1997 VALUATION ACTUARY SYMPOSIUM PROCEEDINGS

SESSION 18

Practitioners' Forum I

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PRACTITIONERS' FORUM

MR. MICHAEL E. MATEJA: Our goal in this session is to address some of the major issues and concerns of actuarial managers. We suspect that these issues and concerns represent the issues and concerns of managements of insurance companies as well.

Alastair Longley-Cook from Aetna is one of the panelists. Barry Shemin will be second. This session is an interactive forum, and it's distinguished by significant audience participation. Our structure is simple. We will have a brief introduction of a subject by me or by one of the other members of the group. This will be followed by brief comments from the others. We have about six prepared topics, which should be more than enough to keep us going.

My role, as I said, is the moderator. This may present a challenge once I throw it open to the group. We're going to try to keep our comments rather short and concise. We're here to serve as catalysts on some issues that we hope will be of concern to you. With that I will introduce the first subject, which was the responsibility of the absent panelist, Mr. Raymond. And that's risk management.

This was the lead-off topic at the Chief Actuaries' Open Forum held in 1997, and I think discussion on this subject ran on for about three hours. My impressions of that discussion are that it was quite revealing. It's clear that many companies are concerned about it.

So what is risk management? I don't think that any specific definition has been put on the table that would be universally accepted. In the broadest sense, it's the identification and management of risk. But those activities, I think, are extended well beyond the normal limits that are the concerns of actuaries in the context of product development or valuation.

Conceptually, risk management is an attempt to anticipate the kinds of things that go wrong. It's perhaps best illustrated by such recent events on the life insurance side as overexposure to commercial mortgages and market conduct or related issues in the area of illustrations. On the

property/casualty side, one of the other issues that came up was litigation surrounding exposures to hazardous waste and such. Note that hazardous waste is a legal issue. Litigation, in general, is one of the major things that has gone wrong in recent years.

In most companies there's no centralized focus for an investigation as broad as that which I've discussed. I think companies are casting about as to where responsibility for risk management in this macro sense lies. Various companies might call upon the corporate actuary, and others may use a special task force. We'll look for a sample from this group as to what your companies may be doing.

I think the risk management issue is also related to the broader issue of dynamic financial solvency analysis. Such analysis is aimed at the highest levels in the company in an effort to really understand some of the things that go wrong affecting surplus levels.

Alastair, do you have anything that you could add to that?

MR. ALASTAIR G. LONGLEY-COOK: I'd like to begin with some comments about what's been going on at Aetna, and then I hope we can get into some discussion about what's happening at your companies. Risk management, as Mike indicates, is a very popular topic among actuaries and senior management. When our current CEO came on board a few years ago, he came from a financial background. He brought a very different management style. He was very familiar with risk quantification, which grew out of the problems in the banking industry. His assessment was that we were doing a good job in terms of analyzing certain kinds of risk, such as investment risk, but we were not analyzing risk across the board for the whole company. So we started implementing that kind of quantification process.

We have been using an approach that has come out of the banking industry, which is a "value-at-risk" calculation. Specifically, what is the maximum amount you can lose in a portfolio over the time it takes to get out of that position at, say, a 95% or 99% confidence level? Applying those

concepts to mortality or morbidity or managed care is a challenge. But, to the extent that actuaries can meet that challenge, I would argue that this is probably the largest growth area for actuarial expertise today. We're in the process of putting a value-at-risk process together. We're not there yet, but we're already learning quite a lot from it.

MR. BARRY L. SHEMIN: I have just one or two additional observations. First, you can look at the risk-based capital, C1-through-C4 framework, as risk management framework. The C1-through-C4 construct is comprehensive and exhaustive, and it attempts to cover everything. But it does an uneven mob and operates by necessity at a fairly high level. I think some of the new ideas that are coming up, such as value-at-risk, are much more focused and more bottom-up rather than top-down. An example would be analyzing what a California earthquake would do to health claims, mortgage defaults, and property/casualty claims. The real problem is trying to aggregate results to some probability level. Such an analysis provides a very different framework to the risks a company assumes.

MR. MATEJA: How many companies represented here have concerns or issues regarding risk management? There's enough interest here to pursue the subject further. At this point, I'll entertain questions or comments from the audience.

MR. SELIG EHRLICH: I think the hardest part of this subject is not losing sight of the one thing that doesn't fit into your framework. Things such as mortality, interest, and lapse are all covered one way or the other in our work. But there are risks that all our companies face "out of the blue." Unless you have some sort of net or some process to try to find them, you'll be blindsided by a competitor and lose the business that you counted on. It could be regulatory. I think that's the real challenge in risk management. The things you have concepts for will be surfaced; it's trying to find the things you don't have concepts for.

MR. SHEMIN: I agree with that. It comes under the heading of defining the risk. C-1 through C-4 gives you a nice, neat way of defining the risk. The California earthquake approach is much more

random. Companies that are going to use that approach presumably need to pay some attention to having a good process in place that will get people's ideas and creativity surfacing to really look for what the unthought of risk might be.

MR. LONGLEY-COOK: Let me follow up on that. I think different lines of business lend themselves more to the kinds of models that we're comfortable with that can produce confidence levels and value-at-risk-type calculations. Life insurance and annuities lend themselves to those kinds of calculations. Even so, in those lines of business, the thing you're not modeling, or the thing you're not thinking about, is what is going to hurt you.

For other lines of business, health care, and managed care in particular, I'd say just trying to build models that can even begin to deal with some of these concepts is very difficult. The way we've tried to address this issue, and I know the Prudential has handled it the same way, is to insist that a risk profile be built for a line of business. We don't ask them, we tell them, because the line managers know the risks better than the corporate area would. But by telling them to run the right models and think it through, they identify the risks that have to be worried about, and then they quantify those.

