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Marketing Actuaries to Nontraditional Employers—What Product, Exactly, Are We Marketing?

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Summary: So you say you want to apply your incredibly unique skills in a nontraditional industry. But what exactly do you bring to the table? How do we quantify our unique skills and articulate them to nontraditional industries to enhance their awareness of actuaries and the role they can play in these industries? The profession has struggled with developing a strategic marketing plan for expanding actuarial opportunities to nontraditional employers. Part of the struggle centers on clearly defining and articulating the “product” that actuaries have to market. This role play helps clarify this definition.

Mr. Joseph Paesani: In trying to keep with the somewhat nontraditional theme here and the nontraditional format of this session, it struck me that in Disney World there are so many opportunities to do things with characters. I wanted to see if we could enhance the presentation with characters.

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So I called the Disney Institute and asked them what type of options or things would be available. They told me about the deluxe plan of characters, which I jumped at right away because I thought it was a great idea. It costs several thousand dollars. Had we gone that route, we would have been able to get four marquee characters to come here for the entire session, mingle with the group, give autographs, etc. I know the Society will sometimes fund some of those extraordinary expenses for the meeting, so I called Barb Choyke with this great idea. After she finished laughing, she said, "No." Then, I asked my panelists here if they'd be interested in chipping in or having their firms chip in and they all threatened to quit on me.

So, I called the Disney Institute back and asked if they had other options. They told me about the basic plan. For the basic plan, which costs \$1,000, you can get one character to show up for ten minutes and do absolutely nothing other than just stand there. It couldn't be any of the big characters like Mickey or Minnie or Pluto, the Genie, or the Little Mermaid. They are all out of the question. But we could get a second-tier character. Again, for the price, I couldn't get much support. I called back a third time and asked if there was any other option available to us. They finally told me about the economy plan. For under \$20, we could kind of re-create many of the good qualities of the deluxe plan. I jumped at that one. We will now present our character session.

This session is being sponsored by the Actuary of the Future Section, of which I'm a member. The Section had its genesis in the Actuary of the Future Task Force, which was started in 1985. In 1989, the task force was charged with developing a plan for accomplishing the following objectives:

- To identify and prioritize nontraditional opportunities for Society members;
- To develop a plan for educating nontraditional employers about actuaries and what actuaries can bring to the table;
- To educate Society members about nontraditional opportunities;
- To position nontraditional employers to encourage them to hire actuaries;
- To position actuaries to be proactive in looking for these nontraditional opportunities.

The work of the task force was done with a defined view of the actuary. We defined the actuary as a financial architect and a potential manager of both public and private enterprises. Based on his or her experience analysis and risk evaluation, the actuary can measure, respond to, and communicate the financial implications of current contingent events. This sounds like a mouthful, but we attempted to be very general in our task force work because we believed there was that the actuarial profession had to offer beyond the more traditional arenas of life insurance and employee benefits.

In 1991, the task force presented a report to the Board of Governors with 12 specific recommendations. The report was approved in its entirety, and some of the recommendations have been carried out or are being worked on. For example, one of the recommendations was targeted to the education system. We recommended that we review all the current education structures in place. There was a very specific recommendation made for the development of what we were calling a financial track (there was also an investment task force that was working at the same time we were), and the results of that became the investment and finance tracks that exist on the syllabus today. We recommended reviewing all recruiting materials and the public information that we make available to ensure they're appropriate and consistent with where we saw the profession going. Also, we recommend trying to develop relationships with targeted nontraditional employers to help foster a better understanding of what the actuarial profession can do. One example of this is the development of several task forces, including the Task Force on Banks and Financial Institutions.

The Actuary of the Future Section was created at that time to help address some of the other issues that came out of the task force report. At the section level, we've tried to look at developing career-planning prototypes for finding ways for actuaries to bridge into nontraditional areas and white paper research. We've also tried to work more closely with universities and search firms to increase their understanding of what actuaries can do to try to get a better understanding of what other industries are like.

A particular struggle of ours has been trying to develop a strategic marketing plan for expanding actuarial opportunities in nontraditional arenas. It's something that different groups, and different individuals in the Society have tried. There have been many success stories of actuaries that have bridged into nontraditional areas. But most of the success stories tended to be more individual success stories. For example, an actuary was able to play a role for employer X because employer X happened to know the actuary and his or her abilities, not so much because the employer was consciously hiring an actuary. There are a great deal of those type of individual success stories. But there has been no real concerted effort at the professional level to try and make other industries aware of what actuaries can do.

The struggle probably stems from at least two items. First, I think it's probably safe to say that as a profession, we don't have a clear understanding of exactly what it is we have to offer. Individually, we can all state what an actuary has to offer, but if you asked ten different actuaries, you might get ten answers that would sound different to a nonactuarial person. Second, as a group, we've probably not clearly and effectively communicated to nontraditional audiences what we are capable of doing.

In this session, we are going to use role play to address the actuarial product. Through interactive discussion, we will dramatize a particular set of situations, to highlight the product that we have to offer. We have three objectives. First, we hope that you have a better understanding of the actuarial product, that is, the thing that we have to offer. Second, we hope you have a heightened awareness and appreciation for the attributes that nontraditional employers may look for when they're hiring professionals for their organizations. Third, we hope you get a better understanding of how we, as individuals, as well as a profession, can approach nontraditional industries and roles.

It's my pleasure to introduce our panelists for this session. They have helped me quite a bit in putting this session together and I appreciate their efforts. Barbara Opper is chief officer of financial policies and projections at the World Bank in Washington, D.C. She spent 12 years at the Federal Reserve Board of Governors as policy economist monitoring commercial banks and other financial institutions, especially regarding their role in the U.S. capital markets. She has also been with Traveler's Insurance Companies as a financial economist reporting to the chairman of the Finance Committee. She was with the ACLI when it was the Life Insurance Association of America. She researched life insurance companies' role on capital markets. She started her career at Connecticut General in the pension actuarial department, so she has very strong actuarial roots. She's a member of the SOA Task Force on Banks and Financial Institutions. She will play the role of the nontraditional employer. From her perspective within the commercial banking industry, she will attempt to define a specific need, and then address how she feels an actuary could fill that need.

Bob Buckner is assistant vice president and actuary with ERC Life Reinsurance. His current responsibilities include pricing and marketing of life reinsurance in the eastern U.S. Bob is very comfortable with speaking before actuarial clubs and other groups. He has just been asked to relocate from New York to Philadelphia. Bob will play the role of the actuary. He will address how the actuary is able to fulfill the specific need, and then will extend that into a more general case.

Aimee Jordan is executive vice president with Andover Research, a firm that specializes in placing actuaries and benefit consultants. She has been with Andover Research for 12 years. Previously, she was in public relations with Burson-Marsteller and the Softness Group as vice president of consumer products where she promoted many household items including Duracell batteries and Arm & Hammer baking soda. She has spoken on television, radio, and at conventions in many cities across the country. Before public relations, she was an editor with *Scholastic* magazine for two publications geared at high school students and teachers. She began her career as a home economics teacher at both the junior

high and high school level. She received her master's degree in communications from New York University, and her bachelor of science degree in education from the University of Rhode Island.

