

RECORD, Volume 29, No. 1*

Washington, D.C. Spring Meeting

May 29–30, 2003

Session 29PD

The Future of Our Profession: Critical Skills Needed for Future Success

Track: Actuary of the Future

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Summary: Do you think the analytical skills possessed by actuaries will be enough to ensure our profession's growth in the future? Come learn about the findings of the 2002 Member Survey and 2002 Market Opportunities Research Report. Listen to the opinions about critical skills needs offered by traditional and nontraditional employers of actuaries and gain insight into initiatives underway at the SOA to advance our profession.

MR. MICHAEL L. KASTER: I'm the managing director of the practice areas at the SOA, and I am an actuary on staff. My responsibilities include doing whatever needs to be done to help advance the profession. This topic today is near and dear to my heart and near and dear to my responsibilities.

We're going to talk more specifically about the critical skills needed for success in the future of our profession. This session is sponsored by the Actuary of the Future Section, and that section focuses on exactly this topic: helping actuaries find new employment venues for application of our skills, helping identify new avenues for actuaries to work in and identifying the skills that we'll need to be successful in the future.

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Note: The chart(s) referred to in the text can be found at the end of the manuscript.

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There are many activities going on at the SOA to help in this endeavor. As I already mentioned, the Actuary of the Future Section works on this subject. Several actuaries on staff, including myself, support and help advance the work that actuaries do in many different avenues in the four various practice areas. The SOA also has a strategic planning committee, which you're going to hear a little bit about, that is responsible for developing our strategic initiatives, all with the focus of growing the actuarial profession.

There's also the Management & Personal Development Section, which is focused on helping actuaries develop skills that are needed, such as personal management and communication skills. Michael Braunstein will be talking a little bit about that.

We have a couple of objectives for today: to learn more about what the market says about actuaries and what skills are in demand by employers. We'll tell you about some of our recent surveys we've done on employers of actuaries and the skills they say will be needed in the future, what we're good at, what we're not so good at and what will be in demand in the future. We're going to learn more about some management and personal development skills, specifically what business acumen means.

You'll see that the business acumen skill set of the actuaries probably needs to be worked on in total. This certainly is not true of each individual, but there are some trends, and we'll be learning about how you can work on developing those skills. We're going to talk a little bit about a specific role that is evolving today—it's the chief risk officer (CRO) role. It's nontraditional for actuaries, but it's an evolving role and one that's growing more prevalent. You'll learn a little bit about what to expect and what not to expect.

Let me introduce today's speakers. Michael Braunstein is the director of North American Operations in Global Marketing for BPP, which is an actuarial training organization. Michael is an associate with the SOA and a member of the Academy. He's worked for 30 years in various venues, including actuarial training, actuarial recruiting and actuarial education. That's his focus today. He's currently on the Academy's Communications Review Committee, and he's also been a member of the Management & Personal Development Section for many years, as well as the chair of that section for at least one year, if not more than

Stuart Wason is the managing director of Mercer Oliver Wyman, a consulting firm based in Canada. He is a fellow of the Canadian Institute of Actuaries (CIA). He's also a fellow of the SOA, a member of the Academy, a fellow of the Actuarial Society of India and an honorary fellow of the Institute of Actuaries. He is also the past president of the CIA. Like Michael, he has about 30 years of experience in many different traditional venues, including financial and actuarial valuation work. More recently, he has focused on risk management, so he's going to talk to us about the CRO role. In addition to that, he's currently the International Actuarial Association's (IAA's) chairman of the Insurer Solvency Assessment Working Party.

He's focused on the subject of risk management and how it affects insurer solvency.

Harry Panjer is the president of the SOA. He is a professor at the University of Waterloo and a fellow of the SOA. He's a fellow of the CIA, a prior president of the CIA and an honorary fellow of the Institute of Actuaries. Harry is going to start off today by telling you about some of our more recent survey information on employers.

MR. PANJER: My job today is to report on what's going on in the Strategic Planning Committee with respect to the issue of positioning the organization vis-à-vis the skill sets that actuaries will need in the future. The Strategic Planning Committee is working on this. There was a survey done last year that several thousand actuaries completed. Another survey is being done this year, which was completed last week.

We're also going to talk a little bit about the results of some of the research. First, we'll discuss the marketplace research. This is research that was done with employers, asking the employers which skills they think actuaries should have. The second was the results of the survey from members. This is the Internet survey that was done concerning the implications for the organization and some current initiatives that are underway to address these issues.

Let's discuss the employer-based research. First of all, I should mention the brains behind this belong to Meredith Lego, who's our marketing manager at the SOA. She will answer all the hard questions.

The SOA-sponsored research for employers was designed to identify the key skill sets, identify existing gaps and identify potential new markets for actuaries where their existing skills will be useful. That survey was conducted through a standardized interview process with many employers or potential employers in both traditional and nontraditional fields. This research is important because there is competition for the kinds of jobs we have. The nature of the industries that we work in is evolving, and there's a perception that actuaries are losing positions of power in some of these new consolidated integrated organizations. There's an emergence of the CRO role both for insurance companies and the institutions, and Stuart is going to be talking about that a little later on.

The study of employers focuses on both traditional and nontraditional employers in these particular areas of financial services, so the focus is still financial services.

I was at a conference in Australia last week, and there were several themes to the conference. One was on energy derivatives and managing energy. Another was on reforestation. All were areas where actuaries in Australia are working, and they are all somewhat financial in nature. They're looking at long-term strategies for organizations in terms of the financial outcomes for those organizations, but some

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of them are not directly in the financial services sectors. This research deals in the traditional financial services sector, including the typical actuarial employers.

In summary, the skill sets desired by the traditional actuarial employers working in the usual areas of practice, in order of importance, can be seen in Chart 1.

The first is business savvy. Obviously, business communications is part of it, as is general business acumen. Mike is going to be talking about some of these ideas in his presentation later. What's surprising for some individual actuaries is that quantitative skills are not right up there because that's what we focus on now. That's where we put all of our energy as an organization. This has some serious implications for strategy for the SOA. The Strategic Planning Committee is looking at this.

Risk management is a great emerging area for actuaries. This is the area of opportunity. Knowledge of subjects like accounting and economics is ranked by traditional employers as being down on the scale relative to business savvy and quantitative skills.

What was the corresponding ranking for people in the broader financial services sector or the nontraditional areas? It was basically the same. One of the conclusions is that the same kinds of skill sets are required and the same kinds of levels of importance are attached to the different skill sets.

In Chart 2, there's not much difference by practice area across our traditional practice areas. Risk management is becoming a significant area of importance but much less so in the retirement systems area. That's about the only place where there's a significant difference between practice areas.

The question is, what is the degree of proficiency required in these areas for the same subjects broken down by practice area? Again, in Chart 3, there's not much difference except risk management. There seems to be some difference in the risk management area by practice area. That tells us that if we're going to focus on risk management in the traditional areas, we also need to focus on the life area and, potentially, the health area. Obviously, risk management and finance fit together naturally. You can see it in terms of level of proficiency. I'm a bit surprised by that last yellow bar to the right because risk management and the finance area seem to fit hand in glove.

Chart 4 is a representation of the outcomes on different types of business savvy skills. They come directly out of the survey. Business acumen and business communications are the two key ones. What is interesting is that Leading People is not ranked high. Leaders don't necessarily hire people to be leaders. They hire them because of their skill sets. I suspect that they would argue that leaders come out of the people who are effective.

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Personal courage is not ranked high, but I think in these difficult financial times, personal courage may be more important. Notice that Self-Development is ranked high. This is the notion that people should be motivated to improve their own skill sets.

