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Session 8L Actuarial Jobs at Risk

Track: Education & Research

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Summary: This session discusses the increased competition in the financial services industry for risk-management roles, decreased influence of actuaries in the insurance world, increased criticism of actuarial techniques in media and press (e.g., pensions) and how the actuarial profession is reacting.

MS. VALENTINA A. ISAKINA: The first speaker of the session will be Mike Kaster. Mike Kaster is a Fellow of the SOA and a member of the American Academy of Actuaries. He is senior vice president of actuarial product management for Conseco. He has been in this role for a couple of months. Prior to that he was the managing director of the actuarial practice areas for the SOA, and this is how he is able to speak on this topic. We planned the session prior to him transitioning into his new role at Conseco. He is very much up-to-date on the latest developments that are going on in the profession.

I'm the Finance Practice Area actuary at the SOA, and I will also be sharing with you my knowledge and my opinions about certain things that are going on. I also will share a few things that have happened recently, including the decisions the SOA's Board made about the profession in general, in regard to where the profession is going. There are things that need to be addressed to help current and future SOA members with their professional experiences and their abilities. I think our presentation is very dynamic. I will ask you to give us your questions and your feedback at the end. We are interested in how this is perceived. So, we will certainly welcome any suggestions or any questions that you may have. Without further ado, here is Mike.

MR. MICHAEL L. KASTER: As Valentina mentioned, for the last two years I spent most of my time thinking about the actuarial profession and what's going to be happening to the profession in the future with my role at the

SOA. I've done a lot of thinking about this, but what we're hoping to do today is talk a little bit about what's happening at the SOA at the strategic planning level, and how we are trying to address the future of the profession. I'm going to give you a lot of the data behind these initiatives, why these initiatives are in place, what you might be able to do, and even though this is labeled as a lecture format, as Valentina said, we really want this to be an interactive session. So, as you're thinking about some of these issues, if you want to share some of the anecdotal evidence you have with your companies, some of the things you're seeing, we'd be very happy to address those things.

We will give you some of the historical context for the challenges we're facing as a profession. I will give you some background on the SOA and why we're doing this because for a lot of you the SOA is merely the organization that you got credentialed by or that you come to these meetings for, and that's all the SOA is to you. The SOA is a whole lot more than that. The Society has done a lot of research about the profession in general and how it's being viewed in the marketplace. We're going to go over that. We'll also discuss how members perceive other members and what's happening from a perceptual basis. And then, as Valentina mentioned, I think she'll go into what is being done, what has been decided and the direction that is currently being set.

But let me give you some of the context. The traditional markets have been viewed as insurance businesses. We work a lot in life insurance, health insurance and property and casualty insurance. We're not limiting this to just SOA types of actuaries. This also is meant to incorporate the casualty perspective. But within that traditional sector, there is a lot more competition for jobs. There's more and more pressure. I'm seeing it now with my transition from the SOA back into the real actuarial world, where there are scarce dollars to be spent on resources. We have a lot of pressure at my own company to make sure we're using our dollars for people very well, and that's putting a lot of pressure on professionals.

There's definitely a shift within the insurance industry. It seems like life insurance may be suffering a little bit. I don't know if that's 100 percent true, but there's definitely a shift happening. When you think about the risks involved in the evaluation of the life insurance industry, they are different than the risks involved in the annuity industry. There are a lot of nonactuaries who don't necessarily see a value that the actuaries can add to that process. It's a much more investment-oriented product, and there's a lot more emphasis on investment-oriented products in the industry today. Nonactuaries don't necessarily know that we bring some of the investment expertise to the table. That's causing some pressure on our jobs.

Let me talk about technological advances a little bit. If you think about the profession 30 years ago or more, we needed a lot of actuarial students to crank a lot of numbers on calculators and punch cards, but today things can

be automated. So, do we need a lot of students to do all this work? We don't have as high a need as a profession to do all the manual calculations. We can program computers to do it. What we need in the industry today is much more analytical review of this stuff, expertise and the ability to evaluate stuff. There's definitely a shift going on from that perspective.

Within the broader economy, there's definitely convergence. Financially oriented organizations are still consolidating and merging. The speaker at the general session talked about all the accounting scandals. I wouldn't even want to attempt to touch that subject. Sarbanes-Oxley is certainly putting a lot of pressure on people today to document their processes and make sure things are compliant. It's a volatile market. We've seen that in the stock market going up and down. There's much more awareness of management prudence and making sure that risk-management is something that is being addressed within an organization. These are just some of the trends.

Within the health-care industry, there is much more price competition today. You have to be able to do a lot to review the medical trend prediction, and predictive modeling has traditionally been an actuary zone within the individual health and group health businesses. There's more pressure from competing professionals in this industry. More and more economists are being brought in by health insurers or health providers to do this predictive modeling. They're not thinking of actuaries to do this work. Again, even this industry is seeing the consolidation and merger activity that is causing there to be a reduction in workforce with fewer and fewer job opportunities. It's just a very competitive environment for all of us.

Within the pension world, there is a continuing trend away from defined-benefit plans. Some people call it the death of the defined-benefit plans, and I'm not sure it's in a death mode. It's not heading toward extinction, but it is very much in crisis. Defined-benefit plans have been where actuaries mainly have spent their time. We have not spent a lot of time as a profession on the defined-contribution side — again, a much more asset-driven side of the business. So, in addition to that, there's been increasing scrutiny from the general economy on the calculations that actuaries have put into those plans. When defined-benefit plans get into trouble, it's sometimes pinned on the actuary.

There's also a big shift going on today with our society. We are in an aging society. This is not news to anybody. But what is that causing? It's causing a lot of debate and discussion about how retirement is going to be funded from a societal perspective. I think actuaries could bring a lot to that debate and discussion, but we're not being asked to be even a part of that debate. These are some of the reasons why it's very important that we look at our profession long term.

Some of you may be sitting there saying, "Well, why? This doesn't affect me. I'm in a good situation. I'm in a good job. I don't need to worry about this."

Well, I would say you do need to worry about this, because I don't think any job is safe today. I've been the victim of a couple of changed circumstances where I thought I was going into a great situation. This was the company I was going to stay with for the rest of my career. Lo and behold, somebody at a very high level decided to change the business plan, the business model. All of a sudden, I was out of a job. So I had to worry about my own marketability and the ability for me to get into different employable situations. I think this is something that we all need to worry about.

Within traditional actuarial employment, we talked a little bit about the pressure, but there's also diminished scope within our traditional roles. One of the things we learned from talking to a lot of chief actuaries is they have pointed out that they're not necessarily in senior management anymore. That's cause for concern. Again, 30 years ago, the chief actuary always reported to the president or to the CEO. That's not necessarily true today. So, why is that happening? That's a big question for us.

International is definitely an expansion opportunity for a lot of companies. Are we, as professionals, ready for that? Do we have the skills we can bring to the table to be a part of those expansion and growth opportunities? Within nontraditional areas, the question is are we ready for that? Have our exams really prepared us? Some would say yes, but the market doesn't necessarily perceive that. There's much more focus and interest in the whole subject of asset-liability management and enterprise risk management. I think Valentina will talk about this later. There are definitely some skills that we can bring to the table for that sort of initiative, even outside of our traditional areas, but nobody's thinking of actuaries in that light. Actuaries have the potential to understand a very complete picture of risk management better than other professionals do. We are skilled at the more complex analysis that is needed to analyze risks of all sorts, but, again, we're not being recognized as such within the marketplace.

The SOA is taking this on as part of their mission. Just as a statement of fact, the vision of the SOA is for actuaries to be recognized as leading professionals in the modeling and management of financial risk and contingent events. The leadership of the SOA, the leadership of our profession, has stated that that's what we're working towards. We're trying to make sure that actuaries are recognized in that light. There is a strategic plan in place. Have any of you seen the strategic plan on the SOA Web site? I'm glad Cheryl Krueger has. She is replacing me at the SOA, so she's taking on this job.

