have "swag" in them.

"The rule is that if you take something from the geocache, you must put something in, generally of equal or greater value. I've heard from many geocachers that bring their young children, this is the best part for the kids," he says. Once you have found the cache and signed the log, you rehide it where you found it for the next person to find.

Two special types of geocaches will often take you someplace interesting. There isn't a container for you to find, but something is there that the cache owner wanted you to visit, and typically you need to answer some questions about it to prove you visited.

One is a Virtual Cache. "These will often take you to a historical site or some architectural feature or sometimes just something to make you go 'huh.' I did several in Austin, Texas, during a [Society of Actuaries] meeting one year and saw many places of historical importance in Texas. There are many of these in the Washington, D.C., area, too.

"The other type is an Earth Cache where some geological feature is there to see. Sometimes it's a boulder left by the ice age, sometimes it's a fossil bed; I've even gone to a gold mine."

On top of the thrill of the hunt and the exhilaration of exploring and learning, geocachers are a friendly bunch. They "like to help each other out. There are the occasional get-togethers, just to visit and swap stories," says Van Buer. "My wife says I've become much more sociable since I started geocaching, and you know that can be a problem with actuaries." A

Lyle Van Buer, FSA, MAAA, is associate actuary with Modern Woodmen of America. He can be reached at *Lyle.VanBuer@modern-woodmen.org*.

The SOA At Work

CULTIVATING OPPORTUNITIES FOR NON-TRADITIONAL ACTUARIES

THESE ARE EXCITING TIMES for actuaries in non-traditional roles. These practitioners touch a host of business arenas and are well respected for their knowledge, expertise and guidance. The Society of Actuaries' (SOA) Board and leadership, and actuaries themselves, have expressed a strong desire to continue to expand the opportunities for actuaries practicing in non-traditional fields. Because the scope of this area is broad, we made a decision last year to hone in on one market—the financial services industry, specifically banking. The initiative involved environmental scanning, analysis, market research and surveys.

Based on research findings, the Non-Traditional Roles for Actuaries Task Force developed a series of recommendations for the SOA, including public relations and awareness campaigns with an external focus to HR decision makers and executive recruiters in financial services; more professional development content leveraged on leading-edge investment and risk management content; and exploration of partnership possibilities with other entities displaying interest in financial services for the non-traditional actuary.

There is a fair amount of activity in this arena around the world. Actuaries in Australia, Mexico and South Africa have already established a noticeable presence in the banking industry. They tell us that these changes have, in part, been driven by necessity—by legislative changes and, in some cases, shrinking market opportunities in more traditional actuarial fields. Recognition by these new employers of the tremendous analytical skills actuaries can bring to their businesses has also driven change.

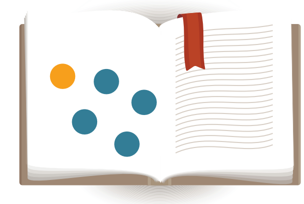
In May, former SOA Board member Frank Sabatini attended a conference hosted by the Actuarial Society of South Africa (ASSA) on the topic of actuaries in banking. Frank and others discussed the many opportunities for actuaries in banking, arising from credit risk, market risk, liquidity risk, operational risk and other business risks. A few key specifics from that conference include: 1) Actuaries working in banks has been commonplace in South Africa since before 2000; 2) Consulting firms working for banks have included actuaries on their engagement teams; and 3) ASSA is developing a banking track to fellowship and we'll also be following their progress with great interest.

The SOA is committed to expanding our reach and researching opportunities for all actuaries and for those working in non-traditional fields. With business needs changing and developing at a rapid pace across the globe, it is our job to put initiatives in place that will further the growth of our members and the actuarial profession and ensure that resources are in place to make those initiatives as effective as they can possibly be in creating these new opportunities for our members and candidates.

Stay tuned for developments as we continue our exploration into this very important topic.

— SOA Executive Director Greg Heidrich

Good Research Reads



COMPLETED EXPERIENCE STUDIES

- 2013 Group Term Life Experience Study & Tables
- 2008-09 Individual Life Experience Report
- 1990-2007 Individual Disability Experience Committee Report

To view a complete listing, visit **www.soa.org/Research** and click on Completed Experience Studies.

