

1985 VALUATION ACTUARY  
SYMPOSIUM PROCEEDINGS

SESSION 2

CURRENT VIEWS ON THE ROLE OF VALUATION ACTUARY

MR. R. STEPHEN RADCLIFFE: A year ago the Society of Actuaries held a seminar on the role of valuation actuary. At that time, several statements were made about what the proper role should be. Much has happened since, so I invited each member of the round table to summarize his current thinking. A question and answer session will follow these opening statements.

MR. MICHAEL R. TUOHY: I think we actuaries should take on this new role enthusiastically. In doing so, we will help the regulators, and I think they need some assistance. I also think they could give us something back by allowing us to design products which make it possible to match assets and liabilities. Having come from the U.K. where guaranteed cash values based on book values are not allowed, I think products should be introduced without such guarantees.

MR. LAWRENCE V. DURLAND, JR.: It is the valuation actuary's job to check on the pricing, which means to do a valuation at time zero, and as time passes to match the experience of products against what was originally anticipated.

MR. MICHAEL E. MATEJA: My work has left me with some deep convictions about the role of the valuation actuary. If you accept that the purpose of a statutory valuation is to conservatively state the financial condition of an insurer, then the responsibility of the valuation actuary is to understand the risks assumed by the insurer, and to make sure there is adequate provision in the financial statement to mature the obligations in light of these risks.

Historically, the actuary analyzed asset default, mortality, morbidity and interest-rate risks in the valuation process. The valuation methodology, though, was somewhat perfunctory, performed at obscure levels within the actuarial organization.

Since the recognition of C-3 risk, the valuation actuary has been visibly thrown into a tumultuous sea. The valuation process is no longer perfunctory, and the actuary is often placed in conflict with key managers in the organization. The job is complex, requiring considerable judgment. Resultant reserve levels for products having a high degree of mismatch risk can have a profound impact on pricing profitability and the long-term financial health of the insurer.

The joint committee recommendation has essentially extended the responsibility of the valuation actuary to include surplus levels, with the implication that such an extension is necessary to fulfill the basic responsibility of the valuation actuary. I personally believe that it is possible to fulfill that responsibility by focusing solely on valuation reserves. If those reserves are developed in a manner consistent with sound valuation principles and standards of practice, there would be less reason to be concerned about surplus levels.

The key requirements are principles and practice that control the valuation process, produce reserves that meet a realistic test of adequacy in the light of the actual risks assumed by a particular insurer, and produce consistent reserve levels for various insurers. With such valuation principles and practices, reserves would remain in the domain of the valuation actuary, while surplus would remain in the domain of management. I do not see the proper role of the valuation actuary as including even indirect responsibility for surplus levels, although

management should be free to seek advice from the valuation actuary regarding appropriate surplus levels.

MR. ROBERT HOGUE: I look at the role of the valuation actuary as evolving, influenced by a number of groups with different viewpoints. First are the researchers. When actuaries look at what they have developed in the way of tools, methods and techniques, the role of the valuation actuary looks awesome. Next are the regulators. From preliminary reports, they are not asking too much from us. There are a number of NAIC, Society and Academy committees. I belong to a committee working on principles, hoping to have an influence. The ultimate role of the valuation actuary will be somewhere between not too big a change from what we do now and an awesome change.

I see three characteristics evolving that define the valuation actuary. First, a valuation actuary will be a researcher. This role is being defined by the committee working on valuation principles. Second, the role will deal with margins, cash flow streams and standard ways of discounting asset-liability cash flows like a pricing actuary. This role is being developed by a committee working on valuation standards. Third, the role will be fairly close to an accountant's or a financial actuary's role, one of following tightly constrained guidelines. Choosing and justifying assumptions would probably be the major feature of this role. This role will probably develop from the Actuarial Standards Board, if that ever comes into being.

MR. STANLEY B. TULIN: I too have strong feelings about our profession and what it means to be a professional. First of all, I don't believe that the valuation actuary ought to be a policeman.

The primary responsibility of a valuation actuary ought to be to his employer. What he ought to do is quantify and understand risk. The problem in the industry today is that we take risks that we don't get any premium for. If we can get our managements to understand the risks of this business, then the whole process will have been worth the effort.

