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# 1999 Valuation Actuary Symposium

## September 23–24, 1999

### Los Angeles, California

#### Session 20IF

#### New UVL Update

**Moderator:** Larry D. Baber  
**Panelists:** Arnold A. Dicke  
R. Thomas Herget  
Kerry A. Krantz  
David K. Sandberg

*The panelists provide a forum for the member of the American Academy's committee working on the revisions to the Standard Valuation Law to update participants as to the status of the committees' work. The topics include:*

- *A brief description of the activities currently taking place*
- *An update of where the revisions process stands and what the next steps are*
- *A brief description of the valuation process currently being proposed by the committee*
- *An action plan for the future*

**MR. LARRY D. BABER:** I am with the Phoenix office of Milliman & Robertson. I have been an appointed actuary for a number of years for many clients. I do a lot of financial work and analyses, and I would like to introduce you to the panel for this session. We have four different speakers. First is Kerry Krantz. Kerry spent 20 years in the industry, and, in 1995, he went to work for the Florida Insurance Department. He reviews Exhibit 8 work papers for certifications of valuations, performs actuarial reviews for financial exams, and reviews actuarial opinions, memorandums, and risk-based capital reports. He is active in the Society of Actuaries and the American Academy of Actuaries. He was the chairperson of the SOA Computer Science Section and is currently a member of the AAA committee proposing changes to the NAIC Actuarial Guideline ZZZZ.

Arnold Dicke is another one of our presenters. He's senior vice president and chief actuary of ING Reinsurance. He's involved in overall management of business, focusing on actuarial and risk management areas. He was previously with New York Life. He has been a leader in the Society for a while serving as a vice president and a board member. He is chair of the AAA Committee on Federal Life Insurance Issues, on the ACLI Task Force on Market Value Accounting for Life Insurance Liabilities.

Our third presenter is David Sandberg. He is appointed actuary for Life USA, which has just merged with Allianz. Previously, he was with Lone Star Life. Dave is on the Committee on Life Insurance Financial Reporting (COLIFR), is the Valuation Task Force chairperson, and also participates on the C-3 Risk-Based Capital Task Force and on the committee that's drafting changes to the cash-flow testing Standards 7, 14 and 22.

We are going to start with Kerry. Kerry is going to summarize several recent meetings of the regulators by giving his viewpoint, rather than those of the regulators. He'll share what he has seen and what is missing in the valuation laws, and he will share some of regulators' concerns. After that, Kerry and Arnold will present a dialogue that would typify a regulator speaking with an appointed actuary on what the regulator needs and what he would like to see in the future. We would encourage your comments and questions. If you could come to a microphone, we would be glad to accept your questions or comments at that time. We would like to keep those comments strictly on current issues. At this time, we do not want to get into a debate about the proposed Unified Valuation Law (UVL). We will take those questions or comments later, after the final presentations. After the dialogue, Dave will discuss the work that has been done by the Valuation Task Force, and then Tom will present a numerical example under the proposed UVS. Kerry will begin with his presentation.

**MR. KERRY A. KRANTZ:** I was invited to participate in the August 11, 1999 Valuation Task Force Meeting in Crystal City, Virginia. There was a breakout session for state regulators and other interested parties to discuss concerns in the current environment and also concerns about a

proposed unified valuation system that would exist five or ten years from now. I was the moderator and recorder for the breakout session. The complete minutes for any task force meeting are available from the Academy.

Let's first discuss today's system. The first point is there might not be enough qualified valuation actuaries in companies, and the UVS might even exacerbate this. The second point brought up by one of the participants was, the current system does not respond well to new products, and it takes too long to get them filed and approved. It is difficult for regulatory actuaries to respond. One of the people there asked whether this will go away or not? Third, under the state regulation that we have now, it's not uniform, and different states might react to the same problem differently. For example, I believe New York was the only state that actually adopted the 1995 version of XXX. The Department of Insurance (DOI) does not attempt to duplicate a company's work. Trends and assumptions are reviewed. If a certain DOI finds a problem with the opining actuary's work, it will invite the actuary to come for a visit and discuss what's wrong. The actuary will then redo the opinion or memorandum. One thing that a department of insurance can do is hire an outside firm or actuary to come in through a request for proposal and redo the opinion and memorandum if it's determined to be necessary.

The fifth point under today's system is the appointment of an outside actuary is like an atomic bomb solution. It's seldom used. As stated above, a request for proposal (RFP) is necessary, and involvement of the commissioner is required. The sixth and last point is actuarial memoranda vary in detail. ASOPs are loose. For example, little guidance is given on expenses.

Seven, under a UVS system, in five or ten years from now, one person thought that an EA type exam might be useful for qualification. Maybe an admission class, like the Fellowship Admissions Course (FAC) for new Fellows, would serve that purpose. With flexibility, will the problems of state variations continue or will they go away? Second guessing by the reviewing actuary can't be eliminated. A broad ASOP might make this inevitable. There might be problems, which has been discussed at previous UVS meetings, if the reviewing actuary is company retained.

Due to limited resources, many small insurance departments will need to obtain outside help to implement UVS. Even large departments might need to outsource some of the work.

There might be a need for referees if the appointed and reviewing actuaries disagree. For example, what constitutes out-of-line assumptions? The commissioner is the first-level referee. The Actuarial Board for Counseling and Discipline (ABCD) might also be a first-level referee. The vitality analysis might assist in resolving disputes. Will the scope of the reviewing actuary's review be more thorough if the company's viability is in doubt? Will the ASOPs guiding the reviewing actuary address this? There are practical and theoretical answers to this question.

In September 1999, the task force had a follow-up breakout session, and I was able to get some of the comments that were expressed. One of them was sole dependence on formula reserve requirements can lead an actuary to focus only on the formula reserves and not the underlying risks. The criteria for establishing additional reserves as a result of asset adequacy testing are vague. A regulator is often faced with a Hobson's choice of applying the literal letter of the law or adjusting the facts to fit the situation. Reliance on others in an opinion raises the issue of the qualifications of those on whom reliance is placed. I pointed out that ASOP 22 limits the degree of reliance that the opining actuary can place on others.

The attempts to build a better mouse to get around the XXX mousetrap have already begun. Will the appointed actuary be accountable in spirit and not just to legalisms? The eighth of the ten points is what is the early warning for risk? Are the management discussions and analysis (MD&A) helpful? There's a concern over future nonuniform interpretations of guidelines for nonguaranteed elements. A bigger black box will require feedback loops. Without this, problems will arise.