For employers, Chart 5 is a quick and dirty summary of the actuary by employers, and these are not necessarily different for traditional and nontraditional employers. They are labeled negative and positive. They don't necessarily need to be categorized that way, but the positives are that actuaries are hardworking, motivated, bright and have potential.

The areas we need to focus on are image. For example, the image that actuaries are narrow, have poor communication and lack imagination. That's a surprise for me. They lack in solutions. This must suggest that they cannot work in a broad set of possible solutions. They are poor managers, are too linear and get lost in detail. You can give them the details, but they may not necessarily be able to see the big picture. They are caught in the technical box and cannot multitask.

Some of these may be more of an image than a substance, but the follow-up research is intended to address some of those questions. We don't know whether these are just image questions or whether there's some substance. If there is an image question, there's probably some substance. This gives the SOA some issues to work on.

Chart 6 shows the member research results. Where do our members see the competition coming from? They see the competition for jobs coming from MBAs, accountants and financial engineers and, to some extent, people called risk analysts. They might be rolled into financial engineers and are chartered financial analysts (CFAs), I think. MBAs are those people who have the skill sets that actuaries seem to be lacking. That validates this response.

What are actuaries doing about it? According to Chart 7, lots of them are getting MBAs. This suggests that actuarial education doesn't provide the necessary background for these business savvy skills. In the risk management areas, Ph.D.s and CFAs are the two ways of moving into the finance risk management field. This again validates the previous perceptions not only of business savvy skills, but the importance of risk management as an area. These are the complementary designations that people are getting.

What do the members say about the SOA in terms of the educational process? One comment is that members want the SOA to maintain high standards and enhance the value of the actuarial credential. This suggests offering continuing education and promoting the profession to employers. One thing the SOA has never done is spend time promoting the actuarial profession. It's always been in the purview in the United States of the Academy. It's a public interface, but its energy has always been focused on Capitol Hill. There's a void in terms of selling actuaries to existing

employers but also to potential new employers in expanding fields. That's an area where we will be doing more work.

How do members measure the SOA's effectiveness in maintaining their value of credential? They measure in terms of compensation level, level of opportunities or the job market for actuaries and the number of actuaries in significant positions in organizations. Those are simple key measures of the value of the credential.

What are the implications? The first is that, in general, actuaries need to broaden their skill set. It's not clear that the SOA, as an organization, is going to be able to fulfill those needs, but it's one of the areas that we're going to be looking at.

The second conclusion is interesting. There is an apparent gap between the perception of our members as actuaries and the perception of employers in terms of actuarial skills and abilities. Our members believe that we should be promoting the image of the actuary first to stimulate demand. Employers believe that actuaries need to improve their skill set. The question of image versus substance is an important one. Members believe it's image. Employers believe it's substance. It still could be image.

Actuaries and employers of actuaries need to dedicate time for training business savvy skills. This need is going to have implications for strategy for the SOA. The Strategic Planning Committee is going to be looking at this closely in terms of the possibilities.

The Strategic Planning Committee is going to be addressing a number of additional questions with employers, and some of these questions are in Chart 8. The last one is particularly important for the organization. Strategic Planning is responsible for the direction of the organization as a whole. This last question, trying to identify why members are getting additional credentials, will cause the Strategic Planning Committee to address the question of whether or not we, as an organization, have some responsibility in this area in terms of providing opportunities for acquiring additional skills. Clearly, we're not going to offer MBAs—that's the job of universities—but we do have continuing education programs where we can enhance what we offer actuaries without having actuaries enroll in a long university-based program.

Overall, some of the objectives are to create a branding and awareness-building campaign for the profession so we're really marketing the profession, to identify which market opportunities are the most valuable and what changes the SOA wants to make in its current education qualification process in the long run. This will feed directly into the 2005 task force, which is looking at the content of future examinations for the long run for our future actuaries.

We've done some work already. In discussing the 2005 redesign for our educational system, there was an initial suggestion that we need a generalist track to deal with international actuaries outside of Canada and the United States That

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has evolved into a suggestion for a risk management track. This was tested out at the board and the board was supportive of going in this direction.

Last week in Australia, I discussed this with the Australian actuarial organization and the British actuarial organizations. They're very keen on moving in this direction themselves. The risk management area is one area that really doesn't know national boundaries, but we can work with the other actuarial organizations around the world in building a specialty track that can serve all.

We are working on continuing education. There's a discussion with at least one university for executive training where actuarial training will be recognized. That's going on in the University of North Carolina, but there certainly could be others. Some of the other actuarial organizations and other professional organizations have done this with, for example, MBA schools so that individuals may be exempt from some of the requirements of an MBA because of their quantitative skills, but still capture the essence of the MBA through case study work and through broad work with others from other fields.

The issue in the "attracting the best and the brightest campaign" is one of broadening the base from which we attract candidates. If we all have mathies like me, we'll have a nice strong group of people who are relatively narrow. If we attract a broader set of candidates, we diversify some of our own risk as an organization. We will have actuaries with a broader set of skill sets—some like me, and some with broader business skills like Mike and Stuart.

That's one of the initiatives going on with the Strategic Planning Committee. This is not a short process. It's a serious research effort, as you can tell from the surveys, and that will feed back through the strategic planning process over the next year.

FROM THE FLOOR: I have a question regarding the surveys. Are the employers who responded to the survey mainly U.S.-based or from all over the world?

MR. PANJER: That's a good question. It was not a survey. It was a personal interview and I think, Meredith, they are probably mostly U.S.-based.

MS. MEREDITH LEGO: Yes, the overall the membership is about 80% U.S.-based and 20% Canada-based. While there is a percentage of international, the SOA has focused mostly on North American organizations.

MR. PANJER: Were any of the employers that were surveyed outside of North America?

MS. LEGO: No.

MR. KASTER: They're all Canada and the United States.

FROM THE FLOOR: I just want to confirm that the split of employers by geography is 80% U.S. and 20% Canada.

MR. PANJER: Well, it's about 70%U.S., 20% Canada and 10%elsewhere. The survey was roughly 80/20.

FROM THE FLOOR: Is it safe to conclude that the results from the survey are mainly applicable to the actuarial profession in the United States

MR. PANJER: That's a very good comment. I think from the survey, we would have to say yes. But in general, we probably would be able to conclude that they're typical outside of Canada and the United States. Meredith, do you want to add anything?

MS. LEGO: In preparing information to supply the Strategic Planning Committee in analyzing all of the data around this effort, we looked at a lot of research done by other international actuarial organizations and other associations catering to risk managers. The conclusions of research efforts they have found supported these efforts through similar, either quantitative or qualitative, research efforts.

MR. PANJER: Okay, so you surveyed the literature on this area and found that the conclusions were similar. Thank you, Meredith.

MR. KASTER: Michael is going to talk about business savvy skills.

MR. BRAUNSTEIN: When I was first asked to speak on business savvy skills, I turned it down because I looked up savvy and there was no such word, and it's not just here in the United States that we don't know the word. There was no such word as savvy when I first checked it out. Then I decided that savvy must be an abbreviation for savoir-faire. It makes sense. We're business savvy with the savior faire. I looked up savior faire, and the dictionary defined it as, "Finesse, refinement, sophistication." I thought, "Why are they coming to me? Social grace, tact. My wife will tell you about tact. Elegance." I e-mailed Mike back and said, "I'm not qualified." He told me it was a different definition of business savvy, not that definition. When he sent me the official SOA definition of business savvy, I said, "All right, I'll tackle that."