At Union Fidelity Life Insurance Company, I'm responsible for product development and actuarial marketing support to the growth of our affinity and financial institution businesses. I've been at Union Fidelity for five years. I graduated from Ursinus College in 1981, was a first-round draft pick of the Provident Mutual Actuarial Student Program, and I also worked with Arthur Andersen and Fidelity Mutual.

It's my pleasure to introduce Barbara Opper who's joining us from the banking industry.

Ms. Barbara N. Opper: Commercial banks typically have a very short-term risk exposure. At the big money-center banks, for instance, the bulk of their assets and liabilities are repriced or mature within one year. Banks, for years, were accustomed to very straightforward exposures. They took credit risk in their assets, and they were exposed to interest and repricing risks. Their liabilities were deposits, very straightforward products. As a result, their idea of strategic planning was geared toward marketing. But now the world has changed. Markets are more volatile and global; many new competitors have come into the field, and this has put pressure on banks to find new ways to profit.

Mr. Robert L. Buckner: What do you see as the major ramifications or exposures?

Ms. Opper: Well, there are two areas that come immediately to my mind. One is risk-based product pricing, and the other is institution-wide risk management.

Mr. Buckner: What do you mean by risk-based product pricing?

Ms. Opper: With futures, derivatives, asset-backed securities and so on, risk-based pricing is vital. These products are bought and sold between banks every day, and the pricing for these transactions often is developed without real quantification of their inherent risks. Much of the pricing is done with flaws that would be obvious to actuaries. Consider mortgage-backed securities, for instance. You can separate the debt servicing stream into at least two pieces, one piece is more predictable. It's tied to the fact that people don't stay in their houses for the entire term of the mortgage; they sell them to move someplace else. That can be quantified, and it's fairly reliable. But there's another piece which is a stream of debt servicing, that is very volatile. It has a lot of noise in it, and it's much less predictable.

Mr. Paesani: A lot of noise?

Ms. Opper: Noise, yes. As interest rates fall, people will prepay so that they can refinance at better terms. The managers of portfolios will often try to sell off a component of a mortgage that's likely to be affected by that prepayment, so that they can feel that they're locking in a return on the portfolio that they keep. The seller often can set a price that is satisfactory from his or her portfolio objectives, but the buyer needs to agree and realize a price for purchasing that is compatible with the inherent-risk characteristics in his or her portfolio. The future risk can have a very wide tail on these streams that have a prepayment risk, which can result in very significant gains or losses compared to what they expect. This tail must be quantified so that the risk can be measured and managed. Although the buyer can find his return based on frequencies, often the bank, which is the buyer of these securities, is not hedged in terms of the residual risk.

Mr. Buckner: Barbara, as I listen to you describe the situation, it sounds analogous to some kinds of reinsurance in the insurance industry.

Ms. Opper: I think that's a fair analogy.

Mr. Buckner: As you know, in the reinsurance area we're frequently called upon to coinsure blocks of annuities. We come up with an initial ceding allowance—effectively a purchase price—and similar to your seller, our seller has now locked in his return. We, as the buyer, on the other hand, need to conduct a lengthy analysis of the annuity block to determine its value. This analysis has to take into account the current status of the annuity, such as how many years it has been in force, what interest rate environments it has been through, and other factors. It's similar to examining the seasoning of your mortgage-backed securities. From there, we have to consider what assets we're going to receive, the level of quality, the coprotection, the duration, all of these figure prominently as we attempt to match the assets and liabilities. With mortgage backed, as you pointed out, if interest rates drop, the mortgage is typically prepaid faster—that's the noise you were referring to. With annuities, we usually have the opposite problem; that is, when interest rates rise, we either have to credit more interest, cutting our margins in an attempt to conserve business, or risk having policyholders surrender their policies. Many companies use new premiums to pay these surrenders, leaving their assets intact. Sometimes, though, the bleeding is too great, and we're forced to liquidate assets and realize capital losses. Before we get into this money mess, we carefully examine what might happen under various economic scenarios.

Ms. Opper: That's right, Bob, but, unfortunately, with some of these situations in other industries, the people who were doing these transactions either underestimated the amount of capital they needed to put under these risks, or, frankly, ignored the notion of having capital under them. This meant that there was

a great deal of leverage, and that either produced a very good outcome or an extremely bad outcome.

Mr. Paesani: Barbara, from your perspective, what skill sets do you think are needed to address this type of need?

Ms. Opper: First of all, a person must understand risk, and they must also be very, very adept at statistical analysis with a very good understanding of stochastic distribution.

Mr. Paesani: Do the folks typically doing this in the banking industry have this type of background?

Ms. Opper: I would say no. Bank professionals and decision makers typically have strong academic backgrounds; they tend to be either Masters of Business Administration (MBAs), economists, or maybe of the more academic finance stream, which is very different from an actuarial stream. The people may be very intelligent. They're very good, and they're very serious, but they really are not trained to understand or manage risk.

Mr. Paesani: Why do you suppose that this is the typical background for this type of professional?

Ms. Opper: I think it stems from the history of the banking industry. I think the people who today are responsible for commercial banking personnel decisions were trained and developed in a different era when true risk management was really not a primary requirement for being a successful commercial bank. As a result, these people have been slow to realize and understand the magnitude of the risks they're now exposed to, and now that they're starting to appreciate this, they find that they don't have available to them the skills that they need to actually do this kind of risk management.

Also, bankers have their own language. In order for practitioners with risk management skills to be really effective in the banking industry, they have to understand and communicate in words that the bankers can understand. I think the reason actuaries probably haven't been traditionally regarded as people who commercial bankers can turn to stems from two sources. First, the actuary typically hasn't demonstrated to the bank what he or she can do in language that the banker can understand. Second, when the banker is looking for someone to do risk management, he or she is not thinking about this skill set in terms that reaches into the actuarial profession. So I think it boils down to an awareness issue between the banking industry and the actuaries.

Mr. Paesani: So the people hiring the professionals to fill these roles today probably don't have an understanding of the skill set required to really carry out the role?

Ms. Opper: That's right, I think that is the case. It's often true that when bankers realize the need to hire someone stronger to fill risk management roles for risk-based product pricing, they often think that strong equates to rocket scientist. As a result, they tend to look for people with strong algebraic and scientific mathematical skills, and often that means a person with a Ph.D. in physics.

Mr. Paesani: Where does the banking industry typically go when they look to hire people?

Ms. Opper: For these risk-based products, I think they tend to look in the investment banking industry. That's because the people who are involved with these derivative transactions are often investment bankers, so they serve as a natural choice when commercial banks need to start recruiting. Investment bankers have been quicker to realize the need for disciplined risk-based pricing skills, and they're a little further along than the commercial banking industry is in terms of those skills.

Mr. Paesani: I know that it's becoming more common for actuaries to work for investment bankers. Are there any other areas within the banking industry where you feel the actuarial skill set is applicable?