For those that are quantifiable, such as interest rate risks, you end up with a value-at-risk calculation. You can prioritize and come up with not only which risks you ought to focus on, but also how they're changing with different investment strategies, or how they're changing over time. Such risks are considered financial risks, and they can be analyzed in financial models.

Nonfinancial risks are usually operational risks, but not always. Legal risks end up being somewhere in between.

Many operational risks are very hard to quantify. What is the risk that we will not process on time the various orders on variable annuities and mutual funds? With a lapse in this regard we'll have either SEC action or we'll have suits. It's very difficult to quantify that. But again, they are added

to the risk profile. So you end up with some quantified risks and some unquantified risks, which is not what actuaries like to see. Ideally, we'd like to add them together, but developing the right covariances presents additional problems.

By forcing the risk analysis process, I'm hoping that, over time, more and more risks are getting quantified. In practice, you're still going to have those wild cards. The danger is that actuaries tend to focus on things that they can quantify, and they ignore what they can't. Wild cards are more often found with the unquantified risks.

MS. HELEN GALT: This is really more in the nature of a comment. As Alastair referenced, we were doing quite a bit of work in this area, and we have a simple definition of what we consider to be effective risk management. If we can make the following three statements, then we think we're doing well. We're not there yet, but we think we would be there.

The first statement is that people who are taking risk in the company know what they're doing. The second statement is that risk is being measured effectively and communicated appropriately. The third statement is that this profile isn't what we think it should be. If you think you can make all three of those statements, then we think you would have an effective risk management process in place. I think that helps to kind of clarify what the basic issues are.

MR. MATEJA: I would say that's reasonably consistent with what I've said about understanding and then managing risks.

MR. LONGLEY-COOK: One other element is implied by Helen's comments that I think one has to really understand. For risk management to work, the compensation of the decision makers has to be tied to it. As long as line management and corporate management are measured only by sales or stock price, then there is the risk that they will make very risky decisions that won't materialize for a few months or a few years. The ultimate goal of a good risk management process, and this is where it gets very, very difficult to implement, is when you take the value-at-risk or other

quantifications and use those in some performance measurement tool. So, if a line of business introduces a new product or changes the investment strategy and dramatically increases the risk exposure, then that's taken into account in performance measurement and compensation. Similarly, if they reduce risk exposure, that's taken into account in performance measurement and compensation. Once you can do that, you get the manager's interest in the risk profile.

MR. JAMES A. GEYER: I'm just curious as to the panel's view and the view of others as to the dynamic financial condition analysis (DFCA) work that the Society has been pushing for a few years. What Alastair described as value-at-risk seems like much of what's been in the various journals. Financial journals have focused on what banks are doing with value-at-risk. It seems that the DFCA is going off perhaps toward the dead end.

MR. LONGLEY-COOK: I think it's bit of a dead end only because there hasn't been the pressure for it from the regulatory front in this country. It's in place in Canada, as many of you may know. Clearly, the banking industry has a very short-term-horizon viewpoint. If it is worried about a derivative portfolio, it is worried about its loss over the next day, maybe a week at most. With long-tail liability lines of business in the insurance industry, we're worried about what happens during the next five or ten years.

Now dynamic financial condition analysis says to project out not only the in-force but new business as well. If this is a static analysis, then I don't think it tells you much more than what you get now out of cash-flow testing (which is sometimes too static). The crucial step, which is not envisioned and not done, is to test the new business model under different scenarios. We need to do some stochastic modeling of cash flows under different interest rates, default rates, and other assumptions that affect results. Then we end up not only learning the value to our company but also learning how sensitive that value is to changes in external, or sometimes internal, risks. Such an analysis gives us a value-at-risk for that line of business that takes into account long-term risks, not just what can happen in the next week. But it's a lot of work that involves many assumptions.

MR. SHEMIN: I'd agree with that. But Alastair, I really don't see the two techniques as being that inconsistent. In Canada there's an enormous amount of flexibility around the assumptions that actuaries choose to do an actuarial projection. You can orient those around the same risk characteristics that you might use to evaluate value-at-risk. So it becomes more of a short-term market-value-oriented technique on the one hand, and a long-term, book-value-projection-oriented technique on the other hand. But they're basically trying to get at much the same thing.

MR. KENNETH JAMES HAMMOND: I work out of our Massachusetts office, so I do the group valuation work for both the NAIC and the Canadian counterpart. In Canada, the equivalent of dynamic financial analysis is called the dynamic capital adequacy test. In the first years, it was just a real burden. Many mistakes were uncovered. Since then, it has become a little more of a cookbook approach. Every year we're encouraged to come out with a specific business condition. Sometimes we exit a line of business, or we face expense problems. We think that such an analysis has helped us quantify and understand the risks we assume.

I like the concept that has been coming out the last few months or weeks about what you can lose with a 95% or 99% likelihood. I don't think that they're in conflict or that they are competing; I think they both help.

I think the problem is that the Canadian reports are confidential reports to the board of directors or whatever. In the U.S., there are problems about keeping that report confidential. In our Canadian report, we modeled the new sales plan, and we also modeled higher and lower sales.

One of the more interesting scenarios we did is what they call the suspicion call. You're being investigated and you're not allowed to sell any new business for 12 months. Can you recover? You have to estimate how much of your business you'll lose, whether you'll try to hang on to your agents with a guarantee salvage and similar issues. It's worthwhile, but it is difficult at first. I think perhaps the confidentiality is the hardest thing.

MR. MATEJA: How many of you look at this from the practical standpoint of actuarial contribution to management process? Are there shortcomings perhaps in that regard?

MR. SHEMIN: I think we, as a profession, run the risk of driving too hard on quantification. If we see risks coming from a competitor or from a different source, we can highlight it without driving to a number, and help the rest of the company deal with it. This applies whether it's the marketing folks or the business heads we're dealing with. I think we can be more effective with management sometimes by using fewer numbers and just raising issues.

