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**ALTERNATIVE CAREER OPPORTUNITIES**

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*In this forum, attendees will learn how certain colleagues have moved from a traditional career to a "nontraditional" career utilizing their skills and background. The forum will concentrate on pension actuaries who have moved into careers peripheral to pension consulting.*

MR. SAM GUTTERMAN: Our panel represents three examples of alternative career opportunities for actuaries. I will not take much time to introduce these gentlemen, because talking about their nontraditional roles is the major reason for their being on the panel. Mike Demner will be talking about the formation of his own company, in which he used expertise gained from his previous traditional work experience. Alan Cooke will relate his experience with a shoe company in a nontraditional actuarial role; he is currently with Foster Higgins as a pension consultant. Paul McCrossan, currently with Eckler Partners, has had distinguished and broad experience; he will describe several of his nontraditional practice areas, roles and projects, which will be quite enlightening.

MR. MICHAEL D. DEMNER: My background covers all traditional actuarial areas—pension, group benefits and insurance. I started off in the insurance business, moved into pension consulting with Hewitt Associates in Chicago and Toronto, and then was with the Wyatt Company in the group benefits and the flexible benefits area. My last full-time employer was Towers Perrin in Vancouver where I worked in the pension administration systems area—a bit less traditional. Then two years ago I set up my own business in Vancouver after 22 years working for large insurance or consulting firms. Part of the reason for striking out on my own was to search for something different. When you are in a consulting firm or large insurance company, you tend to work long hours and may get to a stage where you feel that if you're going to work long hours and don't believe that you are being sufficiently compensated for them, why not try to do it for yourself. It took 22 years for me to get my nerve up to do that, for it is not easy to go out and develop your own client base and to develop your own systems and expertise. All the skills I developed over the years provided me with a good start.

It helps to have a general background in a lot of areas. If you are starting your own business, you have to specialize in one or two key areas. Although this is important if you are with a large company, it is even more difficult when you are on your own. It is not possible to keep up to date on all actuarial areas, so you have to pick two or three target areas. If you are in your own business, you can pick and choose these areas, particularly if you know that the opportunities are there. Moving into the computer area has also been helpful to me.

Some recent talk shows have indicated that actuaries make good financial planning professionals, which is true especially if you have computer knowledge and a financial background. So I think I'm in the right area. To do so, all you need is to find the clients with which to do business. But you still have to develop a lot of contacts with other

professionals. I have very good relationships with the other actuarial firms, including the large ones, and work on joint projects with some of them.

I have set up my own corporation and it has become a family business. I work out of my house and I have enrolled the family in the business. One of my sons is involved in the computer systems and programming area. He has been on computers since he was age five, so it's a natural fit to get him to do some work. He likes to program. At age 15, he's my right-hand man, so to speak, in the computer systems area. I do some contract work for employers in the Vancouver area, and I have developed a pension administration system for small to medium-sized employers. I also do third-party pension administration for small to medium-sized companies, although I have also done some small projects for some of the very large international firms.

In nontraditional consulting like mine, you have minimal overheads compared to traditional consulting in a larger firm, although when you get into it, you have a lot of fees to pay. You have to do your own marketing and selling, which can be a problem when you are really busy. If you are working 20 hours a day, you really don't have much time to do your own marketing. So you have to network all the time and hope your background is sufficient to bring the business in. I'm not a strong marketer by any means. You just have to be there at the right time and develop a good network with actuaries and other professionals in the area like lawyers and accountants.

Another area that is a little bit difficult is peer review. So I don't get into some of the traditional actuarial areas where a peer review is so important. Although there are other individual actuaries and we do work with each other to some extent, it's difficult to make such an arrangement work. Research materials are available but are very expensive; you also don't have time to read all the materials. I think that finding the right mix of personal and work time is the most important thing that you have to achieve. When you are working at home and your family is there and you have client projects to do, you have to shut yourself away sometimes. You have to do your own administrative work, word processing, and financial management. I can't afford to hire a lot of staff right now, except my family, so you have to do it yourself.

The other problem I found when you first go out on your own is that the phone doesn't ring as much. When you're working with a large organization, you're probably on the phone a lot—you're consulting. Suddenly you go out on your own and nobody calls you and you think—well, what's going to happen? Fortunately, there's enough business around so that I haven't starved. I have children going to private schools, so there is a certain cash flow minimum that I have to meet. In the computer area, you have to keep abreast of the technological developments, so again it's another area that you have to keep up with.

But the rewards are that any money I make is mine and my family's. I think it's important to involve the family. They appreciate what I do much more. Before, they thought I just went to the office and, based on a comment from one of my sons, just sharpen pencils all day. I think he came in once and saw me sharpen my pencil, so after that he thought that was what an actuary does. Now he thinks I'm either on the computer all day or sitting out in the backyard in the sun.

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You also get to meet lots of people and experience job satisfaction. If you get a new client, you've developed that client. You can then be more creative and have to be flexible in meeting your clients' needs. You have to work all hours of the day and night and weekends. Hopefully there's enough time off to be with your kids, family or friends, and not always working on the weekend.

