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Actuarial Opportunities in the 1990s and Beyond

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Summary: This panel will present an overview of current and future employment trends in each area of the profession. Topics for discussion include:

- *skill development*
- *how to increase your marketability, and*
- *how to position yourself to take advantage of future opportunities.*

Mr. David J. Fishbaum: We have an actuarial recruiter who will tell us the trends in actuarial employment that she has seen and what companies are looking for in today's actuary. The Canadian Institute of Actuaries (CIA) has a task force on the actuary of the future which I'll discuss. Finally, we have a member of the Society of Actuaries (SOA) Board of Governors and education task force who will talk about the vision of the actuary that they came up with and how actuarial education needs to be changed to fit that and be consistent with that vision. Our first speaker is Terri Michalewicz: Terri is the president of LCM Associates and has been recruiting actuaries for 12 years. LCM is based near Atlanta and recruits solely in the actuarial field. After talking with Terri, I know she has some really good insights as to where the profession is going from the vantage point of what companies are looking for from today's actuaries.

Ms. Terri Michalewicz: There are a great deal of new things going on in the industry today. I have been recruiting in the actuarial field for 12 years. During that

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time I have seen much change, but at least from a recruiting perspective, I'd say the prominent changes have occurred in the last two to four years. Change can be a scary thing. How many of you folks remember your very first job change? I'd be willing to bet, no matter how exciting that opportunity was, no matter how positive it was for your career, there was probably a fair amount of anxiety associated with that move—especially if it involved a big relocation away from friends and family. While we've all experienced perhaps the scary aspects of change, I think we've all known the positive and rewarding aspects of change as well.

So what are the changes that are taking place in the actuarial field today? What are companies looking for in today's actuary? As we examine those questions, we're going to take a look at the following topics: the historical perspective, skills that improve marketability, high-demand areas, senior management perceptions of actuaries, and career planning.

As recently as seven to eight years ago, demand exceeded supply across the board and at all levels for actuaries. Companies were much less selective in the recruiting process and a degree plus exam progress plus experience in really any given area was a virtual assurance of job security and employment. Exams and credentials—sometimes over performance—really determined career progress, and that was both in terms of up the ladder as well as compensation.

Career opportunities were largely actuarial and the career path was relatively clear cut. Chart 1 shows, from 1985 to 1995, the number of Fellows of the Society of Actuaries (FSAs) and Associates of the Society of Actuaries (ASAs). You'll see that in 1985 there were just under 10,000 actuaries and by 1995 that number was just under 17,000 actuaries. Chart 2 shows life insurance companies in the U.S., and they've gone during that same time frame from, about 2,300 companies down to just over 1,700 companies. We've seen a drop of 546 companies.

Chart 3 pulls it all together. You'll see a 72% increase in the number of actuaries with a corresponding decrease of companies of 24%. I'm the first to admit this is not a completely representative chart in that it neither takes into account the fact that all companies did not hire actuaries, nor does it look at the fact that not all jobs were lost when there were mergers and acquisitions. It doesn't look at health and it doesn't look at consulting—but I think we'd all agree that it does offer a fairly striking comparison between the number of actuaries and a very significant source of employment for actuaries.

CHART 1
ASAs and FSAs

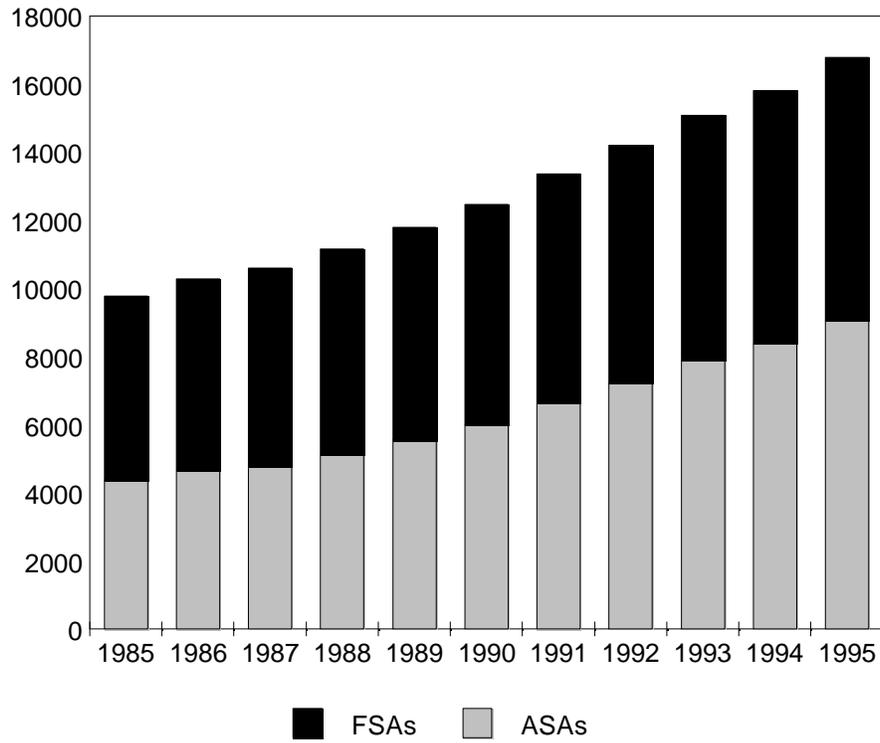


CHART 2
LIFE INSURANCE COMPANIES IN THE U.S.