I don't expect that any of you have seen it, but it might comfort you to know that the profession has a plan to address these concerns and make things better. The Strategic Planning Committee had been in place for years and formed the current strategic plan starting in 2001. It's been updated a few times, and the most current update is the result of a lot of these research initiatives. The SOA strategic plan is in place to make sure that the Board

governs the activity. It sets the strategic direction. Where do we want things to go as a profession? This is very important because, as a profession, in the past, every president got to set his or her own agenda. Each year the profession went this way for a while, then next year we went this way, and then next year we went this way. We weren't going in one direction as a profession because each president got to come in and say, "Here's what I'd like to do."

Now we've gotten a group of leaders together to say, "This is where we want to go." I believe each of the presidential candidates understands that he or she is to be supportive of that plan. It's not going to just change because they decide to change it next year, which is good. That means we can start to make progress, because progress is very slow. We need to review it every three or four years. In business, you have to review your strategic plan almost annually, if not more often than that, but when you talk about professions it doesn't move quite that quickly.

The strategic plan was created back in 2000-2001. The Society conducted its first round of research in 2002. Some of you may have participated in that. There was a member survey that was done. We also went out and talked to employers of actuaries to get a good understanding of what they thought. It identified some initial implications. We're a bunch of actuaries. What do we like? We like data. We have to have facts to make decisions. We can't just decide because, boy, it sounds like the right thing to do. We have to have evidence, facts and data. That's the way we govern our profession.

We go out and get facts and data before we decide to act. We not only had the 2002 surveys done; in 2003, we did it again. We went out and got a second round of employer surveys and member surveys to confirm some of the initial implications. It identified several key areas for Board action, and the Board of Governors approved this action. Earlier this year we updated the strategic plan. It has been in place, and we're trying to educate people in sessions like this and we're building some reasons for taking some action here.

Some of the things that came out in the initial research that needed to be answered were these high-level questions: How do we expand in traditional markets? What roles are appropriate for actuaries in the future? So, again, those traditional markets would be probably where most of you are working: insurance, consulting or reinsurance companies. Those would be what are considered the traditional areas. How do we expand our roles? Do we, as a profession, try to enter the broader financial services marketplace? This would be industries like banking, mutual funds, investment companies and asset-management companies. Should we enter and try to establish ourselves in those industries? That's a question.

Question 3 was how should the current value of the actuarial skill set in the actuary be enhanced? There is a deficiency that has been identified by

employers and by members. Should we enhance that perception by addressing the image of what actuaries are, or actually doing something about it and addressing the skill set of the actuarial profession? I'm not going to answer the questions because then I'll be stealing all of Valentina's thunder. The final question was what, if any, other credentials and/or education should the SOA seek to offer? This was more of an SOA-specific question. What skills need to be enhanced in the future? We offer a credential in the marketplace — FSA, that is a credential; ASA, that is a credential.

Should we offer something else? There's an increase in the number of competing credentials and competing professionals that we're competing with. Should we offer something to address that?

Let me tell you about some of the research findings. There are some missing skills and some potential opportunities, and the membership and market surveys were the foundation of this. I'm going to go through a lot of the information that came out of the surveys. I haven't looked at this for four months, so, hopefully, I can still talk to it. We had a very good response rate to the member survey. We had 4,660 people respond. Chart 1 gives a picture of the different areas that the members work in, so we can make sure we had a wide dispersion. The response rates were consistent with where our members work. You can see most of them work in the life insurance industry, health benefits or retirement systems and pension plans.

One of the questions that was asked was do actuaries face more competition? Chart 2 shows both the members' responses and the employers' responses. The question was do you face more competition today than you have in the past? This was on a scale of zero to 100, where 100 is absolutely, we see a lot more competition; zero is actually much less competition. Anything above 50 on average would be, "Yes, we face more competition today." Universally everybody thinks that actuaries face more competition for jobs. We need to know this. We need to be aware of this. That was universally true of members and of employers.

Now, within these we tried to segment the responses to: Do actuaries in the traditional markets face more competition? And what about if we consider going into this new industry sector, the broader financial services industry? Do we see competition there? There's more competition that we will face as we consider a new sector, but even in our traditional areas, in the traditional work that we've done as actuaries, whether it's true or not, people feel that we are facing more competition for jobs.

MS. ISAKINA: What is interesting about the slide, Mike, is that members actually think to a certain degree they have less competition in the traditional areas than the employers believe.

MR. KASTER: Yes.

MS. ISAKINA: I thought that was very interesting.

MR. KASTER: That is true. Members may think they don't have as much competition. Just on a pure numeric basis, employers say actuaries are facing more competition. In these employers, we tried to get actuaries and nonactuaries, people who understand that there's risk to be managed and have jobs where they need people to manage those risks. Those are the kinds of employers we talked to.

I talked a little bit about credentials. One of the questions that was asked of members was: Are you seeking other credentials or do you hold other credentials, other than ASA or FSA (Chart 3)? We eliminated member, American Academy of Actuaries (MAAA) and any other actuarial credentials, because those aren't something that you seek that's outside of the zone. It is something that progresses as people get older, obviously. The average age to Fellowship today I think is around 32 years old. I don't know if that's still true of recent facts, but it's definitely a much older skill set.

There aren't very many people down here at the younger ages that have something other than actuarial credentials, but, as you progress in age, people have seen a reason to get an additional credential. You would think investing 10 years of your life after college in a profession ought to be enough, but a lot of people don't feel that way. More than 50 percent of our members hold something other than an actuarial credential by the time they're in their 50s.

What are they pursuing? If they're currently pursuing an additional credential, what is it? Remember this was asked of members, so it included ASAs — that's why FSA comes up here. ASAs who were currently pursuing an FSA accounted for 39 percent. Twenty-three percent were pursuing a chartered financial analyst (CFA) designation. Fourteen percent are pursuing something today or will pursue something in the next few years, and they plan to pursue an MBA. That was fairly significant information for us.

We also asked people who currently have those other credentials: What do these credentials do for you? What's your motivation for getting them? From a motivation perspective, they were doing it to get increased career options. People are feeling that they don't have enough career options with their FSA. That's not enough. They had to go get something else, and they got this something else to increase their career options. That's important information for us to have to obtain greater knowledge of the industry. In general, actuaries are very knowledge seeking individuals. That's one of the attributes of an actuary.

So it's not surprising to see that 58 percent of them are seeking something else because they just want more knowledge. Some of them are doing it to improve their business skill sets, intellectual interest, etc. Now, that was a motivation for them, so that the next question was: What did you actually

realize as an impact from getting the credential? That was kind of interesting, that they didn't really feel that they increased their ability to get into more career options by achieving those credentials. There's a perceptual thing going on here that we need to address.

This was kind of enlightening to us. Very few people, 29 percent, are seeking those additional credentials to improve their communication skills, but 40 percent of them said it had an impact of improving their communication skills. It might indicate that either those programs are doing a good job at that, or we have a long way to go. I think it's the latter.

Chart 4 is a very busy one, so let me take a minute to go through it with you. It says skill performance — actuaries versus employers. That's not as important because again, on a scale of zero to 100, how accurate are these skills in reflecting the actuary's abilities? The question was: Are actuaries ethical? This received a score of 82 on a zero to 100 scale — actuaries said of the other actuaries I know, I do perceive actuaries to be very ethical. The employers gave actuaries a score of 87. So, they say we're very ethical.

This slide shows the difference between the two. There's a lot of consistency between actuaries' views of actuaries and employers' views of actuaries. Interestingly, the employers consistently rated actuaries higher than actuaries rated themselves. One of the conclusions from this is that we tend to be a little hard on ourselves. But, again, let's look at the skills they're talking about. Universally, we are good ethically. We're good at solving complex problems and quantitative modeling skills. These are our strengths as a profession. We have good industry knowledge in the industries that we're in. We're reliable at getting the right solution. So, basically we're very smart people. That's the conclusion that can be drawn from this.