MR. LONGLEY-COOK: I see it a little differently. You can't manage risk unless you can measure it. I've seen many instances where risks were identified, but we really didn't react fast enough or well enough. So we ended up losing money. Looking back on some of these instances, I clearly see that there will be things that come out of the blue that you just can't anticipate. This is particularly true when the rules have changed mid-game. But there are others that I look back on and say, if we had had the kind of system in place that we're talking about now, I think the red flags would have gone up sooner. We would have been better prepared, and we would have acted quicker. I think the quantification aspect is a good part of what actuaries bring to the table.

I think a lot of qualitative and actuarial judgment is present in this process. But I keep pushing on quantification because I think it helps pin down things that otherwise will get pushed aside. Without quantification, management is likely to say, "Well, yes, I understand the risk, but I don't think it's that big. I think we can live with it another year."

MR. ROBERT H. DREYER: I formerly was chairman of the Smaller Insurance Company Section. I think I'm listening to the large company mafia. I listened to the panelists, a representative from Prudential, and a few from other large companies, and it's all very interesting. However, it's very impractical to the smaller company. When you and I were taking examinations, one of the valuation methods was valuation by overestimation. The smaller company by nature has to be much more conservative in what it does. It has to look at the risks. But it is not in the position to measure those

risks. So it has to approach them more conservatively. Now maybe I'm the lone voice in this group, and I don't want to take up everybody's time talking about small-company issues, but I think this is another aspect to the risk management issue.

MR. LONGLEY-COOK: No question. This is a lot of work, and a lot of expense. Over time some of this may be simplified so that some rules of thumb could come out of it. This certainly would be possible for positions in certain common assets or products. Also, a lot of this analysis came out in the risk-based capital calculations. Risk management is not inconsistent with that. I understand that many small companies don't do asset adequacy analysis of reserves. But RBC and asset adequacy analysis can handle 80% or 90% of what is required in risk management. It's the 10% or 20%, particularly for large companies exploring new concepts, that can really hurt them. I think that's where they need to spend the money.

MR. SHEMIN: Small companies also have a couple advantages. One is that they're typically not as diversified. The other is they don't have many layers of management. So top management is not as apt to be unmindful of a risk that might be taken by a decision maker several levels down. Further, a small company is less likely to be exposed to concentration of risks, where several lines of business are taking the same risk. So it may well be that there is not the same need to carry risk management techniques as far in a small company.

MR. DREYER: The need comes from the fact that we are subject to the same overregulation as the large companies are.

MR. LONGLEY-COOK: I view the risk management process currently as 90% addressed to senior management. At some point, perhaps it gets into the regulatory or rating agency arena, but right now it's internal.

I'd like to go back to the confidentiality issue that was raised earlier. If you think about it, if risk management is effective, then the last thing you want to do is have anybody outside the company see it.

FROM THE FLOOR: One last question, going back to what Alastair said earlier, you were saying something about if risk is taken, it sounded as if that possibly was adverse. I wasn't sure how you tie in knowing that there's risk, and then attach a sense of good or bad.

MR. LONGLEY-COOK: I don't think the purpose of the risk management process is to find risks and eradicate them, because then we're out of business. The purpose is to make sure that the lines of business are taking *appropriate* risks and getting *appropriate* premiums and putting up *appropriate* capital and reserves for those risks. So the more you can measure risk, the more you can manage it (and the better you can take that risk into account when you come around at the end of the year to evaluate performances).

I think the next issue we're going to get into is performance measurements. This may be a good segue. If you have the right measure in place, then you can encourage and reward appropriate risk-taking in performance measurement.

MR. MATEJA: Let me make a few final comments on risk management. Insurance companies, in fact, are risk-taking organizations. I go back to my reaction when I first heard the word *disintermediation* back in 1979 or so. I'd been in the insurance business for 20 years, and I had never understood one of the major risks that we were assuming. There are probably other risks out there that need to be recognized. Once you recognize them you can manage them. To my way of thinking, the whole issue of risk management somehow takes a more global approach to this effort. I think the opportunity to force discussion of risks we assume is healthy in a risk-taking organization. I don't know whether these things just happen or whether people expect them to happen magically. Being aware of what you're dealing with, in my opinion, is the first step toward effectively managing it.

With that we'll go on to address the issue of performance management. Performance measurement is dealing with all the realities of how you're doing after you assume these risks. Alastair will introduce this topic for us.

MR. LONGLEY-COOK: First, performance measurement really isn't anything new. But, to review the bidding, current performance measurement is largely driven by GAAP accounting, particularly in the stock companies. The usual basis is return on equity (ROE) or growth and amount of primary earnings. Statutory base measures include internal rate of return (IRR), present value of distributable earnings, and now, more recently, "economic value added." Also, there are ad hoc measures, particularly for health care, such as loss ratios, and, again, for stock companies, stock performance.

The concerns that I'd like to express are not new or earth-shattering. GAAP-based measures, in particular, tend to be short-term-oriented and subject to the vagaries of GAAP. Only economic value added reflects the use of capital. In the financial press, economic value added tends to be defined as return on equity less cost of capital. So for a short-term, it's short-tail line of business that might work out all right. But for a long line of business, that is not an adequate definition.

Stock performance puts too much weight on short-term market perceptions. In all these measures, I would argue that risk is not reflected in an explicit or dynamic way. Risk is captured implicitly and statically through capital and discount rates. As a result, a compensation system or strategic planning process may encourage decisions that improve short-term results to the detriment of long-term results or the increased risk exposure unacceptably.

I'd offer three possible solutions for discussion. Then I'm interested in hearing others. First, economic value added, should be added to existing required measures, such as the GAAP measures that you will have to report on anyway. But primarily for internal purposes, economic value added is a very effective way of taking into account long-term economic value growth.

Second, capital and discount rates should reflect the current risk exposures for each line of business. Or use risk-free discount rates and then make an explicit risk adjustment. Third, value-at-risk analysis should be performed and reflected in performance evaluation. Barry, do you want to add to that?