I've enjoyed it. There are some challenges ahead. In the first two years, all the work was difficult. I would do it over again if I had another chance and probably a little bit sooner. I think it helps to have a computer background and organizational skills as well.

MR. ALAN COOKE: I started out in a very traditional actuarial career, like most actuaries of my generation. I graduated from college in 1972 and went to work for a large life insurance company. At that time, most new actuarial students did work in the life insurance industry. I completed my exams while with an insurer in 1977 when I was working in the group pension area. I experienced that initial euphoria and relief when you complete the exams. It was a couple of years after when I started examining where I was in my career. I found that the life insurance company wasn't giving me what I wanted in the way of a career. Coincidentally, there was a very interesting ad in a national newspaper for an "international actuary." At that time, international sounded very enticing. The ad sounded great. It said, for somebody who is bored in their current position, here is the "opportunity of a lifetime." I secured the position, which was the director of pensions and benefits of a large international shoe company. It was a private organization called the Bata Shoe Organization. When I was with Bata from 1979 to 1988, it operated in about 75 countries and had about 70,000 employees. The position was to manage the various pension programs and benefit programs Bata sponsored around the world. I was looking after the investment, funding, design, etc. of these programs. One of the perks to me, as an actuary in his early 30s, was the travel. The organization had a philosophy that to really understand what was going on locally, you had to hop on a plane, go out to the countries and solve problems. I had the good fortune during those years to travel to more than 50 countries. As a result, I think I not only gained an appreciation of different benefit and pension structures in a lot of countries, but also a sensitivity to different cultures.

One of the challenges of the job was to work primarily with senior managers, many of whom had little background in pensions and benefits. The people I was working with were shoe people; their main function was to manufacture and sell shoes. You had to be able to translate the intricate issues of pension plan and benefit funding in a way that employees would appreciate and relate it to the shoe business. One of the other advantages was always being the client when dealing with third party providers. In every other job, before and since, I have been the client, rather than the provider. Being a client is much more relaxing.

Over the years I added additional business functions. I took over the risk management function within the company. I think the philosophy of Mr. Bata, who was the owner of the organization, was that insurance was insurance. So, since I understood group life insurance, it was a natural that I would get into property and casualty insurance, which I also found quite interesting.

Another advantage of having worked in the industry was that opportunities opened up to me when I finally decided to leave the shoe company. When I left Bata in 1988, I had the choice of going into consulting or to another corporate position. I chose consulting

because I felt my experience on the corporate side would give me an advantage relative to other consultants. Since then I have worked in a number of countries as an international consultant.

MR. W. PAUL MCCROSSAN: What I will do is to run through a few of the unique projects that I've been involved with on a fairly regular basis. They fall under two areas—quasi banking and public policy consulting. The common thread may seem unusual to you, but they all relate to how I got involved with these projects as a result of serving on three Education & Examination (E&E) committees between 1970 and 1978.

The first parts examined numerical analysis. The second, Part 5, examined risk theory and I tutored students of that day for the Canadian Institute of Actuaries (CIA). The third, Part 9, of which I was chairman, was the original country-specific (Canada/U.S.) exam, as well as the original bilingual (English/French) exam and involved social policy and taxation. My experience on those three extracurricular educational projects has led me into nontraditional consulting.

Let me run through the sort of projects that I became involved in. I was pricing derivative contracts back in the 1960s, before there was a derivatives market. I was still pricing them last week, now that there is a derivatives market. Most actuaries may not be aware that almost all of the original derivative pricing methodology is found in our literature, in the *Transactions of the Society of Actuaries* under risk or "ruin" theory. I guess that if Mr. Leeson of Barings Bank had understood risk theory when he was investing in derivatives contracts and had a healthier appreciation of the ruin potential of the contracts he was entering into, Barings might not have collapsed.

Another nontraditional assignment was a series of projects for a merchant bank, involving the generalized multiparty leveraged lease structuring. Essentially, these were American option analysis problems and they were performed for a couple of financial institutions. The leveraged multiparty leases I studied involved three active players and one inactive player. The active players were a company that does not currently pay tax that wants to buy something, another company that is currently taxable and wants to have a larger after-tax return on its investments, and a merchant bank that wants to bring the two together and earn a transaction fee. The fourth inactive player is the government. The problem is to have the three active players maximize their return and minimize the return of the fourth (inactive) player. In effect, this is a nonlinear algebra problem in a four dimensional space, in which you are looking for a saddle point where you can optimize the position of the three active players and minimize the position of the inactive player.

This type of analysis led directly, in the early 1980s, to doing varying acquisition negotiations, initially for nonfinancial institutions (negotiating the purchase of originally a national name meat packer, then a name-brand tire company) and ultimately doing acquisitions of insurance companies. Now a large part of my current work is involved in what can be called a "traditional" actuarial role; even though it did not exist prior to 1980, I'm doing the analysis of the value of insurance companies in purchase/sale situations.