What are we weak at? Let's go down here to the bottom — "Bold, takes informed risks." As a group we are not risk-takers. We analyze risk, but we're not being perceived as being bold and willing to go out there and take that risk. Business communication is clearly one of our weaknesses as a profession — having acumen and understanding of the business that we're in and just being able to present yourself well. We have great knowledge. We know a lot of stuff, but we can't communicate it to anybody, and we can't get the point across. Again, that was universally true — actuaries' views of actuaries and employers' views of actuaries. Again, I'm giving you the data we're using to make some decisions.

How important are these skills? We want to know, as employers who have to manage risk or people who have to do something relative to risk, what skills are important to you when you hire a professional? Again, we asked the same question of actuaries. Of the actuaries you know, how important are these skills to them being able to do their job? And how important are these to the employers? Again, there is a lot of consistency, and Chart 5 shows what they say they need. The employers need us to be good at business

communication skills. They need us to be able to focus on the big picture. They need somebody who can provide leadership, intellectual agility and also is an innovative thinker. They don't need a lot of this stuff down here. It's not zero scores. I mean, again, a score of probably above 50 says they still need it, but on a relative scale, they need this less than they need these skills.

We segmented the results between the traditional employers of actuaries and the potential new employers of actuaries (Chart 6). Within the traditional areas, we asked the same questions of these employers about actuaries and about the people who are competing with actuaries. What are the relative skills and the performance in these skills of actuaries — that's what the scores are on the left — and then of the competing professionals? Those competing professionals are people like the MBAs, the CPAs, the CFAs, the economists, etc. How good are we actuaries, zero to 100, at being proactive versus competing professionals? They want a fair amount of proactivity out of people. Actuaries are scoring pretty low at that, whereas competing professionals are doing pretty well. Being bold and taking informed risk, business communication — these lighter shaded areas are the gaps that we have versus the competing professionals. The darker shaded areas are where we have strengths versus competing professionals. Again, we're good at quantitative modeling, solving complex problems and handling the very difficult analysis and complex issues. That's where we have an advantage over the competition; we have a weakness in this communication and business acumen zone.

That's the conclusion of all this research. Some of you would probably say, "Duh, I knew that before." We needed the data to prove it. That last one was traditional employers. Here's the broader financial services market (Chart 7), the new possible zone for us to go into — actuaries versus competing professionals. Again, it was pretty consistent — quantitative modeling skills, solving complex problems, understanding and assessing things. That's where we're stronger than the competition. Where we're weak is in this bold communication and business acumen zone.

To summarize, in the current performance of actuaries and employers' ratings of actuarial skills, we're highest in ethical, quantitative modeling, solving complex problems, financial assessment and reporting. Those are the areas where we rate the highest as a profession. Where we rate the lowest is in the bold, taking risk, business communication, focusing on the big picture, etc. Go back to those questions — is it an image issue or is it a skill issue? Well, it's actually both. But we need to know this stuff. When you build an image campaign, what do you focus on? You focus on your strengths, de-emphasize your weaknesses and show people that we do bring something good to the table. Then as a profession we start working on these weaknesses so we don't have those weaknesses in the marketplace.

When you're competing you need to know a little bit about the competition. Where did the competition rate highest? Well, they also viewed the

competition as ethical. Ethical is on both lists. So, that's not necessarily a competitive advantage. It's a strength, but we don't necessarily have a competitive advantage there because the competing professionals are also being viewed as having high ethics. Again, the competition is the MBAs, the CFAs, the CPAs, math PhDs, math degrees, etc. But the competing professionals are being viewed as team players. This is one of their strengths. They are reliable at getting to the right solutions, intellectual agility and being proactive, whereas they're rated lowest (this is kind of interesting) in the zone of risk management. That might indicate an opportunity for us. If we can go out there and show people how we can help them manage risk better than the competing professionals, that might create some opportunities for the profession in the future.

We had a list of 15 or 18 different skills. We tried to be consistent. We asked actuaries and employers in all the different segments to rate actuaries and the competition on the same skills. There's a whole list of a lot of skills here. How do you group them? They applied some statistical analysis to the response, and they found that with respect to people's ratings of actuaries, as you rate the skills that actuaries bring to the table, in the scoring there was some definite grouping that you could do. There were three distinct groupings: business skills, financial skills and something they called "getting to the right answer."

Chart 8 shows actuaries' view of actuaries. The business skills set includes: business communication, business acumen, boldness, taking risk, leadership, focusing on the big picture, proactive, innovative, team player. The actuaries gave themselves a pretty low score; we get a current score of 54. In general, everybody says there's a strong need for improvement here. Financial skills are just that general knowledge of financials, financial markets and financial assessment — quantitative types of things. We already do OK there, but there's still a need for improvement. "Getting to the right answer," being ethical, being able to solve complex problems, they still said there's some need for improvement there, but relative to our performance, we're already doing pretty well. What does this tell us? This tells us this is an area to focus on as a profession.

Chart 9 shows employers' views of actuaries. The groupings are somewhat similar, but not exactly the same. This is to show our strength level of each one of these, so that's what the numbers are — 82 in the far left-hand bubble, 60 down here on the right. So, again, they grouped together business leadership and gave us a fairly low score. This thought leadership one is kind of interesting. The skills in here — being proactive, being a thinker, being able to suggest that we need to go do something and understanding of the big picture — this is a set of skills that the market is saying we're not really very good at. It offered an opportunity for us because we could do better in this area. But where we are good is up here in the quantitative skill, solving complex problems, etc.

Chart 10 shows where actuaries perform well. We're already being viewed in these markets as doing this kind of work. Actually, some people do operate in this broader financial services market in doing this sort of work.

Let me talk a little bit about the value of different credentials (Chart 11). You have to be at least an ASA to be a member of the SOA. Sixty-two percent of the people who responded to the survey were FSAs. And, again, here are those numbers of the credentials that they're seeking. So, again, a large number are seeking. Now, we asked traditional employers and the broader financial services employers what credentials they were looking for when they're looking to hire somebody to help them manage risk. What are the credentials they seek? Well, 85 percent of those employers said they were looking for an FSA to help them do this work. I wish we had this data from 10 years ago to see how big these numbers are. My guess is, from the information we've gathered, these numbers (the CFAs, MBAs) are higher today than they had been in the past. Now, interestingly, when you go to this new zone, this new industry that we're looking at pursuing, they look for a CFA 63 percent of the time. They look for an MBA 59 percent of the time. Those are the highest sought-after credentials that this market is looking for when they're looking for somebody to help them manage risk. It coincidentally happens to be the nonactuarial credential that most of our actuaries are seeking.

Chart 12 is a summary of that last information. Just put an X in the box if this sector looks to hire somebody with that credential. You can see ASA, FSA, is already being looked at within these traditional zones. We're nonexistent in the broader financial services industry today. It's an opportunity, but we need to be cognizant of the fact that they already are seeking these other credentials — CFA, financial engineer, MBA and CPA. In the consulting industry, in the zones that we work in, we're already being sought, but they are also looking for CFAs. This MBA credential is valued in the consulting world and having some higher analytical ability.

Chart 13 is a graph showing the summary. Within the percentage of employers who seek an actuarial credential of some sort, we're already pretty strongly established. The insurance sector knows us; that is the bottom line here. They already know what actuaries are. They know who actuaries are. The reinsurance industry knows actuaries. We're pretty well known there. This is not management consulting; this is consultants who work with risk, so it would be traditional — the pension consultants, the insurance consultants, etc. We're already known, but down here in the broader financial services only 23 percent of those employers even knew about our credentials and about actuaries.