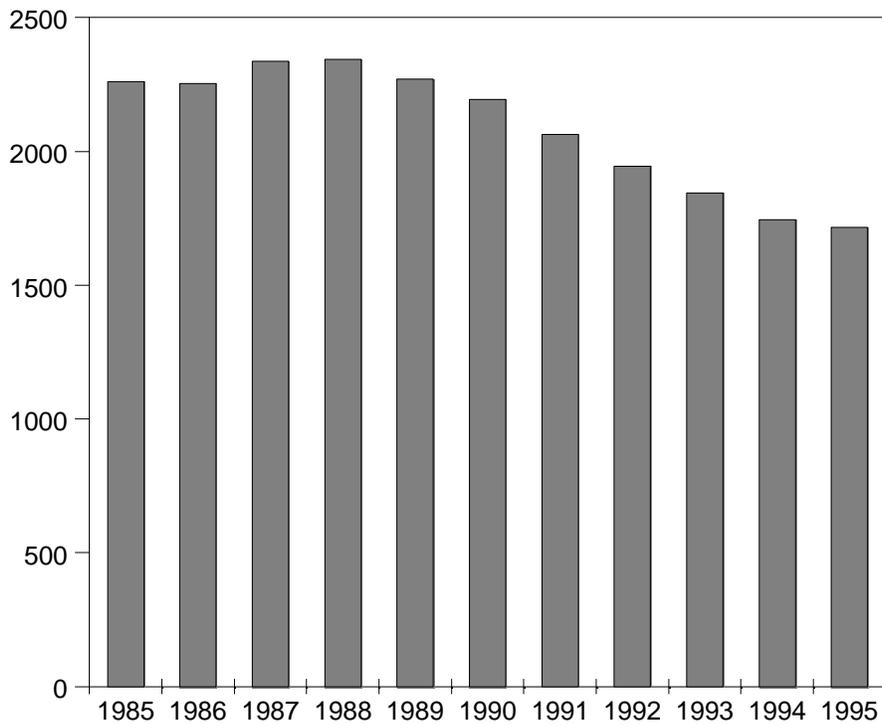
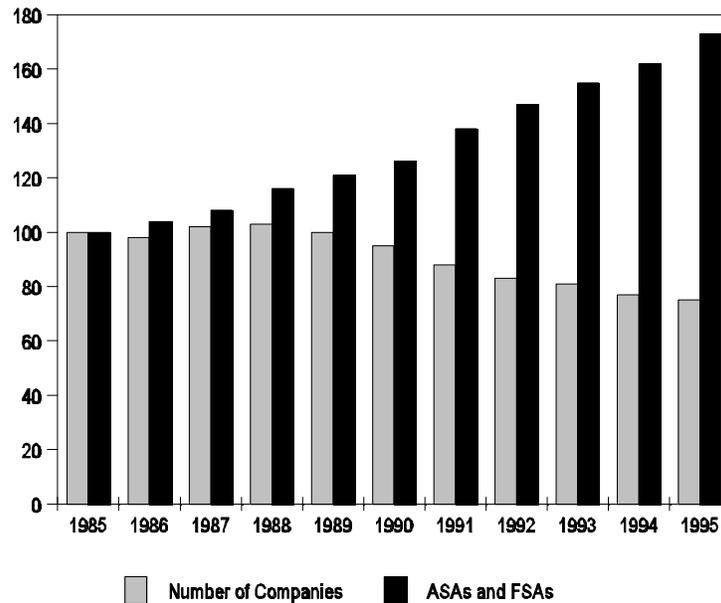


CHART 3
COMPANIES AND ACTUARIES, NORMALIZED



So what are the skills that improve marketability? All you have to do is master all of these skills, preferably before you get out of college, and you've got it made. But of these skills, which skills are requested most frequently by employers? Let's look at them one at a time: (1) ability to communicate effectively, (2) management and leadership skills; (3) ability to influence people and to negotiate when necessary. (4) understanding of general business principles; and (5) technical and analytical strength.

ABILITY TO COMMUNICATE EFFECTIVELY

What do we often think of when we think of good communication skills? Frequently, I think we associate that with sales and marketing type personalities, but that is not necessarily true. The ability to communicate effectively really means having the ability to communicate your thoughts and ideas in a very clear and easily understood fashion to a variety of audiences. For the actuary, often that means communicating very technical information in a nontechnical fashion.

The ability to communicate through written skills has taken on much more significance in the last couple of years. As a matter of fact, in recruiting, my candidates are often asked to produce writing samples during the interview process. Some of the primary complaints really revolve around spelling, grammar, punctuation, wordiness, and disorganization. Sometimes the point that was trying to be made is just not clear.

Listening Skills

Sometimes my husband will say to me, "Terri, I know you hear what I'm saying, but are you listening?" I think that we've all been guilty of that from time to time, but it's through listening that we really are able to get a sense, not just for what somebody is saying, but what it is they're trying to say. During problem solving, often this helps us come up with the right kinds of questions to ask which will hopefully lead to better solutions.

Presentation Skills

We often think of this type of forum, giving a speech to a large audience, and that certainly applies. It can also mean giving a major presentation to a few members of senior management. Furthermore, you could be sitting across the desk from your boss just trying to sell him on a new idea that you might have. So that old saying, "It's not what you say, but how you say it," is certainly apropos.

Appearance

This may surprise you, but appearance really is a form of communication, and poor appearance can certainly detract from the message that you're trying to send. I'm referring to the obvious—your clothing and how you dress. I'm also referring to how you carry yourself, which can certainly make a difference.

MANAGEMENT AND LEADERSHIP SKILLS

Here I'm talking about both projects and people, and this is the ability to facilitate, delegate, and motivate.

ABILITY TO INFLUENCE PEOPLE AND NEGOTIATION

How well do you relate and get along with people? While the team approach to management and problem-solving is very prevalent now, probably more than it ever has been, most team members have no direct reporting relationship to the team leader. Therefore the leader really does help the team achieve its goals through influence and management by persuasion.