The second nontraditional area in which I have worked is public policy consulting. This has involved significant work in capital projects financing, a very important actuarial field now that is opening up in Europe. I have also performed various types of public policy consulting for social welfare programs in Canada and abroad, such as trying to estimate

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the amount of antiselection in Canada's national unemployment insurance programs or re-designing Canada's family benefit programs.

I entered into politics as a result of being the Society of Actuaries' (SOA) Part 9 examination chairman. When I was putting the course together, I was really frustrated at how poorly Canada's national programs were designed. So I wrote a letter to the leader of one of the political parties. I was astounded when I got a call three days later asking if the national director could meet with me. I found out that I became quickly, by virtue of writing a letter, an adviser to the official opposition and I later became an elected Member of Parliament (M.P.) and served three terms. As an M.P. I became heavily involved in more nontraditional actuarial assignments—re-designing the national retirement system and the individual tax-assisted savings systems similar to U.S. individual retirement account (IRAs), which in Canada are called registered retirement savings plan (RRSPs). The last thing I did in public office was to set up a study to examine financing National Medicare in Canada in the 21st century. As an M.P. I have also been involved in re-regulating the Canadian financial system. Out of office, I consulted on setting up the demutualization legislation and regulations for life insurers. As president of the CIA, I built on this work not only in terms of getting expanded powers for the appointed actuary, but also in getting this legal statutory responsibility with substantial legal immunity.

It seems to me that the skill set that an actuary brings to public policy consulting, an area in which there are not many active practitioners, first and most important has a long-term perspective. Almost all politicians and almost all people in public policy positions have a short- to medium-term perspective. They aren't used to thinking in terms of generations, or in terms of the long-term payback of long-term capital projects. I found that the way actuaries approach such problems is unique, very powerful, and very convincing to people in various levels of government.

The second skill that we bring that almost no one else brings is a probabilistic approach. Most people find it hard enough to think about the most likely scenario, but almost nobody other than actuaries thinks about nontrivial events that can happen, and what happens if they do happen. Actuaries naturally apply contingency planning, stochastic processes and scenario testing. Actuaries are aware that what is happening to the nation's demographics can have wide ranging effects. How are the demographics of the "tidal wave" represented by the aging of the baby boom going to affect national policy? Lots of people understand the idea of the baby boom conceptually, but I think actuaries have a better handle than almost anyone else on the financial ramifications on national social programs.

The third skill is that actuaries bring the concept of the time value of money. It's so trivial, that we take it for granted. My experience in public policy consulting is that very few other professionals really have an intuitive understanding of trade-offs involving present values. Many people can duplicate the skilled mathematics involved, but always looking at the financial implications in terms of present values is a skill an actuary brings to the table.

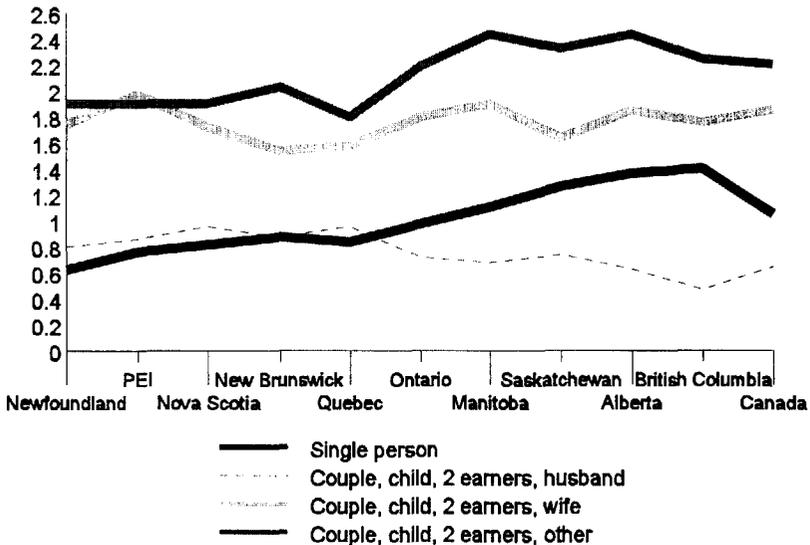
A key observation is the well known rule of thumb that you can solve 80% of the problem with 50% of the cost; but if legislators try to solve more than 80% of the problem, it's going to have enormous cost in terms of both effort and dollars. Actuaries are familiar with sister concepts affecting the process of designing insurance contracts or employee benefit plans. In public policy consulting, an actuary has to use his or her skill and

experience in developing a feel for how to get the biggest bang for the buck before starting to get to the point of diminishing returns where solving more of the problem costs an immense amount of dollars.

Also, a fundamental principle of insurance that we all learned is that, in designing a program of insurance, benefits should not be so generous as to change the underlying contingencies, otherwise you can destroy the insurance principle. I will give you a couple of examples. If you insure a house or a restaurant for too high of an amount against fire, you are asking for arson. What level is too much? Actuaries know if benefits are raised to a certain level of insurance, some people will make trade-offs and change the underlying probabilities. If an actuary designs an income replacement program with above 70% replacement, self-selective disability or employment should be expected to be generated.