Chart 14 shows a lot of detail. An X in the box indicates that this is a skill that is viewed to be important by these industry sectors for mid-level jobs and for top-level jobs. As we consider how to encroach and engage in new potential job opportunities, it's important for us to know what kind of

functional skills they are looking for. Strategic and environmental risk management is something they want for people who attain the top-level positions. Asset-liability management is something we seem to think we're very good at, and we are. In the broader financial services it might be an opportunity for mid-level positions. The way this is broken down by industry sector may be of some value. This is not data. This is just a summary of all the data. That's a lot of the information that we've used to draw some conclusions.

I'm going to let Valentina go through where the profession is going, some of the conclusions that we've drawn and where we're headed.

MS. ISAKINA: I think it was very nice to have you here and have some of your knowledge because you were very closely involved in this work. Thank you for refreshing my understanding of these issues.

What I want to do right now is shift gears a little bit and try to put this in perspective. This is all very interesting information. We spent several years collecting it. Now what do we do with it? How do we make a difference for those members who are currently practicing in the industry, who are maybe considering other opportunities, and for those who are just coming into the profession? What can we do as the organization that educates and credentials our members for the future?

Mike brought up some questions before he went through the findings. Now let's try to see what we found. Do members and employers share the same perception of actuarial skill sets? Yes, they share the same perception. Members view themselves very critically, and they view themselves more critically than employers view actuaries. That was very interesting to find out.

The second question is: Is the employer's perception of the actuarial professional driven by a set of current skills being credentialed or by the employer's level of knowledge about the actuarial skill set? We found out that it is both. It is both the perception of the image and the image itself, the skills themselves that we need to enhance.

Do we need a clearly defined identity for the profession? How should the actuarial image be changed or enhanced? There is clearly a defined existing identity that is valued for the technical skill sets that we bring to the table. The image does need to be enhanced, as we found out, both from the membership survey and the employer survey along the dimensions of business leadership and business acumen and also, to a certain extent, knowledge of financial institutions and markets. We are quite knowledgeable in the areas that we know very well — insurance, pensions, health, life and annuities — but when you go outside the traditional area can an actuary speak well about the broader financial services industry?

How about the international trends? Can we put this in the perspective of the economic trends that are currently happening? Can we connect it to business ethics? Can we connect it to political issues? Can we see a lot of the dynamics that are happening at a higher level and see how they funnel down to the industry level? Those are the things that sometimes we'll lose the perspective of because we have been educated very heavily on the technical issues. We know very well how to take a pencil and a calculator and calculate all those things. But can we step back and see how these things that we are working on are affected at a higher level and what the challenge is for the company, the industry and the economy as a whole? How do those things interrelate? That's the question. Can we do that?

We talked about two different markets. We talked about the traditional markets, and we talked about non-traditional markets. Now I want to touch on answers we found to some of these questions. Do we expand in the traditional markets? We certainly need to enhance certain skills and advance business leadership opportunities of our members. The membership was very clear on this particular topic. They want to be able to be recognized as the leaders in our traditional industries. Actuaries were very well positioned to lead the industry 20 or 30 years ago, and now those roles are being diminished. Actuaries are not as highly positioned anymore as they used to be. What's the problem there? We need to address that. The membership was very specific about that. What roles are appropriate for actuaries in the future? Risk management and business leadership roles are certainly appropriate.

What skills need enhancement for future success? Risk management in some areas is one. We certainly still have some work to do on the asset side. The recent exam changes, I would probably say within the last 10 years, have started addressing this, maybe not even to the extent that it needs to be. But we have a number of members practicing that were educated long before that, and what do we do to bring them up to speed and help them understand the skills that are needed right now in the marketplace and that the marketplace is demanding?

As far as the risk-management skills themselves, actuaries know how to manage risk, but it's done in a very narrow type of scope. We cannot take our knowledge that we have gotten through the technical exams and apply it to broader concepts. We cannot translate our knowledge very easily from an insurance perspective to an energy perspective or to an asset-management perspective. We have a mental block sometimes seeing that these are the same principles. We all can do this. But because we have been educated in a very narrow type of framework, we don't see the connection often. Again, business savvy, financial markets and leadership are all coming up as areas where we need enhancement.

As far as broader financial services questions to be answered by the 2003 research, what we have found and what the Board has decided on is we need

to enter broader financial services and make sure that that area of expertise, that area of practice, recognizes the value actuaries can bring to the table. To the question of what, if any, credentials or education should the SOA offer, we would certainly need to offer additional educational skills and opportunities on risk management, business savvy and financial markets. Certificate issues are being explored currently by the Board. This is something that is still being discussed. We'll see how that progresses.

There are resulting decisions that the SOA's Board of Governors made based on this research. This happened within the last six months, so this is all very new. Do we enter the broader financial services industry? Do we help the profession? Do we help our members? Do we support them to go into those areas? The Board said yes. Should we expand in traditional markets? Should we help our members go for those higher leadership positions that currently seem to be almost out of reach for actuaries? The Board said yes. How should the current value of the actuarial skill set and the actuary be enhanced along the dimensions of image and skills? The Board said both need to be enhanced.

What, if any, other credentials and/or education should the SOA seek to offer? These items are still to be explored. We are educating the members right now on what has been found. We're educating the members on the decisions that the Board has made. But the extent of additional credentials is still on the table. The Board has not decided on that particular item yet. The education aspect is there. Some of this is going to be addressed in the 2005 education and examination (E&E) redesign. This is being very heavily explored by the groups that are working on that.

Also, more emphasis will need to be put on the SOA's meetings and the seminars we offer. It's not only the technical sessions that bring value to our members. What actually brings more value, from what we have found, are non-technical sessions — the ability to communicate, the ability to explain a technical situation in layman's terms, the ability to communicate with your clients, internal clients, be it senior management or external clients if you're a consultant. So those are the important issues for the profession.

There were several very big decisions made by the Board, and now I want to talk in more detail about those decisions. One is to develop an image-enhancing program to re-brand and strengthen the recognition of the actuarial profession. This is a very big decision. There will be quite a bit of resources put into this. The Board met right before the SOA's spring meeting on Saturday and Sunday, and they agreed to a framework to address this particular issue. So there will be more developments coming out within the next several months, and the image campaign itself is going to be launched at the annual meeting in the fall. There is going to be a lot of information coming out on this particular topic.

The idea is to improve the recognition of actuaries as thought leaders, as

people who can take charge, who can see the bigger picture, the things behind the calculations, and who can step up to the plate and be proactive when needed. Expand awareness and relevance of actuaries in nontraditional markets is now the goal of the image campaign. The SOA will have to work in cooperation with other actuarial organizations because we cannot do this alone. Our association has only 17,000 members. If we think about the accounting profession or the Chartered Financial Institute, former Association of Investment Management and Research (AIMR), that credentials CFAs, we just cannot compete in numbers. We have to have a solid foundation, a solid group of organizations that drive this process.

The first step that happened in this is the chief risk officer publicity campaign, and that was launched in August. I don't know if any of you saw the first outcome of that campaign. There was an interview with one of our spokespeople on CNN Financial News. I think it aired on May 13. It was perceived very well. We received a number of inquiries about that particular interview, and there will be more things to come. There is going to be a media press briefing at the end of July in New York where we're going to invite a number of media representatives to come in and listen to what the actuaries have to offer in this particular area — chief risk officer — and enterprise risk management areas. And, as I said, the image campaign itself will be launched at the SOA annual meeting.

The second decision by the Board was to strengthen the position of actuaries in traditional markets, and that would be done by enhancing the values actuaries provide — that is, skill development. As I mentioned before, we will need to sit down and think about a comprehensive way to address this issue. How do we improve leadership and business skills, thought leadership abilities and communication skills of our members? How do we do that? There are already projects on the way to address this issue. The University of Illinois is working on a research project trying to identify when we talk about communication, what exactly do we mean? What are the areas of communications that actuaries need the most improvement on? They are starting to find out a lot of very interesting things.

