

RECORD OF SOCIETY OF ACTUARIES 1989 VOL. 15 NO. 3B

A VIEW OF THE FUTURE

Moderator: CHANDLER L. MCKELVEY
Panelists: HAROLD L. BARNEY
ROBERT D. SHAPIRO
Recorder: BRUCE N. VANDER ELS

- o The panel will discuss results and implications of the Futurism Section's 1989 Delphi Project. This study developed input on important issues and changes facing our profession and industry.

MR. CHANDLER L. MCKELVEY: This session is "A View of the Future." Our purpose is to inform you of the results of the Delphi project undertaken over the last several months by the Futurism Section of the Society. This meeting, in many ways, can be considered a follow-up to the opening general session. The strong reaction you heard was in part triggered by this project.

Before I show you the results which our leadership considered to lack vision and urgency, I must ask you once again to suspend disbelief and join me in the 21st century. It's October in the year 2000. I have here a copy of a recent issue of *The New York Times*. I'd like to read excerpts from a guest editorial by Ian Rohlback, a retired insurance executive and observer of the financial services scene. The title of the piece is, "Where Have All the Actuaries Gone?" It reads: "Back in 1989 actuaries, while a busy, influential and prosperous lot had an uneasy leadership. The leadership was uneasy because it feared that actuaries were tied to a stressed and tumultuous industry, were traditionalists in a time of great change, were financial conservatives in a go-go financial world, and in general were neither professionally nor psychologically prepared for the many major discontinuities lying close at hand. In addition, a number of aggressive professions and semi-professions were pushing into their turf, prepared to eat their professional lunch." So, continues Mr. Rohlback, "futurism came to the actuarial leadership. It came quickly, and as is frequent in these matters, with great passion and conviction. A task force was formed, a study done. That study, *The Future of the Actuary/The Actuary of the Future*, foresaw grave dangers to the actuarial profession arising out of a world of great change. Recommendations were made. Prominent among those recommendations was the urgency of attracting more rounded people to our profession. People with greater communication and human skills, less analytically oriented. In addition, it was seen to be crucial to change the training of actuaries so that they would be better able to fend off competing professions, to influence national policy, to cope with change and to effectively articulate actuarial principles. They then made their classic fatal mistake. They acted on their recommendations. They changed their syllabus stressing communications and management. They recruited those who otherwise would have drifted into personnel departments, politics, financial planning, or management consulting. They found that in their rush to survive they had lost their heart, their history, their purpose. They found that in expanding their capacity to defend the actuarial point of view, they had become confused as to exactly what that point of view was. They found that in loosening their grip on financial conservatism, along with their long-term view, they had lost their place at the decision making table. In short, they had lost their special relevance. There are, of course, still people called actuaries. But we all know their sorry state and their almost total loss to other more specifically competent professions. Perhaps there is a lesson for us all."

Now I'll spare you the remainder of this depressing article. Perhaps it's best to get back to the 20th century and our program. The way I'd like to do this is to summarize the results of the survey of the Futurism Section.

For those of you not aware of how we went about this, we had a two-phase survey of the members of the Futurism Section. In all we had about 450 members of that Section participate in this exercise. We asked around 70 questions relating to future conditions of our industry and the world and actuaries. When we got the returns, we went back a second time and indicated to the

PANEL DISCUSSION

participants in the first round what they and their peers had concluded, and asked them to reply again with that additional knowledge. We're going to summarize the results.

The first general conclusion is that there is general feeling on the part of the participants in this survey, that our actuarial world in 2000 will not see enormous change. That is, the trends that we've seen in the last half dozen or dozen years are expected to continue, perhaps even on an accelerated basis. However, we will have no sudden dramatic switches in that direction. For example, the chance of a major domestic economic discontinuity is believed to be about 33% for the U.S. and 32% for Canada. Most people felt from the responses that an economic discontinuity meant something like a collapse of the banking system or runaway inflation. This result, and the others which follow, represent only some of the responses. On some there was great consensus, and on others there was a great lack of unanimity.

The chance of a major war involving the U.S. was believed to be 19%, and the average yield on new investments was 9.9%. We may have triggered the latter result with an observation on the survey form that the current rates of interest obtained by the insurance industry have been around 10%, and people had an opportunity to go all the way down or all the way up. This certainly indicates that there was a feeling that interest rates are not going to change a lot between now and the year 2000. As a matter of fact, I think the 50% range, in other words, from the first quartile to the third quartile, was fairly tight from around 8% to a little bit over 11%. So there was a fairly good degree of consensus on this point. Consistent with the interest rate, annual price inflation was not expected to change from the current 5% or 6%.

Compared with 1988, mortality is expected to drop overall to 94% of the current mortality despite the overhang of AIDS. This interested me because I wouldn't have expected it to go down at that pace, if you take a 10-year period; that's roughly 0.6% a year. Health care costs, 11% of GNP currently, were expected to grow to 14% of GNP. That's roughly a 25% growth related to the GNP but it implies continuing significant inflation higher than what we see in the rest of our economy.

Average life company surplus, currently 6.5% of assets, was expected to drop to around 5.8%. A significant number of people who responded thought that it would be lower than that. I think this kind of a drop implies an increasing number of difficulties and insolvencies in our business over this period of time. Marketing costs for life insurance companies, as a percent of 1988 costs, were 89% and maintenance unit costs were 92% of 1988 costs. This reduction in costs is attributed primarily to the increase in mechanization.