I learned a couple of things on presenting through the years, although by the end of this session, you may think otherwise. The first was to greet people at the door so that there are no enemies in the crowd. Hopefully, I've made friends with many of you. For you latecomers, please drop by afterward to say hello. The other thing I learned was from a guy named Jerry August, who does presentations on presenting. Jerry said that if you want to do a good presentation, it's simple. There are three steps. Tell them what you're going to tell them, tell them and then tell them what you told them. I said, "Okay, that's easy enough."

Let me start by telling you what I'm going to tell you. Let's briefly discuss each of these topics starting with business communications. If we want to establish ourselves with business savvy, we need to be good verbal communicators. We need to be persuasive, logical and engaging. Be an engaging presenter. You need business writing skills. You need to listen well and share information.

How many of you are verbal communicators? For some of you, that might not be your primary way of communicating. My wife's primary way of communication is rolling her eyes, but she gets her point across well. Body language is something that it is used in communication. It's something that we need to be able to read. In business, it's important that we be good verbal communicators. We need to be able to speak intelligently and articulately.

We need to be persuasive. To be persuasive, it makes the most sense if you're dealing with an intelligent audience to present both sides of an argument. You're going to lose credibility if it's just one side you present. It's always good to present both sides, obviously emphasizing the part that's most important to you. You need to be engaging.

How many of you have ever seen a spelling or grammatical error in a business communication that you've received? What about in a resume that you may have gotten? How many of those people were hired? You see the problem. It's important to have good business writing skills. It doesn't have to be Pulitzer Prize winning, but it's important to be accurate and use correct spelling and grammar.

I recently flew Southwest Airlines and read the Southwest Airlines magazine. There was a little quiz in there, and one of the points was about listening. It said that 80% of the workday is spent listening in some way and that attitudes about listening influence what we ultimately come away with. Listening is a crucial part of our day, and attitudes are important.

Sharing information is important. If you want to kill morale in your office, just tell somebody after he's spent a lot of time on a project, "Oh, we're not doing that anymore. I meant to tell you." How many of you have ever done a project only to find out that it really wasn't necessary, and you could have known that beforehand? It's frustrating. In terms of communications, we want to communicate effectively with others, and we expect others to communicate effectively with us.

Next on our list is self-development. We need to learn quickly. We need to make connections, be accountable and hold others accountable because that's a range of interest. Be ambitious. With respect to learning quickly, actuaries are in good shape. The exam process teaches you how to learn, though maybe not as quickly as we would like. We certainly need to learn quickly and need to continue learning. We can't finish with exams and then that's the end of it. We need to continue to learn throughout our careers. In fact, we want to continue to learn throughout our lives.

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An interesting thing I heard not long ago is that with older people—very old people who are beyond the age of disease even becoming a factor anymore, such as those aged 95 or 100—the length of life seems to be directly related to intellectual curiosity. I don't know about you, but when I wake up in the morning, I always wonder what's going to happen today. When I go to bed at night, I want to wake up in the morning because I don't want to miss what's going to happen tomorrow. That's not the only reason, but that's one of the reasons I want to wake up in the morning.

Intellectual curiosity plays in. It's like going for a walk in the woods or driving in a car and always wondering what's around that turn. The people who wonder what's around that turn, the people who want to know what's going to happen tomorrow, tend to live longer. Not only do you learn, but you can extend the length of your life to 120 years.

Making connections is important. Are any of you writers? Writers have an ability to bring things together that might not seem to go together. There are lots of events that are connected in life. We live in a world of actuarial science, and it seems like it's just a scenario, but it involves all sorts of different things. Writers have an appreciation for that. We should use the right half of our brain sometimes and try and make those connections.

The beauty of bringing things together is that it comes in handy. It's valuable. For example, in rotations, in actuarial jobs, if you worked in the life department and then you rotate to the health department, you might discover that there are some things that you can bring with you. Those kinds of connections are important and are a part of becoming a good businessperson, hence the business savvy.

We need to be accountable. If you do something wrong, you need to acknowledge it. If someone else that works for you does something wrong, do you say, "Oh, don't worry about it. I'll just fix it. I'll do it." No, if you're a good manager, you give it back to the person and say, "You need to do this over. You need to do this again." We don't want to reward the people who do it wrong. We want to hold people accountable, and we'll be held accountable, and we should be held accountable. Accountability is crucial.

Having a range of interests is important. Has anybody ever gone to a cocktail party? Who's the life of the party? Who's the best person at the party?

UNIDENTIFIED PANELIST: The drunk.

MR. BRAUNSTEIN: The drunk! Now, when you get heckled from the panel, it's not good. The truth of the matter is the life of the party is the man or woman who can talk on any subject—the conversationalist, the person who's there who knows a little about this and a little about that, who listens to what you have to say and can comment on it. That's valuable and useful even if you're looking for a job. It's always nice to have a range of interests and an ability to do a lot of other things.

Ambition is important for self-development, as well. As far as ambition goes, energy and enthusiasm are good. I think the people that don't want to sleep have it best. Are any of you in favor of a pill instead of sleep? If someone said to me, "You don't have to sleep; just take a pill," I would take it. There's so much to do, and the people who have that attitude, who self-drive, are the people who have the best business savvy overall.

Let's move on to leadership. Harry made the comment that leadership wasn't high on that list. I'm not going to pay attention to those ups and downs in those statistics too much. I think all of these things are important. In terms of leading people, we need to assess them accurately, deal fairly with subordinates, be candid and compassionate, engender the respect of others and motivate others to excel.

In terms of assessing, has anybody here ever put a softball team or a volleyball team together? You have to assess the players. You don't want to put the guy on first base who can't catch a ball. You want to be able to tell who's good at what and put them there.

Sometimes you have to do that in short order. I've assembled volleyball teams, softball teams, baseball teams and put together other winning teams. I've also assembled administrative teams, sales teams, marketing teams and financial teams. You want to deal fairly with people, and that just means telling the truth. I think that's probably the best advice. When it comes to dealing with subordinates, just tell the truth. If it's good, it's good. If it's bad, it's bad. People appreciate that.

With respect to being candid and compassionate, again, what I have to say probably is somewhere out there in literature. I'm sure it is. Don't ask me who said it, though. It is suggested that the decisions at the top level should be made ruthlessly, but that the message should be communicated compassionately. In business, that makes a lot of sense. Make the decision ruthlessly. Do the proper thing. You realize sometimes that it adversely affects people. That's the way it is. But you communicate that message compassionately and with good reason.

Respect, of course, is a two-way street. It's the Golden Rule. If I want people to respect me, I've got to respect them. As for motivating people, motivation can sometimes be just your tone of voice. If something is good, make a big deal about it. If something's bad, you can say so, but say it nicely and politely. You can motivate staff if you approach it in a positive way. By the way, there's a great book called *Stop Managing, Start Coaching: How Performance Coaching Can Enhance Commitment and Improve Productivity* by Jerry W. Gilley and Nathaniel W. Boughton that you might want to look into for some of the leadership points.

When relating to others, we need to be flexible and create networks. The individual who creates the network builds collaborative trust, handles conflict positively and appreciates and fosters teamwork.

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I'm an extrovert. When I was little, I was shy, but I got around that, and I'm now an extrovert. My wife is an introvert. Is everybody here familiar with Myers-Briggs? I'm an ENTJ for you Myers-Briggs fans. My wife is an ISFP. We are complete opposites on the spectrum. I'm an extrovert. She's an introvert. I'm intuitive. She's sensory. I'm thinking. She's feeling. I'm judging. She's perceptive. But we've been married for 14 years, so you really need to be flexible.