I would like to illustrate this principle with a graphic that has never before been published. It comes from an actuarial antiselection study of unemployment insurance that I did for the federal government back in 1979. It's based on a 50,000-person study, all 50,000 being unemployed, spread across provinces of Canada (Chart 1). From the left to the right, the graph analyzes unemployment from the east coast to the west coast, with Canada as a total on the far right. The lines trace the cost of unemployment insurance by category of family. My theory was, and the study demonstrates it fairly well, that actual family status given the current design of the national unemployment insurance plan in Canada was the single largest determinant of unemployment. It was more important than region, age, sex or education.

CHART 1  
50,000-PERSON STUDY OF UNEMPLOYED IN CANADA  
BY PROVINCE  
(BASED ON INSURABLE EARNINGS)



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The bottom, black gray line represents comparative unemployment rates for a single person. In Saskatchewan, Alberta, and British Columbia, in the late 1970s, unemployment was down around 1–2%. You'll see that comparative unemployment moves up sharply as you move from east to west. As you move from high unemployment to low unemployment regions, the comparative unemployment cost of a single person rises. That seems counterintuitive, unless there is a very large amount of antiselection. If you think about it, where can a person select best against the national unemployment insurance program? Where can a job easily be obtained, if desired? These claim costs are all from people who had jobs who lost them. We see that the aggregate claims cost increases because the economy is better for young single people. In other words, the study suggests youth-selected unemployment, in those days, at 70% of salary.

The dotted line represents claims costs for the higher earner of a couple with two wage earners with a child. Normally, this was the husband. The comparative level of unemployment across Canada is essentially stable in all economies because that person has the least mobility, the least choice.

On the other hand, if you move to the lower income earner of the couple with a child, which is the light gray line, you can see that the relative level of claims is double. These earners have more freedom to move. They can choose to be unemployed. They can choose to trade off 70% of salary (which is what the national benefit was at the time) and there are social pressures to be home looking after a child. You can see that the relative level of claims costs doubles for the lower earner of a couple with children compared to the higher earner. The top dark gray line is the claims costs for a third earner, a young adult earner in a three-earner family. You can see that the young adult earner in a three-earner family has about three times the unemployment claims cost of his or her father. This study was a straightforward example of the application of insurance principles, looking for antiselection in an income replacement program. Anybody who has designed a long-term disability (LTD) program knows that at a certain point you have to protect against antiselection.

The other theory that we tested was what happened to young adults living away from home. The answer is, although they're not shown on this graph, relative claims costs are at about 60%. This suggests that, if a person has taken on the extra responsibilities of making rental payments or household payments, he or she has less mobility and less opportunity for antiselection.

However, if the same individual is living at home, since expenses are paid for, income can be traded off easily for leisure. This type of analysis is an example of an actuarial approach to social program review to detect moral hazard or antiselection as we call it.

How does an actuary get nontraditional assignments? To be successful, from my experience, one can only focus on a narrow range of issues. In my public policy consulting, I essentially concentrate on financial institution regulation and social program changes in Canada or internationally. The first step in obtaining an assignment is to simply form a view as to whether the design of the program makes sense in view of what you have learned as an actuary whether the program design is effective or efficient.

The second step is to put this view in writing, that is, if you think the program design is wrong, hypothesize about it and start monitoring it. Make wagers on it to sharpen your

own interest. The third step is to test the view against what is known. I do economic homework for up to two hours daily. I spend two hours a day reviewing economic and other academic journals, newspapers, and financial analysis, to make sure I am up to date on anything that happens in those two areas. I also try to get access to people who know about these programs, to test out my theories, to see whether there are holes in them.

I would like to give you a few quotes from the Bible. Ecclesiastes 11:16 has a quote which, I believe, relates to what you should do during a working day and what you should do at night if you want to get into nontraditional consulting. The quote is: "Sow your seed in the morning and at the evening let not your hand be idle." It seems to me that during the daytime you should do your regular work, but at night you should take time to think about what interests you. Sit back and take another view. According to the Old Testament: "For you do not know what will succeed, whether this or that or whether both will do equally well." (Ecclesiastes 11:6) One thing I found is that I had no idea what concepts were going to be worthwhile and what concepts weren't going to be worthwhile, but it was worthwhile systematically to examine alternative ideas in the public policy arena.

The fourth step is to publicize your conclusions. Again, from chapter 11 of Ecclesiastes 11, "Cast your bread upon the waters, for thou shalt find it after many days." I tend to give a lot of speeches on public policy formation. My rule of thumb is that every two speeches I give leads to one client, but that client often might not appear for up to two or three years. If you give speeches about what you think it will be like five years from now, about what may be right or wrong with current conventional thinking, you're likely to find someone in the audience who thinks about what you've said and who says afterward, "You have an interesting idea, can we work on that?"