MR. SHEMIN: I'll just mention a couple things from a mutual company perspective. Mutuals are in the process of moving toward GAAP and using it more. Perhaps we haven't been using it long enough to . . .

MR. LONGLEY-COOK: To hate it as much as we do?

MR. SHEMIN: To recognize all the frailties. But at Hancock, we use GAAP ROE as our primary performance measure by line of business. The "E" is a measure that reflects apportioned capital using a risk-based capital framework. So we really are trying to measure risk, albeit the traditional risk-based capital approach, way down at the business unit level. Then in setting benchmarks for earnings we derive hurdle rates based on studies we can do of stand-alone businesses representing each line of business by using the capital asset pricing model. We try to derive data for a stand-alone individual life company or a stand-alone annuity company. There are obviously better data on such businesses than there are for a stand-alone group long-term-care company.

But we do try to apply that methodology and reflect risk in the asset base, in the hurdle rate, or in the data from which the hurdle rate is derived. Then there are the issues about long term versus short term that you mentioned. But for mutuals at least GAAP is a significant improvement over statutory accounting. It at least gives you a better view of the short-term performance.

MR. MATEJA: To what extent is definition of some of the alternatives, say the GAAP ROE, an issue? Economic value added (EVA), in particular, is very elusive. I think I've heard what I call the accounting definition of EVA in which you include chairs and conference tables and everything else that has a nickel's worth of value. Another approach that has been promoted by the firm that

I'm associated with is option adjusted value of distributable earnings (OAVDE), which is more a true economic-based measure. Until there is some acceptance in the financial community of a measure that makes some sense, I don't see managements ready to stand up and sound the trumpets.

MR. LONGLEY-COOK: That's a very important issue, Mike. The one I've already alluded to is probably the biggest source of confusion. Articles on EVA in the financial press cite various companies that brag about using it. When you read a little further and find out what it is, all they say is, "Well, our return on equity was 17% and our cost of capital was 14%, and therefore our economic value added was 3%." Well for a company with long-term liabilities that's really not going to do it. So that's one big definitional difference. When we talk about EVA we're talking about present value of distributable earnings. Clearly, we're using a totally different concept.

The other issue that I've been focusing on lately is the difference between *economic* value and *embedded* value added. Economic value added includes new business. In other words, if you're truly looking at economic value, you need to ask, what is this line of business worth? In this content, then, you can't ignore sales next year or for some reasonable period into the future. How you include new business and how you come up with a present value is extremely difficult.

MR. MATEJA: Okay, with that foundation, we'll go to the audience to see if we have any takers on performance measurement.

MR. JEFFREY G. STEVENSON: I guess I want to start off with a question for everybody. How many people or companies use the number of customers they have as a performance measurement? I see a couple hands. That's actually a surprise to me. I've been in business for a long time, and every time I open a financial statement I see the growth in assets. The growth in face amount of death benefits also is reported. I rarely see any measure of increase in customers or policyholder base. I would submit that if you keep track of your customers and know how many customers you have, and if you price your products appropriately, you will have good financial results. If you look back over the years, I wouldn't be a bit surprised if many companies have had declining customer

bases and declining agent bases. I think we really should focus more on the customers. That is our business -- getting and keeping customers.

MR. LONGLEY-COOK: I think that's a valid point. I'd say that you'd want to build on that. One good measure for instance, is expense per customer, which we look at a lot, particularly in the health care area.

MR. SHEMIN: You're getting at the idea of a balanced scorecard. It's very difficult to do everything with one measure. Often a better approach will be to try to get several measures. A financial measure about current earnings might not reflect growth at all, and then some growth-type measures might be related to sales or customer value for any number of other things. So I think companies have to decide for themselves whether they want to wrap everything up in one package or try to use a multitude of measures. Some companies that do the latter end up with the difficulty of having an elaborate measurement process. No one is quite sure what their objectives are, but they're probably better able to mix and match those if they go through the efforts to fine-tune them to get the results they want.

MR. MATEJA: I don't think anyone is advocating any single measure that will show the road to success. I think successful management gets intelligence from all different quarters. For instance, you had better keep an eye on your sales results and year-over-year increases, not only new business but total business in force. If you're bringing policyholders in the front door and they're going out the back door, that's probably not a successful strategy. You can track many different criteria. I think what we're really looking at in the context of performance measurement is something in addition to what has been used. Is there something lacking? Are there any other thoughts on this subject?

MR. DREYER: We use a measure at our company that might be a property/casualty thing. The measure is the number of policies per employee.

MR. MATEJA: It's apparent that different criteria may apply to different business segments. In the health insurance sector, some different criteria must be used to measure performance. If you look at an area such as New York City, for instance, I think there's an opportunity to have a higher profile or index in a densely populated area compared with a sparsely populated area, such as, for instance, North Dakota.

MR. HAROLD N. DERSHOWITZ: To synthesize the comments about the customers and performance measures, aren't all these things really being driven by the rating agencies now? The customers want to see these good ratings, and the rating agencies really determine what they want to see as good performance measures. So what the senior management does really is not under their control.

MR. SHEMIN: I don't think it's quite that stark. I think the rating agencies' interest is primarily in solvency. They are moving away from the strict balance sheet approach to solvency to more of a franchise value and vitality approach to solvency. But they are far removed from the level of refinement as to performance measures that companies are using. Companies are generally using things that are well ahead of where the rating agencies are now. I think the security analyst might be a better example of an external observer trying to develop earning measurements that might put pressure on companies.

MR. LONGLEY-COOK: I agree with that observation. Each analyst will have a favorite metric. I think the trouble with rating analysts is that they think they're security analysts. Instead of looking at balance sheet items and solvency, they are focusing on quality of earnings, which isn't necessarily a solvency issue. But it is certainly true that they will have their own measures. I think performance measurement is something that's 90% internal. It's something that is helpful to the management of the company in understanding performance.