For example, one of the things they're doing is holding focus groups with different clients of actuaries, both internal clients, such as HR and senior management, and external clients for those actuaries who have external clients. Those clients are not necessarily actuaries. They are primarily nonactuaries. And what is interesting is that actuaries cannot send the message. They cannot explain what they're doing to a person who is not an actuary. They have a mental block. They cannot communicate clearly. A number of times in those focus groups what came up is that the clients of actuaries complain. They say, "I've asked an actuary a question, and I got a spreadsheet back with no explanation." This person has no understanding of what this spreadsheet is, what the issue was, how it was resolved. Actuaries just don't do that. They don't communicate in simple, layman's terminology. This is the issue that we need to address.

Another way to strengthen the position of actuaries in the traditional markets would be to enhance credentials to incorporate skills that are evidenced as desirable in the marketplace. This is another area where some work has been done already, and more needs to be done. As I mentioned, the E&E redesign will address some of these issues to a bigger extent. We are examining additional means of acquiring those skills through continuing education opportunities for our current members, certificates potentially, partnerships with other professional associations, both actuarial and actually, more importantly, non-actuarial associations that can bring us some of those missing skills that we have currently in the profession.

The third big decision was to work to create a position for actuaries in the broader financial services market by enhancing current credentials to help actuaries expand into those new roles and opportunities, evaluating potential new credentials, as I mentioned already, and exploring partnerships with other organizations.

When we talk about just a sample of jobs or a sample of positions that an actuary could potentially be in as far as the new roles are concerned, these are the things that I came up with through my research and through my work. Obviously, there are chief risk officers. Actuaries can bring a tremendous amount to their roles as chief risk officers and other leadership roles in risk management. Some members say, "Well, I don't necessarily know how to do this particular thing." My question is, "If it's not you, who do you think is better positioned to be a chief risk officer, for example, in an insurance company? Do you think a banker would be more qualified to be a chief risk officer?" Think about it from that perspective.

This is a very new role, and there haven't been many chief risk officers out there, yet our members tend to be kind of timid a little bit in stepping up and saying, "Let me try this. Let me try to put an enterprise risk management process into place. Let me show my management what actuaries can do, what I can do as a person." This is all possible, and this is all within our reach.

Other areas include market risk management, credit risk management and operational risk management. All those are the subsets of what an enterprise risk management program would do at the company level. Again, asset-liability management, investment, long-term forecasting and strategic business planning are the areas where actuaries can contribute. I ran into one interesting story about special event advisory. There is an actuarial consulting company in Australia that offers its services to a number of different industries, and they were hired by the Sydney Olympics to do a special event advisory project. They did a comprehensive risk analysis. They did a lot of forecasting and planning, and it was a very good project for the company and for the profession. So, things like that are already happening for the profession.

I want to give you just one example of how actuarial skills can be applied to non-traditional areas. Particularly, I want to concentrate a little bit on the energy industry. This example is talking about oil and gas in particular. The oil and gas industry explores for oil and gas reserves. It has trading of oil in the international markets. It does marketing and retailing of petroleum products and their derivatives. There are domestic and international considerations in this area. There is an issue of efficiency of use and conservation here. Natural resources are a scarce resource, so that's where the issue of risk management comes in.

Another very interesting aspect of this particular area is that energy products and services include complex derivatives and options. A lot of contingent types of calculations happen there, and that's what actuaries are very good at, contingent claims calculations, except that we don't necessarily think we can do this anywhere except our traditional areas. That's what I would like to give you as an example. We can do this. We have all the same tools as what some other risk managers are doing in those areas, but they're not necessarily considering actuaries for these roles.

Potentially, actuarial involvement in these areas can include assessment and modeling of demographic changes and energy demands internationally, modeling financial projections, financial arrangements, valuation of contingencies and options, as I mentioned before, and just general risk management as well.

There is one last example I want to present to you. This was a job posting I took off the Web site of an actuarial consulting company, and they're advertising for an actuarial consultant in the energy industry. I'd like to read this to you briefly: "Our client is a leading actuarial consultancy practice specializing in advice on financial risks and management solutions across a range of industries. As a consultant in the energy and utilities practice, your role will include risk consulting, modeling, pricing analysis, valuation, including for complex derivative products. The successful candidate may be a qualified actuary but could also be a graduate in statistics, mathematics or economics."

What I'm trying to say by this particular example is there are opportunities out there, and some actuarial companies are already recognizing that they can bring more to the table with their skills. Not only in the traditional sectors, which are in various stages of decline, if you will, but beyond that, and they're already doing it. So, this is all up to us. We have the appropriate skill set. We have the appropriate knowledge. It's just a matter of stepping back and saying: What are the basics that we have all learned? All those basics are applicable to pretty much any industry. The profession has a very bright future if we all can do that. This is the end of my presentation, and we'll be happy to take any questions or address any of your concerns and maybe recommendations for our work at the SOA.

MS. MARY HARDY: I understand that the Board of Governors has decided that we should create opportunities for actuaries to work in the broader financial services. I was noticing on all your slides that not only are we lacking business skills to some extent, but also the area where there was most support for a need for improvement was knowledge of financial markets, etc. The Board of Governors has also decided to remove from the examination syllabus financial economics, hedging and risk-neutral measures. Everything that's currently on Course 6 is no longer on the 2005 syllabus. It seems to me that new actuaries are not really going to be qualified for this area, and I just wondered if you wanted to talk about that apparent contradiction.

MS. ISAKINA: You're absolutely correct. That was a mistake that was made in the redesign. I'm pleased to tell you that it's being addressed as we speak. There are a number of initiatives happening to address that specific issue. Harry Panjer, as you know, is very seriously involved in this. As a Finance Practice Area actuary, I'm involved in that. So, let me assure you that it will not be a problem.

One problem that we have to deal with is when we have to comply with other organizations' requests or demands. There are a number of exams that we have jointly sponsored with the Casualty Actuarial Society (CAS). So, a lot of times it becomes give and take. It becomes kind of political negotiation. Well, we already have this in our later exam, so we don't need this on our early exams. It is a difficult issue to deal with, but we are trying our best to make sure that this issue is addressed. It concerns me tremendously. I certainly understand exactly where you're coming from, and we will do all that we can to make sure that is addressed.

The Board meeting just happened Saturday and Sunday, and Harry Panjer specifically requested a formal report to the Board at the next meeting regarding how this issue is being addressed. This is taken very seriously, and hopefully by the annual meeting we will know exactly what has happened. We'll see where the gaps are to take this further. We are planning on doing that. Does it help?

MR. HARDY: I'm skeptical.

MS. CHERYL A. KRUEGER: I'm on E&E. So, separate from my role in the SOA, I'm also an education volunteer, and this is why these transitions take so long. It's very much a volunteer effort of people who come from various backgrounds, and I think now this 2005 redesign is at a point where it's really getting the broad look of are we covering everything? Have we missed something? That is the evolution of the E&E process. I think that that's one of the reasons people are saying we can't just change this thing every five years. It's really too difficult. We are taking a risk by making so many constant changes to the system. So, while I cannot from an SOA perspective make any guarantees, I understand the process quite well, and there's

always a chance with the redesign that the first cut is not going to be the best cut. That's just a comment from a volunteer E&E perspective. This is not a paid advertisement.

MR. KASTER: One of the things in the new design that's meant to be there is some flexibility in the structure so we can address things as they come up. There's an old modular approach to the ASA course and the FSA ultimate designation, so if we find there's a piece missing, we can offer that as a module at some point. That's one possible way to address it.

MS. HARDY: I don't want to hijack the whole discussion, but it seems to me to be very central to this entire talk about actuarial skills and where actuaries are going to move into. But I've read all the material, including the final syllabuses for the exams that are less than one year away, and there is no space for it. Somebody's going to have to backtrack if this is going to get in, and nobody looks like they're willing to backtrack at this point.