Let me illustrate some more lessons I've learned at the school of hard knocks of nontraditional consulting. The most powerful approach I use is one I stumbled upon (I wish I had stumbled upon it earlier). When I'm talking with people in a field that I think I know something about or have an application in mind, but don't quite know it can apply, I try to get them to explain their ideas. I say over and over again, "I'm not sure I understand what you mean, can you please explain it to me again?" I find that a lot of people have formulated views about their side of the problem which tie in with my views as an actuarial practitioner. By getting them to explain their practical knowledge and tying it in with the mind set I have in terms of long-term thinking and stochastics, they often lend me support for my ideas about public policy consulting. I've learned if I show off (or assert my own arrogance or superiority) too soon, it gets back to the people that count, and I've lost the assignment. My rule is basically to act dumber than I am and listen a lot.

Finally, don't forget the need for the C-4 risk provisions for adverse deviation for business risks that you haven't even contemplated that's going to come in from the blue and shatter everything. "See far," is how they would pronounce C-4 in Newfoundland. It seems to me that it does involve looking into the future and being aware of those remote contingencies that can just appear out of nowhere. When you are doing public policy consulting, it's really important. You must cast about for unlikely events that can become pertinent to become a skilled public policy consultant.

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MR. MCCROSSAN: I think the last rule that I cited of constantly asking questions, is really important. You have an expertise to bring as a trained actuary which brings significant value because you have a way of looking at problems that is different from the way that other people look at them. You shouldn't assume that you have knowledge that you don't have. That's why it is important to listen to people and then advance ideas; see if your audience is receptive and then go ahead and test your ideas. Take the case of the antiselection study in unemployment insurance that I described earlier. When I first proposed that to the Prime Minister in 1979, he took it to the unemployment insurance commission and said, "Is it possible that we have large scale voluntary unemployment in Canada?" They said, "No, we'd know about it because we audit claims regularly." They just completely turned down the concept of large scale antiselection. What the commission decided was to have Statistics Canada, a government agency, identify 50,000 households with unemployment and surveyed and monitored their experience, both during the claim period and after the claim period. It would cross-reference age, sex, education, and region, with family status. The study demonstrated statistically that between 15–20% of the unemployed in the late 1970s were voluntarily unemployed. What the study couldn't do was identify which individuals they were. Statistically we could identify that there was massive antiselection, but we could, in effect, tell the unemployment counselors where to look for the antiselection. I had a theory, and I sold the commission on running an experiment.

My advice is don't say, "I have the answer and I'm going to prove it this way." Instead say, "I may have the answer. Let's run an experiment. Let's agree on how we design a study to test whether it's so or not so." As an actuary, you must work in a multidisciplinary approach.

MR. GUTTERMAN: Mike, how do you as a practitioner approach this problem?

MR. DEMNER: Whenever you get into nonmainstream actuarial areas, you have to be careful, if you are on your own; try to use peer review. If you are going to be doing something where you are out on a limb, you have to make sure you discuss it with others in your profession. I find that a lot of the clients that I work with are not looking for very sophisticated ideas. They are looking for basic advice. I think as long as you keep it simple, you shouldn't encounter problems.

MR. GUTTERMAN: Alan, you went to foreign countries where there are no standards of actuarial practice. What was your feeling about going somewhere where there is much less regulation than was the case in Canada?

MR. COOKE: There are the standard actuarial issues, but maybe the greater issue in my case, was going to a country which I had no knowledge of beforehand. You have to talk with a lot of people in the country, touch base with people in insurance and other industries and learn from talking to people on the job. Actuarial considerations are not significant in a lot of the countries since many of the underdeveloped countries that I used to go to only had money-purchase plans. My major concern was just learning what was happening in the country.

FROM THE FLOOR: We have an actuary in our company who recently moved into a position with the private security analyst department. Could you comment on what sort of an opportunity there is for an actuary with the type of special skills an actuary brings.

How does that opportunity fit into the future considering the new investment traps and things like that? How do you analyze the companies with which you would do private placement bonds and related projects.

MR. MCCROSSAN: I'm aware of actuaries who are doing that now. Historically, one of the problems of our profession has been that we have been too busy doing what we routinely do. If you go back into the literature in the 1930 and 1940s, you'll find a tremendous amount of work on operations research or operational research as they call it in the U.K. It wasn't pursued by the SOA as part of the actuarial mainstream as it was in Mexico. Operations research is another profession that has developed alongside ours in Canada and the U.S. Similarly, when you look at a lot of the ruin theory applications in the 1960s and early 1970s, you see financial analysis. I think actuaries are very good at developing ideas, but not terribly good at exploiting them, because they are too busy doing what they have traditionally done.

Different countries have different experiences. In the U.K., investment banking has been a very important part of the actuarial profession's mainstream because in the Great Depression of the 1930s, there were many unemployed actuaries who could calculate bond values quickly. This was an entry into the investment houses. When I lived in the U.K., I found that the equivalent of the Dow Jones Index in the U.S. was called the Actuaries Index in the U.K. Actuaries are very much a part of the investment community in the U.K. and in a way that they have never been in Canada. In the U.S. there are exceptions like Jim Tilley, who has done quite well with Morgan Stanley and done a lot of good theoretical work. Our thinking is very applicable to financial analysis. I don't think we've exploited it. My own daughter has taken a master's course in derivative pricing in the last year. She came to me and said, "There's no literature on how this methodology started off." I said, "I know where it all is. It's all in the *Transactions of the Society of Actuaries* and in the *Journal of the Institute of Actuaries*. Literally, derivative pricing is an area that has developed and forgotten its beginnings, because its beginnings were with us. Now they price these things using the Black-Scholes model. But the beginnings are with us. It's a direct application of our type of thinking, and it is still open to us.