Life insurance written by companies affiliated with financial institutions is expected to expand to 17% of total. Incidentally, that is up from 5% today. That's a trend. It is expected to continue and continue in a big way in our industry. Life insurance written by companies affiliated with nonfinancial groups is expected to be 13% of total. That's also around 5% or 6% currently.

MR. ROBERT D. SHAPIRO: Maybe I should tell you that my experience and bias are in life insurance and financial institutions; Hal Barney's are in employee benefits and health care. Before I begin my comments, I have a couple of questions.

How many of you weren't at the opening session? Not many. How many of you aren't in the Futurism Section? That's interesting. Most people here aren't in the Futurism Section. How many of you did not read the summary of the survey results before you got here? Again, the majority. How many of you did read the survey results before you got here? Only a few. How many of you were moved when you read those things? Even fewer.

I'd like to tell you how this survey got going. The Futurism Section was trying to figure out what it should do this year, and decided that it should support the actuary of the future discussions by trying to develop some scenarios or a scenario that they could use in their planning. Our role is really to try to characterize the year 2000 and provide a basis for the actuary of the future discussions. We wound up getting the results that are being discussed now. We expect discontinuities. There is probably the most controversial conclusion, and if it is the most controversial, you probably suspect that there's not a whole lot of controversy that's going to show up in the other results. That's something that concerns us. One of the reasons why we want to make this like an open forum is to get some of your ideas to help us both in the actuary of the future work and in these kinds of surveys to make our efforts more effective.

A VIEW OF THE FUTURE

We are going to focus on mean values. What's probably even more informative to most of us is the dispersion and what was said on the endpoints of that discussion. We didn't summarize that -- we're in neglect. In some of these cases there were a lot of people who were well outside the middle of the range, and there we didn't get much documentation.

How many of you, just based on these, would be willing to plan your next 10 years using these kinds of figures? One person. That's the problem, and yet this is the result of an approach, a Delphi approach, which is often referred to as a valid futurism approach. And yet we all know that a Delphi approach basically builds a consensus and winds up having mean values expressed and not too much discussion generally of the endpoints.

FROM THE FLOOR: In connection with that I would be interested to know on which of these questions there was wide dispersion. I would like some sort of a statistical measure on the consensus. Another question is about the assets or the personal savings element. When talking about insurance, are you talking about term or cash value? What about the role of the insurance industry as a savings intermediary?

MR. MCKELVEY: Good points -- let me respond to them. We do have the dispersion; as a matter of fact it's part of the output of the study. I believe those of you who have read the results have seen a dispersion. We showed the mean and then we showed the 25th, 50th and 75th percentiles. So you get a good feeling of where there was consensus. We can talk about specific ones if you wish.

On the second point, I think you'll see that we have asked questions about the role of the insurance industry and its relative position ten or eleven years from now as compared with now. So I think we can at least partially cover what you're talking about.

MR. AILEY BAILIN: I have a little problem with the way the questions were asked.

MR. MCKELVEY: Join the crowd.

MR. BAILIN: Let's take as an example the mortality question. I believe it was posed in terms of, "do you believe that in the year 2000 mortality rates will be the same as today, 110% of today, 90%?" The people answering these questions had to choose one number, whereas I think it would have been more meaningful to say that we believe there is a 50% probability that mortality rates will be 80% of today, there is a 20% probability they will be 90% of today, and there is a very small probability they will be 120% of today. That sort of additional information would have shed more light on what we believe the trends really are.

MR. MCKELVEY: Good point and I think it's a criticism we can accept. I don't think any of us who participated in putting this together would claim it's a perfect job and I think the comments you made will be helpful next time.

MR. HAROLD L. BARNEY: If I can comment on that just a little. One of the things one runs into in any research project -- I'm sure everyone here has been involved one way or another with research -- is that you have to make some decisions and trade off between the ideal question and the difficulty of putting together an analysis of it. Some of that went into this, given the time frame we were working with to get this project up, running, do two cycles of surveys, get them collated, put together and all that kind of thing. I would have loved to have seen that kind of dispersion -- that option -- available. It was one of the decisions along the way -- we'll take a point estimate and use that because it's a whole lot easier to code.

MR. TROY J. PRITCHETT: I have a question about the first two. As I look at them it looks like one in three in one case and one in five people in the other basically think the world is going to go to pot in ten years. That concerns me a lot. I can see why you're disappointed, but to me that's an astounding number saying that we'll have a major war in the next ten years. Twenty percent -- one in five -- could we have more discussion on what those two things would cause? With the international relationships and money, what happens when you go to war with the people who have 20% of the stock in your industries? How does that play out? I think that there are some real questions out there.

PANEL DISCUSSION

MR. MCKELVEY: Let me just respond to that by saying that the two quartiles -- in other words, the space in which 50% of the consensus operated -- this was one of the questions where there was quite a wide dispersion. The 25% quartile on that first one (and incidentally, Canada and the U.S. were virtually identical on this) was at 18%. In other words, it was an 18% probability of a major economic discontinuity. But the 75th percentile, which means that 25% of the people thought it was more than this, was 44%. Your point is correct. There is a wide array of disagreement, and a nonnegligible number of people in that survey thought there was a very good chance of discontinuity.