**MR. ARNOLD A. DICKE:** I'd like to start by taking us way back. I've been around the Society and Academy and ad hoc committees since back in the mid 1980s working on these kinds of problems. Syed Ali, now on the SOA staff, and I were used to reminiscing about the late 1980s when we'd go up to New York about once a month to help write Regulation 126. Thus, my first question is, to what extent has the Actuarial Opinion and Memorandum

Regulation (AOMR), which resulted from the Regulation 126 work, improved the regulators' ability to assure the public that the promises made by insurers will be kept? Was this improvement really worth the cost both on the regulatory and the company side, in your opinion?

**MR. KRANTZ:** Section 7 opinions are sometimes filed by actuaries who are doing it to go through the motions and are not really confident in the opinion that they're signing. As such, I'm not sure that the Section 7 opinion has that much value. Section 8 opinions, to the extent that they cause the actuary to do cash-flow testing, have performed a valuable service to companies because some of the outputs from that system have been helpful in managing our companies. Those companies that are going through the motions on a Section 8 opinion may not have benefited, and, in their opinion, it may be that it's not worth the cost.

**MR. DICKE:** Are you comfortable that the regulators have benefited from this and that they have a greater understanding of the risks that companies are facing?

**MR. KRANTZ:** In one case, I examined a company that was exempted, under the current Section 7, at the beginning of the year from a Section 8 opinion. However, because of the examination team declaring them a Category 1 company, they were actually subject to Section 8 and failed that test. The actuary wasn't aware of that. His company hadn't informed him of the fact that they were a Category 1 company. When I pointed that out, I requested an asset adequacy opinion. Because his company was essentially a small group and medium-sized group A&H company, I told him that a gross premium valuation would be all that would be necessary to determine whether or not the company needed to set up an actuarial reserve. As it turned out, the company did, in fact, have inadequate premiums and did set up an additional reserve. At that point, the company complimented me and told me that the actual work that it did added value, and that it appreciated my help with it.

**MR. DICKE:** That's great to hear. By the way, I should point out Kerry's remarks are from his personal experiences, and my remarks are from my personal experience in working with many committees and so forth. Neither Kerry nor I are speaking on behalf of any organizations. We're both here as individuals. I'm not representing the Academy or the Society groups I've worked

for, and Kerry is not representing the Florida Insurance Department or the NAIC. We've heard some good things about this, but are there shortcomings? What are the most significant shortcomings to the approach that is now in place—that is, formula reserves and formula risk-based capital, supplemented by the AOMR?

**MR. KRANTZ:** I think one of the shortcomings came up in the minutes of the meeting. There are company actuaries that look at the formula reserves and think everything is fine without examining the true risk the company faces. I think everybody is aware of what happened in St. Louis, and I won't go into that. Companies need to know that they are risk-bearing entities. One of the reasons that the Life and Health Task Force wanted to have a new valuation law, starting with a blank sheet of paper, was they wanted to move towards a system that evaluated risk and determined reserves on the basis of risk. The people who developed the current formula for the risk-based capital, especially the C-3-risk, knew there would be flaws in it. For example, if a company is conservative and holds reserves that are higher than minimum, they're actually punished into holding higher risk-based capital. We need to have something that, instead of being inversely proportional with the result that's expected, would be correlated with the result expected.

**MR. DICKE:** Kerry was referring to an event that occurred about two years ago, when the Academy was approached by the leadership of the Life and Health Actuarial Task Force of the NAIC and was asked to start from a blank sheet of paper and determine what sort of valuation system the Academy would recommend. From a personal point of view, what sort of results did you hope to see from this charge?

**MR. KRANTZ:** The first thing I wanted was there to be no GAAP or purchase GAAP or tax reserves. I thought that there ought to be one system of reserves that were correct reserves and that the company would use those. If those reserves resulted in a level of income that was too low for the Internal Revenue Service, then the point on the UVS curve might be a little bit different for their benefit. The idea would be one set of reserves for all purposes. This is the way I explained it to my actuarial analyst when I hired him: If you have life insurance, and the mortality costs are going up steeper than the level premiums, then you need to build up a reserve.

I believe that the reserve ought to be something that's simple and easily explainable to upper management. The calculations may not be simple, but the concepts should be.

**MR. DICKE:** We now have a UVS proposal. We're going to hear more about it later. It's focusing more on solvency issues—what is currently being covered by reserves plus risk-based capital for most products. It'll focus on ways to calculate reserves for some of the new varieties of products, and it contains a provision for what's being called a viability report. This is similar to the dynamic financial condition analysis proposals, looking at the risks of the company and trying to quantify them, and looking at plans for new business and looking forward to seeing if the company is in a position to carry out its plans. The current proposal would be developed for the company's board, but regulators would be made aware that the board would be receiving the report. Does the UVS proposal address regulators' needs, and what sort of practical issues does it raise for the regulators? Will regulators be willing to depend on actuaries to the degree required by the UVS?

**MR. KRANTZ:** I went to college here in southern California, and the governor, at the time, later became president. His famous slogan during the trials with the Soviet Union was trust but verify, and I believe that's what the reviewing actuary's role will be. I have spoken in the past about how I thought that the culture in Canada is different than it is in the United States and even in Great Britain. I don't think we have the culture here in which we want the company actuary or the consulting actuary to be the actuary for the department of insurance. That person should probably be a loyal employee. That person, as a professional, will take into account all the people who are affected by the work he does and will act professionally. However, if that person does the work that he or she is supposed to do, documents it well, and uses reasonable assumptions that are consistent with actuarial standards of practice, it should be easy for a reviewing actuary appointed by the commissioner.

Or one of the other methods that is still under consideration for the method of appointment of the reviewing actuary would enable him or her to look over the actuary's work without redoing all of the work. He could perhaps sit down for a period of time with the actuary. He should be able to

come back, from time to time, to see how things are going so that it's not just a fixed December 31 valuation review but a continuous estimation of the vitality of the company.

**MR. DICKE:** I should have mentioned that the proposal includes a provision for a reviewing actuary, and it's not clear whether that actuary would be hired by the company from a list of qualified actuaries supplied to the department or the department would actually retain the reviewing actuary. Would a proposal based on the idea of doing a solvency test that's based on actual scenario testing (not just of alternative interest rate scenarios, but of scenarios' mortality rates and other sorts of things), actually add to the regulators' ability to carry off their function?