UNDERSTANDING OF GENERAL BUSINESS PRINCIPLES

Companies are looking for big-picture thinking, yet they still want people very sensitive to details like market sensitivity, strategic thinking, bottom-line orientation, and knowledge of corporate finance.

TECHNICAL AND ANALYTICAL STRENGTH

This still remains the cornerstone. Companies are looking for these expanded skills in addition to, not instead of, strong actuarial capability. Creative problem-solving is desired. Above all, be sure to keep your technical skills current and sharp. Here I'm not only referring to your actuarial skills, but also keeping abreast of changing technology.

We've talked about the skills that companies are looking for, but what resources are available to you to help you develop those skills? There are plenty of how-to books and tapes. You can get those at your library or a bookstore. Seminars, colleges, and universities are also available. You probably have three options. Often there are one-, two-, or three-night classes sponsored by a college or a university focusing on a specific topic. You could be looking at a full-semester course, or a full-blown degree. For those of you who are interested in expanding your knowledge of general business principles or expanding your knowledge of corporate finance, a master of business administration (MBA) could be an excellent choice. MBAs are receiving an awful lot of attention today, and they are highly valued in today's market.

Outside organizations can also be useful. I'm referring to organizations like Toastmasters. You could be looking at the Kiwanis Club or Lions Club. Perhaps you'll join a committee in your church or synagogue. Whatever you choose to do will give you a chance to develop and practice those skills. Give yourself a chance to do that outside of the work environment. The SOA can be a good resource with periodicals, newsletters, journals, and training departments. Check with the training department in your own company. They could indeed be an excellent resource for you. If they don't have something on hand, it's certainly possible they could put you in the right direction. Many companies will pay for a lot of this outside training.

Mentor

Perhaps there's someone in your company that you really admire, respect, and would like to emulate. Learning by example is not a bad idea.

Now we've looked at the skills that companies are looking for and how to acquire them, but where are we going to put them to the most use? When we look at the high-demand areas today, it's probably easier to tell you what's not hot than what is. In terms of work our practice has done over the last couple of years and where we focus a lot of our attention includes the managed care and provider arena, risk management investment areas, variable products, international, and consulting. Before I leave consulting, you might be interested to know that currently 44% of all ASAs and FSAs are in consulting. I see the demand doing nothing but growing.

Many of the consulting firms are going beyond traditional actuarial work and getting more into the strategic and overall general management issues. That's both on the product development and the financial side of things.

We know what the industry's wish-list is, we know what companies are looking for in today's actuaries, but how do you all measure up? Positive attributes that I hear quite frequently include bright, good problem-solver, ethical, strong analytical and quantitative ability, dedicated, strong modeling skills, and detail oriented. I could think of worse things people could say about you.

What about the flip side? Negative attributes include: lacking communication, interpersonal, and management skills; narrow (doesn't see the big picture or business aspects); sometimes arrogant, rigid; lacks marketing sensitivity; and compensation too high. Those first two points are mentioned much more frequently than any of the others. You may or may not have noticed, but those first two points cover four of the top five skills requested most frequently. What that says is that these skills are very hard to find, yet demand is very high for them. So the actuary that brings some of these skills to the table is in an excellent position to maximize their career opportunities.

Recently I was talking to a chief executive officer who said that from his perspective, one of the company's greatest competitive advantages is an actuary with good communication skills. He and some others have gone on to say that they really see actuaries falling in one of two camps: those with good communication skills and those without. The breakdown that I hear most frequently is about one-quarter with, three-quarters without. Furthermore, and I thought this was very interesting, the perception goes on to assume that those actuaries with good communication skills are more likely to have strong creative abilities than those without. If you think about it, even those actuaries who do not have good communications skills but who do have strong creative abilities, often lose that creativity because they can't express it.

We've taken a look at what companies' needs are, but what about your needs? How can we make sure that you are in the best position to keep your efforts moving in the right direction? Why is career planning important? I think it will help us be successful. We all want to be successful, right? How do you define success? I read this quote and it struck me, so I'd like to share it with you. Success is not the key to happiness. Happiness is the key to success. If you love what you are doing, you will be successful.

So what is career planning? Well, it's a dynamic process to help you determine what it is you love to do and then help you put a plan in place to help you do it.

How do I get started? Well, I think a great initial step to help you define and articulate your goals is really to commit them to paper. Ask yourself the following questions: What is important to me personally and professionally? What am I good at? What do I enjoy most? What are my short- and long-term goals? When can I realistically expect to achieve them? What intermediate steps are necessary? What am I doing right? What could I do differently? What gaps exist in my background and knowledge? It may be that you finish this exercise and say, "Hey, I'm doing well. I'm on the right track." Be careful. Even if you are on the right track, you just might get run over if you just sit there. So career planning really helps make sure that you keep things moving forward.

There's a saying that I am aware of that I think honestly has more meaning today than it ever has, and that is: "The only thing permanent is change." If we welcome it, prepare for it, anticipate it, even help create it, we don't have any reason to fear it. I have no doubt that things are different than they were five or ten years ago, and I have little doubt that they're going to be very different five to ten years from now. But the actuary who prepares for change and who responds to it is genuinely going to be met with increased, not diminished, opportunities. I have to say the reverse is true as well.

Mr. Fishbaum: In 1993 the CIA instituted a task force to look at the actuary of the future. The SOA had formed one a bit earlier. The Institute in England has also done one. What I'd like to do is report on our findings and see if it's useful for people in the U.S.