MR. DEMNER: I have a few friends in Vancouver who are seriously thinking about getting a chartered financial analyst (CFA) designation, and doing investment counseling and buying securities in the market. One of them is English; this is in their background and they are very good at this sort of stochastic modeling. It is a natural extension of our actuarial background. But most of us see it as a different area, an area where actuaries have not traditionally been involved. They see big opportunities there. I think we'll see more actuaries getting into it.

MR. MCCROSSAN: As one concrete example, the government of Canada has introduced real return bonds, or cost-of-living indexed bonds. Much of the work in both product design and in subsequent promotion to pension funds was done by an actuary who recognized that if pension funds have cost-of-living indexed obligations, it is natural for the government to issue bonds denominated in real dollars, which can raise funds cheaply.

MR. GUTTERMAN: I hope that a lot of actuaries will use the investment track to get involved in this practice area. I would like to caution you that although there are no standards of practice or limited standards of practice in this area yet, there still is the code

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of professional conduct. When you go out on your own in a new area, you have to refamiliarize yourself with it.

**FROM THE FLOOR:** I am currently working with a fellow who just came back from industry to consulting. I also work with a client in Toronto who did the same thing. He talked a little bit about the decision to come back to consulting versus staying out of the hot seat. My impression was that there are a few years of euphoria where you are controlling your situation much more than the consultant who doesn't know what's coming at him or her. You are the third person I know who has come full circle back to consulting after going that route.

**MR. COOKE:** A very good question—at different times I weighed in my mind the pros and cons of consulting versus corporate work. I know a number of people who have gone from corporate to consulting and back to corporate, as well as from consulting to corporate and back to consulting again. I have concluded that on balance, corporate may be better because the one reward you get in corporate that you don't get in consulting is seeing something through to the end. One of the frustrations I find in consulting is you come up with a good idea, you set it out for the client contact, and then the contact has to run with it. Sometimes the client contact runs with it, sometimes he doesn't, but you lose control of your idea after a certain stage. I found when I was in corporate, one of the biggest rewards was taking an idea or a solution to a problem from start to finish. I think that's the one major advantage of corporate over consulting.

**MR. DEMNER:** I think what we are going to see is a trend. I do contract work and sit in a client's office for about two or three days a week and I then consult with other clients. I think we may see more cases in which a company likes to have a consulting actuary on-site. In such a case I think you get the best of both worlds. You can do your own consulting, because that can be interesting and then you can also find out what some of the needs are of the corporate culture. I find they really appreciate you, maybe more than some of your consultant friends do, just because you have the expertise. Thus, I think we might see a little bit more of both aspects.

**MR. COOKE:** I think that might be the best of all worlds. When I was working in the U.K. there was one corporation for which I acted as the internal benefits manager for two days a week. You get all of the rewards that go with a corporate job, plus you can consult the other three days of the week; it was a nice mix.

**FROM THE FLOOR:** In public policy consulting as well as private sector consulting, you have to start by helping the client identify the problem. In many cases, you also have to educate them on the terms and conditions and the skills that an actuary can bring to bear on the problem. What do you see as the big differences between public policy and private sector consulting?

**MR. MCCROSSAN:** The invisibility of the actuary in the public sector. Currently, actuaries are not anyone's first choice in public policy consulting on any problem, so they tend to get into it through a variety of second-hand means. Usually, there is a dead end of some sort reached and somebody says something like, "He did something interesting; let's ask him." Sometimes they even call you in and they don't know if you can do anything. In some of the nonfinancial institution acquisitions I've worked on, I've had people say, "We had no idea what you were going to do for us. We're buying a company and we'd

like you to just listen to a description of the transaction and see if it makes sense and tell us if you have any ideas.” You can find large amounts of money, like \$1 million, \$2 million or \$3 million literally over lunch. That can multiply many times just by asking more questions. Sometimes you get called in to listen to such questions as, “Can you just tell us if we’re missing anything?” We may end up with an hour or two of consulting with no significant findings. Or you may end up saying, “Have you thought about this?” They say, “What’s that?” Then you’re away to the races. You have a new consulting opportunity opening up.