COMPLETED RESEARCH STUDIES

- Simulating Health Behavior—A Guide to Solving Complex Health System Problems with Agent-Based Simulation Modeling
- 2012 Emerging Risk Survey
- Segmenting the Middle Market: Retirement Risks and Solutions—Phase 1 Report Update to 2010 Data
- Report on the Survey of Older Age Mortality and Other Assumptions
- Pension Plan Embedded Option Valuation
- Health Care Cost—From Birth to Death
- Middle Market Retirement: Approaches for Retirees & Near-Retirees

To view a complete listing, visit **www.soa.org/Research** and click on Completed Research Studies.

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:

Social INSecurity: Why We Shouldn't Be Panicking

Fox Business reports on the risks of claiming Social Security benefits too soon. For the whole article, visit *www.foxbusiness.com*, search term Social Insecurity, or use the QR code.

Annuities as Income, Not Investments

Leading retirement actuaries discuss lifetime income with *MarketWatch*. Visit *www.marketwatch.com*, search term Annuities as Income, to read the entire article. Or, use the QR code.

CNN's Sanjay Gupta Reports on Aspects of Health Reform

Actuary Sara Teppema talks with *CNN's* Sanjay Gupta about the cost of the newly insured under ACA. To read the article, visit *www.soa.org*, search term Sanjay Gupta, or use the QR code.

USA: The Process is Slow and Challenging

Tonya B. Manning talks to the *Economic Observer* about long-term issues in the employment market. To read the article, visit *www.soa.org*, search term Economic Observer, 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

CRITICAL ILLNESS INSURANCE FORUM
Sept. 16 – 18
Ft. Lauderdale

DI & LTC INSURERS' FORUM
Sept. 18 – 20
Ft. Lauderdale

VALUATION ACTUARY SYMPOSIUM
Sept. 23 – 24
Indianapolis

ANNUAL MEETING & EXHIBIT
Oct. 20 – 23
San Diego

CANADIAN HEALTH SEMINAR
Nov. 6
Toronto

View all Professional Development opportunities by visiting *www.soa.org* and clicking on Event Calendar.

Recommended Readings

The following is information* The Actuary *received from Ardian Gill, FSA, MAAA, who donated a collection of books to the SOA library. His write-up about the collection follows.

The profession should be made aware of a rare, indeed unique, addition to the SOA library: the library of the first American actuary, one Charles Gill, who was actuary of the Mutual Benefit Life and later of the Mutual Life Insurance Company of New York.

The books date from the first half of the 19th century and, quite unsurprisingly, are not in pristine condition. But what a library it was, and what a mind was possessed by Gill. Most of the works are in French because the French dominated mathematics for most of that century. The authors' names alone will transport any actuary back to his or her college math courses:

Lagrange, *Mécanique Analytique*, vols. 1 and 2
Poisson, *Traité de Mécanique*
Lacroix, *Traité Elémentaire de Calcul des Probabilités*
Ampère, *Philosophie des Sciences*
Cauchy, *Exercices de Mathématiques*
Laplace, *Traité de Mécanique Céleste*

The Swiss get into the act with Euler's *L'Analyse Infinitism*, whose work inspired Cauchy.

The list goes on, even to a slim volume titled *Gill's Analysis*.

Included in my donation are a few volumes not from Gill's library, among them *Testimony of the Investigation of Equitable Life* (1905; the infamous Armstrong Investigation that changed the nature of insurance regulation) and *Letters and Sayings of Amicus*, a folksy collection of gossip and goings-on at the Mutual Life.

An article titled "Do Books Make the Man?" describes the library and the prominent actuaries of the era. It can be found online at *http://www.contingencies.org/mayjun04/tradecraft.pdf*.

For more information, contact Dean Ruppert, SOA digital librarian, at *druppert@soa.org*.

E-COURSES: GROWING YOUR KNOWLEDGE

THE SOA IS PROUD to offer 20 e-courses worth more than a combined 80.00 CPD. See our full listing at *www.soa.org/ecourses*.

Financial Economics: Asset Pricing
This e-course focuses on the asset pricing branch of financial economics. You will learn about mean variance portfolio theory, how the concept of market equilibrium can be extended to determine the market price of risk and rational decision making for decisions with certainty and with uncertainty.

Financial Economics: Corporate Finance
This e-course focuses on 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 between each. You will consider what things would be like in an ideal world and examine what factors contribute to the corporate financial structures seen today.

Financial Economics: Financial Mathematics
This e-course focuses on the financial mathematics branch of financial economics. You will learn about derivative securities and options, modeling returns, and option pricing and hedging.