**MR. KRANTZ:** There's one thing that I think will still always be necessary. I grew up in southern California, so the most famous case I heard of regulatory review was the Equity Funding case. In fact there was a movie made of it with James Woods as its star. I think they show it from time to time to the Fellowship Admission Class. I believe that it's very important that there continue to be examinations by accountants and the reviewing actuary or that a department actuary continue to review the company because we still have black boxes. We'll need to have computer audit specialists that work for the government to verify that the company is keeping its promises, and that it's not just garbage in, garbage out. The actuary will need to know that his cash-flow models do produce correct answers, are reasonable, and that if he plugs in certain answers or assumptions for which he knows what the answer ought to be, that the system will produce those outcomes.

**MR. DICKE:** In developing this UVS proposal, we recognized that it would take extra work for companies, so one of the big considerations was what kind of benefits might companies get out of this? Of course, the current reserves-plus-risk-based-capital basis for solvency testing is somewhat arbitrary and somewhat simplified as any formula has to be. Therefore, it doesn't really represent the risk faced by the company, and, in many cases, it requires a higher level of capital that would be required on an economic basis. One of the hopes is that UVS would allow companies to hold lower levels of capital. If it turned out that the UVS system actually resulted in reduced capital requirements for some products, would you be willing to support it?

**MR. KRANTZ:** I would be willing to support it as long as it was verifiable that there was a measure—for example, moderately adverse conditions or something that’s definable by placing number ranges on them. The idea is that insurance is a long promise, except for health insurance, which is maybe six months or a year. Most insurance that’s sold by life insurance companies has promises that could go over 100 years, depending on whether somebody buys it young and their dependent gets a settlement annuity that could go for years. So the company is basically making a promise, and it needs to keep its promise.

One of the things that I like about the vitality report is that it would go to the board of directors, not just company management. Company management sometimes is managing towards current year results and not looking at the long-term picture. The board of directors would need to understand what this report was saying because the company would have a plan of what it wants to do. This methodology would tell them how much capital was necessary in order to succeed at that plan and what business tactics would be used, and what alternatives would be taken if the results did not emerge as expected.

**MR. DICKE:** A factor that has perhaps slowed up some of the innovations in the life insurance industry is the difficulty of regulators knowing how to deal with some of the new product types that have come out. Some of these products deal with risks that are not the traditional risk of the life insurance industry. For example, several of them are based on stock market risks of one kind or another. I’m thinking of equity-indexed products and guaranteed minimum death benefits and various things of that nature on variable annuities. Do you think that if you had a UVS system that you would be more likely to accept, or that you’d be able to more quickly review products that involve risks that are new to the life insurance industry?

**MR. KRANTZ:** My area of practice is not rates and forms approval. I’m in financial solvency and market conduct review. However, I believe that those people that do work in those areas would have an easier time. They’d be able to look at these products, and the company would have to say this is a new product; we don’t know all of the risks. The regulator might say to them, we don’t want to stop innovation. However, what you should do is sell this product on a limited basis until you can evaluate the results. I believe when long-term-care insurance came

out, some of the companies that I worked for had just that in mind. They decided that there wasn't much correct data on how to price the product. There was Medicare data, but that wasn't the kind of true data that reflected the products they were selling. So, they used it to price their products. They made them guaranteed renewable with the right to change rates, but they sold in limited quantities until they had a chance to evaluate the results. Even now, since the person might be buying the policy at age 50 and might not have a claim until he or she is 75 or 85, we still might not have adequate data to price these products properly. One of the things that might come about out of this is the actuary for the department of insurance will simply say this product is too risky. You shouldn't be doing it.

**MR. DICKE:** I think another thing would be that if they're going to have to do a UVS report on this, and there's going to be a reviewing actuary selected, it would allow the department to select somebody with expertise in the particular new risk, instead of the department's actuary having to be the expert in everything.

Another approach being talked about is market-value accounting. Part of the reason this is being talked about is because the International Accounting Standards Board is starting to look at it, and the International Actuarial Association is supporting them in that. Also, FASB, in pronouncements such as *Statement of Financial Accounting Standards 133 and 115 (SFAS 133 and SFAS 115)* has started to bring in more and more market-value based accounting. If those types of things go forward and actually include insurance liabilities, do you think the regulators would be interested in reviewing the results—not necessarily requiring them, but looking at them?

**MR. KRANTZ:** I think that regulators want to see as much data as they can get their hands on, but obviously companies are reluctant to share certain things for proprietary reasons. In Florida, we have sunshine laws, and unless we change laws to state that certain information that the company voluntarily shared was not to be made public, I don't think that companies would want to share it.

**MR. DICKE:** The proposed market-value accounting would be public, of course, and I just wondered if regulators would have an interest in those types of numbers?

Next, let's hit some of the current issues. For example, in your opinion, why didn't the current system prevent the General American failure that you alluded to before? Do you feel that the current system adequately protected the policyholders in that case?

**MR. KRANTZ:** I'm not that familiar with General American. I did read the newspaper, so I followed it in the sense that a layman would. I believe, from what I've read, the problem was not a solvency crisis but a liquidity crisis, and General American did the proper thing by going to the Missouri Department of Insurance and asking for help at that time to prevent a run on the bank. I think this is an example of the problems that actuaries face when they simply adhere to the letter of the law, and not the spirit of the law. The General American actuary might simply have said, "I funded this business. It's 100% co-insured. I don't have any risk." But the company did have a risk if something happened to the reinsurer. If one or two ratings categories had to be jumped before they faced this problem, maybe after the first downgrade, they should have immediately become more liquid, and then they wouldn't have had a liquidity problem.

**MR. DICKE:** Do you think either the UVS proposal or market-value accounting would have helped in this situation?

**MR. KRANTZ:** Maybe they would have had a plan that said, if there is a downgrade for their product, they might have to face a liquidity crisis. Then, the board would have been aware of that and could have said, "What will you do in case that happens?" How much lead time will you have?" They probably could have had steps in place for this to happen. It's possible that they wouldn't have done enough in their report to the board. The actuaries obviously can write a one-page report, stating everything is great, just like last year, or it can write something that uses three boxes of paper. It might be something closer to a thin, three-ring binder, but the idea is that the more the board understands what the company is doing, especially on a long-term, risk-taking basis, the better the company will be.

**MR. DICKE:** The viability report to the board might have identified these risks and, therefore, led to the scenario you just discussed?