If you're going to work in an environment with people of different styles who have different ways of doing things we can get an advantage from that as long as we're flexible.

I was on this side of the room, and in every category Jim was on the other side of the room. He and I wound up working together on the Management & Personal Development Session and worked great together. I love working with him. He's completely different from me, but I think we get an advantage from that.

We need to create a network by coming to meetings like this or doing extracurricular activities, be they work-related or otherwise. All are valuable. Volunteer work is a great thing to do to create that network. You need trust. Honesty is the best policy. I guess it's a cliché, but honesty is the best policy and, if you're honest, you're going to gain trust. If you ever lose trust with someone, it's next to impossible or very difficult to regain it. Trust is crucial.

Handle conflict positively. A few years back, I lost my job. I was talking to some other people that I worked with, and I was happy and laughing. One of them said, "How can you be happy? You just lost your job." I said, "I can have just lost my job and be happy, or I can have just lost my job and be unhappy. Either way, I just lost my job. Where am I better off? Being happy or unhappy?" It made so much sense to me. The truth is that if you see those kinds of conflict situations as opportunities, you avoid stress. You live a healthier life. Appreciating and fostering teamwork are important. You need to look at winning and losing and realize that often times it's attitude that makes the best team.

I played on a softball team where one year we could do nothing wrong. It didn't matter how far behind we were. We had such camaraderie on that team that we knew we were going to win and did. We had a great year. We won, won, won. Every time we turned around, we'd win a game. The next year, we had the same team, the same players, but there was bickering and arguing, and I don't know what went wrong. We couldn't win a game to save our souls. What was the difference? It wasn't about talent. It was all about attitude. Putting a team together involves chemistry and an appreciation for the other players and what they can do.

Business acumen requires us to be perceptive. We need to be creative. We need to devise solutions, maintain a balance, build and improve processes and exhibit a broad knowledge. We need to be aware of our surroundings. Politics are always around us, in the office or wherever. We need to pay attention to that. It's valuable

to us. It can be helpful to us, but more than that, it's interesting to know what's going on. We need to be creative.

You've all seen the nine dots. We need to think outside the nine dots. There should be a little difference. As far as creating solutions and creative solutions, I have an uncle who always hired lazy people. The reason he hired only lazy people was they found the easiest way to do things. There's something to be said for that.

We need to have balance. When we talk about balance, I suppose we could operate around the meaning or just hang on to the meaning and you might think that that's balance, but I would argue that it's not. You really need to diversify across a broad spectrum of areas and keep a balance across the spectrum. Imagine walking on a balance beam. You're bound to fall off if you try to stay too close to the center, whereas if you have a nice broad platform and just keep that in balance, you're better off. We need to build and improve processes and never rest on laurels. It's detrimental if you do that. We need to have a broad knowledge, expanding our horizons.

If you want to grow, you want to have new interests all the time. Have you ever and asked yourself, depending when you were born, "What was of interest to me in the 1950s? What was of interest to me in the 1960s? What was of interest to me in the 1970s?" You'll see how your life is changing, see how your life has grown and, hopefully, some of the things that were of interest are still of interest and, hopefully, you've added to it.

Let's discuss personal courage. We need to be composed. Despite fear, we need to remain consistent, ethical and truthful. We need to show self-knowledge and balance our work, life and good health. We talked about losing a job. If you lose your job, you're probably going to be concerned and afraid. Everybody would be. But don't show that. In fact, show confidence. I recruited actuaries for about 12 years, and the people who got the jobs were the ones who were confident. They weren't necessarily the best or the most talented, but they were the ones who exuded the confidence. The trick here is not to show fear even though we're all afraid at some time.

We need to be consistent. Did you ever tell an employee one thing and then tell another something else because it was the expedient thing to do? That's not a good plan because what's going to happen if Joe wants A and Betty wants B, and you tell them, "Oh, no problem. You can both have that day off." Well, there's going to be a little conflict later on when one of them doesn't get that day off. Sooner or later, Joe and Betty are going to compare notes, so you want to be consistent.

You want to be ethical, and I don't really need to comment. Jim Lichtman did a good job of that with his two books, which are, *The Lone Ranger's Code of the West: An Action-Packed Adventure in Values and Ethics With the Legendary Champion of Justice*, and a new one titled, *What Do You Stand For?* Both are

excellent books. When I was a recruiter, and, by the way, I got paid twice by the same place—I got two \$25,000 checks, one the day after the other. I thought, "Hmm! This is good." But I sent one back because I thought, "Well, if I don't, I'm never going to do business with that company again."

UNIDENTIFIED PANELIST: It was a test.

MR. BRAUNSTEIN: Well, I thought that it might be a test. But then I thought even if it's not, there's no sense in burning for an eternity, so I sent one back.

You want to be truthful. Don't be afraid to tell the boss he's wrong if he is. Don't be a "yes-man". If the sales department is double counting a dollar per production, blow the whistle. I'm a firm believer in telling it like it is no matter what. You can always do it nicely, but you should always tell the truth. You need to show self-knowledge, and the keyword here is "show." I think there are personalities, and some people don't want to be showy. It's not enough to have the knowledge. It's important to share that knowledge, and we need to do that.

Balancing work, life and good health are important. Years ago, I had a job where I worked for myself, and I was going to write a book titled, *Work Is One of the Things I Do*, because when I got up in the morning, work was one of the things I had to do, but I also had to mow the lawn, go to the drugstore, get a gallon of milk, write that letter and negotiate that salary. Work is one of the things I do. It's important to look at your career that way. Maybe 9:00 AM to 5:00 PM needs to be spent in the office, but you want to have a nice balance of work, life and good health.

What next? There are sources out there for you, including The Actuary of the Future Section, the Management & Personal Development Section Dale Carnegie training and products and Toastmasters courses. I also mentioned the book by Matt Boughton, *Stop Managing, Start Coaching*, and the Myers-Briggs test.

This is the third part. I told you I was going to tell you, I told you and now I'm going to tell you what we talked about. We talked about communication. I'll recap with a couple of keywords. Verbal communication involves being persuasive and engaging, having good writing skills, listening and sharing. We talked about self-development, which involves learning quickly, making connections, being accountable, having a range of interests and being ambitious.

On the leadership side, we talked about assessing others, dealing fairly, being candid and compassionate, showing respect, gaining respect and motivating others.

For interpersonal skills, we talked about being flexible, creating a network, having trust, having others trust us, being honest, dealing with conflict and having effective teams that we work with.

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In terms of business acumen, we discussed having know-how, being perceptive, creating solutions, finding balance, building and improving processes and building a broad knowledge base.

Finally, we talked about courage and composure, and being consistent, ethical, truthful, having knowledge and finding the right balance in your life.

MR. KASTER: I'm not going to tell you what Michael told me because he did it so many times, and it was effective. I will introduce Stuart Wason now, who is going to talk to you about one of those new evolving roles that actuaries are beginning to play and what you might need to know to play in this role in the future—the CRO.

MR. WASON: Just as the other Mike was telling us, repetition is the key when making presentations, so my version of repetition is just a little bit of an agenda for the discussion today.

I'd like to talk about the evolution of the CRO role as it relates to insurance enterprises and discuss some of the aspects that I think have helped shape that current role as it exists today. I'll follow that with what the skills are we would expect to see in CROs, then and finish with some implications for actuaries.

The evolution of the CRO is an important step in the evolution of risk management. We're seeing it grow in a number of business sectors, particularly in the finance sector. It's been existent in the banking sector for a while, but it's relatively new in the insurance company side.

I have found quotes of interest about risk from a number of sources.