The term of reference for the task force was to study and make recommendations regarding the future roles of actuaries, and we were very specific about Canada. The focus would be on new roles based on our current skill sets for new clients and then expanded skill sets for existing clients. We were supposed to look at the future needs of both sets of clients and anticipate them. There was a draft report in 1996 which you can find on the web. We're at a stage of looking for comments. If you do read it and send me a comment, or anybody else on the task force, we'd really appreciate it.

I want to do a quick survey. How many attendees work for insurance companies or consulting firms who consult to the insurance industry? That's even more than half. How about consulting firms or employers doing employee benefits? Boy, this is unusual—there are only three of them. Usually it's more. Let's also do any educators of actuarial science? We have a couple there.

If you're doing pension planning for a manufacturer, basically that manufacturer is an insurance entity, and because they have a large enough number of employees

they can self-insure. What they're asking for from you is basically your skill as an insurance engineer, and that's why they're comfortable using you because they understand what you do and that's something they need.

Basically our analysis was for our current employers, be they insurance companies or insurance entities, we're currently doing all aspects of management—be it pricing, the traditional actuarial jobs, investment management, or asset/liability management. Basically, our task force felt that we've got the current employers down pat. We're doing almost everything we need to do for them.

The goal is to find new employers to utilize a current skill set and find new people who need that skill set. In marketing terms it's called a positioning statement. That is basically how your client uses the product you're selling. In this case it's the actuary. Our task force came up with a current positioning statement. The profession normalizes the cost of insurance risks and determines the solvency of insurance entities. I must admit, this normalizes costs for Canada. Basically, we'll come up with a product that says you pay us \$5,000 a year, and when you die, we'll give you a million dollars. People outside of the insurance industry, and I think people just outside of the actuarial profession, are amazed at that simple concept that we can come up with. So the normalization of cost is an extremely valuable benefit, and people are comfortable that the actuary is the only one who can figure that out. In Canada, the actuary is responsible for signing off on the solvency of insurance companies. So this is how the Canadian public views us now. The question is, how do we move to get to new clients?

This is the positioning statement we came up with: The profession projects the contingent cash flows of financial instruments and determines the solvency of all types of financial institutions. We've taken out "normalizes the cost" and instead talked about projection of continuing cash flows. We felt normalization was too narrow a concept; we can expand more in what we do in that we can take all types of cash flows and do the projections of them. Obviously you'll see that we've moved from solely insurance and moved on to investment. The other thing we've done is changed and expanded the role of solvency from insurance companies and moved it on to all types of financial institutions. Investment banks are probably the best given all the types of risk they take, but banks and savings and loans (S&Ls) obviously are other institutions.

If we've defined a positioning statement we want to move to, the question is, how do we get there? Well, there are four things to consider. First, we need to get agreement from the profession that this is where we want to go. The way we're starting in Canada is going out and talking to actuaries to get their feedback. Does this make sense? Is this something that I should be looking at in the future as well?

We have to update the education. This is our task force view, and Pete will tell you about the SOA view.

There are two areas where we feel that the education needs to be improved. The first is probability theory. Many of the new financial instruments being created now are being designed by Ph.D.'s in probability theory. Many of the hedge instruments are all based on this kind of theory—on this kind of science. For us to be able to use these instruments to protect the solvency of our own employers—the insurance companies, pension plans—we obviously need to be more understanding of all this new work.

The second thing is investments. There are new investment products coming up every day. Our employers are using them to back the liabilities and solvency of the insurance companies, and we need to be able to keep up with all of them. The task force didn't believe that we had to be creating these new products, so we don't have to go out of our area of expertise. However, we do need to be able to explain to management, boards of directors, and risk management committees that the investment products, the new hedges, the collateral mortgage obligation (CMOs), and all of these things that the investment department is using, are appropriate for the solvency and to back the liabilities of insurance entities. If we expand to other financial institutions such as the investment banks, we'll obviously need to understand all of them if we're going to put our name on the line about the solvency of those organizations.

Third, to do solvency of other institutions, we can't just simply take where we are and tell a board of directors of an S&L that we can help you on your solvency. What we assumed we would do is create some research ourselves as a profession that says we've looked at the problem of solvency—and the S&L crisis here is an excellent example—and say, this is what we as a profession have come up with. In Canada we also have S&Ls. They're called trust companies. Actually many insurance companies do own them. So it was felt that doing dynamic solvency testing for trust companies would be a good research topic, partly because we can get the data, and partly because management of insurance companies are interested in ensuring that these subsidiaries of theirs don't go under.

The fourth thing was demonstrated successes. It's a bit of a chicken and egg problem. You can do something but then the employer or the new client might say, "Well, have you done it before?" The problem is you haven't, but you know you can do it. What we've decided is the best way is continuing our process of dealing with the boards of directors of insurance companies who are also members of the boards of other financial institutions and also the regulators. If the regulators see the excellent job we do in insurance companies in protecting the solvency of them and

developing the techniques required to ensure the solvency of the insurance companies, then they will also be supportive of us moving this technology to the other financial institutions.

When we talk about who will benefit and who these opportunities are for, you need to understand that there are basically three different actuarial entities. The first is the profession itself. When we talk about the profession, we're talking about the entity society designates as being responsible for a certain source of expertise. For example, in Canada it is in the legislation that the actuary is responsible for the solvency of the insurance company. That's our expertise. Though the accounting profession says this is something we can do because they also have certain techniques, legislatively, the actuarial profession has control of this.