One example of this situation involved the development of the Home Buyers’ Plan in Canada, in which taxpayers can withdraw money for a first-time home purchase from RRSPs, which are similar to IRAs in the U.S. The plan makes available for first or subsequent home purchase, an amount of money on an interest-free basis that can subsequently be repaid in the tax-sheltered vehicle. I became involved in the development with the following parameters stated by the government: We’d like to stimulate housing. We’d like to encourage home ownership, and we’d like to do that in a way that involves no cost to the treasury and no increased deficit. Given the parameters of stimulating housing, encouraging home ownership, and avoiding cost to the government, all at a time of recession, I had to come up with ideas. I played around and came up with an idea, which in fact, had negative costs. That is, I thought people would be attracted to it and if they bought it, it would actually increase the long-term tax base for the country. Finance didn’t accept that idea, but once they understood that you could not only develop a program at no cost, but actually do it at a negative cost (that is, it would improve the fiscal situation), they were away to the races. We worked with them closely for about six months playing with related ideas. They refined the financial aspects of the idea. It made it into either the February 1991 or 1992 budget. Its genesis was a discussion about a problem with the economy and a decrease in the level of household construction and home ownership. I redefined the problem by not limiting potential solutions, with the result being the development of the Home Buyers’ Program.

MR. GUTTERMAN: I find in my social policy consulting a lack of identification of risks, not really understanding what types of risks are involved that may negatively impact future outcomes. Second, I often find a lack of long-term focus that Paul mentioned earlier. I think government is typically very short-term oriented, probably to a greater extent than private corporate managers.

FROM THE FLOOR: I would like to comment on another nontraditional area that we’re seeing more of. This is where banks may utilize group pension actuaries. There has been more education in banks in terms of what actuaries can do for them, with more actuaries interested in heading up financial services areas which in turn can lead to being money manager positions and related jobs that may be of interest. Any comments on this type of employment opportunity?

MR. DEMNER: While not involving banks, part of my practice that I am starting to develop involves financial counseling. I think that this will be a big growth area, and not just for actuaries, but for anyone with some of the skills developed through an actuarial background who can work with both organizations and individuals in providing such services. I do some individual consulting as well as corporate consulting to develop not just preretirement counseling programs, but providing seminars and advice to individuals. I know banks are starting to look into these services. I don’t know whether they will hire

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actuaries to provide this function. Both this area and the provision of administration assistance in other areas will be important. I think this a natural fit for actuaries. If you have a software background, there's a great deal of software need in this area as well. Providing independent advice will be significant in this area.

MR. MCCROSSAN: My observation relates specifically to Canada, but I suspect it is similar to the situation in the U.S. Both countries are behind Europe and the South Pacific. BankAssurance goes through a series of phases. In the first phase, a bank wants to know how can it sell more products through its branches. There is a role for the independent actuary to bring products to them or to negotiate products for them. This phase tends to last about five years. The second phase involves a desire to get more of the profit by the bank who, by then, believes that the insurance company partner is making too much of the profit associated with the products. So the bank will hire somebody to get more for them. The third phase is, how can the bank make even more profits. This stage usually involves tax arbitrage and such approaches as the formation of a captive insurance company in the Caribbean. Again, the actuarial skill set can be extremely valuable, including running of insurance companies off shore to capture more of the profit, which, of course, involves the invisible passive fourth player I mentioned earlier—the government. The fourth phase is actually having the bank be an underwriter. All of the major banks in Canada, except the Bank of Montreal, are now planning to become underwriters. The Bank of Montreal (BMO) places advertisements for qualified insurance staff. Clearly banks have been hiring good people, including a lot of actuaries. They started with experienced middle management and upper management people and now they're hiring newer Fellows and students. I believe banks will be a major source of employment opportunities. These will initially be concentrated in the insurance area. However, if the actuaries prove to be good, they will open up their own opportunities elsewhere in the bank and show other things they can do. Banks are currently hiring actuaries in Canada, with potential for other future opportunities.

MR. GUTTERMAN: Both the areas that have been mentioned are the concern of the Actuary of the Future section, the sponsor of this session. If you have any ideas related to this area or the expansion of the profession, you should get in touch with the section or the Banking Task Force headed by Lynn Peabody. In addition, the SOA Foundation is also studying possible areas for actuaries to get into. In summary, the SOA is trying to investigate these opportunities and is looking for more ideas.

FROM THE FLOOR: One of the best descriptions of what actuaries are equipped to do that I've heard is that actuaries are trained to estimate the financial implications of future contingent events. Obviously, contingent events and financial implications have connotations relating to the financial services industry. I'm wondering if you know of specific industries that actuaries might be equipped to answer questions about and are there opportunities in specific industries other than the financial services industry?

MR. MCCROSSAN: I would like to expand on your definition. Actuaries have in the past and continue to put a value on an uncertain future event and design systems to cope with these uncertainties. The second part is where the real value-added nature of the actuary is derived. I think the area of monitoring and controlling and designing mega capital projects should involve the actuary. Actuarial involvement is not otherwise obvious, except that the mega projects are long-term in nature. There are many contingencies involved and there's much contingent risk handling to do. The Institute and Faculty

of Actuaries in the U.K. have identified capital project management as a significant growth opportunity for actuaries. They've done something that probably wouldn't work in the U.S. because of anti-trust laws. Basically, the Institute arranged with actuarial firms to free up key practitioners to work cooperatively on such projects with the government. These actuaries will not be working as competitors, but they will be working to bring an actuarial skill set toward capital project management. So far it seems to be quite a success. One of the interesting offshoots of this experiment is that one of the Big Six accounting firms has hired some of those actuaries away to form a capital projects management group. That demonstrates that other people see it as a successful initiative and one that has potential for future employment.