**MR. KRANTZ:** Right. If there had been a report, and it hadn't been thorough enough, the department of insurance wouldn't have had access to that because normally the department of insurance under a UVS will not be seeing this report unless the company is showing signs of being a troubled company. It depends on the actuary's ability to be thorough.

**MR. DICKE:** The board's responsibility is looking to the future, as you said before. A couple of other recent events that made the newspapers were the reinsurance spirals, such as the Unicover spiral. Of course, there's the famous case of misappropriation of funds that led to the bankruptcy of several companies. Are spirals such as Unicover of concern to life regulators? What about failures due to misappropriation of funds? Let me just cut to the chase. Do you think either the UVS proposal or the market value counterproposal would have helped in those cases?

**MR. KRANTZ:** I think that the current system would have worked in the second case in which the money was embezzled, if somebody would have just checked to see if there were bank investments somewhere, or if somebody would have just checked to see whether there really was money in the bank, and who had control over it. In the first case, when I was first asked if Unicover affected any of the companies we regulate, I looked into it and saw that it had to do with workers' compensation, and I thought that it was probably something that affected our property/casualty bureau, not the life and health bureau. Later, when I found out that life reinsurers were involved, that changed the picture, because then it was a question of whether these people know what they're doing.

**MR. DICKE:** Do you think either of these proposals would have helped at all?

**MR. KRANTZ:** If the reinsurer, in the case of Unicover, would have done its homework, it would have probably been a little better off. I don't know if they would have gone into the detail of individual transactions like that with their board. I hope they would have.

**MR. DICKE:** To what extent does liquidity risk concern you, and are there any other risks taken on by life insurers on new products or anything that particularly worry you? Again, to what extent would these proposals be helpful?

**MR. KRANTZ:** A company can't keep its promise if it doesn't have the money when it needs it. So obviously, liquidity is an important issue. If we just check to see if the formula reserves are adequate, we're doing that as of a point in time. We're not looking at six months from now, or two years from now. Will the money be there to pay the claims then? Formula reserves only specify a present value of the amount that's necessary. They don't specify the timing. If a company is asked to be a market maker, like General American, there's no way that it will be able to avoid a huge loss because it can't borrow enough money at the right rate in order to escape the problem of its liquidity risk. That is because, as soon as people find out that it needs that much money, it is not going to be able to get it at a rate that will enable it to afford the losses. Under the UVS, it all comes back to the same thing. How thorough is the report going to be? Are they going to do cash-flow testing? What about small companies that have only a little bit of something? Is that little bit of something enough to cause them solvency risks? If they have \$20 million of credit insurance and \$1 million of annuities, is that \$1 million of annuities going to threaten their solvency?

**MR. DICKE:** Kerry, you've been very patient in taking all my questions and answering them. Do you have any questions for me? Would the regulator like to ask the actuary any questions?

**MR. KRANTZ:** If there were no regulation at all, I believe the industry would want to invent it. It's like the old story. If there were no God, man would invent one. If there were no regulation, what would the industry invent?

**MR. DICKE:** First, that's true; we'd want to invent it. I'm thinking back to the time when the economic system in Eastern Europe changed, and we were trying to think of all the ways we could help the republics that came out of the former Soviet Union. Many of us were thinking about their nuclear weapons, but I think the best thing we could have done was to give them some real insight into our regulatory system from the SEC down to state level. Insurance

regulation, and all the other regulation we have, allows us to have this free-market system. People look at us and say, that's wide open capitalism. It's wide open capitalism with the conscience provided by the regulators. They allow us to go about our business without needing to wear two hats—one when working for the state and one when working for the company. I think it's a good system. What kind of a system would we develop? There's a lot of questions about things like state versus federal regulation. There are many opportunities to obtain different opinions from different state regulators. I find that to be a great advantage. I know other people don't agree with me on that. In my personal opinion I think state regulation works very well, but I'd like to see some way of getting regulations like reserve regulations coordinated and adopted uniformly. That's the problem that we have currently. I think that some regulators can go too far. On the other hand, some of the federal regulators that have become advocates for their industry, as opposed to advocates for the customers of the industry, might have actually gone too far in the other direction. I'm pretty comfortable with the balance state regulators have achieved in that area.

**MR. BABER:** Thank you, Arnold and Kerry for your dialogue. We will save all the questions and comments until the end of the presentations. Dave will start his comments.

**MR. DAVID K. SANDBERG:** I've had the experience over the years of attending these symposiums. Three or four years ago, I came to the conclusion that it feels somewhat like going to church. I take a break from my ordinary life, and I get a chance to step back and see a bigger picture, and kind of reflect on my individual situation in my company and think about the things that I hear here and then think about how to best apply them in my day-to-day work life. We've chosen this kind of framework to reinforce the idea that these are some thoughtful things that we should pull away from these meetings and so we will think about these kinds of questions. Kerry and Arnold discussed some important questions. It's important for us to start thinking about what's the best way to proceed?

The last question they dealt with was, if there were no regulation, would you invent it? In a way, that's similar to the Life and Health Actuarial Task Force (LHATF's) idea of, what if you started with a clean sheet of paper? Let's just start from scratch. What's the ideal environment in which

to build a valuation system? One of the regulatory strategies that you could take to answer that question is what's called the specific approach strategy that says you see a specific problem that leads you to a specific restriction and then it leads to specific avoidance. If you look over the last 20 years or so, you can see, in many situations, where this pattern occurs. It can lead to adversarial relationships and very creative accounting or pricing in order to be legally within the box but maybe avoiding the larger question.

The other approach would be to say, what if we tried a general approach? Then we will see a specific problem this time. Instead of finding the specific solution, let's try to focus on what principles have been violated. There was a principle that was violated. Therefore, the focus is on a principle-based general requirement leading to a general compliance. It's this kind of approach that is kind of at the core of the UVS alternative, if you will. It's a principle-based alternative. The idea is that the actuary's role is to determine resources needed to accept risk and to meet obligations. Risk is based on events with probability distributions of varying degrees of credibility. The evaluation of that company risk includes both a point-in-time question dealing with solvency and a direction for viability or resiliency of this company to execute its ongoing business plan.

This is expanding the valuation actuary role beyond reserves to required capital. It's very consistent with the big tent message that Howard Bolnick has been talking about through most of 1999. You step back and say, is my job to generate factors and add up results, or is my job to say what is the risk of the company and how much capital does this company need? It's a very important question, but I suspect we need to be thinking about both. It's nice to think about it in terms of our current job, but it's more important to think about it in framing the direction of where we're going. It is the difference between going into the office and first reviewing what the company risks are and presenting a plan to go about evaluating them and coming in and having to prepare a set of factor-based reserves for this month's report.