MR. ROBERT CHIPKIN: One of the things that seems to be missing from the discussion is that when we price products, we have certain financial goals in mind. In fact, we have some basis for

making decisions on pricing. Doesn't it seem reasonable to measure performance of products and portfolios against those pricing parameters, whether it's the internal rate of return (IRR) or sales growth?

MR. LONGLEY-COOK: We use the same hurdle rates and capital base for pricing products as we do for measuring GAAP ROE. So we do try to tie those together.

MR. MATEJA: The previous comment by Mr. Chipkin is something that has been dear to my heart. I've seen very elaborate pricing models, all assumption-driven, of course, that produce what I would call the road to riches. All these models produce the kinds of returns that I guess represent the financial goals of the companies. I think as a generalization I could say that few companies are reaching their financial goals because the reality of the actual experience associated with these beautiful pricing models is that the assumptions are not being realized. I don't see efforts to quantify the deviations from expected in that regard. I'd be interested in any observations from this group. How many of you are kind of working at understanding the relationship between pricing assumption and actual experience? Is somebody held responsible, for instance, for lapse rates?

MR. SHEMIN: I might observe that it's possible that the life insurance illustration regulation has had a salutory effect here in essentially forcing illustrations and therefore, pricing to be based on current assumptions. I think the regulation has led many companies to pay a lot more attention to exactly what their current experience is.

MR. LONGLEY-COOK: Mike, I'll put in a plug for your company here. I think the proliferation of commercial models, such as PTS and TAS, has gone a long way to pull all this together. I think we all come from companies that have a proliferation of systems that are homegrown legacy systems that are not consistent. These systems don't interact, so you have pricing, reserving, planning, and compensation systems that are totally independent. We are now experiencing, through use of better commercial systems, the ability to do pricing, reserving, and planning all in the same system. Lo

and behold, you can do fancy things, like run them stochastically, so that you can do that sensitivity testing.

I think that by using the commercial systems and getting away from your own homegrown systems will help. There's some initial expense to build the platform, but once you have it, you can drive all these things off that one platform.

MR. STEPHEN N. STEINIG: Mike, you asked a question a few moments ago, are there any performance measures that should be used that are being left out? I think it's a good question, but in a way it's a question that enters the equation at the wrong point. I think the real question is, what are the fundamental purposes of companies? Performance measurement systems and incentive compensation systems are really means to see that the ultimate purposes are being emphasized and being achieved. For stock companies, the ultimate purpose is profit for the stockholders. Everything you measure is either a measurement of stockholder profit or a measurement of a driver or a leading indicator of whether you're achieving that purpose. I think all the current emphasis on value or economic value added is geared to that; i.e., increasing the value of the end product and not just this year's earnings.

As a lifelong career mutual company employee, this is all very confusing, because the way in which you measure the stated purposes of a mutual are a little mysterious to me. In fact, I think mutual companies have been developing performance measurement systems and have been running themselves in the last five or ten years, as though they're stock companies. There's no distinction. It's the same language. But yet they would state that their fundamental purpose is quite different. I think there's a lot to play out on that in the next few years.

MR. SHEMIN: I have only one comment on that point. I don't sense the same market discipline for mutuals.

MR. LONGLEY-COOK: I don't disagree at all with Steve. I would just add that all companies need to be sure they're operating efficiently and adding value as best they can to their customers. This applies whether they're mutual or stock. So many of these financial measures do reflect that fact. I think mutuals perhaps might perceive themselves as having more of an obligation to attract new members and serve their membership. That might, in fact, lead to perhaps more rates of return by virtue of returning some of the value added to policyholders. In fact, if you look at mutuals' ROE, you'd see that it is lower. It becomes very difficult to say whether they're lower because they're trying to spread the wealth versus perhaps being less efficient. I don't disagree with you at all. But I also don't think that the financial measures are out of balance for mutuals as long as they're not the only measures that are used.

MR. MATEJA: Are there any other comments on the broad issue of performance measurement? If not, then I think we can move on to our next issue, which Barry will introduce. We want to take a look at valuation, and I guess we're also going to look at nonforfeiture as kind of a trailer.

MR. SHEMIN: Let me give a short introduction, and then I'd like to raise some issues that companies and actuaries should be concerned with. The NAIC asked the Academy to take a look at the valuation structure. The charge was to start with a blank sheet of paper. The Academy designated a working group to address this. It's chaired by Bob Wilcox, former Utah Insurance Commissioner and currently with Deloitte Touche. The vice-chair is our absent panelist, Craig Raymond. The group has been meeting monthly and has started a number of research and self-educational efforts. It has tried to define some broad objectives of what it's trying to achieve and is looking at the valuation framework overall. It's also trying to define some principles.

I also should mention that the meetings of this task force are open to any Academy member. The actual membership of the task force is quite small, perhaps less than ten. The monthly meetings have been drawing about 40 people. So, if anyone is interested, you need to just contact the Academy office. They'll tell you where and when they are, and you can come to listen and participate.

One of the things the task force has done is try to identify problems with the current statutory valuation framework. There are several pages of problems, which I won't go through. But I'll mention one of them, which seems to be the overriding one: a formula approach to both reserve methods and assumptions does not distinguish among very different levels of company experience. The current approach creates reserves which, for some companies, may be extremely redundant and, for other companies, may be barely adequate or even inadequate. To apply this rigid framework to a universe of companies, it is necessary to be redundant to minimize the number of companies for whom reserves would be inadequate.

Everyone agrees it would be desirable to somehow not have this situation continue in a new valuation framework. To try to get some ideas about what some alternatives might be, the task force has established a working group that has been looking at international valuation practices.

MR. MATEJA: I'm going to interrupt you here Barry because Bob Wilcox addressed a lot of the fundamental issues in the opening session. I want to direct our attention to what senior management's perspectives are on this. I think the point that you made up front -- that a formula-driven reserve really doesn't reflect what I would call distinctions in risk-taking among companies -- is a very valid one.