MR. COOKE: One of the areas that I was involved in when I was with the shoe company was risk management. Like most large organizations, the organization I worked for had a captive insurance company. I think there is a fair amount of work that could be done for large corporations, both in employee benefits and in property and casualty insurance; we can look at ways of using their captives effectively to manage risk.

MR. GUTTERMAN: Also, financial risk management in financial institutions other than insurance companies has become increasingly important. Actuaries have not, in my opinion, done enough or contributed enough in that area.

MR. R. SPENCER KELLY: As an actuary working in the banking industry, I would like to expand on your comments. There is a great deal of work being done by banks and investment dealers from North America in determining an appropriate level of risk-based capital (RBC). It's not a government definition of RBC, but an economic definition. This work is not only being done now, in the larger institutions, but it is also beginning to trickle down to the smaller institutions as well. I'm very surprised to see this work going on with so few actuaries involved. I think there is tremendous opportunity for actuaries to add value in this area.

MR. MCCROSSAN: That's an interesting comment. I might add that I am involved in one of those projects now for a major financial institution trying to construct sensible RBC management techniques. Once again what's interesting to me in the project is that, in Canada, we now have the minimum continuing capital and surplus requirements (MCCSR), in the U.S. there is RBC, but if you go back to the original discussions of the concepts behind RBC, which took place in the late 1970s and early 1980s, you would see there are all kinds of theoretical constructs that could not be handled by the computing power of the day. These limitations led the insurance industry to take a lot of ad hoc decisions and trade-offs to develop capital formulas that were easy to calculate, measure and were not easy to fiddle with. If you go back to the theoretical bases underlying RBC, there's just tremendous value to be had by mining those old Society of Actuaries *Transactions* and *Record* volumes to determine what capital a financial institution should have to cover the risks it has taken on. Given the enormous expansion of computing power that's available now and that's going to be available in the next five years, I think we really should be looking at going back to basics and building up RBC management techniques again. I have a feeling that if we would have the same theoretical discussions today, we would derive completely different models than the regulatory models that were driven by the fact that the best theoretical calculations couldn't be done.

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MR. GUTTERMAN: An additional perspective has been given to me by my friends in the banking industry who define long term in terms of weeks and months, rather than the actuarial definition of long term which is in terms of years. Some actuaries will have to change their perspectives to look at this long term, but they will have to recognize the types of assets and liabilities they're dealing with. Getting into a new area means taking a risk. In terms of taking risk, whether it involves entering a new practice area as the individual actuary or a new mode of operation, what advice would you give actuaries who are thinking about this, that might push them to try to take on a new, or in some cases, a totally new task or career?

MR. MCCROSSAN: I can tell you how I did it. I think the advice is sound. When I was with Mercer as a vice president in 1980, I went to its Canadian president and I said, "I want to open up an acquisition practice." He said, "What's that?" I responded, "I really don't know, but I think there's money to be made there. I also think there's interesting work and I think I want to get into it." He said, "All right, let's give you two years, but you have to earn your money doing pension consulting in the meantime." In other words, minimize the risks, but keep the money coming in. If you identify an area you want to move into, set about actively prospecting in that area, but in the meantime keep busy doing what brings in the bread. If I hadn't opened up an acquisition practice of any sort at Mercer, I don't think anyone would have noticed, because I was still bringing in a lot of pension consulting. At the same time I set about attending seminars, meeting people and finding opportunities so that I could get into acquisition consulting. Similar techniques actually led to my federal pension assignments, too. Just keep the money coming and don't put all your eggs in the basket of something that is a glint in your eye. That's going back to Ecclesiastes again. You don't know which of your ideas are going to pay off. All you can do is put ideas out there and try to make them work; if they work, great; and if they don't, you move on.

MR. DEMNER: I think the important thing is, as Paul said, you must have or obtain an appropriate background. I think you should stay close to what you are used to doing. When I went on my own, I had a number of clients and contacts to look up. I thought I was going to do a lot of work with the existing clients. Although it didn't necessarily work out that way, I did some contract work for the company I had worked for. I think you have to keep in touch, at least at first, because the first year or two are probably the most difficult. Over that time, if you are very good, you will have to provide good service and you must be available all the time and at a competitive cost. It doesn't mean you must be priced the lowest, but you must be competitive. You can develop your business through word of mouth and keep your contacts with actuaries and other professionals. In order to get yourself over that initial hump, you have to take a chance at whatever you do; try lean and mean in the early going. Mainly, just keep in contact because you never know where your work is going to come from. It might, as Paul mentioned, take a couple of years if you're initially talking to somebody to get a project. You have to be flexible enough to be able to handle that. You have to keep at it and don't give up after two or three years when you don't think you're doing very well.

MR. COOKE: I think that if you are going to take a risk, it should be for a potential reward. I don't necessarily mean financial reward. When I decided to go to a nontraditional career, it was something I was very excited about because it sounded interesting. When I look at my years with Bata, I don't think there is anything else, job wise, I would have wanted to have done for those nine years of my life.