What has the task force done? The first year they drafted a set of principles. It was what a clean sheet of paper approach would look like. They then spent the second year saying, if we would just draft the model law not so much to say this is *the* best approach but it gave us something to

talk about. Because this is a very abstract idea. It's a totally new concept. This is not an evolutionary approach of taking a current system and then changing one thing at a time so you can see how it changes. We're having to step back and say, let's start over again. The next thing we've done is do some modeling assignments. What if we took a line of business and said, what are the specific risks or the key risks associated with this line of business? We started wanting to look at a 20-year level term, at an in-force annuity block, a group major medical product, universal life, participating whole life, long-term care insurance, and an equity-indexed product. This is a range of products. We wanted to keep the discussion beyond the usual focus on interest rate risk, such as annuities and universal life. Several members of the task force, in the midst of all their ordinary busy work, believed they had something of value to add to this question.

There have been some great presentations about actuaries who have taken their asset/liability modeling (ALM) work and said, "There's a lot more value that I can add beyond the requirements of signing the actuarial opinion." They're really saying, "Let's take this modeling concept and skills that we have and find ways to create additional value." Four of these lines of business (term, universal life, par whole life, and long-term care) have been completed. It was useful for both the task force and the regulators to say, "I could look at mortality as a random fluctuation or a stochastic scenario dealing with mortality. I could look at morbidity. I could look at the interrelationship of equity returns and bond returns." This approach should clarify for the company, the actuary, and the board, what kind of bets or beliefs a company has about underwriting, field force behavior, investment risk, the ability to get rate increases, policyholder behavior, and the value of options granted to policyholders. It should also allow recognition in the valuation process as the experience diverges. If you're able to establish, up front, that this is what we believe is going to happen, it then allows for a feedback loop to generate a learning process as you go about issuing the business.

As a background concept, let's talk about the actuary in the role of a quartermaster. In the army, a quartermaster is responsible for making sure that the army has sufficient resources to meet its needs.

Are there adequate resources to meet whatever kind of strategy the generals might employ in the battle? Similarly, in an insurance context, the actuary determines if a company's assets are sufficient to execute its key strategies.

This is the kind of question that we're trying to address and say this is the role the actuary should be playing within the company, but the real question is where are we going? We've done some numerical examples. What needs to happen next? We need to be able to put together the different lines of business to understand the full risk picture. As a task force, we're talking to regulators saying this needs to happen. Some of the things that I have heard are it can't be done, and yet I have heard several sessions here from several different companies saying they are asking the same questions internally. We know that we're not required to do it by a GAAP perspective or a statutory perspective, but our management wants to know what the real picture is as we put together all these lines of business?

How do we value low frequency, high-cost events? You have distributions where you get a very fat tail, and if you set a percentile mark, you might not have a reserve. The question has been, how can you find a value for that or should there be a value? What kind of approaches can you take there? How do you value the impact that you might have the wrong parameters? When you say that you're taking on risk, and you have a probability distribution, it assumes a mean and a variance based on your company experience, your reinsurer's experience, and industry experience. What if those parameters are wrong? You could have the wrong mean or variance or you could have an incorrect probability distribution.

The other question is, how do you set historical parameters? You have to look at the level of the volatility, and decide whether changes are a random walk (simple Brownian motion) or are discreet state interval changes followed by a period of random fluctuations before another discreet interval change? You also need to consider the impact of averaging versus the most recent observations.

These are complex problems. What I'd like to emphasize is that these are our problems. This is the actuarial problem. It is not the regulatory problem. It is their problem if no one is able to

step up and say, we can provide some solutions to this. As actuaries, I think we have learned skills that will develop solutions like the one used by Alexander the Great in untying the Gordian Knot.

For those that aren't familiar with this story, Alexander the Great had determined that he would conquer the world. He sets off on his conquest and enters into Persia, and there's a famous knot. It's a very large, complicated knot, and the legend was that whomever could untie that knot, would conquer Persia. Alexander takes one look at it, takes out his sword and cuts the knot in two and says let's get on our way and proceed with the conquest. We certainly can define problems in a very complicated fashion that require us to generate calculations that could last a year or three years or ten years before we find the right answer based on how we see the problem today. But we have many options of getting around those problems and finding ways to move on.

A final area of concern is how to organize a feedback loop. You want to be able to say the financial information of a company should be focused on the key risk events that are driving the business that it is issuing. An earlier session talked about how financial reporting people spend a lot of time looking at variances from forecasts and looking at discrepancies that don't have any real impact on the overall profitability of the business. They just have to explain the variance. When you try to focus on larger questions, your limited resources aren't able to address it. You want to make sure that you're defining up front, what the primary risk drivers are. Does the financial reporting process allow you to focus on those?

Another important step that has occurred this year is that the Society has become aware of this project and of its own responsibility to say they are the research organization that should be sponsoring and coordinating the information that would be needed to carry out this kind of approach. For example, as Howard Bolnick said, the Society is thinking about redoing the examination process. I think about the amount of resources that have supported that in the past. What if we had similar amounts of resources or even a half or third of those resources devoted to a library and syllabus of tools and methods for the valuation of risk? If you're able to start from the principle of assessment of risk, you're not trying to find a perfect solution. What you're

trying to say is we're building a more robust system—a more robust process that will be healthier in the long run than the current system based on a specified set of formulaic approaches.

Many people are interested in this. I attend the Actuarial Research Conference in August 1999 where I heard the researchers say they are seeking practical applications. They want to be able to take the research, have modeling opportunities and resources where they can apply the thought processes to come up with some practical solutions. The Society has said this is consistent with its mission. Howard Bolnick attended that same meeting with the Actuarial Research Conference, and shared that the board is not asking whether we should support this, but how we should support this. It's consistent with the SOA mission.

LHATF provides an interesting example. It's a common stereotype to criticize regulation, but it was at the initiative of the regulators and LHATF, and I really credit it to the strength of the profession. The actuaries involved in regulation saw that their responsibility as actuaries was to look to the future. They wanted to avoid chasing the same problem every year, and find longer-term solutions. That was the initiative behind this project. Finally, the Academy has certainly contributed its resources. It's consistent with its efforts to focus its attention on public policy issues.