Ms. Opper: Yes, I think it is in asset/liability management for the whole balance sheet, which is to say institution-wide risk management. Many leaders in the banking industry have now realized this need, and they have started to look for professionals disciplined to serve a role that I think is quite similar to that of a chief actuary in an insurance company. Also, the commercial banking regulators have recognized the need for risk managers at a very high level as necessary for prudent pricing and for the risk management of all banking activities. The regulators have identified the need for strong modeling skills to understand covariances in risks, so that risks can be measured properly and managed prudently. The regulators have recommended that commercial banks build a disciplined expertise for risk management. As I said, the way they are describing this is a role that's very similar to that of a chief actuary in an insurance company.

Mr. Paesani: In summary, Barbara, from a banking perspective, how would you summarize and define the actuarial product?

Ms. Opper: I think the product is the measurement and communication of the financial implications of future contingencies, so that appropriate business decisions

can be made. The actuarial product can serve to manage a commercial bank's overall balance sheet for the pricing and development of new instruments. Banking leaders have begun to recognize the need for a strong, independent, centralized risk unit, and the banking regulators have recommended this as well. I think actuaries are uniquely qualified to fill these roles. While their ability to understand and manage risk and their strength in statistical analysis are well known in the insurance industry, and probably even taken for granted, they're still not well known in the commercial banking industry. There are some exceptions to this. But, I think, for the most part, the commercial banks' senior management are just beginning to be aware of the need for good, professional risk management. They are not yet aware of the potential that actuaries have to fill this need for them.

Mr. Paesani: I'd like to read a brief quote from the May 1996 report of the Basil Committee on banking supervision. It states, "Proper risk management is central to the safety and soundness of individual banks, as underscored by trading losses suffered due to inadequate management controls." I think that underscores everything you just said.

Ms. Opper: That's right.

Mr. Paesani: How would you suggest that our profession increase the awareness within the banking community of the unique skills that the actuaries can offer?

Ms. Opper: Well, I think the good news is that the setting is finally right. The regulators have said these things; some of the commercial banking leaders have recognized it. I think that what the actuarial profession needs to do now is to demonstrate its skills and abilities to bankers in terms that bankers can understand, not in actuarial language.

Mr. Paesani: Bob, we've just heard Barbara discuss this specific need within the banking industry. She shared her views on what she thought it took to fill that need. Do you think the actuary is capable of filling this type of role?

Mr. Buckner: Specifically, I think the actuary can fill this role because he or she is trained to analyze risk. Actuaries are more than number crunchers; they're problem solvers. That's why I like my job so much; I'm paid to think. There are two prerequisites for solving a problem. The first is to recognize that a problem exists; the second is to understand the nature of the problem. Only then can you actually solve the problem. I think every actuary in this room would realize that a potential problem exists for banks in trading mortgage-backed securities or other assets with embedded options. I think they also have some idea that the primary source of that problem would be a change in interest rates. From there, they'd pick the problem

apart. They may not know the most cost-effective solution to the problem when they're starting out, but at least they'd have their hands around it. Then, it's a matter of convincing management that there's the potential problem, proposing a solution, and implementing it. In this instance, we're probably talking about some basic trading guidelines for day-to-day operations, coupled with some overall portfolio management, perhaps reviewed monthly, quarterly, or after interest rates have moved so many basis points.

Mr. Paesani: Bob, what makes you think you know enough about the banking industry that you can be so sure the actuarial skill set is so uniquely suited for it?

Mr. Buckner: It's not so much knowledge about the banking industry as it is knowledge about risk and how to quantify it. Let me give you another example, Joe. It's a little off the wall. I think Pizza Hut ought to have a staff actuary, and I don't mean just to calculate their pension benefits.

Mr. Paesani: You're kidding me, right, the Pizza Hut actuary? What's he going to be worried about: how many times people exercise their money-back guarantee?

Mr. Buckner: I know this sounds crazy, but consider the real-life contingencies that this company faces. Obviously, the actuary could work on pension and compensation issues, but these are really just traditional roles within a nontraditional employer. Instead of confining ourselves to something we're all comfortable with, I want to break things out of the box, yet still use skills that most actuaries have.

As an example, how about developing a cost-effective pizza? Working with the marketing department, our actuary could conduct surveys to test how sensitive the customer is to changes in the ingredient mix of a pizza. Perhaps customers will trade a little pepperoni for some extra sauce or vice versa. Then, depending upon the relative prices of pepperoni and tomato sauce, the actuary could design a more cost-effective pizza. Of course, minimums would apply; a pepperoni pizza has to have some pepperoni. There's no reason to stop with pepperoni and tomato sauce. Perhaps there's an acceptable trade-off between the thickness of the crust and the amount of cheese. Lots of one or the other might be good; too much of both wouldn't sell well. We can further complicate things by adding additional relationships: lots of cheese cuts the need for pepperoni, lots of sauce requires a thicker crust, and so on. Just think of the possibilities for a combination or a supreme pizza.

Assuming the relationships are linear, Joe, the actuary could use linear programming to minimize the cost of a pizza. On the other hand, the relationships may not be

linear, in which case the problem becomes even more challenging for our actuary. Maybe there's even an application for fuzzy logic in here somewhere. In any case, I believe that by proper balancing of the ingredients in a pizza, we probably could improve the profit margins on that pizza by about 10 cents or roughly 1%. That may not sound like much, but 1% seems to be the total margin on many of the term products that I've seen recently.

We're off to a good start for our Pizza Hut actuary, but I think we can do more. The relative prices of the ingredients may shift from time to time, possibly creating a sub-optimal pizza and forcing a recalculation of that optimal mix. If we could somehow lock the prices on the ingredients, though, we could focus our attention on other issues. That leads me to my next idea: pizza futures. Pizza futures don't currently exist, nor do tomato futures or pepperoni futures. Direct futures do exist, however, on pork, beef, and wheat. Working with these, we could develop appropriate hedge ratios for these ingredients. As for tomatoes, maybe an appropriate proxy would be corn. If the two tend to grow under the same conditions and in the same locations, it's not unreasonable. I doubt milk or cheese is highly correlated to gold futures, but our actuary could spend some time working on creating an appropriate hedge.

At this point, we've created a product that has a higher profit margin with lower volatility. In effect, we've gotten closer to the efficient frontier—greater return with lower risk. That's not a bad improvement, but, I think, we can still do even more.

Now that we have a better product to sell, we can work to sell more product. Here the actuary can turn to demography. Instead of being led by crazy marketing schemes, such as double-decker pizzas or copying Little Caesar's specials, Pizza Hut could anticipate changes in consumer buying habits. One example of using demographics would be to determine the effective placement of restaurants. This could be in terms of what region of the country or in what kind of neighborhood. Perhaps midwesterners eat more pizza than easterners. Perhaps African-Americans eat more pizza. Does it necessarily follow that midwestern, African-Americans eat more pizza? If so, where are these people located, and, more importantly, where do they buy their pizzas?

Another demographic shift may be in the delivery of the pizza product. Right now, we're familiar with pizza shops where we stop, sit down, and eat, or with pizza delivery to our doors. But what about a drive-thru pizza parlor? Any rental car company in America will tell you that Americans eat in their cars, and I'll bet pizza eaters own cars, too. What about pizzas ordered by computer? Or what about changing the shape of a slice—maybe making it smaller, or square, to make eating

in the car with one hand easier? Maybe the pizza parlor is dead, and Pizza Hut should go into frozen pizzas at the supermarket.