"All of life is the management of risk, not its elimination."—Walter Wriston, former chairman of Citicorp.

Peter L. Bernstein, in his book *Against the Gods: The Remarkable Story of Risk*, argues that without risk management, our complex, highly integrated world (including insurance) could not exist.

Christopher L. Culp, in his book *The Risk Management Process: Business Strategy and Tactics*, believes that risk management is a vital component of business and critical source of innovation.

I would hope you are able to take away from these quotes that risk is a double-edge sword. It can work to our benefit as well as to our detriment, and when we think of risk management, we shouldn't always think about in the sense that we're trying to get away from the nasty stuff. We should be trying to think of CRO in the sense of protecting against adversity but also trying to incorporate it as a vital component of our business. It's a source of innovation for us and, after all, insurance is all about the management of risk anyway.

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James Deloach, who is with Arthur Andersen, suggests in his book *Enterprise-Wide Risk Management: Strategies for Linking Risk & Opportunity*, a number of questions, which I would suggest many CROs think about all of the time. Business managers, in general, think about these types of questions. We shouldn't restrict these types of questions to a CRO. In this session, I think it is appropriate that CROs, in particular, would focus on these types of questions.

I mentioned that insurance and insurance entities are all about the management of risk. Chart 9 is a diagram that has evolved a little bit over the years, but I think it was an international actuary who got this one started. It was named by the Australian Institute of Actuaries. I believe I've expanded it a little bit. It appears in a more recent work that I'm working on with the IAA, but it typifies how insurance entities manage risk. Capital is at the core of everything that we do in an insurance entity.

You can start anywhere on the diagram and work your way around from the original design of products to match or meet customer needs, to pricing of products, establishing liabilities for those risks once they're put on the books, to selecting assets to back those liabilities and to designing an appropriate asset liability management strategy. Eventually, experience evolves over time, resulting hopefully in profit with a positive sign beside it, and that affects the solvency position of the entity. This is all about risk and the use of capital. The diagram also shows that risk activity is bounded by the business environment in which we operate and the professionalism of all of our employees.

As we think about the role of CROs as they operate within an insurance entity, they have a number of roles they have to play, as shown in Chart 10—identifying risks, helping to make sure risks are assessed, planning appropriate strategies and monitoring those strategies and how the risks are evolving. You can see the wheel of the risk management process, and capital is not at the core of it, but communicate is instead. I hope, through our panel today, the message is being portrayed that actuaries need to focus on their communication skills. For CROs, it's a critical skill.

What are the benefits of risk management? There are several. First, increasing shareholder value is a benefit of risk management. In demonstrating to rating agencies and supervisors that we know how to manage risk in our company, we end up with a higher valuation multiple when the stock price is determined for our company.

Enhanced competitive position is another output of better risk management, which we have an improved ability to act proactively in relation to our competitors and improved ability to retain key staff.

A few other benefits of risk management are reducing earnings volatility. Sometimes that's the first thing that folks focus on. It is an important output of risk management. Excellence in corporate governance is high on many agendas,

including the publics that we serve. We need to move beyond just regulatory compliance to active risk management. Through risk management, we're better prepared with contingency plans to deal with those low-frequency, high-severity events.

One of the developments that supports the development of a wider scope of thinking about risk management and the role of the CRO would be the work of the IAA on insurer solvency assessment. We're trying to meet the needs of the International Association of Insurance Supervisors who has actively solicited the input of the actuarial profession to try to develop a global framework for risk-based capital.

Charts 11 and 12 show only a small part of a lot of work that's being done in that area, they are an indication of the need expressed by an outside user of our work as actuaries within insurance companies, and the supervisors will rely and do rely on the CRO as the focal point to demonstrate that risks are being managed well within an insurance entity.

One thing I want you to take away from this is the comment about how risks should be considered within a solvency assessment framework by the actuarial profession. I would suggest by the CRO. It isn't just underwriting risks, and here, underwriting risk is meant to be all of those risks that insurance companies undertake because when we undertake the business of insurance, we're all about the underwriting of risk, whether it's mortality, morbidity, automobile or fire.

Commonly actuaries focus as on that underwriting risk category. Not exclusively, but there are other categories of risk that are important in the banking sector and are also true for us. They include credit risk, market risk and operational risk. The banking sector through the Basel Accord is focusing on those four key risk areas.

We've talked a little bit about the benefits of risk management and some of the forces encouraging us to be better at risk management. Let's reflect for a moment on a few risk management failures just before we answer the end question, which is what are the attributes we're looking for in a CRO? There are three risk management failures I've suggested in Charts 13, 14 and 15. I'm not going to dwell on any of them particularly, but what I would ask you to think about as you review these real-life cases of risk management failures that affect the insurance industry and, in most cases, there are a couple of examples here outside of the insurance industry is this: do you think that actuaries have the right skills to catch some of these situations before they happened? We would expect the CROs would have skills to identify those situations as they're emerging. Are we ready as a profession to cope with some of those as they come along?

The first one up is agent misrepresentation and how it's affected various insurers in different countries. (Chart 13) We don't have to think it has a home in one specific country because it has had a home in a number of different countries. A lesson for

me is that we need to think about market conduct and the way in which our sales representatives deal with our clients, the customers.

Next is Barings, the rogue trader. How we would have assessed that risk? Lack of liquidity came up in American General. How about failure to understand underwriting risk (Chart 14)? Actuaries should be right front and center on that one, but was that the case? Were we able to capture those risks, and for all of the companies affected? How about the high credit risk investment strategy undertaken by Confederation Life and First Executive Life? High asset yields also entail high credit risk.

Dominance risk is an interesting one that is cropping up in a number of situations as there are a number of investigations looking back at insurer company insolvencies. There are a couple of them whose names I probably won't list at this point, but they've been fairly recent. There is evidence in the press that some senior executives played a dominant role in decision-making in the company and, perhaps, have influenced the thinking of other executives such that normal freedom of thought and controls were ignored.

Chart 15 includes examples that are outside the insurance sector. They are a mismanaged hedging strategy, an asset liability mismatch risk and a moral risk. The last one happened to be a Canadian insurer whose employees arbitrated their own company's mutual funds. It was an international fund, and it had to do with the close of business in Europe versus the opening of business in North America. The point of bringing this up is this was an event. It was not good. It cost the company real money in one sense, but it took the action to restore the funds, which were only a few million dollars, into the appropriate client accounts in the company. However, the impact on the company's reputation was so severe that it ended up in a windup situation for that particular entity. It was a trigger that caused the ultimate demise of the company.

Those are just a few failures that I put forward to you as you think about what skills you should have as aCRO in an insurance entity. I'd suggest a number of skills. This is not a scientific analysis on my part, but just thoughts. CROs need to have an ability to understand and communicate key risk issues to senior management, the board, supervisory authorities and rating agencies. They have to have an ability to foster (foster being the keyword) open communication and analysis of risk issues in their own company with the supervisors and with the rating agencies. They need to be a senior member of the management team. They have to have good general risk modeling skills but don't have to be the expert because they can rely on others on their team to be the subject matter experts. It's important for them to be able to think outside the box and identify emerging industry and company specific risk issues. Most important, they must be careful not to be dominated by other members of the senior management team. As a result, they may need statutory whistleblowing powers or professional association support for those difficult situations. In this case, the actuarial profession would shine.