MR. JOHN GILFOYLE: Can I pick up on that and also address average yield on your investments and annual price inflation rate? I apologize for not being involved in the Futurism Section because I don't know exactly how those questions were asked but let me give you my perspective. I've been in the investment business for a long time. I know with a very high degree of probability that the interest rate in the year 2000 will not be 9.9%. It could be 3% or it could be 30%. I know almost for a fact that it won't be 9.9%. If you just want to address that in a survey I have a suspicion that when people don't know whether it's going to be significantly higher or significantly lower they will say it is going to be the same.

MR. BARNEY: One of the questions that I would love to ask, and I think we can collate this later, is, "what are the probabilities that it won't be this, that or the other thing?" How many people really said a combination of a couple of these things, that would be using the discontinuity in the war example, that neither of those would happen? That may be a very high percentage or a very low percentage that neither will happen. So there is going to be a problem. You are absolutely right; the probability of the interest rate being 3%, 9.9% or 30% is probably not too much different.

MR. MCKELVEY: That is one of the questions where there was greatest unanimity. You would have fallen either way far outside the 50% because the 50% margin was from 8.5-11.3%.

MR. BARNEY: One of the problems with a Delphi approach is if you go to a large number of people you are going to end up with the type of weather forecast that I love to hear. I heard once on the radio: "Temperatures today are expected to range into tomorrow." The trend of today is tomorrow's because of the consensus of going to a large number of people with the same question.

MR. GILFOYLE: I would probably align within most of the 50% because I don't know whether it's going to be 3% or 30%. I am probably going to be as bad as everybody else and say it is probably going to be the same as now.

MR. BARNEY: These surveys, to develop enough scenarios, are only useful in the sense that they can influence how we plan and operate our companies or our plans, or whatever. How do we use 9.9%? Can we use 9.9%? What do we substitute for it if we can't use it? How do we derive what we substitute for it?

MR. CHARLES BARRY H. WATSON: I was rather surprised that there was only one person, in the room, who said that he would be willing to rely on this as a means of planning developments for the future. It seems to me that the results of the Delphi Study, if they mean anything, represent the most likely scenario. If one is going to act on the results, one should take this as being the most likely scenario and build into it whatever margins of safety or risk that one wanted to take in planning your economic enterprise. I admit that if we are going to have a major economic discontinuity or a major war, I suspect that invalidates nearly all of the answers to the other questions. It certainly makes them highly suspect. So you almost have to begin with the assumption that neither of those is going to occur, and that the remaining points are valid. I do agree with the person who said he was shocked with the high percentage of assumption of a major economic discontinuity. We were talking about this in the general session where the panelists said we weren't giving enough weight to major discontinuities.

MR. BARNEY: Can we pose a question to this audience? A major economic discontinuity in the next ten years? (A pretty good number.) Let me raise it to 50%.

MR. WATSON: A collapse of the banking system is something quite different from other lesser degrees of discontinuity. Hyperinflation is different from say 7% inflation.

A VIEW OF THE FUTURE

MR. MCKELVEY: They are different and I think each one of them has different ramifications. I think that certainly what we had in mind, and I hope we were able to convey this to the respondents, was that by a major discontinuity we meant something that represents a significant break. It's not a question of going from 6% to 15% inflation; it's much more severe than that.

At one point in my career back when I had honest work, I was in charge of strategic planning for a group of companies. I think the way I would have addressed this particular scenario, which incidentally would have been pretty interesting and helpful to me in that job is I would do exactly as Barry said. I would say those first two things are not going to happen. We are going to plan our future enterprise on the assumption that they are not. But then I would, subsequent to that, get very deeply involved in how we best guard and insulate our resources and our income-earning capabilities against those within the context of our principal scenario. Those are not negligible probabilities and so you have to have a contingency plan for them.

MS. GRACE V. DILLINGHAM: It seems to me that when using it for planning you have to stop and say, "I don't believe there is going to be a major discontinuity. Therefore my predictions, best guesses, or whatever, on all these other things are in this area." But if there should be a major discontinuity, then all the other responses have to be reworked. I have no idea how other people would have answered the questions. I said, "Well let's discount all this economic discontinuity -- major war -- and go ahead and answer it." Things go on pretty much the same with trends that are at least somewhat recognizable now.

MR. MCKELVEY: At the end of this meeting, we're going to sign people up for the Futurism Section so that you can participate in the future.

MR. FREDERICK W. KILBOURNE: I'll just focus on the average yield on new investments and the average price inflation. It seems -- here we are a bunch of actuaries who do nothing more than extrapolate -- there is something rather dramatic in that, for example, even if it is substantially an extrapolation. If I understand that correctly taking those two together, which is probably the most significant thing to do, we are anticipating a real investment rate of more than 4%. Perhaps an investment actuary could tell me, I don't think that has ever been sustained. That is a very dramatic projection and one that would be reflective either of an entirely new attitude about the reward for risk and money of which maybe the changing capital gains rate is only just the tip of the iceberg, or it might be reflective of some of the economic turmoil that might otherwise be there and cause people who are going to invest to demand that kind of a return. That is one example, I think, of something that seems to be a very conservative, extrapolative kind of projection that really when you think about it, to the extent that it shows more than a 4% real interest return, is reflective of something rather dramatic happening.