Yet another demographic shift might be to change the ingredients of a typical pizza. What about a lighter or nonfat pizza with turkey sausage and nonfat cheese? This may not be as outrageous as it sounds. In fact, in my local grocery store, I have seen a nonfat pizza in the frozen food section. Certainly, no one will argue that Americans are not interested in lower fat products. What about cold pizzas? Why do pizzas always have to be hot? Perhaps fruit or ice cream pizzas will make it big, just as the French have both salty and sweet crepes. By exploiting demographic shifts, Joe, Pizza Hut would be able to maximize profits by positioning itself ahead of the market. Pizza Hut will be there when the market moves allowing it to capture greater market share without as much expensive advertising. Who better than the actuary to piece together bits of demographic data to discover these trends. Every day don't we take incomplete data and make the most of it. Finally, the Pizza Hut actuary could get involved in the hard financial analysis of capital needs, restaurant-ruin theory, expense studies, cost of capital, and labor versus technology. The list really is endless.

Pizza Hut could use a corporate actuary. I'm not saying each Pizza Hut restaurant could support an actuary, but a couple at the headquarters would be useful. I don't think anything I've described here is beyond the capabilities of the actuaries in this room. They have to think about problems a little differently, but the skill set is remarkably similar. Nor should we limit ourselves to Pizza Hut. I maintain that with a little creativity, we could justify someone with actuarial skills in virtually any industry.

Mr. Paesani: Bob, I hear everything you're saying, and I think it sounds good. But do you feel you have the skill set to tackle and address such a big problem, such a big scope?

Mr. Buckner: Definitely, Joe. Actuaries are problem solvers. These challenges require strong skills in mathematics, reasoning, and logic, and actuaries have these strengths. We also have strong modeling skills, and we are well trained to quantify and manage risks. Because of these strengths, actuaries do have the right skills to manage business challenges across a wide range of industries.

Mr. Paesani: Bob, are there areas where you feel that the actuary is lacking or maybe not quite as strong to fulfill these needs?

Mr. Buckner: I'd love to say no, that we're perfect for these jobs, but we need to be candid here. There are some areas where we do need further development and

training. While we are trained to quantify and manage risk, the education has generally been based in life and health insurance and employee benefits businesses. While risk elements may be similar across most other industries, actuarial education should include contingencies beyond life and health. In general, our overall knowledge horizons should be stretched beyond traditional insurance and pension businesses. Because of these limitations, we probably do lack awareness of other opportunities available and the ability to effectively communicate outside our traditional roles. As a result, we are, or at least can be perceived to be, relatively inflexible to deal in different areas.

Mr. Paesani: They seem like significant limitations though, Bob. I know the education structure is being reviewed and modified to be a little more inclusive, fuller range of business context. But, Bob, if they're going to make dramatic changes to the education systems, how about those of us who have gone through the syllabus that's out there today? Is there hope for us?

Mr. Buckner: Of course there is, Joe. Well, it's true that some current actuaries perhaps cannot fulfill the roles we're discussing. Actuaries are well-versed in risk and risk management skills that are transferable. The current syllabus just happens to emphasize insurance and employee benefit businesses. Through continuing education of other industries, and more exposure to business-specific examples beyond life insurance, the profession can learn about these industries and how it can serve them. It would also make sense to focus initial efforts in expanding actuarial roles in more closely allied industries such as banking and finance instead of pizza.

Mr. Paesani: Do you see salaries as a problem? Many people think actuaries get paid too much. What about a nontraditional employer that might not be willing to "overpay" for untested talent, at least untested from their standpoint?

Mr. Buckner: Let's start here. Does anyone think he or she is currently overpaid? Certainly it's a potential problem, but one I think that can be overcome by increasing awareness of both actuaries and nontraditional employers. Actuaries interested in expanding in nontraditional roles may need to give up something for the opportunity; however, reward normally follows performance. As actuaries demonstrate their ability to make a contribution, employers should realize and reward that expertise. In addition, younger actuaries still in the exam process could move into other industries where the salary differential may not be as big an issue, and begin developing an expertise base for the profession in that other industry. The newly proposed exam syllabus could grow and develop with this professional growth.

Mr. Paesani: Bob, in summary, could you please define what you think the actuarial product is?

Mr. Buckner: To me, the actuary is a broadly skilled professional who can identify and quantify the problem, analyze alternatives, develop a solution, and then communicate the results and the impact.

Mr. Paesani: We've just heard two different, but, I hope you'd agree, similar views regarding the perceived needs in a nontraditional actuarial environment, the recommended skill sets needed to address those needs, and how actuaries can fill the roles to address those needs. Aimee Jordan will now help us to bring these two viewpoints together so that we can get a better feel for defining the actuarial product. Then she'll discuss how we can use this knowledge to begin developing a marketing plan to expand our career opportunities into nontraditional areas.

Ms. Aimee Jordan: Joe, before we go into this further, I would like to recap what I just heard Barbara and Bob saying. Then I will give you a blueprint to follow when preparing for an interview with a nontraditional employer.

According to Barbara, risk management is vital in banking. Products such as futures, derivatives, mortgage-backed securities, etc., are bought and sold every day, but the pricing of these transactions is often done on the fly without someone quantifying the inherent risks. This is where Barbara sees a need for actuaries, and she see it in managing the assets and liabilities of the entire balance sheet. Actuaries, as we all know, are trained to understand, quantify, and manage risk. After all, the insurance industry was built on the basis of accepting risk and managing it for a profit. Who else is better equipped with this knowledge or expertise than the members of the actuarial profession? Why aren't actuaries working in every bank if this is what the banking industry or even a Pizza Hut needs? Well, the answer is simple. Barbara even mentioned it. Senior bank management does not recognize the need for sound, or more sophisticated, quantifiable risk management, and they do not realize the roles actuaries can fill in managing their businesses. Bob even pointed this out to us when he described how a staff actuary could be valuable in a Pizza Hut operation. Whether it's for complex, financial analysis of capital needs, or to balance pepperoni and tomato sauce quantities, the need is there for an actuary in all different businesses.

I think we can clearly see that there is a void and a need for actuarial expertise in most industries. I'm sure that many of you can and would like to fill this void; however, we know filling this void is not easy to do. It appears we have a huge gap separating actuaries from getting jobs in the many industries that need to manage,

identify, and quantify risk. After all, if senior bank management doesn't realize the need for actuaries, it is a good bet that a Pizza Hut owner will certainly not.

Mr. Paesani: You're saying we have this huge void to fill. What is your suggestion?

Ms. Jordan: Let's build a bridge. For the purpose of providing you with some tools to bridge the gap on your own, I will use the banking industry as an example. Whatever I outline can be used for any industry, even the pizza business.