For those of you who are long-term attendees at these sessions, you may recall that many years ago I gave a presentation entitled "Risk-Based Reserves." This was at a time when we were doing initial development on risk-based capital. At that time, I said it would make a lot more sense before we had risk-based capital to have risk-based reserves. If you had reserves that were uniformly 80% adequate on a probabilistic basis, it would be easier to determine what kind of capital you needed on top of that.

MR. SHEMIN: I think the issues around this relate mostly to the use of company-specific reserve bases, which will of necessity involve a lot more actuarial analysis and judgment. So here are some specific issues. The first issue is that if we rely more heavily on actuarial judgment, there may be

pressures on actuaries to push their assumptions to the limits, or even beyond. Is there a concern that competitive pressures on capital use will affect the actuary's decision and perhaps even impair the solvency of some companies?

Another issue is variations among companies. At least now you now that all companies are using the same formula reserve basis even though you don't know how adequate it is. If we go to a basis that purports to relate more closely to company experience, how closely will the margins between the reserve basis and the company experience match from one company to another? Is it possible that differences could be hidden and not recognized and too much emphasis would be placed on the relationship of reserve basis to experience?

Dynamic financial condition analysis is one of the things that's being looked at as a possible component of this new valuation framework. The idea here is something like the Canadian process. Do we want regulators requiring dynamic financial condition analysis? It's kind of an intrusion in the management process. Do we think that we can keep the analysis confidential within companies? What about expenses? We're talking about things that will require more analysis of specific company experience. Actuaries developing assumptions will want to engage in additional analysis to do that. Will companies perceive this expense as value added? Or will the perception be that this is just another regulatory dream caused by the actuaries? Is the net effect on the industry's vitality positive or negative?

Then, finally, we'll undoubtedly need actuarial standards of practice to bring together a framework that relates reserves to company performance. Do we think actuarial standards can be up to the task of, on the one hand providing enough flexibility so that actuaries can exercise judgment and fit the reserve assumptions to their company situation, while on the other hand, not allowing so much flexibility that competitive pressures on capital could force inadequate reserve levels?

So those are some issues that came to my mind. I'd be interested in anybody's reaction.

MR. LONGLEY-COOK: I'd just add that if this comes to pass, and if we end up with a valuation system that does put more judgement in the hands of the actuary, then the actuary ends up being caught in the middle between regulators and management (and their own conscience perhaps). We've seen some of this already with some of the asset adequacy analysis. So I'm interested in furthering this discussion, in terms of what actuaries have seen so far and what they anticipate. Obviously management would prefer to have complete control over reserves through the actuary. To the extent that reserves are formula-driven, then it's difficult to do that. To the extent they're more judgmental, then, theoretically, the valuation actuary is abiding by actuarial standards of practice and is doing the right professional thing. But in the reality of life, they will come under increased pressure from management to move one way or the other.

So as this task force, the industry and regulators attempt to deal with the inadequacies of the current formulaic minimums, then we're going to come more and more to the judgment and integrity of actuaries.

MR. MATEJA: How many companies represented here have been at least thinking about longer-term implications of the kinds of reserve standards that are being proposed? Are you piped into this process at all? Is there any evidence of concern? At this point, I'll open it up to the audience.

MR. JAMES G. BRIDGEMAN: I want to move our discussion a little further down the line that Alastair was taking. If the concept is to literally do away with the formulas, what they are replaced with becomes very important. Being right is important to actuaries and the profession in addition to the company management that we work for. Being right now in the reserve area as a professional when it really comes down to cutting the nut is to be sure the rules are being followed. There are many other considerations, which are very important, but following the rules is what it comes down to.

If the regulators aren't establishing the rules, if they're putting the ball in our court, then we're moving into an area where we are not company agents designed to assure companies and regulators

that the companies are operating within the rules. We become instead agents of the regulators in achieving their more vaguely stated goal. Now there are many implications to that approach. I'm not an expert on what goes on in the UK, but my vague understanding of the role of the actuarial profession in the UK is that actuaries are agents of the government that the company is required to employ. The difference between that role and the role we play in the United States today is worth contemplating. Are we prepared as a profession to play such a role? Is that a role we want to play? Will it be in the best interests of the profession? In the best interests of our customers? In the best interests of our companies? Those are difficult questions. I'm not sure what the answers are, but if that's the direction we're heading with this blank piece of paper, we need to consider them carefully.

MR. LONGLEY-COOK: I think Jim has a very valid point. What he says about the United Kingdom is true, and the fear is that we end up being outside the loop. At Aetna we have outside auditors and actuaries and we have internal auditors and actuaries. You need both. You clearly need somebody who is totally unbiased to give senior management advice as to whether the reserves are okay. But you miss something if they're out of the loop. I think Canada has experienced some of this, and the Canadian actuaries could speak better to that. I think that valuation actuaries in Canada do end up being viewed more as regulatory agents rather than as management agents, and that is a net result of going down that road.

MR. ERLICH: Obviously, it will play itself out, and we can influence it if we get involved. But I'm not convinced that it means you're an agent of the regulator. If you look at the property/casualty model in the United States today, the property/casualty model actuaries are very clearly company employees or consultants. They do their work within the confines of actuarial standards of practice. If the standards of practice can be strong enough, that is the only way I could see of not becoming an agent of the regulator employed by the company. Actuaries could be company employees practicing their trade, just as lawyers.

MR. MATEJA: I think the comment about agent of regulator as opposed to agent of management is very well taken. At least it gets my attention, and it's one of the things that I haven't really heard debated. One of the things that has happened to actuaries is that their role in the management process has diminished during the last few years. If this proposal promotes that trend as opposed to reversing it, that would be something worth contemplating.