With that background, I think maybe we're ready to hear from the audience. This is really meant to be a forum to give your reactions and to have some kind of dialogue and thinking on this. I hope that you have gathered the message that, whether the specific UVS Task Force were to succeed or fail, all of these problems have to be addressed within our industry. Wouldn't it be nice if there had been a regulatory framework that encouraged it as opposed to detracted the time and energy from solving it? What kinds of issues come up as you then turn the focus to say the actuary's responsible for determining the adequacy of capital for the balance sheet?

**MR. BABER:** I will start with a question that I had. Kerry made a comment that he had heard something about who would referee a difference between a reviewing actuary and appointed actuary's work? First would probably be the commissioner, but there could also be the ABCD. I disagree with that. I don't believe that's what the ABCD is for. I think the ABCD should be

brought in if there are some professional ethics that have been breached, but I don't believe that they should be used as a referee for a difference between two actuaries. At that stage, I think we have to develop something else. Does anybody on the panel have any ideas of what would be a good way to handle this?

**MR. KRANTZ:** I probably misspoke earlier, forgetting something that I had thought to say, which is the two should work it out themselves. One of the roles of the ABCD is counseling, not just discipline. If the disagreement is over whether or not the appointed actuary is using assumptions that are not within actuarial standards of practice, then perhaps before you go to the commissioner, go to the ABCD. You might not have to go to the whole ABCD; maybe it has specialists that would be appointed to determine whether or not the person was or was not within actuarial standards of practice.

**MR. SANDBERG:** I think one of the most common criticisms of reasons for hesitation is the "it's too complicated" excuse. I agree that it's very complicated, but does the questioner then mean that it's too hard for the actuarial profession? We should let someone else who is more competent try to address it. I don't see anyone stepping up to do it. In the same way, when I have a problem at work that I can't solve, I don't go home and say, someone else will solve it. I find a way to make sure I can get it resolved, and I'm often surprised. I didn't know that I could have done that. That's part of what being professional is about.

The other issue is the discipline process, and that's what Larry is addressing. What's the most appropriate way to put the discipline around this? There are several ways you can proceed to answer that question. One is you could say it's our professional responsibility to discipline ourselves. That's related to the idea of the ABCD. It's the first line of refereeing. As a society, we can do that. Another alternative is to say, no, we should have a regulatory process that does that.

A third option, which isn't in conflict with the other two, is the idea of a feedback loop. The introduction of *FASB 97* was a very interesting way to introduce discipline into the setting of assumptions for a company. The company says this is what we believe will happen, and, lo and

behold, I have found that, in our company, my management is most concerned about getting it right. They don't want surprises, but they also know they don't want to leave earnings on the table that they should be getting credit for. It certainly makes people work a little harder, but I think, in the end, it's a better work product. Again, it's another option to the discipline process. We need to be thinking in terms of what's an effective form of discipline. Keeping your choice in mind can start going down the path of specific discipline with specific problems or keeping it focused on some principles that, in the long run, we think will make it healthy. Another good example would be the U.S. Constitution. The Constitution is a very principle-based document, and it relies on the idea that there's competing balances of power. Many people complain government never gets anything done. That was the whole point. You wanted to make sure that a strong central government couldn't get anything unless the will of the people had mobilized the government bodies to act appropriately.

**MR. FRANCIS C. CLAPPER, JR.:** I don't think professional standards and discipline are going to solve the problem. If you compare this with an attorney who's doing legal work for his company, he can be completely professional, and still there will be people who disagree with his result. However, it doesn't get decided by disbaring him. It gets decided through arbitration or through a court of law. You're not going to solve the problem by depending on professional standards, as long as the primary reliance is on the company actuary.

**MR. KRANTZ:** One thing I should point out is that when I talk about a disagreement between the two, I'm not talking about a trivial disagreement. I'm talking about a major disagreement where the reviewing actuary has doubts about whether the appointed actuary has done a good job or has met the burden that was imposed by the Unified Valuation Law. In other words, the actuary is to act professionally and to produce work that is in compliance with Actuarial Standards of Practice. Actuarial Standards of Practice are, by their nature, vague, and if we make them too tight, there's no room for flexibility. One area we don't want to regulate is flexibility. We want to allow the actuary to use judgment, but if the actuary assumes that nobody ever dies by setting an X factor for universal life reserves, and the result is such that mortality is less than accidental death mortality, then something's wrong. However, if the actuary can point to statistics and show that the company experience is, in effect, credible and that their mortality

levels are at a level where their mortality is less than what the reviewing actuary might have thought appropriate, and if the actuary has done a good job and has proven that he has acted professionally, there won't be a dispute.

**MR. SANDBERG:** The other thing to keep in mind here is that this roadblock exists in the current system. How would it work? You have an actuarial memorandum that's based on the actuary's judgment and read by a handful of people. So, if the actuary "makes up" something, where's the discipline in that? But what if it were part of a process that has some accountability built into it? It might be an actuary or the company management saying we believe this. Then there's a way in which they will be held accountable for those beliefs. But what if the actuary really doesn't know? The process has revealed to us that in this area, we don't know very much. Right now the current process reveals much less to the regulators or to management about those areas that they really don't know anything about or that the company could be betting the company's future on.

I think we'll go ahead. There are some areas of judgment that are important to think about. Arnold will give a small portion of Tom Herget's presentation and give some flavor for just some of the things we're thinking about that are out there that we need to consider.

**MR. DICKE:** Tom Herget was scheduled to be one of our presenters, but he has been detained at another session. Let's at least go through Tom Herget's handouts. They show several models. With reserves on both statutory and UVS bases. First, there is the universal life model and a par whole life model, both created by Lone Yee of State Farm Mutual. Second, there is a term insurance model—created by Tom himself. The third model on long-term care insurance, was done by Larry Rubin at TIAA/CREF.

In each of these cases the statutory reserves were worked out according to current rules. The UVS reserves were established at an 80% adequacy level. In other words, in a ruin testing situation, the reserves were sufficient to pass 80% of the scenarios. These scenarios might have been interest rate scenarios. In the case of universal life and par whole life, there was some mortality also included. The term insurance was tested solely on mortality scenarios. I think

Tom ran 10,000 scenarios of mortality results, all based on a fixed table. So the UVS reserve was a fluctuation or volatility reserve. He didn't take into account the possibility of parameter risk—the risk that he didn't have the right table.

Long-term care was very interesting because it was run with a stock market portfolio backing the long-term care risk. It was a combined model—a model of the stock market combined with an interest rate model. Unfortunately, the various interest rate models were not 100% correlated.