First, actuaries need to learn to speak the language that bankers understand, which Barbara pointed out. You have to remember "like likes hiring like." Think of the people you have hired or recommended in the past. Barbara admits that bank administrators hire people with traditional skills who have an MBA because that is what they've always done and because that is their background, too. This is what they understand. On occasion, Barbara mentioned, they do realize the need to hire someone stronger to fill the risk management and pricing roles, but they often think of the rocket scientist or someone with a Ph.D. in physics, not an actuary. In order for bankers to think of hiring actuaries, they need to understand you so that they feel comfortable. And in order to speak the language of the banking community, you must first understand the banking industry.

Before I continue, I just want to mention something Bob said, and I am purposely pulling it out of context to make a point. Bob, I know what I'm about to say was not your intent when you said it, but someone could interpret it that way. Bob said: it is not so much knowledge about the banking industry as it is knowledge about risk and how to quantify it.

This statement alone could be a major problem plaguing the actuarial profession from bridging the gap into other industries. It is like saying, "I do not need to know more about banking, because I know more about risk and how to quantify it than you." Yes, this could absolutely be true, but no banking professional will feel comfortable hiring you unless you do know something about the banking industry or any industry you would like to apply your skills.

Mr. Buckner: Aimee, your point is well taken. In fact, I have a personal experience that emphasizes that very point. When I was looking for summer work during college, I tried to get a job doing some computer programming for an insurance company. The information services manager, which was the data processing manager back then, gave me some good advice. He said, knowing computer skills made me useful, but knowing computer skills and a specific industry made me indispensable. So, Aimee, I agree with you. For actuaries wanting to go into

banking, it's important to understand the banking industry. My point was that actuaries already have the skills to be useful to the banks.

Ms. Jordan: Bob, that's right. In addition to having the skill set, this knowledge of the banking industry is not for the purpose of walking in day one and running the show without experiencing a learning curve. This knowledge is important to make the people interviewing you feel comfortable and to create some sort of common ground. Once they feel comfortable with you and that you understand the issues they face in their business every day, then they can begin to understand what extras you could add. Their comfort level is dependent on how well you communicate. After all, you did not follow similar career paths or have similar work experiences. They need to feel that you understand and think the same, even though you are different. Taking this point a step further beyond the interview and into the actual workplace, your effectiveness is directly related to how well you communicate in any business environment.

Mr. Paesani: It's not just a matter of us focusing on ourselves, our product, or what we can do? We need to focus on the user of the product—what they need in terms they can understand.

Ms. Jordan: Yes, that's right, Joe. Get them to see that you not only understand the issues of their business, but that you can also help them solve their problems by quantifying different scenarios for them to examine and analyze. Show them how you can actually model a particular scenario or price a particular product. Then change it and show them how your model will give them a new set of results. Ask them to put in a few variables of their own and change it. Show them how your model measures or quantifies the difference in results.

I may be oversimplifying this, but I'm sure you get the picture. Let these bankers see what you are capable of doing within their realm. Let them see how your modeling and your ability to measure of risk can translate into their business becoming less risky. Demonstrate that you understand risk, can calculate it, and measure it, which helps manage the business better.

Mr. Paesani: I don't think you're oversimplifying at all, Aimee. I think that's at the heart of the change. As a profession, I think we have demonstrated a limited ability to communicate outside of our traditional industries. Some of the papers and letters I've read by actuaries about this topic tend to focus on the need to have other people understand us better, almost at the exclusion of us understanding them better.

Ms. Jordan: This is a major problem. I mentioned the need to research the business, whether it is banking or pizza operation, in order to be able to speak the same language as the interviewer. When researching, also keep in mind how you should plan your interview. Yes, interviewees can and should plan their interviews. I don't mean take control; I mean prepare your answers. Actually write them out. Learn your answers to questions you would ask if you were the interviewer.

What are some typical questions? The first (and I love this one) is, "Tell me about yourself." How many of you have been asked that question or something similar at the beginning of an interview? Well, if you haven't, you're lucky. If you have, how did you answer? Figure out beforehand what you want to say succinctly. Give a brief synopsis of your history, but tie in your interest and why you feel you would be an asset to the banking industry. This is not an easy answer that we can extemporaneously recite during an interview; however, if you are asked this question deliver a concise, succinct, intelligent and comprehensive answer, one that may highlight why you became an actuary. Include some information on your fulfilling work experiences as an actuary managing insurance company risk. Then weave in your banking knowledge and any experience you have had in the banking industry. End with why it is a natural for you to move into this arena. If you can say all this at the beginning of an interview, someone is going to be very impressed, including you.

I'm going to deviate a little bit again just to make you aware of another point. An interview can be viewed like a negotiation. If any of you have read *Roger Dawson's Secrets of Power Negotiating*, by Roger Dawson, you know that he says that anything you want in life is owned or controlled by someone else. You have to learn how to get it not by dominating people, but by turning people on. This is what you have to do in an interview situation. You have to turn these bankers on with your knowledge and with what you can do for them and their business. So when you prepare what you're going to say, keep in mind that you are not competing with them on who knows how to run the banking business better, but how you can be an integral part of their team—their winning team.

What happens if you prepared a response to the question, tell me about yourself, and it isn't asked? Was that a waste of time? Absolutely not. You'll be able to use pieces of the paragraph that you prepared to answer other questions such as "Tell me, what did you do when you worked for First Mutual?"

You'll begin with what you did, how you modeled the pricing of this product, and measured the spread on that product, and you'll continue with, "I thought this could be useful in banking because banks theoretically do the same type of thing but with different products, etc., and I got to thinking. . ." You can go on and on. You'll

continue to make that segue into how insurance and banking are similar, and why not apply the same risk management principles in this industry too.

Mr. Paesani: I'd like to interject another quote. Hopefully, this will emphasize some of the parallels and thoughts that Aimee is bringing out here. This is from a speech Alan Greenspan made entitled, "Optimal Bank Supervision in a Changing World." I'll just read a brief excerpt from it.

Banks now face more complexity in the measurement and management of overall portfolio risk than ever before. These risks include interest rate risk, credit risk, foreign exchange risk, market risk, and business risk. The industry and its regulators must now worry about how these various risks interrelate. Several major private financial institutions have recently created a new staff position called Chief Risk Management Officer. Still, little is known right now about how the various portfolio risks interrelate. Models that would measure lost co-variances across the bank-wide portfolio of all risk positions still are in their infancy.

I would like the audience to think about whether this is the role that you think the actuary can play or should play. I think there's a lot of parallels there between that context and some of the things Aimee is bringing out.

Ms. Jordan: Let's continue. Now that we have dissected that first question, I'd like to give you some other questions to think about and to prepare for. How about, What are your strengths? Prepare three strengths. What are your weaknesses? Prepare one or two, but make sure they can be turned into a strength. This takes a little bit more thought. What are some of your accomplishments? Prepare three, and try to make them relate in some way, shape, or form to the banking industry. Let's use what Bob told us earlier.

Bob is interviewing, and he is describing his accomplishment of working with the marketing and the field people to develop and price a cost-effective term life product. "Really, Mr. Pizza Hut owner," he says, "at First Insurance Company, I worked with the marketing people to develop this new term product that we priced to make a profit and that our customers wanted to buy. This is really similar to your business. If we figure out the appropriate minimums for the specific ingredients in a pizza pie, and calculate the trade-off between the ingredients, you can minimize the cost of your pizza and improve your profits, too."