MS. ISAKINA: Well, I don't think the picture is that grim. As I said, the Board is very serious about this, and they're expecting a formal report on this particular topic at the next meeting. So, I will assure you that the discussion will happen, and things will be changed. Nothing is final, as you know. We have an exam one year, and the syllabus changes, and there are additional topics added to it next year. This year we have a new enterprise risk management extension in the finance track. So, what is final? There is no such word in my understanding.

MR. KASTER: If we as a profession want to get serious about a new industry, maybe that needs to be a separate track, and then all the important information could be offered in that track. We're not there yet, but that's something we could do. We could offer a new Course 8 type of course on the broader financial services industry and make sure that those fundamental pieces that might be noncore to everybody, although I know I'm getting in danger there of having somebody say those are core to everybody, but they could be addressed in that manner, too. We're at the infancy of this. We haven't really engaged fully in the new industry sector yet. What other concerns do people have? How about in the traditional markets?

MS. LORI K. JOHNSON: Mine's more of a general question. You mentioned the joint exams with the CAS. Are the CAS, the Canadian Institute of Actuaries (CIA) and some of these other organizations also looking at these same concerns of needing these broader skills to compete in the industry?

MR. KASTER: There's a group that's called the Council of Presidents that is there to coordinate these issues between all the interested parties — the CIA, the Academy, the CAS as well, and they all get together. They all have agreed that the image campaign, the need to promote the image of what the actuarial profession is, is important and are somewhat supportive. The honest-to-God truth is that the SOA is, of the actuarial organizations, the

only one that has funding available to engage in this campaign. So, the SOA will tend to take the lead, but it is absolutely a cooperative effort with those other organizations. Now that's on the image side. I can't really address the skill side of this.

MS. ISAKINA: The same issues are relevant to the CAS, for example. We have a number of joint working groups that are working on various risk-management topics. If you think about enterprise risk management in general, all the risks can be broadly defined into four categories: market risk, credit risk, operational risk and insurance/underwriting risk. As the SOA, we bring to the table our knowledge and skills on the market side, credit risk side, underwriting and insurance side for certain areas of practice. What the casualty side brings strongly to the table is the operational issues, the operational risk side. So, if we are to advance the ability of actuaries at the enterprise risk management level, we have to work together. Only then will our value proposition be complete. So we are working with the CAS extensively, to answer your question.

FROM THE FLOOR: My role here is probably a little unique in that I'm in academics, and I hope this is relevant enough of a question. My involvement in this is further upstream where we provide you with the resources you need up front. We basically provide you actuaries. So what I'd like to know, as it relates to the discussion, is what you can tell us about the actuaries that are getting further upstream that are a part of your companies? Are they lacking in communication skills? Are they lacking basic skills that you'd like the academics to address when we modify our academic actuarial programs?

MS. ISAKINA: Is this a question to the audience?

FROM THE FLOOR: Yes. Have you found yourself saying, "We've had a few actuaries during the last several years that are lacking these certain skills, and you academics that have actuarial programs, can you address this?"

MR. KASTER: I can address that because I'm now with an employer of actuaries. While I thought this was an important issue before while I was with the SOA, I now think it's even more important because actuaries are absolutely being perceived as lacking in communication ability.

FROM THE FLOOR: From the onset?

MR. KASTER: Yes, absolutely.

FROM THE FLOOR: So what do you want from the academics that get them in your door?

MR. KASTER: I don't know that I can answer that specifically. I can tell you that as I'm looking to hire entry-level actuaries, I will hire those who can communicate.

FROM THE FLOOR: OK.

MR. KASTER: And those who cannot communicate are not going to get hired by my organization because having the technical knowledge is one thing, but if you cannot tell anybody what it means, you're going to fail. I'm just not going to hire a bunch of people who cannot communicate. I absolutely expect that people will get that sort of basic rounding in their abilities before they join the profession because while we're trying to address it as a profession, it's a hard endeavor. To take a bunch of introverted actuaries and make them extroverted, that's going to be a tough thing to do. Hiring a new set of actuaries is maybe a longer term, better approach.

MS. ISAKINA: I just wanted to give my two cents to that question. I think Mike is absolutely right. It's the ability to communicate in layman's terms the difficult technical issues that actuaries are working on to somebody who may not necessarily have a technical background. It's the ability to interpret a graph or interpret a regression analysis table and a Nova table or stochastic distribution of economic capital. It's the ability to pool the technical things into simple, understandable and actionable steps.

FROM THE FLOOR: So perhaps you'd recommend simulation of such things in the courses that we have as part of our program.

MS. ISAKINA: Absolutely! And also include being able to translate that into an actionable step and provide case studies. These are the things we've done. Forget all the technical things. What does it mean for the company? Does it mean we need to have more liquid assets? Does it mean we need to curtail this line of business? How do we translate this technical project into an actionable item?

MR. KASTER: Even more fundamental than that, just taking whatever they're learning and being able to present it to somebody else, and doing that through a case study type of environment I think would be extremely useful.

FROM THE FLOOR: I was just going to add I think so many times we talk about communication, and it's so broad. A lot of times we'll have some of our actuaries join Toastmasters and those kinds of things that really do help communication, but I think it's much more than that. I think, Mike, you sort of hit on it. The biggest problem I have in maybe myself and even the folks within our actuarial area is communicating really difficult concepts to others. It's more than just standing up and talking. It's more of making that person over there feel comfortable in trying to understand the concept. It's a lot about negotiating skills. It's a lot about trying to get your point across.

You may have an uphill battle with a marketing officer. Well, you don't go in there butting heads. But you need to go in there, and you have to figure it out. I don't know if a course can do it or not, if it's more of simulations, but

it's more of trying to figure out how the other person is going to view things. Then your job as an actuary, because you have the right answers, you know you really have to get to this point, is to be able to convince them that what your ideas have and what your way of thinking is. That's maybe the correct approach. That communication thing is so broad, and I go back to more of almost negotiating kind of skills and talents.

MR. KASTER: One of the things I think we lack as a profession is the ability to work in a group setting to solve a problem together and then explain to people what the group came up with. That's something you can practice in the university level. I'm one of those actuaries who went out and got an additional credential, and it wasn't because I was dying to get more knowledge. I had the knowledge I felt like I needed. I did it for two reasons. The first is I wanted to broaden my ability to analyze business and be a business person but also get some more credibility in the market as being somebody who can be a business leader. But one of the most valuable things in that course of MBA studies to me was the case work, working with a small group of people to solve a problem and then actually present this to people. As a profession, what do we do? We give people a stack of books, go send them in a corner, come back out and tell me if you learned what you learned from that stack of books. That doesn't help in the business world today.

MS. ISAKINA: I have just one quick comment as well. To address some of the issues you raised, Jerry, communications is definitely a vast subject, and it's important to know that it has not only verbal and written aspects to it, but also nonverbal and nonwritten. I think that's where academia can really bring something to the table in their business communication courses. Those are extremely valuable, and they haven't been a big part of a typical actuarial science program requirement. An actuary needs to be able to communicate not only with his or her presentation verbally, but also understand eye contact, how to understand the audience, how to draw them in, to joke when necessary. All of those things are extremely important.

The research I referred to by the University of Illinois, they're making some great progress. One interesting thing they found is that the clients of nonactuaries perceive those actuaries that are good communicators as smarter and as people who can bring more to the table. So, given two skill sets, maybe somebody has an even greater skill set than another actuary, but the actuary with the lower skill set and being able to communicate more is actually being perceived as having more value and will get hired according to Mike. This is all very important to our profession because we are doing ourselves a disservice by not strengthening those skills and starting with ourselves.