I think we have a secondary responsibility to the public, and that is really up to ourselves as professionals. I don't want us to have to sign opinions, at least not the ones that I have seen. I think that the public, and when I say public I include the regulators, needs to understand risk and solvency. I don't believe this is the case at the moment. One thing I have experienced in working with regulators on solvency questions is that regulators hear what they want to hear — simple answers to complicated questions — even if given a complicated answer to a complicated question. I don't believe valuation actuaries should let this happen. One of the things we have to communicate is that solvency is not an absolute condition.

That brings me to my last point about how I think the role of the valuation actuary should evolve. We, professionally, and as individuals, have to convey to the public that we cannot guarantee anything. What we need are guidelines or rules that are consistent. This would help us understand the risks and establish a basis for comparing one company with another. We must get people to understand that solvency and risk are relative matters as opposed to absolutes.

MR. ALLAN D. AFFLECK: When I think about the role of the valuation actuary I think about it at two levels. One is the philosophical, and the other is the practical. At the philosophical level, in today's environment the public and the

regulators want and deserve assurance that a company will be able to meet the commitments it has made. The life insurance industry is one of trust, and I think that is something we need to accept and recognize. Again at a philosophical level, I think actuaries are the group most capable of providing this assurance. But it is not a guarantee.

When I consider the practical level, I am very concerned about the risk that individuals assume and that the profession consequently assumes, if they blindly proceed with making absolute statements. I think the words we use are very important, and people need to understand the level of commitment implied by them. The current "good and sufficient" wording, for example, is too absolute. The statement that a reserve is sufficient, no matter what we as actuaries understand by that, conveys a guarantee to the public. We need to change that. A second practical consideration is that the contribution of the valuation actuary will be in the report to management, rather than in the opinion. Right now we are focusing on the opinion, wondering what will happen if one scenario fails. Does the whole thing fall apart?

As we prepare reports to management, describing problems that may be coming down the road, hopefully we are providing information that will lead to better management of the risks we take.

MR. JAMES A. TILLEY: The article I wrote for the November 1985 issue of The Actuary states my view on this subject. I, too, am very concerned that regulators, looking to provide assurances to the public in today's wild world, might impose too great a burden on the valuation actuary, causing him to make statements that no one in this world can realistically make. In that article, I

discussed how assumptions have to be made about a range of cash flow paths involving lapse rates and so on. One has to model a crediting-rate strategy for interest-sensitive products along with an investment strategy. Management then can change those strategies, at which time all of the scenario test results are rendered useless.

I am concerned about the aspects management can control but the actuary cannot. The actuary may assume a range of investment strategies in his C-3 risk analysis, none of which may turn out to be what a future management does. Often, management will assume an initial crediting-rate strategy that everybody agrees with in principle. But later, under competitive pressures, management may choose to do something very different from any of the strategies previously modeled. This creates a serious problem in that the validity of the actuarial valuation opinion is undermined. A partial solution is to put finite time limits on the legal obligations of the opinion. That is a very practical solution, but the time limit is going to have to be very short. And if the time limit is short, what is the opinion all about? This comes back to the point that one can't make such opinions.

My view is that we are here today to understand more about risk, and more about the state of the art of having a single competent methodology to use in making risk calculations. I too, yearn for some standardization and some consistency in comparing C-3 risk results across companies. I don't believe there can be a good regulatory tool without consistency. At this stage, that consistency in standardization is going to be very difficult.

There is an obvious need for some outside body to specify a set of scenarios. Furthermore, it ought to require that results be displayed in a fairly consistent fashion. Finally, at a minimum, one benchmark methodology should be prescribed.

MR. RADCLIFFE: That concludes the first part of the round table discussion. It is difficult to draw a consensus from the remarks made, but it seems there is general agreement about expanding the role of the valuation actuary, although not to include the form the official opinion is taking.

The next portion of the round table discussion will be questions and answers. I have asked the panelists to take questions in turn.

FROM THE FLOOR: I am an actuary whose company's ratio of assets to liabilities is 1.35. It is privately owned. The flex annuity and SPDA funds are segmented and invested fairly short with very limited interest guarantees. The universal life money is also invested relatively short and segmented with no interest guarantees. Why do I have to go through all the work of checking out reasonable and plausible scenarios when I already know there is no way we have a solvency problem? Why can't some type of guideline be developed that would avoid the "spinning of wheels" activity?