When our task force looked at new opportunities, we were looking at new opportunities for the profession. The Fellow will probably benefit the least from our report. Most of you are comfortable in your positions. You earn a nice living. You don't want to take the risk of pushing and sacrificing all of that and going into something new. We appreciate that. It's the profession and the third entity, which is basically the student, who I think will benefit the most. The concern basically for the student is that there has been growth in Canada of 13% (by student we mean basically anybody who's above ASA and not an FSA) over the past five years. I guess it was our view that the profession and the industry can't support that kind of growth. We just didn't see the insurance industry and the consulting firms requiring all of these new actuaries given that all the other existing actuaries are still around.

We felt the biggest culprit of this was the computer. In the old days, 15–20 years ago, the actuarial student had an apprenticeship role of doing more of the calculations and analyzing the results, but doing the calculations was the major part. In today's industry, that's all being done by the computer. In Canada, most insurance companies use one standard pricing software. All 70 companies are using basically the same software. That obviously reduces the number of students required to build new pricing software and to go through the work. Our view was that the profession itself can't support all these new students as it stands.

That said, we also felt that the education the student is receiving is extremely valuable and useful. Possibly that education was not for the insurance industry, but for Canadian business as a whole. The expertise and the valuable education we saw was the statistical ability of the student, and his or her ability to take that statistical analysis and put it into financial terms. For us the goal was to try to take that value and get Canadian business to start using it.

So what are the opportunities we've developed? For the student, we believe that the CIA must develop an accreditation recognized by the Canadian government. We'll call it the actuarial analyst. Basically this would be the old ASAs. I know this is against current SOA practice and their position, which is moving the ASA further up the professional ladder. If you moved the actuarial analyst role to the old ASA, which was basically competent in doing all the calculations, but not dealing with any of the professional material, the position would be extremely valuable for Canadian business and you'd be able to compete against the bachelor of commerce's and the MBAs. If you go a bit down, for example 200 credits, the student wouldn't be making that big an investment which might not be used. What I mean by that is, the professional part of the exams wouldn't be used by someone who has this accreditation, but is working in an investment bank doing risk management analysis.

For the profession itself we've come up with two positions. One we'll call the solvency actuary which is responsible for solvency for all types of financial institutions. In the U.S. there has been the S&L crisis. There has been Orange County. In the U.K. there has been Barring's Bank. In Canada there has been Confederation Life which still has solvency on the top of the agenda for governance issues of financial institutions. There really is a demand for this position. In Canada we have developed the techniques that can be easily expanded to cover other financial institutions.

The other role we've come up with is a National Health Insurance actuary, which we feel would determine the value of medical procedures and technologies. This position probably already exists in the U.S. You need to understand that in Canada we have a single-payer system for health care, and what is occurring up there is that—and it's the same thing down here—the percentage of the gross national product (GNP) that's going to health care is just increasing and increasing. The goal for government is to try to minimize those increases and get it under control. Oregon has done some cost benefit analysis of procedures that it's willing to cover. Our belief is that the Canadian government will also do the same. It was our belief that who better to be able to do the cost benefit analysis of these procedures. We have the statistical ability, the financial ability, and also control of the data to be able to do proper analysis of whether certain procedures should or should not be covered for health care insurance. My belief is this is being done for the health maintenance organization (HMOs) currently in the U.S.

In summary, what we found was that for our existing clients, which are insurance entities, we're doing everything we can and have the full managerial scope from the president to the investment department to the basic traditional actuarial views. We have to look for new clients. The areas that the profession can take control of are

solvency and health care finance. We also felt that the actuarial education for the students who don't become fellows is extremely valuable in and of itself and that Canadian industry can make use of it. The other thing we found was that when you go to some of these meetings about nontraditional roles, you'll say, "We can do this kind of thing and we can do that. We can do airline pricing, financial planning, etc." We, as a task force, have come to the conclusion that the profession itself has to identify areas that we are responsible for and that there are other fields that other professions can do as well. If you find an area that based on your education and your desires you think you can do, basically our response is: go out and grab it.

Mr. Peter Hepokoski: I know that our panel's time line is the 1990s and beyond, but since my assignment is to talk about the new education system of the Society and its effective date is targeted for January 1, 2000, I'm going to focus a little bit more on the beyond and less on the 1990s. I can assure you that the board task force did take into account what the actuary of the 1990s is already becoming in structuring this new system.

I'd like to start with a brief review of the time line of the new system. The new education plan has been spearheaded by the board task force. This task force was appointed in March 1994 and I joined it in 1995. The emphasis was on two-way communication with the members. We sent lengthy reports and questionnaires to all of the membership in both the summer of 1995 and the summer of 1996, and we've had numerous presentations and discussions at SOA meetings and local actuarial clubs. The board approved the design this past Sunday for a planned year 2000 start. Announcement of the overall design details to date and transition rules is planned to be published this year. There will be an open forum for more details and questions and answers with a number of the board task force members.

I'm going to discuss the new system from the standpoint of meeting the needs of the actuary of the future. The board task force process began with the determination of some overall educational principles and a vision of the future actuary. Throughout the process we've tried to stay integrated with the actuary of the future effort. Bob Shapiro, who is one of the founders of the actuary of the future effort within the Society, has been a member of the board task force from the start. Our vision of the future actuarial practice included four components: the definition, the environment, areas of practice, and required skills. We used a real top-down approach here. Once we had the principles and vision, we had a delineation of our educational needs. This then led to the design of the system. First the task force needed a definition of the future actuary. The actuary is the professional who assesses and manages the strategic and financial implications of risk and uncertainty.

The second of the four areas that we looked at was the environment for actuaries. Here are some characteristics of the changing environment: blurred lines with other professions, traditional employers who are broadening their scopes, consolidations and mergers—which led to some of the graphs that you saw that Terri presented—and the globalization of many businesses. All of these are leading to opportunities and challenges for actuaries.