Bob made his accomplishment work to market himself to the Pizza Hut owner. I know nothing about the pizza business except that I like pizza, but it made sense to me.

Turn your accomplishments into another marketing tool. Your accomplishments should lend themselves to the business to which you are trying to market yourself. Think about it. You do not want to use the accomplishment that you cut staff size by 50%, which reduced expenses to an affordable level, when you're applying to a bank that is expanding. I know that is an obvious example, but the point I'm trying to make is this: make everything you say count on the banking side of the equation. Try not to waste any precious verbiage when you can use that precious time to market yourself appropriately. The only way to ensure your success is to prepare your answers and your examples in advance.

Another thing to remember is that people see things differently. They may see an industry from different perspectives, especially when they come from different backgrounds. Do not assume that the other person knows what you know. Try to prepare your answers from their vantage point so that they understand what you did in insurance. Lead them to understand that what you did in insurance can be done in their business, too. Make sure you also ask questions, but not just any question. Capitalize on your questions. Yes, you need to gather important information and find out what the bankers want to do, what their goals are. Remember, however, they are interviewing you, and you need to market yourself to them. Only ask important questions. Once they have given their answer, tell them how you can contribute. For example, explain to them that even though your experience has been with insurance, the principles between banking and insurance are the same. Explain how and that it would work.

Finally, be enthusiastic. Get them to like you and feel comfortable with you regardless of what you're talking about. Even though you are different, if they take a liking to you and feel comfortable with you as a person, they will begin to trust you. More importantly, they will begin to have faith and confidence in you, that you'll be able to do what you said you could, and that you could make a positive impact on their business.

To recap, our blueprint for bridging the gap between actuaries and noninsurance-related employers is, first, research. Research the industry you would like to pursue, and understand how the business is conducted. Second, identify the industry's need for the actuarial product, what problems you can identify, solve, or prevent. Third, and really the most crucial, learn to speak their language.

Just last month at the New York Actuarial Club meeting, Walt Miller who is an FSA (1959), spoke about how no one is interested in learning the actuary's language, even those at insurance companies. That's pretty sad. He recounted how senior management would often ask, Why don't these actuaries learn our language? Communication is key. Acting professionally enhances the ability to be heard. Having good professional ideas is one thing, but being heard is another. And, fourth, plan your interview as you would a presentation to a client, a group of sales people, or your board of directors. Make sure all your sales points are made and communicated clearly. Lastly, practice to sharpen your marketing skills and your delivery.

Mr. Paesani: You have given us a great deal of insightful tips to think about. Many of those comments were targeted at individual actuaries and how individuals can bridge the gap to nontraditional roles. I can't help but think that the blueprint you just laid out would also be applicable to the profession, which can become more aware of how to market itself more effectively. Obviously, the profession has a great deal to offer. But to consistently deliver our expertise to nontraditional areas, we need to find ways to articulate this better and capitalize on the strengths we have to offer. We can't underestimate the value of "learning the language." I think Aimee's point is well-taken. If a nontraditional employer hired an actuary and it didn't work out simply because the actuary was unable to coexist in the environment or learn the language, then we really haven't taken a step forward. In fact, we've probably taken a step backward.

If we're serious about expanding our profession into nontraditional areas and capitalizing on what we have to offer, then we have the responsibility to learn the language and the nuances of these various industries where we think we can make some inroads. To that end, education at multiple levels is paramount. This would include the need for us to increase our own awareness of what our strengths and limitations are; to increase our own understanding of other industries and their needs, language, and terminology; and, the need to seriously rethink the way we educate and examine actuaries.

Ms. Jordan: Joe, I definitely agree, and this is why I'm so glad the SOA is starting to see the need to further educate actuaries in order to help market themselves outside the insurance industry. You mentioned some of the changes that the SOA is planning. I recommend that the SOA syllabus on risk and risk management include information on how this can be applied to other industries. In fact, maybe there should be case studies that provide overviews on how the banking industry and other industries operate. This would get everyone started on some research of how industries work. Whether it's part of an exam syllabus or continuing education courses, this knowledge would help everyone understand or, what's more

important, help everyone explain how their skills would enhance the operation of other businesses, whether it's a bank or even a pizza parlor.

Mr. Paesani: We've made some references to the education and examination redesign. Session 139, "Education and Examination Redesign" is devoted to this topic. I'd encourage anybody interested in the topic to attend, but I will briefly touch on some highlights.

It is a dramatic change. The redesign effort is poised to increase the scope of education for actuaries, and it will address several of the issues that have come up in this discussion. At its base are the following principles: to examine only subjects that cover the essential elements of what an actuary needs to know; to provide business context with the rigor similar and consistent with what we see in the current mathematical education; to include all or several contingencies, not just life contingencies; to include models from areas outside of insurance and pensions; and to obtain each area of education from the best source possible. This doesn't necessarily mean that we would provide it ourselves.

The syllabus will require knowledge of mathematics, logic, economic security programs, investment and finance techniques, and asset/liability management. It will encourage unstructured problem solving, flexibility, modeling expertise, global thinking, breadth of application beyond insurance, and business value added. Its goal is to develop professionals who can identify, quantify, and manage risk, communicate this to other people, analyze data, construct and test models, set assumptions, manage and communicate results.

Beyond the education, the profession needs to be more proactive in effecting some of the changes we've talked about, if that is our intent. We can't rely on the SOA office to do so much of this for us. We can't rely on strictly a part-time endeavor, and right now this is what has happened. Some people have gotten involved with this and have done so on a part-time basis. What we've been talking about is breaking new ground. Some suggestions we offer for your consideration are to invest in and develop a full-time, fully-dedicated public relations effort. Bring somebody on board with expertise in nontraditional areas who can help put together a marketing package for us, who can represent the profession at conventions and meetings, and who can help sell the profession.

As a profession, we can position ourselves closer to college and undergraduate finance programs, especially in institutions that have an actuarial program. There are probably opportunities there to bridge communication between the two disciplines so that we can get a twofold benefit. One, produce better students coming out of these programs. Two, attract a better set of students into the

profession if there's a better understanding as to what the different disciplines can deliver. Next, and this may be a general statement, but actuarial consultants are probably well-positioned to help with this type of endeavor. Consultants have a wide range of business networks and contacts. They've had many of success stories of individual actuaries performing in both traditional and nontraditional roles. Can we position this as an actuarial success as well as an individual success? A positive example where this has happened is in the health maintenance organization (HMO) market. There was a point where HMOs, more often than not, farmed out actuarial services to consultants. Now, it's more common for HMOs to hire full-time actuaries to provide these services. I think what happened over time was an increasing awareness that there was a need to be filled, and the actuary was a skilled practitioner who could fill that need. Finally, perhaps the SOA Foundation is a resource. If one of the goals of the foundation is to have us reach our potential, as Walt said, and help us to attain the dream, then there should be some opportunity within the charge of that foundation to help in these areas.