FROM THE FLOOR: Could it be the result of not knowing what term was meant when you asked for the average yield on new investments? Were you were talking about a 6-month T-bill or a 30-year bond?

MR. BARNEY: Actually with the inverted rate curve that we've seen recently, it probably doesn't make too much difference when this went out.

MR. ROBERT W. VOSE: I guess I see one more thing that scares me even more than the things that scared Fred. And that is that a group of 500 actuaries did that without thinking about the connection between those two. I'm serious, that scares me for the future of this profession.

MR. SHAPIRO: I think if the actuaries were told about the historical experience and the real earnings rate and were asked to predict that, they would not have come up with a difference of those two numbers.

MR. BARNEY: In fact they were told that the current rates are about 4%.

MR. MCKELVEY: And I think the extrapolated part is that over the last several years we have, in fact, had a 4% differential and more.

MR. BRUCE E. NICKERSON: As long as we're discussing the numbers, there is one that's been puzzling me. I look at price inflation going up at 5.7% a year and I would think that I would then find my unit cost ten years from now as being somewhere up in the vicinity of 200%, rather than

PANEL DISCUSSION

dropping to 92%. If unit costs mean what I think they mean, that is a fantastic improvement in efficiency.

MR. MCKELVEY: I noticed that myself; it indicates that we are going to be getting a lot more efficient.

MR. SHAPIRO: Couple that with the fact that marketing costs are going to drop to 89%. That must be assuming tremendous production increases to keep up with that. Those are internal inconsistencies, some of which result from not designing the survey with a great deal of time and research.

MR. MCKELVEY: We did not say things like, "When answering this question, remember what you said about so and so." Perhaps the results suffer from that.

MR. SHAPIRO: In planning, we need to worry about the average life company surplus of 5.8%. I think there are some people who would argue that the ratio could be kept at 5.8%, but the solidity of the companies could decrease as we transfer more hidden surplus to visible surplus. There is securitization and reinsurance and other things. I guess the question I would raise in terms of planning is, "if when we added the hidden surplus, we used to have 15% there because of the conservative reserves and the lack of surplus relief for securitization, but we have statutory apparent surplus at 5.8%, and we go through ten years and we still are at 5.8%, but we've taken all that hidden surplus and it's now a part of the 5.8%, so we have no more bumper there, how do we use that in the planning?"

MR. MCKELVEY: Let me add my concern. You're seeing it go from 6.5% to 5.8% over a ten-year period. At the same time I think anyone knowledgeable with what's happening in this industry would feel that the risk of life insurance companies related to their assets is going to go up considerably and so therefore a declining percent of assets as a contingency fund related against a risk that should be considerably higher measured against that same standard is sort of a scary thing. Maybe we can get back to that.

MR. MCKELVEY: Let's move on to the suggestion that we'll have more mandated benefits. The chance that health policy benefits will be mandated by the government in the U.S. is 57%, and in Canada, 59%. Generally, the Canadian percentages on this kind of question tend to be higher. The chance that retirement plan benefits will be mandated by government is 47% for the U.S. and about 59% for Canada. The chance that all retirement plan benefits will be portable is 56% for U.S. and 70% for Canada.

What this indicates to me is that, particularly on the retirement end of it, and particularly in Canada, we are going to see a very closely mandated environment for our benefits.

FROM THE FLOOR: Earlier you mentioned that we may be giving up some of our turf to other professions. One of those professions that I see playing a big role is the economics profession because it is much closer to the people in the federal government. What role do you think we should be playing? I am thinking of the Martin Feldsteins of the world and the Boskins and the Sommers who are already in close contact with the Treasury Department -- the kind of people who have a substantial amount of power that can be used or abused. What role do you think we should play in making contacts and sustaining a dialogue between the two professions? It seems to me they are in the seats of power already. Do we work with them? Do we try to develop our own alternatives?

MR. BARNEY: One of the panelists at the Health Section breakfast commented that the Health Care Financing Administration (HCFA) has an actuary. But a lot of what Congress enacts is priced out by the Congressional Budget Office (CBO) where there are no actuaries employed, adding to exactly the question you are raising. CBO uses largely economists, forecasters of various other types, lawyers perhaps, but they don't use actuaries. And the result was kind of interesting -- what happened with Medicare Catastrophic and some of the estimates that were associated with that done by the Health Care Finance Administration (HCFA) versus the CBO with a difference as big as 800% on some of the benefits.

FROM THE FLOOR: Isn't it true the CBO assumed no increase in utilization?

A VIEW OF THE FUTURE

MR. BARNEY: Yes. The upshot of it all was that as the CBO's estimates got closer and closer to HCFA's estimates, they finally did away with Medicare Catastrophic altogether because the cost was more than the Gray Panthers would bear. I'm just adding to the question. I think it's a great question. I don't know what the answer is but Chan does -- he's the futurist.

MR. MCKELVEY: I think that it would be generally agreed that the economists are a profession, they are just not a scientific profession. The thing that startles me the most is the last one. We appear to have a pretty firm agreement that we are going to have portable benefits and I think anyone who keeps abreast of this at all recognizes that as a nightmare from an actuarial point of view of trying to do a conscientious job of coming up with schemes that work. Do we really mean that it's very likely? And if we do I have questions of whether we're going to be able to make sense out of it or control it.

MS. DILLINGHAM: We see now a trend away from defined benefits toward defined contribution plans and I think that moves you toward portability right away and the two will feed on each other.