MR. LONGLEY-COOK: I think that's exactly the point. I think the comparison to the property/casualty side is very interesting. Those of you who have worked on the property/casualty side know firsthand that, in setting property/casualty reserves, the actuary is one of many voices, and not necessarily the loudest. Everybody tends to become an expert when setting reserves that the actuary really can't pin down very well. (What will happen to environmental waste litigation during the next ten years? Who knows?) So you don't end up being the regulatory agent, but you don't end up being the expert in your company either.

MR. GEYER: Just another observation. If we go to that system, I can see the rating agencies playing a more active role in reserve evaluation. They will review the actuary's work and serve as another audience or another control over the whole process. Rating agencies serve in this capacity on the property/casualty side, particularly with environmental liability and other reserves.

On the life side they really haven't done that. They've really focused on capital adequacy, because they can see that changing very quickly.

MR. CHARLES V. FORD: I'd like to return to the issue of what the formula reserves are replaced with. Canada, for instance, has very strong valuation technique papers. In particular, with its term-to-100 valuation, one of the crucial assumptions is the ultimate lapse rate. They aren't formula assumptions, but there are very strong guidelines as to what's appropriate. I couldn't exactly say whether those could be considered safe harbors. They represent very strong guidance to the actuary as to what an appropriate approach is to that kind of issue. So that might be a way to avoid

becoming an agent of the government, yet still have the kind of strong support and professional standards that we would need to ensure reserve adequacy.

MR. SHEMIN: One way to look at this is that the current formula reserve structure is very comfortable. It tells you what method to use, and it tells you what assumptions to use. You can be sure that, in most cases, it's more than adequate. Getting away from that will put different pressures on actuaries. We can't accept that we're going to be allowed a lot of flexibility and not have anybody looking over our shoulder. So I think it goes with the territory. We have to decide whether we want to do a better job of tuning the company's liabilities to its real obligations and perhaps taking some of those negatives that go along with it.

MR. MATEJA: I want to throw out another issue for you to think about. It's the whole issue of effective use of capital, which I think is really related to the valuation issue. I don't know how much capital is buried in the statutory reserves of life insurance companies, but my sense is that it's quite material. I don't think we're getting the kind of credit for this buried capital that we should.
If this whole process gets us back toward what I would call a realistic reserve, as opposed to a more conservative reserve, then the industry as a whole could benefit and compete more effectively in a global financial marketplace.

MS. GALT: Another very practical concern I have about this is the very litigious nature of society in the United States. We can look at some of the other approaches that are used in other countries, but I think that the legal environment does tend to be quite different. It would be nice to think that actuarial standards of practice would be there to protect us against getting sued. But the fact is our current standards of practice are really quite general. I agree with the comment that was made about the Canadian standards; they do tend to be a lot more specific and perhaps provide the actuaries more protection than our current standards do.

MR. JAMES C. LASTINGER: I think this question could be answered by considering your role or responsibility. Are you a person who is deciding what the best reserve is? Or, is your purpose to satisfy someone else's standards?

MR. DAVID K. SANDBERG: I think there are a couple realities that we need to remember. One reality is that regulators are asking questions about how solvent the company is. Rating agencies are asking how they can evaluate the financial viability of a company. They are not getting that information out of the current accounting framework. So the question that we face as a profession is, do the actuaries think they can provide better information than a set of formula-driven reserves? If we think we have something to offer, then this is what I think the task force has the opportunity to state. As financial engineers, we have some better methods or better information that we can provide as a part of a disciplined scientific process. We aren't trying to be a watchdog for the regulator or management. We're trying to find better information for both groups, so they can better understand the dynamics of the company. I think that's really the issue. If we don't want the responsibility for it, then we can leave the formula reserves in place. But I think we have an opportunity to take advantage of what is really at the heart of what I think our profession is about.

MR. MATEJA: I think that's a good observation. That reminds me of something that I once observed about my own perspective on the industry, after nearly 39 years or so. When I started studying life insurance accounting, I think I was using a 1959 or 1960 version of the blue book statement. We have been using the same construct for the last 37 or so years. One phenomenon that happened in this period of time, for instance, is the segmentation of general accounts, which substantially changed the risk profile of many companies. You don't find anything about segmentation of the general account in the blue book (or at least I don't think you do). There's a whole realm of risk management related back to segmentation of accounts.

MR. JOHN M. O'SULLIVAN: I think one of the opportunities that we face with setting up different reserve structures is to put ourselves on a more level playing field with other financial institutions. I'll just throw out two examples. One is where you have the payout annuity and

annuity certain with life contingencies. There you can get into holding very strong deficiency reserves just because of the way the formulas work.

Another example is variable annuities versus mutual funds. Once you wash out things such as the guaranteed minimum death benefit, the insurance reserve can be different. The point is that we can't operate inside of a vacuum, unless we have consistent results for similar types of products. We're doing ourselves a big disservice if there isn't consistency.

MR. SHEMIN: I'd like to extend John's variable-annuity-versus-mutual-fund example, which deals with deferral of acquisition costs on mutual funds that you can't do on a variable annuity. One of the very interesting results coming out of this international look is that it appears that the U.S. allows less deferral of acquisition costs than virtually any other country that we've been able to find. The way it's done elsewhere differs. Many countries use something called zillmerized reserves in which the zillmer first-year expense allowance is much bigger than, for example, for life insurance, the expense allowance embedded in the Commissioner's Reserve Valuation Method (CRVM). But there are some other countries that use more of the present value of future profits. Canada would be an example of such a measure, allowing you to take that as an asset and hold it against acquisition costs.

So the U.S. does seem to be at one end of the spectrum, and if you'd like to think of the industry as a growth industry, it will be more difficult to make that happen under the current regulatory framework, given the capital requirements that currently exist.

MR. ROBERT DREYER: I remain concerned about ignoring the problems that this could raise for the smaller companies. One thing that Bob Wilcox said earlier that disturbed me was the move toward a single valuation basis that would serve all parties. Traditionally, the regulators' objectives and management objectives have been diametrically opposed in terms of making management decisions and protecting solvency. The financial community is somewhere in between the two, and I'd like to hear some comments on this. How do we relate the two that are so different?