From the Floor: I found this session very informative. I teach the actuaries of the future right now and I also worked in the industry for a while. I am often asked, "Are there jobs out there? Yes, there are sometimes. Some years there are no jobs out there, so those actuaries, I feel, need to find these nontraditional roles. The rest of us already work for insurance companies or consulting companies, and unless we're unhappy with the companies, we're not looking to move to Pizza Hut or the banking industry. Yet we are the people who have the skills and who can articulate the skills that we have to these companies. But of the students coming out today in their fourth year, we're not quite sure yet exactly what skills they have. Now this may change with the new exam system, I'm very excited about the new exam system, but students who are coming out today will work for an insurance company and will be shown the ropes until they'll get through the exams, and then they know what to do at that point. Robert, you discussed in your Pizza Hut example that it applies to students who are just graduating today. But I'm still concerned that these are the people who we should be targeting to these nontraditional roles because they're the ones who are going in the marketplace and the marketplace might be shrinking for job availability. Any comments about that?

Mr. Paesani: This whole general problem is one that various parts of our profession have struggled with: who is the best candidate to thrust into this? I think you outlined quite well the pros and cons of either. My only comment is we really haven't figured out a way to do that. I mean, if we're going to carve out X people here as guinea pigs, for lack of a better word, you're right, we do need somebody a little more seasoned with a little more experience to help manage that process. And it's not clear where that comes from today. There is no entity in place that's going to take these people, whoever they are, and give them the training they need to go

out and be the flag bearer to the Pizza Huts or whatever. We haven't figured out a good way to solve it, but I think your point is well-made.

Mr. Buckner: Joe, I'd like to add that I think disaffected associates are probably the ideal candidates to find the nontraditional roles. They have some of the training, and yet they're not happy where they are. I realize that doesn't help the students coming right out, but it's kind of a chicken-and-egg scenario. We need to get some people into those nontraditional roles, and then it becomes much easier to bring the students along.

Mr. Paesani: Correct me if I'm wrong, but my sense is that the problem at the student level may be a little greater in Canada. That is, it's a little tougher for students coming out of school in Canada to find employment opportunities than maybe in the U.S.

From the Floor: Well, there's certainly fewer insurance companies in Canada than there are in the U.S., so it must reach a saturation point every so often. It's a cyclical situation, however. Job availability ebbs and flows. So, yes, it's probably true that Canada, it's more of a problem.

From the Floor: I really enjoyed the session and the presentations that were made by the panelists. I think we have reached the stage where we really have to get into these nontraditional areas, and they could be in the social study as well. For example, I used to think about a number of issues. Take smoking, for example, and the move for people to stop smoking. There are pros and cons there, because if you smoke a pack or less, a lot of people are going to lose their livelihood. On the other hand, if less people smoke, probably there would be a tremendous amount of savings in health care. So these are some of the issues that show how actuaries can look at a problem, and really understand the issue by looking at the pros and cons. And they don't just look at it today but they book at what can happen 5, 10, 15, or 20 years down the road. Look at the expense the community or the economy has to incur, the savings that could be incurred in a few years, and then try to discount it and look at the present value of the benefits and the present value of the cost. On that basis, establish what's the best way to go about it.

You can look at the country's deficit. If you want to reduce the deficit, what can happen? On one hand, the people will lose jobs, but on the other hand, there is a change in payout that the government has to make on the interest payments (and this particular problem is very much seen in Canada). What happens? There are going to be losses of jobs, but on the other hand, there will be savings in interest payments and the taxation could be reduced.

So these are some of the issues that only the senior actuaries can undertake. Then the community at large, the industry, and the big companies can understand the value of the actuarial profession.

As the previous speaker said, if a new student wants to work in a nontraditional area, where does he or she have to go? If the person goes to Pizza Hut, Pizza Hut will say, I pay a minimum base to the person who is in the back room. Are they going to work on a minimum base? Obviously the student wouldn't want to work there. The second point is that we, as actuaries, have concentrated only on the life contingency, the Cx, Mx and Dx, etc. The curriculum, however, should really have some papers with some problems in the general industry. For example, if you look at public transportation, they would have similar problems: the failure rate or the rate at which passengers are using public transportation, and the fact that they travel on the public transportation. From that, how do you establish the optimum level of fleet and the optimum level of the drivers and conductors and everybody else so that the entity can make profit?

I think the sky's the limit. But the senior actuaries really have to go to the public and make it aware that these are the skills that actuaries have. That's the only way the actuaries of the future can get into nontraditional areas.

Ms. Opper: I agree with you. I think that if we take the commercial banking industry, for instance, where the regulators have now called for a high-level independent risk manager, it sounds very similar to a chief actuary. If you have well-seasoned actuaries to play that role and do it successfully in a few of the major commercial banks, the banks would figure out that, like their legal departments, they need a few actuaries. Whereas, if you try to introduce actuarial science into commercial banking at the student level, while they're probably exceptionally good statisticians, I don't think that there's going to be an actuarial role that is understood in the banking industry. They'll see it as needing a few more good statisticians. I think you're right that a few, well-placed, very senior and seasoned people who can speak the language can make a tremendous difference, at least in banking.

From the Floor: I'm director and actuary at Trigon Blue Cross Blue Shield in Richmond, Virginia. I couldn't agree more that communication is vital to success. Being able to produce expert, full-proof analysis, but not being able to tell anybody about it is sort of like the tree that falls in the woods and nobody's there to hear it. One thing we've been working on at our company is to try to produce what we call a memo without words. It's similar to those graphics that you see in *USA Today*. This isn't meant to devalue the information or to demean the reader, but with this huge, overwhelming information-overload today, you must do something a little bit more creative to try to grab peoples' attention and have them listen to what you're

saying or showing them. I realize that the current syllabus is trying to gear folks towards being able to communicate results and gear future folks, but do any of our distinguished panel members have any suggestions on how current FSAs or ASAs can enhance their verbal or written communication skills?

Ms. Jordan: Well, it depends what you mean by how to learn. You could take extra courses, there's the Dale Carnegie course that I know a number of actuaries have taken in the past and have found to be extremely helpful. It really gets you to understand how to present your ideas. I think, even in insurance companies, actuaries lack the skills to present their ideas in succinct, concise, but intelligent ways that are understandable to nonactuaries or nontechnical people. That means, laying out the ideas, using outline form, and really practicing it just like we did here. People do that when they make presentations to their bosses. I do know an actuary who told me that he had to make a presentation to his boss. He practiced it at home. I said, "You really did that?" He said, "Absolutely." And he's a top marketing actuary. I said, "Well, I'm impressed. I didn't realize people did that." You really have to do that, especially if you are lacking communication skills. In terms of communicating some of the technical ideas or technical work that you have, take it home, write it out, read it, read it to your spouse, read it to your child, your neighbor, and then practice it in front of a mirror, and you'll learn how to end up communicating to people who are unlike an actuary. Really, that's the best way to do it. I don't know if that answered your question.

Mr. Buckner: I'd like to add a little to that. At our company we have a rather elaborate employee training process that really has just been instituted. There's an entire notebook of courses that are available to virtually any employee. The employer feels the educated employee is a better employee, whether it be in public speaking, Lotus Note skills, or how to talk with your manager. There are all kinds of courses that are available out there. I would encourage you to talk with the employer to see whether something like that would make sense.