What are some implications for actuaries? Can actuaries be CROs? Absolutely. I don't see any reason why not. Flip it around, though. Do all CROs of insurers need to be actuaries? No, I don't think so. Should actuaries be considered as CROs in banks? Absolutely, if they've got the requisite skills, training and knowledge. What skills do actuaries need to be CROs? I think we need to be able to think about risk more broadly than we have done in the past. We need to be able to communicate and earn the trust of a variety of audiences regarding risk and solvency issues and, finally, foster an open environment for the consideration of risk-related issues.

There you have it—the CRO in an exciting new role coming up in the insurance sector. Actuaries are playing a key role as CROs. There are a number of them around North America and in the global community as well. I'd like to see more CROs be actuaries. I know we can do it, but there are some lessons to be learned. We need to be welcoming of others who are not necessarily actuaries coming into the insurance industry as CROs, learn from them and broaden our skills and vision of how to manage risk.

MR. KASTER: Thank you, Stuart. We've got time for a couple of questions here. Hopefully you did get a good sense that the SOA is trying to examine our profession and figure out what needs to be done. We've heard that business communication, business acumen and business savvy are important. We learned a little bit about CROs and what skills are needed from them.

What would be your suggestions as to how people should further their skills, Michael, in business communication and business savvy, Michael? And Stuart, as the CRO, what are some other things they could do to further their skill development?

MR. BRAUNSTEIN: I would say the key for actuaries who typically have great technical skills is to further their soft skills—the communication skills and the interpersonal skills. The way to best do that is to get involved in nonactuarial-type activities such as volunteer work either within an actuarial environment or in a nonactuarial environment. The more we can and meet with other kinds of people and get out of this smaller group that we tend to be in, the better off we are. We need to establish ourselves for all we can do in environments where people are not used to seeing actuaries involved. The profession as a whole will benefit from that, and each of those individuals will benefit.

MR. WASON: You asked me about CRO, but I was itching to answer the question you directed at Mike. I guess for me, way back when, my wife and I both took the Toastmasters course, and that has stood us both in good stead. We learned a tremendous amount. We had a lot of fun with the group that we were in, and I would recommend it because we learned not only about public speaking, but how to organize a meeting, how to chair a meeting, how to take minutes, how to keep order in a meeting, how to make sure that all the correct things are done in a meeting in terms of presenting and getting people's feedback and how to give feedback to others. We both found that of great value.

On the CRO role, if you have an interest in that type of work, I encourage you to think of some different risk category that you have not yet experienced. It could be the assessment of credit risk, if you spend most of your time on the mortality or persistency side of the business and look for an opportunity within your own organization to develop your knowledge in that risk area. Eventually more of us are going to have to become conversant with what is needed to assess and manage operational risks, market risks, credit risks and underwriting risks. If you're active in any one of these, try and think about branching off into one of the others.

FROM THE FLOOR: Hi. I'm John Summers, Fidelity & Guaranty Life in Baltimore. My question is about the development of business savvy skills from the perspective of a student who's working through the exams. As a student, the exams are forefront in your mind. They take priority. The rewards are enormous and they're clear, and with the business savvy skills, the results are not so direct and immediate. I'm just wondering if there's any guidance from the SOA about how to develop those sets of skills simultaneously and about whether there should be certain priorities. Does it really matter early on in an actuary's career?

MR. KASTER: Harry, do you want to tackle that one?

MR. PANJER: Sure. First of all, actuaries like measurable, quantifiable results, right? That was your first point. When you try to develop soft skills, those skills are not nearly as easily measurable. Let me say the easy answer is to go and get an MBA. That's essentially what our member research said. The complementary designation that people are getting most is an MBA.

The fundamental question for the SOA is what is the responsibility of the SOA vis-à-vis these kinds of skill sets? I think that we can provide short courses, training sessions, CE opportunities, personal development and all of those things. Those are all incremental elements in general business savvy skills.

MBA programs tend to take a different approach, and they take an integrative approach to a broad set of business skills, both quantitative and non-quantitative. According to information I've gotten from my former students who have gotten MBAs or executive MBAs, the greatest value in an MBA program is not so much the detailed content they learned, but the ability to problem solve with people who don't think like them and to work with other people. I always say that if you're really interested in business and you're committed to it, an MBA is a great complement to the kind of technical training that we give within our training programs.

I think it's difficult for the SOA to provide that level or breadth of training if we don't have the skills to do that. Universities are good at providing those skills that are, in a sense, marketable and that are also marketable in a broader marketplace other than insurance companies. I think our CE programs are the greatest opportunity within the SOA. The question for the SOA is, how many of those can we provide?

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Where are we the best provider of those skills, and where should we encourage or work with other providers on those kinds of skill sets?

MR KASTER: The traditional model has been to finish your examinations while you're a student and then work on your business skills after you become an actuary. But the board has recognized that maybe we need to examine new models. We're not anywhere close to implementing, but it's certainly being examined to potentially educate actuaries in a new way so that they can also build on their technical skills and soft skills at the same time. We're experiencing some things right now, but it's a few years out. Plus, it will be a challenge to get the membership to accept it as a new model to educate actuaries.

MR PANJER: It's interesting that other professions have tried to address this. There are a lot of joint law-MBA programs or engineer-MBA programs. There's a recognition that people in these areas also need the soft skills. One approach they're taking is working within universities and working across faculties within universities to develop these joint programs. If we use that as a model, one suggestion would be that the profession work directly with those universities that run MBA programs and try to make it easier for actuaries to become MBAs by, for instance, getting credits and not requiring that they take certain quantitative courses like basic statistics.

MR. BRAUNSTEIN: I just wanted to add a little bit to this. First of all, with respect to timing, I don't think that the old model is a good one. I don't think you want to get to fellowship and discover that you don't have the skill set necessary to be effective in a management role. I think that's happened all too often. I think it has to happen sooner. I think it's incumbent to some extent upon the SOA to almost require that element.

There are two schools of thought on that, but I don't think it would hurt for the SOA to include some parts that might be valuable. In the United Kingdom, for example, there has been, although I think it may be discontinued, a communication exam where you need to articulate a particular business case on paper and be able to write effectively about it. I think there are ways to do it that would still be within the confines of what we're used to.

I realize that study is a predominant thing in a student's life. It's the big thing, but you don't study 24 hours a day. I would argue that there is ample opportunity to do these kinds of things in the normal course of the other things you do. If you have kids, you may get involved in volunteering as a coach. There are lots of things that we do in our lives where we have these opportunities. I don't think we necessarily recognize them. What you need to do is look at your life, look at what you're doing now. I'm not necessarily saying add time and add activities, but look at the activities that you're already doing in addition to your study and see if there are avenues there where you can improve these other skills. I think there are.

The SOA does support this, maybe not so much on the exam process, but in the form of meetings and seminars. I should mention both the Actuary of the Future and the Management & Personal Development Sections are designed to include these kinds of sessions that would be valuable to students. When you come to a meeting like this, don't just go to pricing and valuation sessions. Go to "thinking-on-your-feet" sessions as well.

FROM THE FLOOR: Mark Evans, AEGON Investment Management. How many employers in the survey actually wanted the actuaries to be less quantitative?

MR. PANJER: I don't know the exact numbers, Mark. The total number of employers who were interviewed was approximately 60. One of the conclusions that came out of this survey, prepared by Meredith and her team, was that, in general, the desired level of technical sophistication for actuaries is slightly less than it is now. It was not significantly less, but what they were identifying was the fact that actuaries need these complementary skills.

MS. LEGO: Yes, it's not necessarily that they're saying they don't want quantitative or technical skills at all. We had an employer focus group this morning, and we heard that it's an assumed level of knowledge. We're seeking people who are in mid-level positions and senior-level positions that to need that to communicate to other functions within the business environment, and that's going to help what we do as actuaries to be recognized more. It's not saying that quantitative is less important, but these other skills are necessary and are viewed as being relatively more important in the overall scheme of success.