MS. THERESA M. RESNICK: I have more of a comment rather than a question. I'm working on the redesign program for individual life and annuity. We've been paying a lot of attention to these concepts and a lot of the results of the surveys that are done and working very hard to get this

element of communication being part of how we're designing the material. We're not trying to design material that we're just giving people skill sets. Yes, that's happening in there, but we're always trying to put it into a context, and the modules are going to be a key element of doing that. There's going to be a lot of concept of case study in the modules so that people have to take all these skills that they learned and work them through their heads and be able to supply a product and some output from them. That's my first comment.

My second comment on communication is just an observation I've made during the several years that I've been managing actuarial students. What I have found is one of the biggest issues I have with my students and why they can't communicate is because they're a bit arrogant. If you don't understand what I've done, you are dumb and I am smart, and I should have your role because I know more about what's going on. Back to the educator, if we can work on that arrogance issue a little bit, that would be really helpful.

MS. ISAKINA: I have heard that particular word before from a number of individuals. So, I'm glad you brought it up. I think it does have presence in our profession, and it's not perceived as very valuable by those who are able to rise into leadership positions.

MR. KASTER: I somewhat wonder if that's a generational issue more than a technical thing. I see it universally among kids that are coming out of school today, a little more arrogant, and "I deserve something today."

FROM THE FLOOR: Yes. My students would be like that, many of them.

I have a quick follow-up because I don't want to take too much time with my particular interest, but are you guys finding that students who come out with one exam are meeting your basic criteria? Do you want to see more than one exam from students these days, or are you even accepting students without exams? I'll just be interested in some general comments.

MS. ISAKINA: From the anecdotal evidence I have, companies are generally happy with one exam result due to the competition, usually if a student has at least one exam passed. This is for the U.S. market. It's very different in Canada. There are a number of very good, strong programs in Canada, and, Mary, maybe you can speak to that. I think University of Waterloo students often graduate with four exams on average, but it's not uncommon to have an ASA graduating from the program. So, the market is different in Canada.

MR. KASTER: My impression is that the Canadian universities are a bit ahead of the U.S. universities in providing skilled students to the marketplace. I think from my own perspective as an employer of a lot of actuarial students, in the future I'll take what I can get, and I'm not getting a lot of beyond-Course-1 type of people. If I got Course 2 and Course 3 people

who had the basic potential and ability, I'd probably hire them above somebody with one exam, but it's a supply and demand thing. The supply is just not there.

Chart 1

Excellent Response Rate: 33%

Practice area	Number	Percent
Finance/Investment, ERM	497	10.7
Health Benefits Systems	853	18.3
Life Insurance	1642	35.2
Retirement Systems	1165	25
Property & Casualty	50	1.1
Regulatory	83	1.8
Academic	60	1.3
No information provided	310	6.7
Total	4660	100

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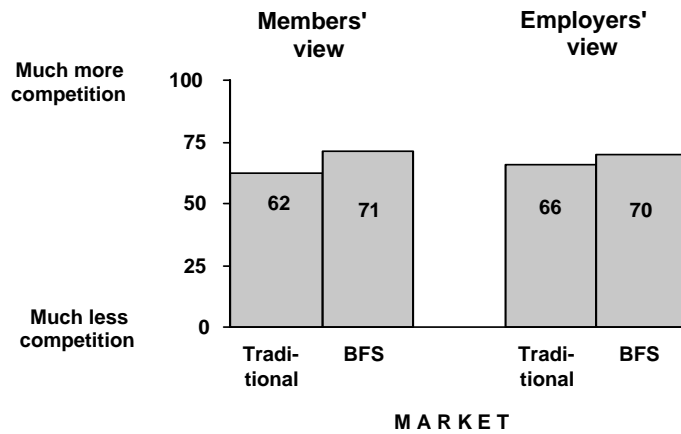


SOCIETY OF ACTUARIES

Chart 2



Do Actuaries Face More or Less Competition?



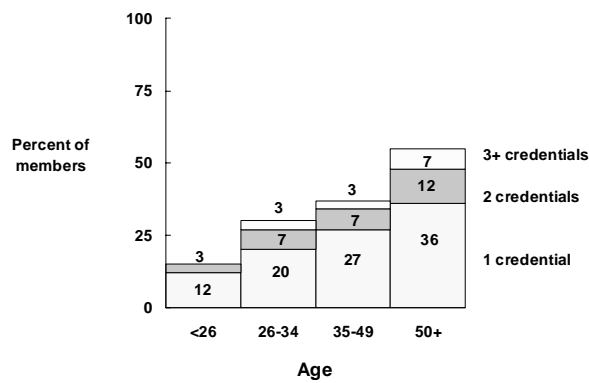
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Chart 3