Mr. Paesani: I'd like to add my comments. I've exhausted every training program I can from my company. I would recommend that to everybody because that's something you can do today, and that's within your grasp. If my company doesn't have programs on site, they can usually recommend programs.

As far as the examination syllabus goes, the examination redesign is focused on continuing education, current exams, and what is in store for all of us after we attain fellowship. As we go through the process now (and I think they're going to go into more detail on this at the session than they did in that report that came out to everybody about a month or so ago), I think it's really important that the membership be as detailed as it can in commenting on this report. One of the ideas

is to build a continuing education system that will help to provide ongoing education for things that the syllabus can't handle, or that may be outside the scope of what should be on an examination syllabus. That kind of feedback will only help make that whole transition better.

From the Floor: I have a question for Miss Opper. I've met a couple of actuaries from the World Bank. What steps has the World Bank taken to encourage the use of actuaries in nontraditional roles? I hope I am not putting you on the spot. In fact, that's a question I'd like to discuss with some of my friends over in the World Bank.

Ms. Opper: There are two World Bank actuaries, and they happen to be here and in the session that's going on right now. But they are completely traditional. One of them does the World Bank's own pensions, and the other one (he used to be with the Canadian department) is working to help our developing countries develop their own social security, pension, and contractual savings systems. But the work that I do for the bank is financial policy and risk management. It all started when I was at Connecticut General. I sat next to Walt Rugland. I had been saying to Walt, "You know, actuaries really need a marketer because all this work that I'm doing is on the capital markets—the role of banking-type institutions in the capital markets—look at it the other way. What role do the capital markets play on the banking institutions, and how can it hurt them?" It's a classic actuarial problem-solving approach. I'm preaching, but we don't have an actuary yet doing risk management at the World Bank.

From the Floor: I just want to make a comment to the gentleman who mentioned making graphs. I think that's a great idea. I work for a worldwide organization, and sometimes part of the problem is communicating. Even though we speak the same language, even the English actuaries will use different words. I think it's a great idea sometimes to use graphs or what have you. It's a universal language, so to speak. We're the TV generation, anyway.

From the Floor: In referring to the nontraditional areas, you mentioned mainly banks and HMOs. Frankly, however, I see HMOs as basically being another type of insurance company. Could you identify some other areas in banks where nontraditional actuaries have been employed or where they're looking into it?

Mr. Buckner: We were kicking around ideas before coming up with Pizza Hut, to come up with an example of more serious or more realistic places for actuaries to end up. One that came to my mind almost immediately was the telecommunications industry—working with traffic patterns. I have a brother who works in the telecommunications industry. At one point, he called me up to ask

how to model a poison process with a random number generator because he was dealing with bouncing things off satellites. Now, I have no idea what the rest of that was, but as we were talking about traffic patterns, I have to believe that AT&T or Sprint, or some of the cable companies, would have some need for things like traffic-pattern analysis, which would be something an actuary could do quite well.

Mr. Paesani: I would add counseling, which is an emerging practice that Jack Bragg is championing. I believe there is now a formation of a task force. An example of actuarial counseling is when your next door neighbor, because they knew you worked in insurance, asked you to explain their life insurance policy, or asked you a question that they thought you could answer. They asked you, not because they knew you were an actuary, but because they just kind of knew you knew something that they didn't know. It's this idea that there's a public need; there are things we do as actuaries that we can do for the consumer in terms of education and awareness.

This is more or less a service provision that has starting to evolve. I don't know names, but my sense is there are people or actuaries out there, who are selling this service. They're selling their expertise or giving away their expertise on a very small scale. There's some move to try and organize that a little bit more.

Other than that, if you look in the *Directory* under the Miscellaneous Employment Section look at the names of some of the organizations there. You'll see a wide range. The one that sticks in my mind is Stats Incorporated. If anybody likes to watch ESPN, at the end there's always a reference to Stats Incorporated, which provides all the statistics to ESPN. For the most part, they do all the formats for *USA Today*. That's a company that's not so small anymore. It's a company in Chicago that was formed and based by an actuary who fiddled around with statistics on the side. For the most part, he is now the sole source of statistics for major professional sports for a wide range of media.

Ms. Opper: Great point. It just reminded me of something I imagine you'd be interested to know. There's a magazine that comes out of London called *Risk Magazine*. It's focused on people who are in the financial industry whether it's investment banking or underwriters or commercial banks. It's very much geared towards actuarial techniques, but I don't believe it focuses on any actuaries. The magazine gives these wonderful seminars several times a year, and they're very quantitative, stochastic distributions, etc., all focused on financial decision making and financial risk management. It seems a natural for actuaries. If you're not aware of that particular magazine and those conferences, that's an excellent place to start showing your stuff.

From the Floor: Robert, I don't know how much research you did on your role, but you should know that within the past year about 15 minutes away from our office, a drive-thru pizza shop has, in fact, opened up.

Ms. Cecilia Green*: I think I'm hearing some of you say you'd like a little more communications training. Session 56, "Actuarial Circles II: How to Make Friends With and Influence the Media" has a workshop. It's more geared toward media training, but it's all communication skills: how to frame your message, how to communicate to nonactuarial audiences.

Ms. Jordan: I just had a comment for Cecilia because she's in public relations for the Society. I was very happy when Joe approached me about this session. Over the past couple of years, I've been very interested with the decreasing market for actuaries and the merging and the downsizing of insurance companies. As a recruiter, I'm always looking for places where I can place an actuary. A lot of actuaries want to go into nontraditional arenas, and with the whole focus of "Ask an Actuary" this is the first session that turns the tables and puts the onus on the actuary to get them into another industry. One of the ways that actuaries can be more well-known in other industries is by going to other conventions, not inviting people to conventions. I saw some correspondence that said some people who are working on this kind of thing for the Society are trying to invite attorneys or accountants or other industries to the Society meetings. I think it should be the other way around. You need a PR campaign to try and place very senior consulting actuaries at a banking conference, a telecommunications convention, an aviation convention. The consulting actuaries could demonstrate how these industries could use their models. They could educate these professions on what actuaries do and how the actuaries measurement and management of risk can relate to their businesses, which in turn might convince these industries to say, "Wow, that's really interesting. I should invite this consultant. Maybe he can help us. Once you start working with a consultant, then those companies will see the need for an in-house actuary like an in-house attorney or an in-house accountant.

We would like to tell this little story which drives home a point. A dog is walking down the street and he sees a help-wanted sign in the window that says, "Computer programmer wanted; must have excellent typing skills; must be bilingual. Lots of upward mobility. Ground floor opportunity for an entrepreneurial self-starter." So the dog walks into the office and approaches the manager. The manager looks at the dog and the dog points to the sign. The manager says, "I can't hire you. You're a dog." So the dog points to the sign where it says Equal Opportunity Employer. "OK," the manager says, "Come in." The dog sits at the computer where he is given a typing test. The dog whips through the test, runs over to the printer, grabs off the sheet of paper, and hands it to the manager. The manager looks at the sheet of

paper and says, "Incredible! One hundred and forty words a minute, and it's perfect. But I still can't hire you, you have to be bilingual." The dog thinks and says, "Meow."