MR. PANJER: You know, Mark, I'm one of the believers like you and have a really firm technical foundation for this profession. I see the real challenge for the profession as deciding to what extent a profession responsible for ensuring that the people who become actuaries have these other skills. I would argue that people who want these other broad soft skills have many opportunities to get them. Not everybody needs to become a manager. Some people like us would like to remain strong at the technical level.

In the long run, our profession is going to differentiate itself from others who have the soft skills on the basis of our technical skills. That's the point at which we differentiate ourselves from the average MBA. In the long run, the profession needs diversity. As I said earlier, there's a diversification strategy within the organization. If we have different types of people, we will end up with different types of actuaries, and will be a less homogeneous group. I think that's the desirable outcome.

MR. KASTER: Ultimately, we can't lose our technical background because we have to build on that and be able to do some of the additional skills that the employers are asking us to do.

Chart 1

Level of skill desired by employers in the broader financial service market

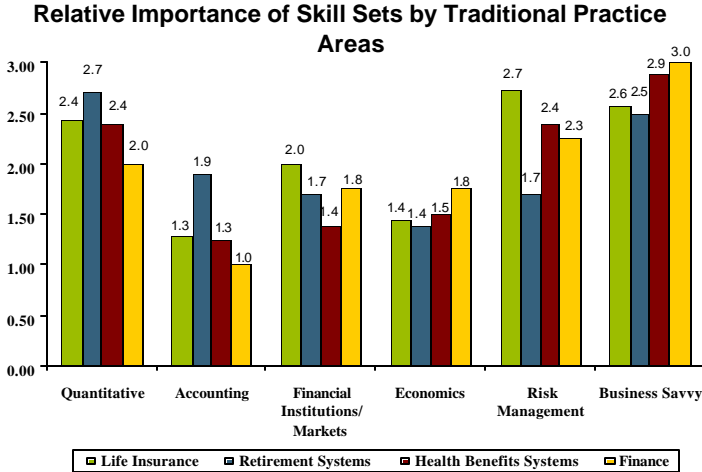
Skill Area	Ranking of Relative Importance	Level of skill required
Business Savvy	1	Business Acumen Business Communications
Risk Management	2*	Designs enterprise financial and other kinds of risk management strategy and tactics; analyzes and manages mitigation of enterprise risk
Quantitative	2*	Adept with calculus, finite and infinite series, differential equations; applies multivariate statistical analysis of variance; knows the general linear model
Financial Institutions/Markets	3	Models and analyzes financial risk for enterprises, analyzes market sectors or funds, creates pricing models for new securities issues
Accounting	4	Analyzes details of financial statements, prepares pro forma projections, performs asset valuations and liability analysis
Economics	5	Forecasts short-term economic trends, can explain monetary policy and global trade dynamics

Source: 2002 SOA Market Opportunity Research, Leading Solutions Group
 * Both Quantitative and Risk Management skills averaged to an equal relative importance



Chart 2

Relative importance of skills sought by employers varies by practices area....

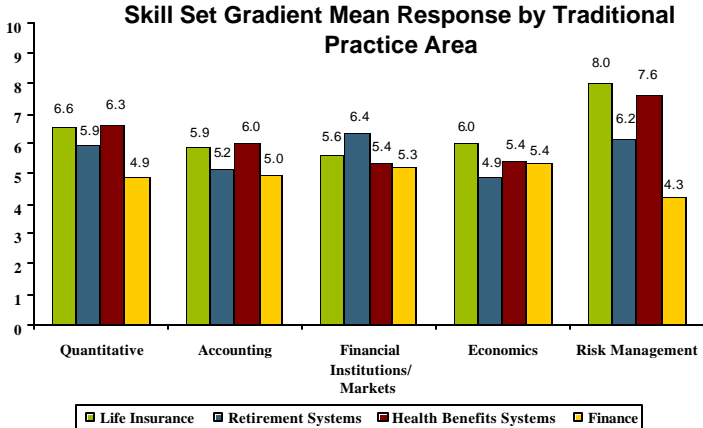


Source: 2002 SOA Market Opportunity Research, Leading Solutions Group



Chart 3

...as does the level of proficiency



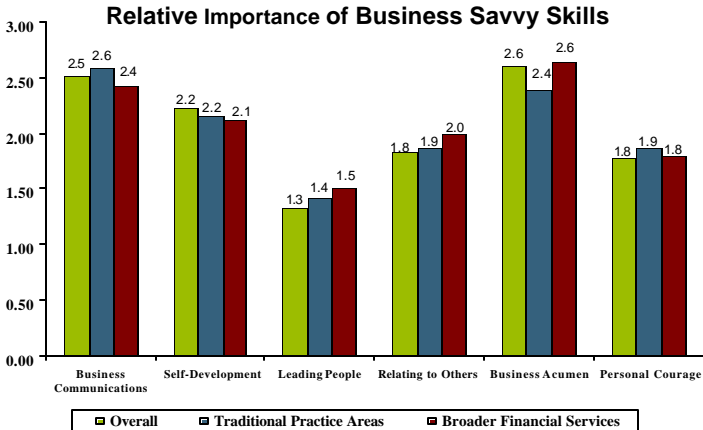
Note – Measured on a competency scale where 1 is least competent and 10 is most competent.
 Source: 2002 SOA Market Opportunity Research, Leading Solutions Group

9



Chart 4

Overall, business acumen and communications were very important for all segments



Source: 2002 SOA Market Opportunity Research, Leading Solutions Group

10



Chart 5

Employer’s image of actuarial ability

Negative Themes	Positive Themes
<ul style="list-style-type: none"> ■ Narrow ■ Poor communication/interpersonal skills ■ No imagination ■ Lack in solutions ■ Poor managers ■ Too linear ■ Lost in detail ■ Not able to see big picture ■ In technical box ■ Cannot multi-task 	<ul style="list-style-type: none"> ■ Hard workers ■ Motivated ■ Bright ■ Potential ■ Quantitatively skilled ■ Expertise ■ Communicators ■ Solve complex problems ■ Understand products ■ Thinking ability ■ Business advisor ■ Manage risk

Source: 2002 SOA Market Opportunity Research, Leading Solutions Group

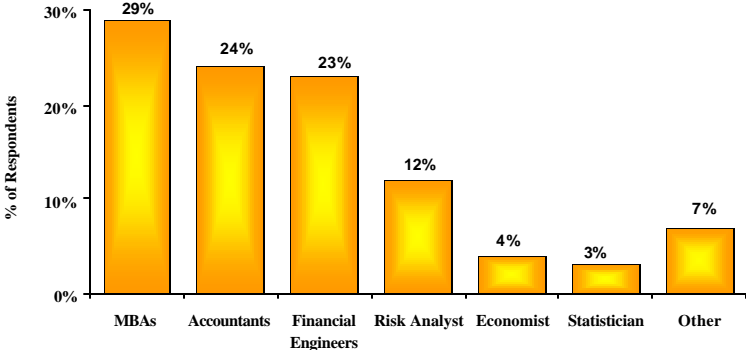
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Chart 6

The SOA is also utilizing members’ experience to define critical skills

Percentage of member respondents who rated profession as the one profession posing the greatest competitive challenge



Source: 2002 SOA Member and Candidate Survey

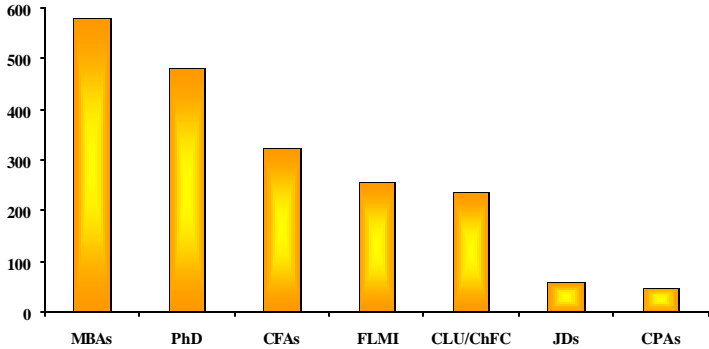
12



Chart 7

This SOA is also utilizing members experience to define critical skills (cont.)