MR. TUOHY: I have sympathy with you, although I'm a bit jealous of your situation. I think that when a specific block of business does look safe, and if reserves are held on a well-defined basis, the actuary should be able to easily demonstrate that the reserves and assets are sound. The safe harbor idea has some virtue, and further research should be done to develop those.

FROM THE FLOOR: When I am evaluating a company for financial solidity, what emphasis should be placed on the downstream subsidiaries that are not insurance companies?

MR. DURLAND: I look at whether the subsidiary company is strong, and, what funds would be available to the parent company to pay dividends and provide cash inflow in the future. I have not had to assess noninsurance subsidiaries. Usually I exclude the entire amount of equity from my considerations, but I am quite concerned about a great number of noninsurance subsidiaries using large amounts of equity. I wonder if there might be a contingent liability, somewhere off the balance sheets.

FROM THE FLOOR: I have a question about lapse rates. How comfortable do you feel about the sensitivity of lapse rates to the changes in interest rates?

MR. MATEJA: There has been an observation that valuation results can be very sensitive to lapse rates. My comfort level would depend on the purpose of the valuation. If I were looking solely at valuation reserve levels that are supposed to cover risks associated with reasonable deviations, I think I could be quite comfortable. If I were looking at what would happen in an extreme situation, I would be less comfortable. There is too much uncertainty here, and I think the tendency is to underestimate the risk.

FROM THE FLOOR: If additional, internally designated surplus is required to secure the actuary's opinion, will this fact be disclosed as a part of the opinion? If not, will this lead to problems vis-a-vis shareholder disclosure?



MR. HOGUE: First of all, I think it will be disclosed. Based on the joint committee report, the NAIC requirements that will go into effect next year, and the Academy's exposure draft for Recommendation 7, a structure is emerging that calls for a solvency test requiring, under reasonable assumptions, a reserve backed by assets. In addition to that test will be a solidity test, under plausible assumptions that deviations should be covered by a designated layer of surplus. There is also something called vitality surplus which may work its way into the management report. This is the amount of free surplus available to fund company growth.

FROM THE FLOOR: What is the best investment strategy for designated surplus?

MR. TULIN: It is my view that the appropriate investment strategy for designated surplus is a function of how you calculate it and what it should earn in terms of its ongoing need. This opinion is only a snapshot. Designated surplus, notwithstanding what it is invested in, ought to be valued at its cash value, in terms of what its market value is on the date of valuation. If you assume that you should invest so that designated surplus will sustain itself in a risk averse manner, what risk are you willing to take with it? It seems to me you would want to invest it in short, high quality instruments. Those could be Treasury Bills or repos that are highly liquid, have little or no interest-rate risk and have market values that are close to book values.

FROM THE FLOOR: Will the NAIC provide any guidelines about which interest patterns are reasonable and which are plausible? If not, it seems like we've got a situation like GAAP where assumptions are very subjective.

MR. AFFLECK: In the discussion draft of Recommendation 7, the Academy's Committee on Financial Reporting laid out three alternatives. Those were: the individual actuary making the opinion would select the scenarios, the NAIC would make the selection, and some professional group like the Society or one of its research committees would choose. The committee I serve on recommended the alternative of the NAIC selecting the scenarios with recommendations from the Society of Actuaries, but the final decision would be the regulators.

In the responses to the discussion draft, half of the people said they thought the NAIC should choose and the other half said it should not. There is clearly a division of opinion as to which is the best way to define these scenarios.

FROM THE FLOOR: What assumption should the valuation actuary make about the availability of "suitable" assets in the future? If the investment strategy incorporates Treasuries, public bonds, private placements, commercial mortgages, residential mortgages, stocks, real estate and so on, what is the appropriate yield curve for discounting or accumulating? In projecting future yield curves, would the valuation actuary try to relate all these yield curves to each other? If the answer is to adjust these based on option pricing theory and credit-risk pricing, ending up just with Treasury yields, does that imply we should price based on Treasury Bills?

MR. TILLEY: If you try to model everything in detail, you will wind up counting grains of sand on the beach, and you will have missed the point. The point is to understand something about the dimension of risk that you didn't understand before. What that essentially means is you should look at a yield curve of current investment opportunities that reflects the realities of how your

organization invests, and create a yield curve appropriate to your company. Then use that as the spring board for creating future yield curves along different scenarios.