MR. BARNEY: These three questions, tied back to the general opening session, lead me to a very optimistic view of the actuary of the future and the future of the actuary. I look back to a few other things like Social Security, passage of ERISA -- both of them essentially full-employment acts for actuaries and I can see mandated benefits coming down the road. I agree the likelihood probably is on this order of magnitude. We are going to have all types of mandated benefits, particularly in the health field. We've already got certain mandated aspects with regard to pensions. I see that as a wonderful opportunity for us to stay fully employed. How we maximize our value and visibility is another question raised by the task force on strengthening the profession and the actuary of the future.

MR. WATSON: The portability can be handled. Basically what we already have is very high, very liberal vesting. And so the question really is, you have to determine the pot of money that the guy can either take with him or it can be paid into some sort of central fund where he would have an account. You would have to have a means of determining a lump sum value of his accrued benefits under his present employer's plan. It's paid either into the central fund where it accumulates at some rate of interest and that would then be added on to whatever other benefits he would get later. Or alternatively, you take it into the new employer's plan and you have some means of converting that, if it's a defined benefit plan, into years of service. The British, of course, have had much experience with what they call transfer clubs and things like that. This can be done. The real problem would be if they said not only is it portable but you've also got to index the benefits you get to allow for future salary increases with the new employer. That's the expensive part.

MR. MCKELVEY: And I'm sure there will be other wrinkles too. We expand to a higher degree of regulation and scrutiny. The chance that Federal regulation will largely replace State regulation of life insurance is 34% in the U.S. For property and casualty (P&C) insurance it is 38%. The regulatory burden, compared with 1988, will increase a little. The level of insurance consumer activism compared with 1988 is also up a little. The same comment applies to government control of actuarial practice compared with 1988. Concerning the level of accountability of professionals compared with 1988, there really was a consensus that it would increase substantially. And valuation actuaries are expected to have a mandated role. Eighty-two percent of the actuaries responding to this either agreed or agreed strongly.

MR. SHAPIRO: What about the regulatory burden? I am feeling a little guilty criticizing the survey as much as we're doing. We're really doing it trying to be constructive in the sense of making sure what we provide is useful. It wasn't perfect but it gave us something. On the regulatory side, when you look at increase a little, compare that with things like -- there is a high likelihood of federal regulation, looking at what is going on with Proposition 103 and some of the states' attitudes toward rebating, the changes in the tax, the move to variable products in many companies, the relationships of the banking industry and the Federal Home Loan Bank Board -- are there still people who believe that the influence of regulation will be less than it is today?

FROM THE FLOOR: As internationalization, globalization spreads, regulators will be less able to regulate.

PANEL DISCUSSION

MR. MCKELVEY: Who thinks that there will be a lower level of regulation in the insurance industry in the year 2000?

MR. STEPHEN L. KOSSMAN: I think that depending on what you mean by level of regulation, it might be a different type of regulation. As it gets to the valuation actuary concept, I think that you may see less specific rules and more general reliance on the actuary to do the appropriate thing -- whatever that means. I think you may have seen a little bit of that already.

When I started you had 1958 CSO published commutation columns and the guidelines were exactly how many decimal places you had to round and round to the nearest even number. As you start getting into 1980 CSO with male/female, smoker/nonsmoker, age last birthday, age next birthday -- it's at a point now where you don't see many published tables. Things that are reasonably rounded, reasonably in compliance, are acceptable. I think to that extent you may see a little bit less regulation. I think that there might be some backlash against some of the regulations such as in California. You've seen Washington, DC, pull back from the illegalities of asking age questions on applications. If states go too far, insurance companies are just going to say they can't issue in that state anymore, they can't do it profitably and they will get out. You can only go so far before you reach a point and then sometimes you pull back a little bit. Everything seems to go in cycles. Interest rates go up for awhile and people tend to think they can only go up. But you see historically things go back down again. So I feel that there is a possibility that -- I don't know if we've reached the limit yet -- we'll reach the limit.

MR. SHAPIRO: One of the areas in the general session was the valuation actuary and the mandated nature of the valuation actuary. You can have mandated powers in two directions. One is you have a mandated role but you apply formulas that are supplied by somebody else, like we have in the past. Or you can have a mandated role where you can apply judgment and people rely on your judgment, like they do in the U.K. And there is a fear expressed that if we don't keep our vision broad we will have a mandated role but it will be more number crunching and formula applying than use of our judgment.

In terms of planning for our profession, how do we make sure our judgment is relied on? How do we remove many of those formulas from the regulatory process and have people rely on us as they do in other countries? Are there any suggestions as to how we influence the future?

MR. NICKERSON: A negative suggestion, Bob, is that we find some other approach than the one we took in the pension area where through the combined efforts of the SEC and the FASB, the judgmental role of the actuary in financial reporting seems to have been substantially diminished from a level of responsibility that some of us in the life insurance area are only now beginning to aspire to.

MR. BARNEY: And add to that what the FASB is doing in retiree health care and the valuation of that. There is a calling here to do something different, but what is it? What can we do differently to take what is the technical core of what an actuary is and make the public willing to rely on somebody who is trained in that field, as opposed to giving the person who is trained in that field a whole bunch of formulas and rules and say "you cook the pie according to this recipe"?