The Numerical Examples Group of the Academy Valuation Task Force, will attempt in the next phase to correlate these things. We're going to be running something where the various scenarios are taken to be a draw from the scenarios for each of the modeled risks. If you look at the statutory page of UL, you'll see all the normal things: A balance sheet on the left and a summary of operations on the right. Let me focus on the UVS balance sheet. Some things are different. Instead of the first category under liabilities being the aggregate reserve for life insurance, it is instead called "assets backing life obligations." That's the term that's used in the UVS for the equivalent of a reserve.

Basically, it is the amount of assets needed to reach that 80% adequacy level I spoke of earlier. When you do cash-flow testing, and you put all the scenarios in order, you get this sort of "S-curve" effect. The UVS "assets back in life obligation" is at the 80% point of the S-curve. As you can see, the reserves still produce the relatively nice pattern over the next few years. None of the other items that are specific to the statutory statement, like the interest maintenance reserve (IMR) and asset valuation reserves (AVR), are a part of the UVS approach. There are many less items on the UVS balance sheet.

One item on the UVS, but not the statutory balance sheet is the "additional assets needed to reach 95% adequacy." This item replaces risk-based capital at one of the mandated levels—perhaps the authorized control level. To say that these results are very representative, although they were done by people who are experts in these areas, would be going too far. The modelers are people who commonly work with the valuation of universal life, participating whole life, and so on. So these models are not simply academic exercises either. Of course, the summary of operations is

basically achieved by taking differences of the balance sheets from year to year. There's nothing too different in the way that the participating whole life or the term life works under UVS compared to statutory. The long-term-care model appears to show a much higher reserve in the case of the UVS than in the case of the statutory. We wouldn't say that that's something that is indicative because there were so many assumptions made that the actual numbers are probably not that meaningful. We're not trying to use these to show whether or not reserves would go up or down under this proposal but to show that this kind of approach could be carried out.

The corporate account is a balancing item, but the symbol that's over it, is the "Don't Use This" symbol. Why is that there? The reason is because one of the most significant parts of combining lines of business, when you look at independent or least uncorrelated risk (such as the mortality risk and the interest rate risk), is that the surplus required for a business consisting of these particular lines of business cannot be calculated simply by adding up the separate surpluses. If you added them up, you'd have a huge surplus. Actually one of the nice things you find out from doing this sort of exercise is that by putting together uncorrelated risks, the larger you get, the smaller the required surplus becomes as a function of say, the asset size of the company.

Our next step in trying to find the appropriate surplus is to produce a true combined model of these risks to find out what amount of surplus we'd need to reach the 80% level adequacy for the combined risks. It should be nowhere near as much as the sum. In some estimations that I've seen, it has come out to be as little as 40% of the sum or less, depending on the particular risks. We're going to approach this issue by taking the various scenarios that were done for these different risks. We'll take what I call a "cross-product," scenario run from each of the models of the individual risks and add them up in all possible combinations. Now these risks are not totally uncorrelated. Several of them have interest rate risk, and we're going to run them using the same interest rate generator.

The stock market risk is not assumed to be totally uncorrelated to the interest rate risk. There is a model that Larry Rubin used that has a correlation of stock market and interest rate effects; in fact there are several such models out there. Further work will likely be done by a person named Mark Tenney. He's speaking at a session on economic generators, and he has his own economic

generators that can model correlated effects between the stock market, interest rates and other economic factors.

What these things don't take into account yet but what probably needs to be thought about is the severity of ruin. When you set the level of adequacy at 80% or something, you still have to ask yourself, what about those other 20%? If you set it at 95% or even 99.5%, you have to ask about that last half of a percent. How bad could these scenarios be? How severe could the result be? How big can the deficiency be? In one of our later steps, we're going to have to build that into the calculation, either at the stage of the solvency testing, or in the viability report that Kerry discussed. This is the report that would go to the board of directors and only to the insurance department in the case of troubled companies.

**MR. SANDBERG:** I'd like to get feedback from the audience. Just so you understand, my role as chairman of this task force is to try to create the best kind of product that we can. The most valuable people I'm interested in hearing from are those that think there's some shortcomings with the product. I really am interested in your concerns and comments on this process.

**FROM THE FLOOR:** Has the task force decided not to develop a proposal on setting reserves?

**MR. DICKE:** In an earlier stage of the UVS, we had thought we might want to set the reserves at one level of adequacy and the surplus at another level of adequacy. There were several proposals out there. For example, one proposal that I personally liked was to set the reserves based on GAAP reserves and do an adequacy test at, say, an 80% level. We would accept the GAAP reserves, but the actuary would test them to make sure they were at least that adequate. If they weren't, then the actuary would increase them. The next level was supposed to replace reserves and risk-based capital. This would be the amount of assets required to reach the 95% or 99% level, which is the approach the Risk-Based Capital Task Force is coming out with, using just the interest rate risk. The new C-3 proposal is based on an average from 92% to 98% or something like that. In other words, two levels of adequacy were to be formed. One of them

determines the year-to-year performance measure, and the other determines the more conservative solvency measure.

**MR. SANDBERG:** The important thing is that those two measures are coming out of the same valuation process. In a sense, you can use whatever you want because now you have a way to understand the variance and distribution of this company. If I'm concerned about solvency, I can say it's at this level. If I'm concerned about a purchase price or an income recognition question, I now have a framework that allows me to do it. The current valuation process kind of answers one question at a time, and many times, that information isn't usable for any other kind of question.

**MR. WAYNE E. STUENKEL:** Much work has gone into the unified valuation system thought and discussion. A great deal of progress has been made both numerically and conceptually, but I'm wondering exactly what kind of problems there are that really need to be solved, and how this was addressed, based on some of the embarrassments that the industry has had this year? I think there have been three major embarrassments in the industry: General American, Franklin and Unicover. I'm struggling to see exactly how this valuation system would have helped out in at least two or in all three of those. In the Unicover situation, you had grossly inadequate pricing by a delegated TPA or a managing general underwriter. It's hard to see how this system would have helped the embarrassment of the companies involved. With Franklin, you had raw fraud and theft, and that certainly is not addressed by this. In the case of General American, you had grossly inadequate communication between the liability side that was putting seven-day puts on the books, and the asset side that didn't know to invest all its money in cash. It's hard to see exactly how all the formulas and the 80% and 95% confidence levels in UVS would have addressed the real problems that the industry has had this year.