The third part of our vision involved practice areas. The actuary's arenas are changing in sync with many of these environmental changes that we just cited. Actuaries already are working in some of these areas, not just the traditional roles in the traditional arenas, but nontraditional roles in both traditional arenas and nontraditional arenas. Some of the nontraditional areas might include things like pollution control, manufacturing—and here the example I've heard cited most often is the analysis of the lifetime of light bulbs. I'm not sure how many professional actuarial jobs will be provided by that kind of analysis, but it's an interesting one. Utilities and pure finance are other examples. I like the example that David had earlier of the medical products and drugs as a potential new arena for actuaries.

In part four of the vision was the skill set, or the competencies of the actuary. We divided the skill set into two categories: first, some well-established, recognized competencies of the actuary, and some others that probably need enhancement. We're going to need an educational system that develops both categories of these skills. Some of the recognized competencies include math rigor, practical business application, problem solving, and communication with less technical parties.

The ones that have been identified by the task force in the second group are not as universally recognized in the actuary. These are unstructured problem-solving, flexibility, adaptability to change, expertise in modeling, global thinking, statistic and dynamic approaches, expanded application of contingencies, and business value-added. If these skills can be better developed, the task force felt we would have a broader and more adaptable profession.

So what are the implications of all of this self-examination and vision of the future? One thing that came out of all of this is the board's statement of focus. That is a focus on enhanced development of essential mathematical capabilities with broader business applications and enhancing core competencies. You'll notice these words. They're challenging words. "Enhanced." "Broader." "Enhancing." They capture what we're trying to do with this system.

We're seeking to enhance knowledge and capabilities. The knowledge should include mathematics and logic, economic security programs, business content, context of economic security programs, investment and finance vehicles, as-

set/liability management, and standards of practice. The capabilities of the actuary should include construction of models, setting of assumptions, testing of data, sensitivity testing, analysis, communication, and management of results. One way to characterize these capabilities in the areas of knowledge is that they set us apart from the other math-oriented or financial-oriented professions such as accountants or economists.

With all this background, the task force developed four operating principles for the new education system. First, examine only those subjects that cover essential elements of an actuary's education. Second, provide a business context with rigor consistent with that of the current mathematical education. Third, include all kinds of contingencies, not just life contingencies. Fourth, include models from outside the insurance and pension fields. These are principles that will lead to the appropriate education for actuaries who will be fulfilling the roles we'll see in the next century.

Let me give you a brief overview of the components of the new system, and this won't be new to those of you who read our task force report that was distributed in the summer of 1996. Here are the six courses that would lead to associateship in the SOA: mathematical foundations of actuarial science; interest theory, economics, and finance; actuarial models for contingencies; methods of actuarial modeling; application of basic actuarial principles; and investments and asset management. The next two courses make up the advanced education component. Course 7 is applied modeling, which we plan as an intensive seminar. Course 8 is advanced actuarial practice. The specialties here may include some or all of these practice areas: managed health care, group life and health, retirement systems, individual insurance, finance, investments, and others.

There are two more components. The professional development component covers topics of a nation-specific or time-specific nature. These will be obtained through a wider variety of educational vehicles as opposed to our traditional combination of self-study followed by SOA examination. Finally, there will be a fellowship admissions course, which has not changed from the current syllabus. It covers ethics and professional issues.

I have some observations as to how the actuarial student of the future will differ from what we were and what we studied. First, in terms of demographics, I think we're going to tend to see more business orientation in the students starting the exams, but with still very strong math capabilities. Also, on average, they will begin a year later in college than today since probability as well as calculus will be on Course 1 of the exams. Second, business content will be emphasized. Right from the start, Course 1 will be studied and examined from a risk-management context.

Now, business courses will not be a prerequisite for Course 1, but they will help more than they currently do. Course 2 gets into economics and finance.

Third, and this is the one that we stressed quite often in our development, is less memorization of facts. Tax laws and insurance laws don't need to be memorized. We're stressing capabilities, techniques, and processes. As somebody said, we're focusing on science, not compliance. We'd rather deal with dynamic and stochastic analysis of the profitability of an insurance product, an insurance company, or some other kind of company than focus on whether such and such is deductible under the U.S. tax law. More reliance is needed on outside sources. If good education exists, and if it's kept up to date, or if it's widely available, why should the Society need to develop its own versions? This is what our professional development strategy is going to be based on.

How is our education improved for our students? Here are a few areas where I see improvement. First of all, fundamentals. You take a generic approach to actuarial mathematics. We're going to work with examples from many fields, not just life and health insurance. This is going to make our skills more transferable to nontraditional areas. Some of the kinds were talked about before. Modeling skills will also be important. There are going to be a great many powerful tools and techniques out there. The probability theory that Dave mentioned is an example of that. Our examination system needs to prepare our students for taking advantage of all of these tools and skills. Larger courses can better educate and test by integrating topics. When exam questions call for a synthesis of knowledge from several areas, they're more true to life. Other advantages of larger and fewer courses are the simplicity, the consistency of educational standards, and the expected shorter travel time through the exam system. Professional development provides more personalized education. In the future, there will be more need for specialization in the education where we can direct it to individual needs and individual interests to take advantage of more sources and methods of education.

Before I close I want to step away just for a minute from basic education to mention continuing education, which deals with the seminars and meetings side of our education. Recently, the board approved a recommendation of the continuing education task force to establish a continuing education coordinating committee. This committee would provide strategic planning and oversight to the continuing education (CE) process (which is currently quite diffused), primarily through the education committees of the various practice areas. The new committee's stated goal is to ensure that educational programs enhance and enrich basic education and on-the-job performance. The task force report listed the number of benefits of the new committee. One is the integration of hot topics, current issues of significance,

and emerging practice skills. The other is the opportunity for members to systematically plan their personal continuing education.