FROM THE FLOOR: Is there any possibility for a preemptive standard that says, in effect, that taking away the actuary's judgment disqualifies him from signing?

MR. BARNEY: Well, can you imagine signing a form 5500 saying "I have complied with the rules but I am not taking any responsibility for this."?

FROM THE FLOOR: I know of some people who have signed NAIC statements: "I am not taking responsibility for this part."

MR. MCKELVEY: Next we consider shrinkage of the insurance industry current markets. The percent of group health insurance self-insured entities will be 65%, up from about 60% today. The percentage of health insurance provided by noninsurance entities will be 28%, up from 18%. The percentage of health care benefits provided by the government will be 49%, up from 41% today. Defined benefit retirement plans will represent 18%, down from 28%. The chance of

A VIEW OF THE FUTURE

comprehensive national health care in the U.S. is 40% and 72% in Canada. The chance that government will provide significant long-term care benefits is 31% in the U.S. and 50% in Canada.

MR. GILFOYLE: The second to last one worries me a lot. I am a Canadian and the Canada 72% chance of comprehensive national health care worries me because it's 100% right now.

MR. MCKELVEY: Well that's an indication of the level of sophistication perhaps.

MR. GILFOYLE: I wonder whether the Canadians responded to Canada and the Americans responded to the U.S. or did all people respond to both?

MR. MCKELVEY: We asked everyone to respond. Interesting thing -- no one raised that question.

MR. BAILIN: I think that's a very important point. There are all sorts of questions on life insurance practices that I felt incompetent to answer because I practice mainly in the pension area. And I don't think that it's appropriate for everybody answering the questionnaire to answer all the questions if they don't have a clue.

MR. MCKELVEY: I think that's a criticism I'd make of the way we did it. We did not make clear that people were free not to answer. A lot of people would answer selectively but we didn't make that point. I think your observation is a good one.

MR. SHAPIRO: Can you accept all of these things in terms of something you would be willing to live with in your business over the next ten years? What pieces of this can we influence? If you look back at the last ten years, many things have happened: ERISA, AIDS, the crash of 1987, the interest spikes of the early 1980s, etc. Some of those and perhaps most of them had signs appearing that they were going to happen well before most of us took any action. On the other hand, some things come in out of the blue like an earthquake or a hurricane. For the discontinuities that we can see some signs of coming, I'd ask that we reflect on them and ask if we can change them. The ones we can't see are hard to change. I'd ask about what kinds of things are sort of implicit in these numbers if we wanted to change them -- and maybe we don't want to change them.

MR. WATSON: Looking at the question of a comprehensive national health care system or of the government providing significant long-term care benefits, I think that, at least within the U.S., the likelihood that there will be long-term care benefits provided within the next ten years has been reduced and I think significantly reduced by what we refer to as the attitude of the Gray Panthers to the catastrophic health care benefits. When you have a situation where it appears that they are unwilling to make contributions toward the costs of their own benefits, I think it very likely that long-term care, no matter how desirable, will be very difficult for them to mount a campaign to get into effect -- at least within the next ten years with other people paying for it. Long-term care benefits are not that common around the world -- this is not an area in which the U.S. is well behind what other countries are doing. So I think at least in the U.S., that the chance of long-term care benefits would be more like 20% or less rather than 31%.

With respect to comprehensive national health care, given the fact that the U.S. is the only industrialized country that does not have a comprehensive national health care system and given what still continues to exist in terms of cost, when you allow an entrepreneurial approach to the provision of care, I think it becomes extremely likely. And it could be even higher than 40%.

MR. MCKELVEY: In view of the current trends, do we really think almost one-fifth of the pension plans are going to be defined benefit ten years from now?

Let's move on to the emergence of new financial security markets. Right now about 1% of the sales of North American companies are overseas. The sales of North American insurance companies overseas in 2000 are expected to go to 5%. Individuals covered by long-term care policies will be 6,600,000. That's currently at about a million. Sales of life products not commonly available in 1988 will be 38% of the total. That, incidentally, corresponds to sales in 1989 of products that were not available 10 years before this of about 60%. It implies a slowing down of the rate of new product innovation, or at least the acceptance of new product innovations. Life policies packaged with nontraditional benefits such as long-term care would be 10% by the year

PANEL DISCUSSION

2000. Currently there are almost none. Life policies packaged with casualty benefits are currently at 0%, but 4% was the consensus for the year 2000.

MR. BARNEY: Let's look at sales of life products not commonly available in 1988 -- almost 40%. Yes I think it's true that 40% of our products weren't there ten years ago. Universal life is a good example of something that has taken much of our new business. But I wonder if a better question is, "how will the packaging of what's always been in those products be different, and why will it be different?" Look at universal life, for example; it's a different package of something we have always done. We have packaged investments with administration and protection. I don't see that changing ten years from now, but I see the packaging different. I would say ten years ago the focus on all of what we did in planning was on the institutions. We were life companies; we did life insurance company things. Banks did their things and we sort of had this wall between all of us. The last ten years the focus has been on products. We've had universal life and some other things. If they could sell some of our products through their institutions that was fine. The focus has been on products but it has changed even in the last two or three years. Now it's on customer needs and how to serve them. At least that's the rhetoric; it has been the rhetoric for awhile but I think it's going to happen. And when you get there you go back to the basics. Customers need protection, they need credit, they need investment, they need administration. You then really do repackage it in terms of what they need. With technology now you can almost customize this. Things will look different but I'm not so sure the things we're used to providing will change -- the benefits or the needs served.