However, you have to be careful about using only gross yields. You have to provide for defaults. If you have callable instruments in the calculation, there is a yield premium that should be accounted for. After all is said and done, do you come to just Treasury rates? No, you really do not, not even in the fairly priced world, because some of the risks are diversifiable like the credit risk. So you would expect to end up well above Treasuries. There are illiquidity premiums that do not bring you completely back to Treasury rates.

FROM THE FLOOR: If all of the scenarios show a market surplus or a market value deficit in the early years, will an overzealous examiner pick that up and require that there be no negative market value surpluses at all in the future?

MR. TUOHY: That would be very dangerous. Clearly, all the scenarios forecasting investments of longer than one year will end up with an early market value deficit. In fact, there is still a lot of volatility in market value surplus past the twentieth year. Therefore, you should make calculations to the point where the majority of the cash flows have disappeared.

FROM THE FLOOR: A mutual company will cut dividends if interest rates drop. Why should it assume that current dividend scales will be maintained in scenarios that assume lower interest rates in the future?

MR. MATEJA: It is probably not appropriate to assume that the dividend scale would be maintained under such circumstances. You must understand what happens if the dividend is maintained as opposed to being cut. If you can cut it in half, you would develop, at some point in time, a lot of risk management opportunity.

FROM THE FLOOR: Can an actuary who is a member of a life insurance company's senior management reasonably perform the role of valuation actuary? If so, what potential conflicts does he face in his roles?

MR. HOGUE: The answers I have heard do not represent a consensus. Some people point out the fact that valuation and appointed actuaries in other countries haven't run into any role conflicts. Others argue that, in other countries, the role has been restricted to allocating surplus between company, shareholders and policyholders. Those viewpoints might not apply in the U.S. because of the evolving regulatory environment and the emerging problems of managing blocks of interest-sensitive products. The role the valuation actuary will play in the allocation of assets to reserves, designated surplus and vitality surplus is a source of conflict with management. This role could limit the execution of the company's strategic plan. Most people point to the fact that the chief actuary, who is a member of the management team, is the one most capable of performing this role for the whole company on an aggregate basis. But he will run into conflicts. The use of an outsider will avoid the conflicts; however, the outsider will not know the company as well. The best response I've heard to this problem is that as the profession develops the tools and the techniques, the proper role will emerge. At some point the valuation actuary's report will be audited by an outsider.

FROM THE FLOOR: We now have liabilities for products, similar to structured settlements, that have fixed payments to be made for fifty, sixty and sometimes as many as ninety years from today. There are very few securities available beyond thirty-five years. How does the valuation actuary deal with the problem of matching these liabilities with assets? How do we, as an industry, deal with understanding this risk?

MR. TULIN: This is not discussed because we can talk solely about the idea of being able to match cash flows for structured settlements and other similar products. In fact, such a liability stream indicates a position where the only way to match cash flows is to assume a bridge that doesn't exist. You must assume that you can invest the cash flows in the later durations at some rate that will support the liability cash flows beyond the horizons of today's long-term investments. This is an asset/liability matching problem in the industry. It is a problem of reinvestment risk that a lot of companies should look at. I haven't yet seen solutions for these questions. I don't know how the valuation actuary is supposed to proceed.

FROM THE FLOOR: Given that future cash flows depend heavily on assumptions, and given the amount of guesswork required to develop these, how much confidence can a regulator have in the actuarial opinion? How will Recommendation 7 address this problem?

MR. AFFLECK: That is a difficult question, and many regulators already have a lot of concern about the existing good and sufficient language in the opinion. I don't believe our credibility is starting out at as high a level as we might think it is. The level of confidence that regulators will have is going to be related to the

level of professionalism we put into the work we do. If we produce results that the regulators can understand, I think there can be a high level of confidence. Recommendation 7 has not addressed this question specifically. It says that each actuary in the profession has an obligation to use his best judgment for all of the assumptions and methodology.

MR. TILLEY: Let me also answer the question posed to Mr. Tulin. One can match structured-settlement cash flows for some period into the future, five to ten years for instance. Then one can match duration and convexity for the overall cash flow stream. Assumptions about forty, fifty, sixty, seventy years out are not necessary. One can use interest-rate futures and zero-coupon Treasury bonds to accomplish the duration and convexity matching for very long liability streams.