There was a random survey of 500 members of the Society done by telephone on a number of topics of interest which showed the concept of mandatory continuing education or post-FSA education received overwhelming support. The level of support just amazed the board. The executive committee has approved the formation of a task force to study this further.

The new system is coming. Many details have yet to be worked out. As it worked out, the Society is committed to fulfilling its role to make sure that this definition of the actuary is the true definition for the 21st Century—that the actuary is the professional who assesses and manages the strategic and financial implications of risk and uncertainty. I hope you share this vision, and I look forward to working on it with you.

Ms. Anna M. Rappaport: Terri, I was really interested in your information. I was wondering if you could describe for us whether it's based on just experiences or some specific research. You mentioned that the CEOs you work with perceive about 25% of the actuaries have the communication skills they want? Whereas they think about 75% don't. Does that square with your perceptions, or are they being fair or unfair to us. Our image really is a problem. You also mentioned actuaries being expensive. Are the people that get used in jobs hired at lower pay or is that a factor—where does that come in?

Ms. Michalewicz: I think you just challenged my listening skills. The way I came up with that information was really in a couple of ways. Yes, quite a bit of it is really based on impressions that I have acquired over the 12 years of recruiting and the definite trends that have shifted.

I'll try to answer that by way of a couple of examples. It used to be, from a very selfish business perspective on my part, that if I found an actuary that was willing to make a change, using the terminology in my industry, that was a placement waiting to happen. It would be well worth my time to market that actuary, even assuming I didn't have a place to put them immediately. That was when the focus was on the technical skills. What I'm finding now is that companies are definitely being a whole lot more selective in the recruiting process. So much so that they will leave a slot unfilled until they are able to fill it with the best person of choice.

As far as any kind of formal research, it certainly wasn't statistically sound, but I did have a little fun preparing by calling friends and acquaintances of mine. I had some prepared questions and kind of came up with my own survey. These were CEOs

that were truly looking for actuaries that were poised to solve today's very complex business problems. What I see is that the focus is on hiring for long-term potential and mobility rather than a short-term immediate need. They're going for the best athletes. A big part of what I am being asked to find are actuaries that can communicate effectively. What I found several years ago is that actuaries tended to communicate largely with other actuaries. So the significance of the communication just wasn't as important as it is now.

Ms. Rappaport: Regarding the other question on the communication skill perception, I was curious as to whether that squared with your impressions because you mentioned that as sort of outside impressions.

Ms. Michalewicz: Now, I may be a little more generous there. It does tend to clearly be more heavily perceived that actuaries do not have good communication skills. Much of that revolves around not being able to communicate the very technical information in nontechnical terms. In talking to the chief financial officer (CFOs) and the CEOs both over time and in preparation for this presentation, I found that they want to know what's relevant to their business. What do they need to know and how does that translate into plans for action? Don't get bogged down in the details. As for the split, while it may be a little skewed, the definite perception is that actuaries do not have good communication skills in general.

Ms. Rappaport: The reason I asked that is I know that perception is there and I think some of it is true, but a lot of it is historical, and we're a lot better than we're given credit for.

Ms. Michalewicz: I would agree with that. Stereotypes come about for a reason, but are difficult to change, even when the situation changes.

Ms. Rappaport: I think we are much better. The last question I wanted to ask you about was the money question. You mentioned the money as a barrier. People perceive that actuaries are expensive. Where you don't help them get an actuary you help them get somebody else. I guess my question was in fact are they finding good alternatives at a lower price or are they not?

Ms. Michalewicz: Yes. MBAs are a big competitor for actuaries in the risk management area. They are coming in, especially at the lower levels. I'm not talking about recognized experts in the industry, but they are coming at a lower price tag than a lot of actuaries are. I had a chance to recruit on a couple of nontraditional searches. It was probably one of the most challenging, exciting, frustrating, and maddening searches I ever worked on, but I brought an actuary to a bank. It was the first time that bank had an actuary and they were in sticker shock. That was a challenge. We

had to get out of that before we were able to proceed. I'd say MBAs, and sometimes accountants, are taking over some of the jobs of actuaries. Those are probably the two primary areas. Actuaries get special treatment with the study time. Obviously that doesn't apply to many other professions.

Mr. Fishbaum: If I'm not mistaken, the positives and negatives that Terri mentioned were also on the SOA Task Force of the Actuary report as well. Communication skills wasn't one of our bigger strengths. I think that was another view, another person's view of that ability.

Ms. Rappaport: I absolutely agree that has been widely stated, but I suspect that we're getting better faster on that.

Ms. Michalewicz: I would agree.

Mr. Fishbaum: I think what everybody is saying is that it is so important and that we do have to work on it and keep working on it and it will change.

Mr. Carl Herman Rosenbush, Jr.: You stated that one of the high-demand areas was the international area. I've had 17 years of experience in international companies and I've been looking around, but with very little success. Could you give some suggestions on where I might find more success in finding international employment?

Ms. Michalewicz: I think that one of the things that companies are looking for in the international area is second language skills. The languages that I get requests for most frequently are Spanish and more recently, Russian and some of the Eastern languages. That would give you a big leg-up. I think outside study is an excellent idea. Familiarize yourself with the cultures and business climate of different countries. If you have some expertise in a certain area, I would do everything I could to enhance that. What I don't see actuaries doing a very good job of is networking. I don't just mean coming to these meetings and shaking hands with other actuaries. Make sure you get involved outside of the actuarial field. Get involved in other meetings, other organizations that relate to the area that you're most interested in. That certainly applies to international business. Make it obvious that you are familiar with the cultures and the business climate and the appropriate issues. If you had a second language skill, that is very valued. Go for the companies that have not just a strong international focus, but also are really going forward and growing their international operations. Consulting is real big in that regard.