How you plan depends so much on how you perceive what this means. If someone perceives this as meaning, "we've got to go out there and figure out where the 40% of new products are coming from," that's the wrong answer. All of this is really being driven by technology and customer awareness and the breakdown of barriers between banks and insurance companies and those kinds of things. So isn't it almost as important to talk about how you interpret this and use it, as you can't use it directly? It would be helpful maybe when we do surveys like this -- I have not seen this done, maybe other people have done it -- to not only provide the results but provide different ways you can interpret this and grind it into your planning and thinking. Maybe there are even some rules that you might follow in organizing all of the information in a consistent way. Would that be helpful? I mean there is some judgment there but if there were some different alternatives provided at least somebody could take this -- I really think this is much more useful than we're giving it credit for. It's not being made very useful by presenting it the way we presented it. Is there any value in extending that next step?

MR. MCKELVEY: I think the point that Bob is trying to make is that the whole objective of doing this survey was to provide useful information for the profession. The question is, "How, if at all, can we do that at this point?" We've got the results, we've mailed out the results of the survey, including the spreads to the people who are members of the Futurism Section; there is a scenario that emerges out of this whole thing and yet we're not sure it is going to be helpful to anybody. How do we take what we have and make it helpful?

MR. SHAPIRO: We actuaries do this all the time. I'm sort of frustrated. If you look at the mortality studies we have done, over and over again reported in the *Record* we summarize mortality in the same way as we've always done. We did it even while the way we needed to use it was changing. All of a sudden we wanted male/female, smoker/nonsmoker, this and that. We still kept studying it the way we've always studied it. How can we make this kind of survey more valuable? Maybe by taking a step other than we've taken in the past. Is that a good question to ask?

MR. NICKERSON: I think it's a very good question and I think that I would start out by suggesting that we not talk about this kind of survey. The actuarial profession is not that different from most others that I know in its inherent bias toward assuming that things will go more or less the way they have been going, and the kind of survey that has been done here, unless you look really between some of the cracks on the questions, tends to reinforce that bias. In terms of helping people with planning, the thing that we're looking at more and more in our mathematical studies as well is the variance and scenario testing. We started out on the very first couple of questions with some significant possibilities of scenario. Perhaps the most useful thing that could be done would be to take a look at this consensus as to just what kinds of change, if change were to occur, would be most likely and given a particular scenario of change, such as this major war that we seem to have a 1 in 5 chance of having. Suppose that major war should occur within the

A VIEW OF THE FUTURE

next 10 years involving the U.S. What then on a consistent scenario basis do people see as being the consequences of that discontinuity? I am really not that worried about the ability of our managements, our professionals, to keep on doing business as usual. It's the business as no longer usual that should be our focus.

MR. MCKELVEY: I'd like to ask a question because I couldn't agree more with what you are saying. What you are suggesting is that alternate scenarios could arise out of something like this that would make some useful tools. It seems to me there are two different kinds of things: one is discontinuities where you say, "if we have this particular discontinuity, what is the logical scenario of what blows out of that," and that is useful. But there is something else, too. Certainly there is the trend towards the mean here; there is no question about it. However, there are non-discontinuities that are equally threatening, I think, over a period even of ten or twenty years, which could include things like more massive encroachment than this survey would indicate from other kinds of financial service firms. I would think that this kind of a survey, if in fact we were able to avoid the clustering around the current situation, would be very helpful.

MR. NICKERSON: I agree with your comment of looking at more than just the discontinuities but again it might be meaningful, for example, to posit certain changes or extrapolations or that sort of thing and say, "how does that affect the rest of it?" For example, you had on average, 17% of new business being sold by bank-affiliated companies. Now that is sort of a mean number. But let us assume, for example, that maybe one in five of your respondents got that up to a 40% level in which case we're dealing with something that is certainly not out of the realm of possibility, if in fact one in five people thought that. Now on your second go round, ask if that should be the case, what else would happen? And build a total scenario around that not probable, but not improbable, change.

MR. MCKELVEY: Good point. I agree with you.

MR. KILBOURNE: I'd like to say first I think the survey was excellent and very interesting. And I don't see so much a bias for the status quo or even a projection of trends as I see in observation that in general that is a fact. I think actuarial science is founded on the idea that we can learn from the past and it may not always be that linear extrapolations are accurate but I certainly do think that if you tell me what today's weather is, I will do a better job of telling you what tomorrow's weather is going to be, than if I had no other information at all. You'd probably agree that tomorrow is more likely to be a good day -- a day like today -- than it is to be some other random distribution.

But then I think what could really improve, I'm supporting what Bruce was saying, after all what are we, if not actuaries, certainly insurance people. We are supposed to look at the unusual occurrence; take a look at the 10% scenario and I think that some of that could be extracted from the responses to the survey and then go back with another survey; OK, what are you going to do about it under these circumstances?

MR. MCKELVEY: I think you are absolutely right and as a matter of fact maybe that is a good assignment for us to take up as a next step. I think we could easily extract half a dozen meaningful alternate scenarios based on nontrivial probabilities and that would be a useful thing to do.

MR. KILBOURNE: I don't think you should be so harsh on yourselves about the imperfections in the survey or particularly harsh on those of us who responded and came up with these ho-hum projections and I speak of that as someone who has been ten years in the future and I know just how it is going to be.