Acquisition of non-actuarial credentials

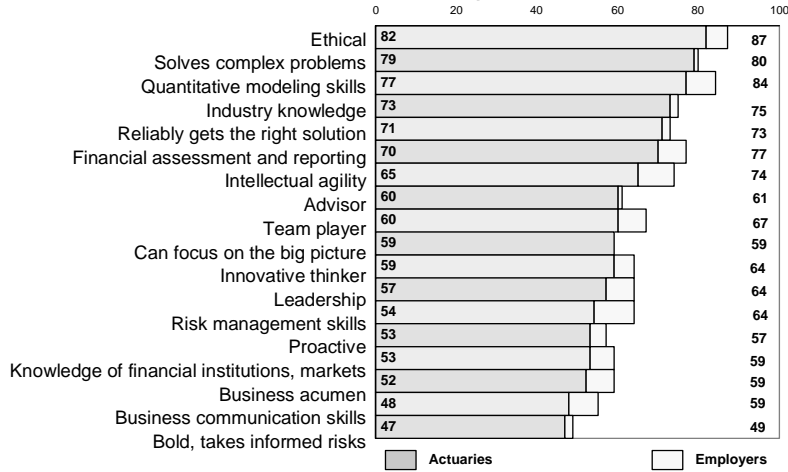


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Chart 4

Skill Performance Actuaries vs. all Employers

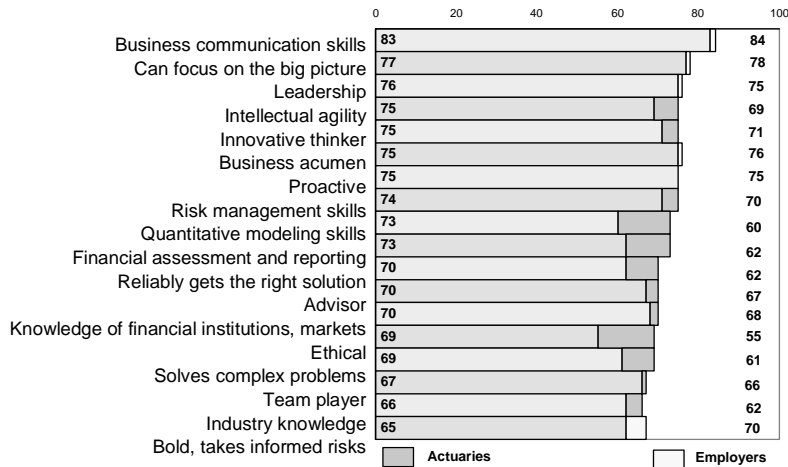


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Chart 5

Skill Importance of Improvement: Actuaries vs. Employers

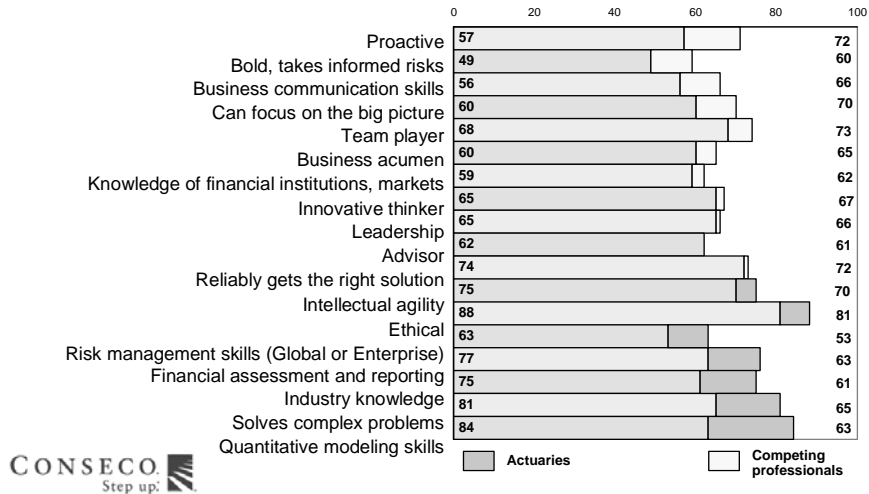


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Chart 6

**Traditional Employer Ratings of Performance:
Actuaries vs. Competing Professionals**

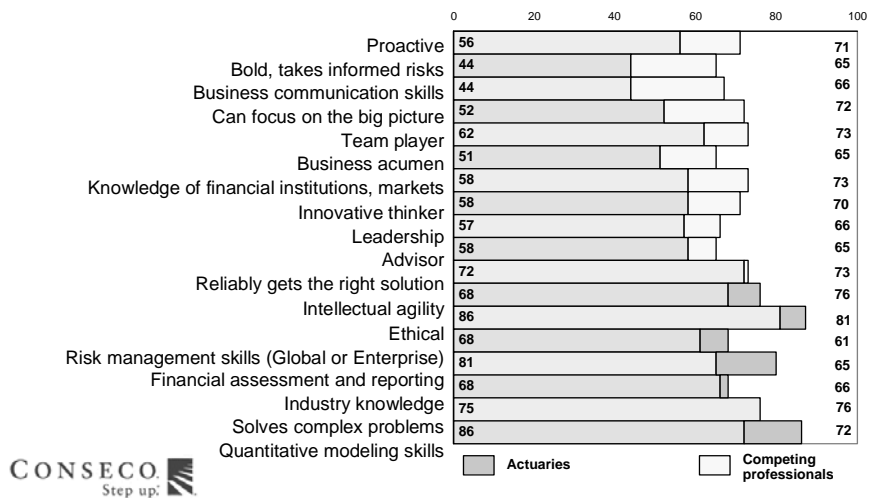


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Chart 7

**BFS Employer Ratings of Performance:
Actuaries vs. Competing Professionals**



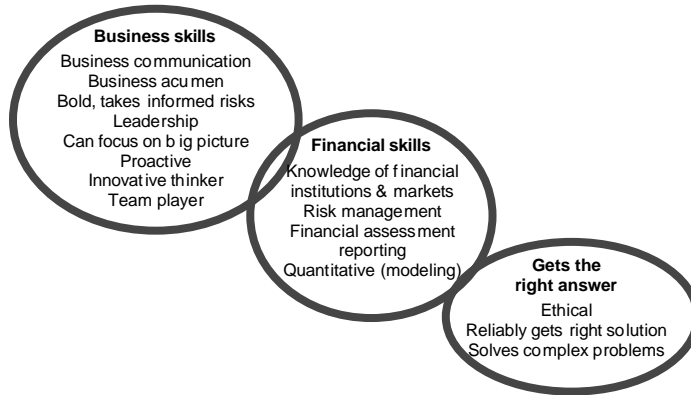
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Chart 8



Dimensions of the Image: Actuaries' View



Performance	54	63	76
Need for Improvement	70	74	72

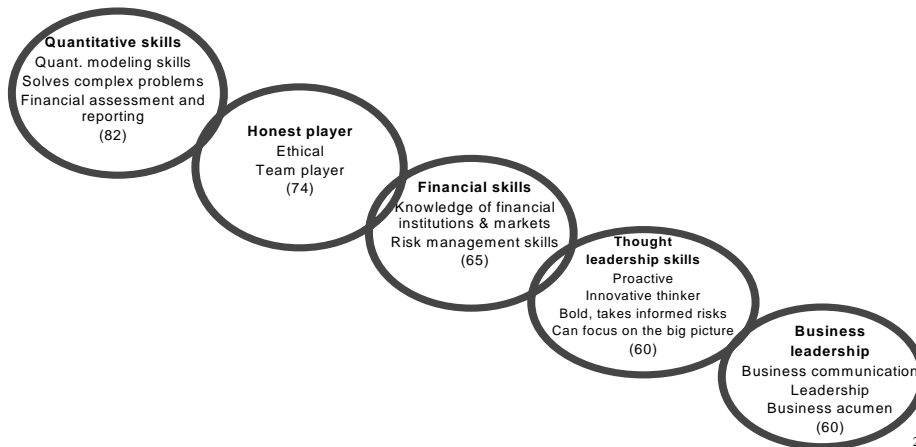
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Chart 9



Dimensions of the Image: Employers' View of Actuarial Performance



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Chart 10



Value of the Credential (Roles) Findings

Primary Responsibilities Typically Performed	Insurance	Reinsurance	Consulting	BFS
Product Develop. & Pricing	X	X	X	
Financial Valuation, Reporting, Planning & Analysis	X	X	X	X
Risk Mgmt.	X	X	X	X
Pension Plan Design, Funding & Acctng.			X	
Financial Advising				X
Asset/Fund Mgmt. & Investment				X

25



Chart 11



Value of Credentials: Details

	Percent			
	Actuaries Hld	Actuaries Seek	Traditional Employers Consider	BFS Employers Consider
FSA	62	39	85	18
ASA	100	NA	64	8
Chartered Financial Analyst (CFA)	4	23	22	63
MBA	4	14	14	59
Accountant	1	2	15	18
Masters, Ph.D. in Mathematics	12	2	6	16
Financial Eng., Masters, Ph.D., Finance	1	4	2	33
Financial Risk Manager (FRM)	0.4	3	1	20

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Chart 12



Value of the Credential (Hiring) Finding

Credential used for hiring	Insurance	Reinsurance	Consulting	BFS
FSA	X	X	X	
ASA	X	X	X	
CFA	X	X	X	X
Financial Engineer				X
MBA			X	X
CPA		X		X
Higher degree in Mathematics	X	X	X	

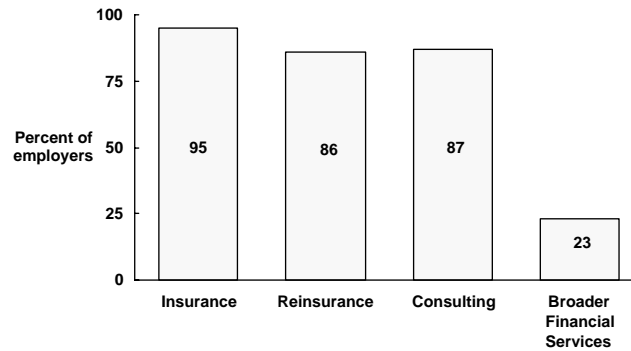
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Chart 13



Employers Who Consider an SOA Credential When Hiring



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Chart 14



Skills Findings – Top Skills Required for Mid and Top Level Risk Management Positions

Risk Mgmt. skills viewed as important	Insurance		Reinsurance		Consulting		BFS	
	Mid Levels	Top Levels	Mid Levels	Top Levels	Mid Levels	Top Levels	Mid Levels	Top Levels
Market/Financial Risk Mgmt.	X		X	X	X	X	X	X
Suitable Knowledge of Industry	X	X	X	X	X	X	X	X
Strategic & Envir. Risk Mgmt.		X	X	X	X	X		X
Asset/Liability Mgmt.					X		X	
Operation-Specific Risk Mgmt.		X			X			
Credit Risk Mgmt.							X	

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