From the Floor: With all the discussion and emphasis on communication skills, my question to you is: Have you or the committee thought about trying to incorporate this in the education process? If not, why?

Mr. Hepokoski: We'd sure like to be able to. I think it's a practical issue. There's communication of sorts taking place through ASA examinations. There's communication taking place in the greater emphasis on seminars. If we're talking about a seminar for Course 7, we'd anticipate that a good deal of the professional development component would be in a seminar format. The fellowship admissions course discusses business cases and ethics issues in a seminar format. There's some of the face-to-face communication there. Beyond that, the practical issues probably prevent us from doing more. That's also one of the reasons why we think that professional development can be the starting point for ongoing continuing education after the FSA which would be, again, a vehicle for obtaining some education in communication areas. Maybe one of our challenges might be to provide some specific vehicles for getting that education.

Ms. Michalewicz: One thing I've often wondered about is the college level. I don't know what the requirements are for an actuarial science degree, but we should encourage business courses. In addition, electives such as speech, or drama, or something that puts people in front of other folks and develops those communication skills are good choices.

Mr. Hepokoski: I would second that. Hopefully, we can encourage that in the students that we have coming in. It's very positive. I took a speech course in college. As soon as I got done with my exams I joined Toastmasters. I felt there's some real advantages to doing that.

Mr. Fishbaum: I'd like to add that from the perspective of the profession, that it's also up to the student or the Fellow to take some responsibility, that the profession can certify that your actuarial capability is topnotch, and that it should be up to you to develop a well-rounded person on your own at some level. The drama classes or the Toastmasters should be your responsibility because you can probably get better training outside of what the Society could provide anyway.

Mr. Brian M. Janiga: I have a question for Terri. In your presentation you discussed the importance of an MBA. I guess employers are looking for that. As a followup, I heard you mention that MBA candidates might be more preferred over entry-level actuarial students, I'm assuming because of salary. The question I have is, are employers maybe being a bit shortsighted? I guess when I see Peter's presentation about the ability of actuaries in the future to assess risk and to manage risk, will MBAs have the opportunity or have the skills to do that?

Ms. Michalewicz: One thing I know not to do is get too deep into something I don't know a lot about, and that might well be one of them. I strictly recruit in the actuarial field. My knowledge of what companies are doing with MBAs over actuaries is really through just casual discussion with some of my employers. For example, I used the scenario where I was talking with the CEO. I would say that also applies in some of the discussions I've had about the MBAs. It's clear that the actuary has some unique training and ability that the straight MBA does not, but the reverse is also perceived. Many times it boils down to the communication issues. As far as compensation, that tends to be more evident and relevant at the more junior levels than at the more senior levels. I'm not that familiar with the hiring of strictly MBAs.

From the Floor: A two-part question for Terri. One is, you touched on the high-demand areas. Should we assume all others are low demand or are there a couple of specifics to talk about? The other question is, is there any activity for actuaries in general management consulting roles?

Ms. Michalewicz: I wish I could tell you I had a lot of first-hand experience there. General management consulting is an area I would love to get into more than I am now. I have more of an interest there than I do specific experience.

With respect to the high-demand areas, as I mentioned, that really is not a completely representative list. From my own practice, I really can't think of very many things at all that aren't hot. What I can say is that I cannot remember the last time I got a search saying, "Terri, I'm looking for somebody who has this specific experience. Here's your checklist. We don't care what kind of package it's wrapped in."

I guess I might offer some areas that I don't do a lot of work in. Some other recruiters could tell you something different, but I don't see much activity in individual disability income or long-term care. I'm starting to see a resurgence in defined-benefit pension work, but that was really not an area of significance in our practice for many years. The high-demand areas really are across the board: product development work and financial work. The financial positions tend to be expanding more, which is a lot of fun from a recruiting standpoint. I can't tell you how tiring it got back in 1990–91 pitching financial reporting and valuation type roles. That's all that was out there at that time. They're getting into some of the financial issues beyond just financial reporting now, so positions are more interesting.

The actuary that brings these other skills to the table has tremendous opportunities. Companies are going for the best athletes. If I had two candidates, one who fit the job specifications perfectly on paper, and one who didn't really match up all that well from an experience standpoint, but it was perceived that this candidate was

going to be a long-term better prospect for the company, eight out of ten times that second person will get hired if they have those intangible qualities that companies are seeking.

Mr. Fishbaum: I'd also like to answer part of that question. I'd like to break it up into two parts. One is for the student, and the other one is for the Fellow. It is very difficult for the Fellow getting into general management because general managers wants some background in marketing, finance, or organizational behavior; that's basically part of the skill set of an MBA. For the student or someone who is coming out of school, I would suggest that is an excellent position for a person with an actuarial education. There they're competing against bachelor of commerce students, or accounting-type students, and that's where the education that the actuarial student has is extremely valuable and can be used in that position in those firms. So it's who you're talking about when you say the actuary. But if have been a Fellow for three years and are earning \$80,000–90,000, you're not going to have an opportunity because you don't have the varied skill set that they're looking for at that senior consultant level.

Ms. Michalewicz: If I can be so bold as to say one thing I did forget. The management and personal development committee is coming out with what they're calling the career planner. They're in the final stages of that, and that is really going to focus on helping the actuary decide the kind of work that you want to do as well as helping you determine how to best position yourself to do it. I think that comes out in the spring of 1997.