MR. LAWRENCE P. MOEWS: Bob, to answer your question, I think what might enhance the usefulness of the Delphi study is if instead of just giving the study to actuaries, maybe you could target it or do some segmentation and give it to academia, bankers, employers, and consumers. You could target consumers between those sophisticated in the business market versus regular consumers. With agents, you could do the same thing, and I think you might get a lot of differences of opinion which might be of great value and which might wake us up a bit.

FROM THE FLOOR: Staying in-house, perhaps the other sections of the Society would be interested in taking the items dealing specifically with their lines of business and asking their

PANEL DISCUSSION

membership what it would mean to them, the actuaries practicing in that particular line, if these things did occur.

MR. SHAPIRO: That was actually something we were supposed to do and never had the time to do. It is a really good suggestion. What we are doing here is perhaps much more valuable as a result of this input.

Then there are things that won't change much. Death benefits provided by the federal government are expected to be 48% -- currently they're 50%. Life insurance sold through direct response is expected to be 3%. That's up, but it's still not a very large number. Private pension funding going to life insurance, 20% -- no change. Pension benefits paid by government plans are right in line with where they are now 34%. Retirement income replacement ratio will be 53%; it's currently 50%. Individually purchased life insurance will be 49% -- that's down from 56%. And life insurance sold in the U.S. and Canada by non-North American companies is expected to be 4%. That's up from about 2% currently.

We don't think we will be able to turn the tide in terms of capturing a larger market share on pensions. There is an indication that there will still be a small but continuing reduction in the amount of insurance individually purchased and a very small penetration by foreign companies into our markets.

MR. RICHARD K. WENDT: I hope we are lucky enough on the last one -- that it's only 4%. Eight of the ten largest banks in the world are Japanese.

MR. MCKELVEY: I had heard ten out of ten.

MR. GILFOYLE: I'll make an observation that's associated with one that came up on one of the other topics about North American companies being in the rest of the world. It's interesting, if the North American companies think everything is OK here, why wouldn't everybody else think so too? I agree with the other comment.

MR. NICKERSON: On the last question on non-U.S. or non-North American companies, there certainly has been a lot of activity over the past few years in terms of U.S. companies having foreign parent ownership. But they are still incorporated in the U.S. Was the question dealing with the incorporation of the companies selling the insurance or was the question dealing with the ultimate ownership of the company selling insurance?

MR. MCKELVEY: It was dealing with the incorporation and the point you make about that being a far different number than the other is correct.

Now let's look at actuaries. Actuarial employment outside of insurance companies and consulting firms is one of the most interesting results for me: 80%. That's up from 5% -- not much of an increase. Actuarial employment in consulting, 43%, is up from 35%. Also, 67% agree that the public will be better informed about the actuarial profession. Actuarial training will remain much the same: 56% disagree, which means 44% agree.

FROM THE FLOOR: The last thing, where you said 44% agree, is that only a yes or no answer?

MR. MCKELVEY: There were four options: strongly agree, agree, disagree, strongly disagree. There was no middle which said "no opinion."

FROM THE FLOOR: Do you get any sense of what would cause the public to be better informed about our profession?

MR. BARNEY: Another article in *USA Today* on our cushy profession perhaps.

MR. MCKELVEY: The final sentence in Parkinson's paper, Parkinson's law, is "the job of the scientist is to merely report the facts, not to produce them."

I think the question of actuarial employment outside of insurance companies and consulting firms is very interesting but maybe that's what we're headed towards. If you look back ten years, our current 5% would have been 3 or 4% so it has gone up very slowly.

A VIEW OF THE FUTURE

Finally we get to miscellaneous topics. Seventy-five percent of the independent life insurance companies will remain independent -- not owned by someone else. For P&C this is only 66%. The number of individuals infected by human immunodeficiency virus (HIV) in North America is expected to be 4,200,000. We used a base number of 1,750,000 for 1989. There will be a trend to level life commissions -- 81% agreed. There will also be a higher proportion of salaried agents -- 59% agreed. Thirty-four percent agreed the insurance industry will remain much the same, and there was no consensus on a trend toward mutualization -- 52% disagreed, 48% agreed. New laws will reduce the volatility of casualty lines -- 61% agreed.

MS. DILLINGHAM: It is interesting to see that 2/3 disagree that the life insurance business will remain the same after previously answering on so many things that it will just change a little.

MR. MCKELVEY: It would have been nice to have a follow-up question.

FROM THE FLOOR: It's kind of amusing that we have the one question on the HIV and in the middle there is a discussion on life insurance companies -- I assume there is no correlation.

MR. MCKELVEY: I was a little surprised at that number, to tell you the truth. Does anyone know off hand what we're seeing in some of these projections that have come down the pipe recently? At home I have two or three projections that have been done recently and I should know, but I don't, how closely they come. My impression is that they are talking about larger numbers than that.

MS. DILLINGHAM: The ACLI survey of claims paid on full-blown AIDS shows the growth is not nearly as fast as we expected a couple of years ago.

MR. MCKELVEY: This has been interesting, and I am sure my colleagues agree, because this is our first attempt at something like this. I think we have seen some cracks in it that we would like to do differently next time. I think that we're perhaps started down a path that really might have some research through the Futurism Section and that is our goal.