MR. SHEMIN: If I can respond to that, I think Bob Wilcox is trying to argue for, at least I hope it's what he's trying to argue for, one system. I think he said that one system will provide the information for all needs. You cannot have one acounting standard that serves all those masters. But if you have one system for which you can make a few adjustments and get to the needs of others, then we can deal with another issue, which I thought the gentleman before was going to raise. That is, when we try to compete against mutual fund companies and others that do not have statutory accounting, the expenses that we incur are a major competitive disadvantage. We must simplify this so that there is perhaps one system with adjustments rather than three or four totally different systems.

MR. BRIDGEMAN: I had the same concern when Mr. Wilcox said that earlier. Alastair's response is consistent with the thought that I had. The way I like to look at the problem is that some users are more concerned with the balance sheet. Historically, this has been the regulators. Others are more concerned with the income statement. Perhaps this is management, the tax man, and others. Well, I think you can prove mathematically that balance sheets and income statements are a little like position and momentum in quantum mechanics. You can be accurate about one or accurate about the other, but you can't be accurate about both. I think that can be mathematically proven. He mentioned GAAP accounting in a similar context.

MR. MATEJA: I've heard some interesting commentary on this general subject. I would urge all of you to get your word processors cranking and share some of these thoughts with the people who are addressing this. Part of our purpose in having this structure was to see how much useful intelligence we could get out of a group that voluntarily comes to a session such as this. You have to get in your two cents worth is the point that I would make.

We have enough time for a flying leap at the last subject. Alastair is prepared to talk about communications to management.

MR. LONGLEY-COOK: I'll make this brief, and we can get into some discussion. In terms of the changing role of the actuary and communication to management, I think actuaries have become more disbursed within organizations, working more as single practitioners. Surprisingly, I think this leads to actuarial jobs that become purely actuarial. Some actuaries are succeeding in nontraditional roles, particularly investment management. But, in my mind, they cross over. They are no longer actuaries. We never see them again. That's understandable. Some companies are making actuaries CFOs; some are not. Traditional actuarial work is becoming routine and automated, and new areas such as asset/liability management, cost containment, and risk management face competition from other experts with other degrees. I think the implication of this is that the cult of the actuary is gone. We don't have as much of a guild training program as we used to. So we end up with more consultants working in house.

MR. MATEJA: Do you have any good news, Alastair?

MR. LONGLEY-COOK: I think the good news is that the demand continues to run very high for actuaries. We've seen many job eliminations at Aetna. I have not yet had a situation in which an actuary shows up at my door and says, I don't have a job. There continues to be an increasing demand for actuaries. They just happen to be working in different areas.

But the other implications are that in terms of communicating to management (something that actuaries are not necessarily born to do), it becomes increasingly important that the actuaries show how they are adding value in ways that management can understand. If all we are doing is just meeting the rules and the regulations, then we'll be marginalized and treated as actuaries in the back room. But the more we can get involved in risk management, performance measurement, and strategic planning, particularly with regard to mergers and acquisitions, then I think we can expand our skills and we can continue to see that demand grow.

MR. SHEMIN: I agree with everything Alastair said. I'd just like to add a couple points. I don't think the phenomenon Alastair described is unique to actuaries. One reason that there are fewer

actuaries in management jobs is that there are fewer management jobs. That's not true just in the insurance industry. It's true throughout the U.S. and probably the world. It is also driven by the way business enterprises are being structured with the layering of managers and with more of an emphasis on empowerment and shared values, rather than on command and control.

So this kind of goes with the territory. I think the way actuaries have very naturally settled into perhaps what might have been the more natural role for them to begin with -- emphasizing their core expertise -- is very positive. But I also agree with him in spades that communication skills are becoming more important than ever before. You not only need the ability to do a good core actuarial job, but you also need the ability to explain what you did to somebody else.

I also want to take a stab at a prediction. I think actuaries have perhaps bottomed out in terms of their role within insurance companies. We've had a solvency crisis during the last few years, and there has been a lot of emphasis on the balance sheet and on the short term. Those aren't things that actuaries have as their central skills. Now we're getting greater focus on how we succeed as businesses in the future. How do we add value? How will earnings emerge? What are the business actions that companies should take? Given the complexity of many of the products that we offer, I think the actuary's knowledge of the inner workings of these products and the ability to translate them into projections of the future will become increasingly valuable within companies.

MR. JOHN D. MURRAY: I think that everything we've said is right on. Communication is vital to the future of the profession. I do think that many actuaries will need help selling these concepts to top management, because there are many companies where actuaries have been taken out of the corporate role. The jobs we talked about and de-emphasized, are the ones that senior management will not jump on as being worthwhile.

MR. MATEJA: I'll share with you one of my own comments. The transition from corporate America to the consulting arena really drives home the idea of value added in a hurry. You really have to add value in a consulting practice. I wonder how many company actuaries really look at

what they do and try to evaluate it in that context. Ask yourself if what you are doing is really adding value to management.

The other thought I have is that within the last year I've seen a decided trend in which managements are looking for help to get a first-class actuarial organization. The premise is that the actuarial staff is not performing up to snuff. There is concern that the actuarial staff is not doing it fast enough or efficiently enough. The quality of the information that they're producing is perhaps archaic. This suggests that you consider what you're doing and how you're doing it. It may provide an opportunity for people in my business.

One of the things that I learned as a manager years ago is that you have to make sure that everybody can stand up to the plate and hit a long ball for you. If you have a weak link with your actuaries, a perceptive management will try to bolster that team. That might be going on right now. I think management's effort to improve actuarial expertise represents a challenge to all of us to increase our skill levels. The kind of work that can be done with financial models is truly breathtaking. With the power of PCS today, it's only a matter of time before every company will have a sophisticated financial model.