**MR. SANDBERG:** It's challenging when we talk about formulas and some of the modeling processes. They can be complicated, and they take a lot of time and attention. The principle is one of risk. What if the first thought of the person picking up the Unicover coverage is to ask what the risks are, or if the person dealing with the General American situation asks what risk do I have? Is there a process upon which you can measure and assess them? Is a responsible party

such as the board or management aware of those kinds of risks? I would not say that the UVS will prevent all failures. That's really the question. Is it a more robust process? Do we think that, in the long run, we will be? I think we will be. I think too much of the current accounting system reinforces the idea that, as long as we calculate numbers appropriately, that's 90% of our job. Then we do a little extra value on the back end if we said no. The initial value comes from assessing the risks and then having the valuation process directly report on how those internal risks and expectations are emerging.

**MR. BABER:** Wayne, there are a couple things that haven't been brought out real strong in this particular session. One is the viability report. Of course that might have revealed the General American situation because the UVS looks holistically at a company's solvency, not just at reserves. The company actuary that signs the report will be looking at the entire risk of the company. That sounds like a big project. I think I would be scared to death to sign something like this, particularly right now, but with more tools, we'll be able to do it. It is a holistic process that will look at the entire company and not just reserving. There's the viability report where you go to the management, and you have to present a report to management and the board that says these are the risks of our company, I think that might have brought out some of these.

**MR. STUENKEL:** It would need to do that because formula reserves have not been the problem. The problem is inept management or theft, not formulaic reserves. That wouldn't have done anything.

**MR. DICKE:** I think you're right, Wayne, and I personally think that the reason I brought this up in a dialogue with Kerry was because there are some unanswered questions there. As we said, this project was supposed to start with a blank sheet of paper. Now there's some real issues out there, and we need to decide whether we have what's necessary to do that? We're not representing anybody, and I'm not representing the task force that's working on this right now. I'm just thinking for myself, and I want to ask whether market value accounting would have done some things that UVS wouldn't have done?

In the General American situation, market-value accounting might have been very useful. It's true that General American got squeezed by Wall Street when it needed to sell assets at a fire sale. It might have been difficult to know what the market-value was. In any case, one of the reasons that companies get into that situation is because they're reluctant to liquidate assets. Why are they reluctant to liquidate assets? Is it because they are carrying them at more than the market value at that moment? If so, market-value accounting might have allowed them to get prepared more quickly. They would have said, "Let's trade some of these bonds for the same amount of Treasuries, and we'll have less yield, but we'll have the same value. We won't take an immediate hit."

So there's an advantage that might come through, depending on how the accounting is done. The same advantage could come through the UVS system, because if you go into the details, the UVS calculations on the 80% level, if used to set reserves, are looking at the net cash flows, and if the net cash flows are off, the test would not be passed. It's very similar to matching up market value. Much would depend on how often the UVS tests are carried out.

Some of the other current issues are harder, and I think they represent challenges that we have to look at in the future. The spiral issue is possibly an issue in more cases for life reinsurers; it is not as much of an issue as it is for casualty reinsurers, but it's still an issue. We do need to look at that one. We should probably say that as far as outright fraud is concerned, all the systems we've had from the Standard Valuation Law on are supposed to have ways of detecting it. The appointed actuary should certainly have some awareness of whether the assets are actually there at all, if he is going to be using them in cash flows. I think that one was "solved" a long time ago, and the solution just didn't work in this case.

**MR. SANDBERG:** The flip side to that is that UVS is not only trying to address solvency, but it's trying to help us get a better picture of solvency. There's a 50% better chance of alerting a company heading into trouble. That would be an improvement. At the same time, you might say the company has a much better understanding of its own capital requirements because the solution to preventing all insolvencies would be to require enormous amounts of capital. Once again, you're trying to set up a system or a process that says, in the end, we think we're getting

better information about that question because we're using this system, as opposed to reinforcing a system. Then, on the back end, we're trying to solve for what that number might be.

In a presentation given at this symposium on annuity and valuation issues, Tom Campbell, from the Hartford, who has been spearheading the efforts to come up with reserve requirements and risk-based capital requirements for variable annuities with the living death benefits or guaranteed living benefits, asked Tom Herget if he could give his opinion. In Tom Campbell's opinion, everyone that's working on this group is saying we need UVS. We cannot come up with a formula answer to these kinds of products. They are too diverse. They're too different. Any answer you give is not going to give you the right answer for the right kind of financial signals. If you want to answer the question as to what the appropriate amount of capital is, whether it's for solvency or for a company with more capital invested in other areas, then the UVS will try to accomplish this.

**MR. KRANTZ:** Regarding the General American situation, one of the committees on the UVS Task Force is looking into low frequency, high-impact events, and if that was part of the report, what would happen if we suddenly started losing our rating. We have a product out there where we could suddenly have cash-flow urgency. One of the things, as far as the current situation someone asked me about, was the question of if you're failing some of your scenarios, you sometimes want to know how many you're failing, but you also want to know by how much. If you're failing by an amount that you can borrow at a reasonable rate of interest, it's not really that bad, especially if it's just a temporary cash-flow problem. The question becomes, is the actuary going to assume at some level, that they can't borrow at a certain interest rate, or that they're going to actually have to liquidate assets? At which point in their model are they going to have to be able to do a market-value adjustment to their assets and actually liquidate them?

**MR. SANDBERG:** That's a good point, Kerry. I don't think I emphasized that as much as I should have. This proposal is about linking solvency and viability. We tend to try to divorce them. Solvency reflects a snapshot; at any point in time, are my assets adequate for the in-force business that I have? You need to see where the company is going, and they need to be linked together. My personal opinion again is that one of the reasons the dynamic financial condition

analysis (DFCA) concept has been slow to gain support or practice among the industry is because, in order to do it appropriately, you need to understand and quantify the risks of the company, but the financial reporting process does not allow you to understand those risks. You want to generate a financial reporting system that allows you to assess those risks and then have the ability to comment on where that is taking you.

**MR. BABER:** The Valuation Task Force has taken literally thousands of hours of very dedicated people putting their time into this. It was ably led by Bob Wilcox from the start. Until this last summer, he was the chairperson for that task force. When we had to come up with subgroups to do various things like the numerical examples, Dave Sandberg was the chair of the Numerical Examples Group. He has recently assumed chair of the task force, and Arnold Dicke is chair of the Numerical Examples Group. Meetings are held monthly. The task force would love to hear any input that you have. We'd like to have your participation in any way we can.