Other skills and credentials/degrees obtained by Members
(Number of Members with other Degrees or Credentials -- 2002)



Source: 2002 SOA Membership Database

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Chart 8

Initiatives underway to address the implications

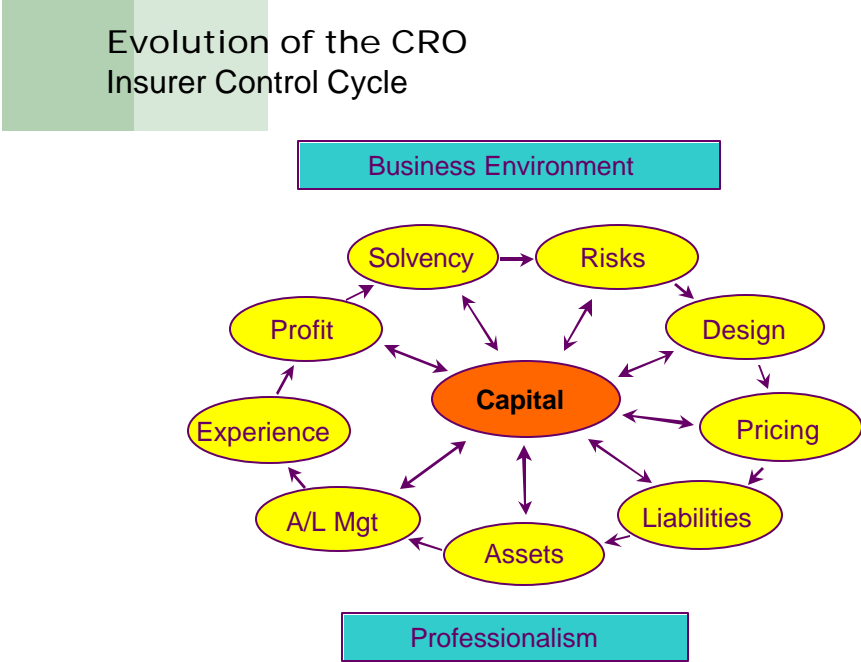
The SOA's Strategic Planning Committee is conducting additional research to address the following questions of employers:

- Who do employers hire if not actuaries to identify, manage, and mitigate risk and why
- How do employers perceive these competitors vs. actuaries among a number of dimensions
- What skills do employers seek for a professional to manage enterprise risk
- Why are (or are not) members obtaining additional skills/credentials/degrees

16

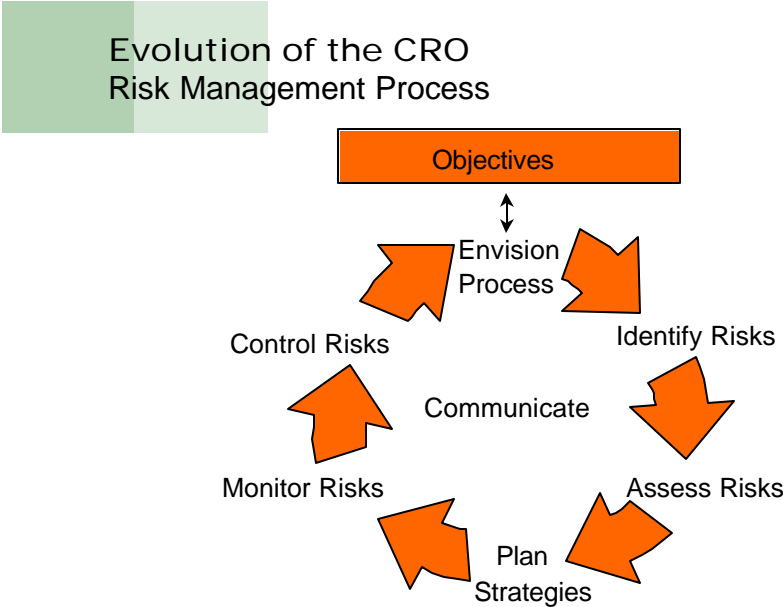


Chart 9



6

Chart 10



7

Chart 11




Evolution of the CRO Developments in insurer solvency assessment

- A set of target capital requirements is necessary for solvency assessment but is not sufficient by itself (Pillar 1)
 - Provides a snap-shot of financial position of insurer
 - No information about impact of various adverse circumstances
 - Factor-based requirements may not even help to understand an insurer's actual risks or their management of them
- Supervisory review of insurer is therefore also needed (Pillar 2)
 - To better understand the risks faced by the insurer and the way they are managed
 - To consider multi-period and multi-scenario modelling of the risks
- Market disclosure measures (Pillar 3)
 - To disclose insurer risks & methods to manage & provide for them

10

Chart 12



Evolution of the CRO Developments in insurer solvency assessment

- All types of risks to be considered within the 3 Pillars
- Within Pillar 1, capital requirements should provide for
 - Underwriting risk
 - Credit risk
 - Market risk
- Any risks not covered within Pillar 1 (e.g., strategic risk, operational risk and liquidity risk) should be examined within Pillar 2 as part of supervisory review

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Chart 13



Evolution of the CRO Risk management failures

- **Agent Misrepresentation (various insurers)**
 - Millions of dollars in fines
 - Billions of dollars in policyholder restitution
 - Lesson - Monitor market conduct carefully
- **Rogue trader (Barings)**
 - Value of Barings Bank reduced to \$1 by a single trader
 - Lesson - Separate trading and settlement operations
- **Lack of liquidity (American General)**
 - Substantial capital cost and forced exit from a profitable business segment.
 - Lesson - Liquidity position must allow for potential external ratings downgrade

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Chart 14



Evolution of the CRO Risk management failures

- **Failure to understand underwriting risk (Unicover etc.)**
 - Retrocessionaires suffered millions of dollars in losses
 - Lesson - Failure to understand the risks inherent in the underlying insurance contracts
- **High credit risk investment strategy (Confederation Life, First Executive Life)**
 - High growth, coupled with a significant concentration of assets in high risk assets resulted in insolvency
 - Lesson - High asset yields also entail high credit risk
- **Dominance risk (various insurers)**
 - High ranking executive(s) dominate the thinking of other executives
 - Lesson - Normal freedom of thought and controls are ignored

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Chart 15



Evolution of the CRO Risk management failures

- **Mismanaged hedging strategy (*Metallgesellschaft*)**
 - US\$1.3 billion loss from improper timing of hedging strategy
 - Lesson - Must understand the hedging strategy and its implications to avoid panic.
- **Asset-liability mismatch risk (*various insurance companies*)**
 - Prolonged negative interest spread due to high interest guarantees
 - Lesson - ALM can have profound implications for product design, pricing and company solvency
- **Moral risk (*a Canadian insurer*)**
 - Employees arbitrated their own companies' mutual funds
 - Lesson - Lack on internal controls can result in inappropriate employee behavior which severely damages insurer reputation