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Session 45OF
Ask the Experts

Moderator: Meredith A. Ratajczak
Panelists: Daniel J. McCarthy
Edward L. Robbins

Summary: This open forum is an opportunity for participants' questions to be addressed by experts in the field. Questions were submitted in advance to allow panelists time to prepare a more detailed response.

MS. MEREDITH A. RATAJCZAK: This is an open forum where you have an opportunity to ask questions of our panel of experts. We did receive ten questions in advance, and some of them are multi-part questions, so we'll cover those first. First, I'll tell you a little bit about our experts. Dan McCarthy is a consulting actuary with Milliman U.S.A. in New York and the current Academy of Actuaries' President. Craig Raymond is Senior Vice President and Chief Actuary of the Hartford Life Insurance Companies and Ed Robbins is Senior Actuary of Allstate Life Insurance Company. Later in the session we will allow follow-up questions from the audience on totally different issues.

Question 1: The Commissioners Annuity Reserve Valuation Method (CARVM) for deferred annuities is fairly well understood. Can you share comments on its application for variable payout annuities, originating from deferred or immediate status? Can you comment on other appropriate methods? Craig.

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MR. CRAIG R. RAYMOND: Applying CARVM to an on-benefit variable annuity is a good question, and it's one that has been asked of me a number of times before. I'm going to give two answers; the practical answer, and then what I think is a better conceptual answer that I always give. What I generally see is that companies continue to just essentially project forward and discount at the assumed investment return (AIR). Your reserve on the variable payout is essentially equal to the fund balance that you are allocating to the separate account. That's the easiest, the most straightforward, and the most common answer that's out there. Conceptually, I do not see any reason why you can't apply a very similar CARVM methodology to what we'd apply to a deferred annuity and essentially project out at a rate that is consistent with the valuation rate that you're using. To do this, you would use a discount rate equal to your valuation rate and assume that's your earned rate. Your fund balance grows at this rate, less the fees in a separate account, which would result in a reserve that is essentially, in most cases, less than what the separate account is funded at. As you project out, you need to recalculate your benefit stream each year if your resulting fund balance isn't growing at the AIR. You need to follow your policy mechanics. It's not a real straightforward way of doing it. It is much more complicated, but it does give you a reserve that's less than the fund balance.

MR. DANIEL J. MCCARTHY: I suppose you could have a situation where the mortality table that is actually driving the contract doesn't square up with the valuation table. In theory, you could find the mortality underlying the contract is more liberal, from the customer's point of view, than the valuation table. You'd wind up with a reserve bigger than your fund balance.

MR. RAYMOND: Yes, clearly. You'd have essentially a guaranteed deficiency that you almost should be holding.

MR. MCCARTHY: Though your margins might offset that in part.

MR. RAYMOND: Right, and if you ended up with a higher reserve, you'd probably want to set up a general account liability for that mortality guarantee.

MS. RATJCZAK: This is definitely the condensed version of Question 2.

MR. MCCARTHY: Question 2 goes on for 12 lines of fairly dense text.

MS. RATAJCZAK: The individual asking the question says: I have a complicated term product where the minimum legal reserves result in some statutory income losses in later years. The minimum legal reserves satisfy XXX completely. I'd like to increase reserves in middle years so as to smooth out the profit streams. I would certainly make the resulting reserves equal to or larger than the minimum reserves at all durations. What freedom do I have to do this? Is it acceptable to use any type of formula that gets the result I want? For example, could I calculate minimum reserves, and then calculate another series of reserves, and for each duration, hold the larger of the two? Could I vary the reserve interest rate by duration?

Could I use the CSO mortality table multiplied by factors that vary by duration? Could I vary the reserve interest rate by duration? Could I simply pick reserve levels where I want them without regard to any formula mortality table for interest rate? However, simple modifications, such as a single lower-than-maximum reserve interest rate doesn't work.

MR. MCCARTHY: For starters we applauded the notion that you wanted to manage for statutory purposes in such a way that you weren't taking on losses at the later duration so we began with that. Then, in theory, and presumably subject to the permission of your regulator, you could hold reserves on any basis you wanted as long as they exceeded the minimum. There are three buts that we identified with that. First, under codification, if you're holding more than is required, you are supposed to say how much, which might mean you would have to do two calculations or have a means of estimating at least what that difference was. Second, it occurred to us, from a federal income tax point of view, that you might well want to adopt a reserve basis in which you dealt only with the interest rate. You would have a schedule of interest rates that changed every year to get to the right reserve because at least then, when you went for tax purposes, it would be clear what to do. You'd have the right mortality table in there, and you'd be using the tax basis interest rate. That would probably be cleaner from a point of view of

qualifying for tax purposes than anything else you might do. If you go through all that stuff and change your mind, you have to deal with your regulator before you take it down. Those were our thoughts.

MR. EDWARD L. ROBBINS: There doesn't appear to be any RBC credit on the horizon for the greater reserve. Of course, the excess statutory reserve over the minimum is clearly not deductible so you end up with a larger statutory-to-tax difference.

MS. RATAJCAK: Question 3: Given a UL product with an extended maturity option that pays the death benefit to age 120 with no loads after age 100, what would be the appropriate way to reserve for this? Normal *FAS 97* says we would hold the fund value. However, if the fund value is a dollar at age 100, the full death benefit is payable upon death with no future payments needed. That seems like an insufficient reserve.

MR. ROBBINS: The phrase, "seems like an insufficient reserve" is a bit of an understatement. I think we have an oblique answer to that in that the forthcoming Standard of Practice (SOP) on long duration nontraditional products speaks to where you make assessments for provision for future costs. The appropriate practice under the SOP is to actually build a mortality reserve while you have assessments to the contract. The reserve would be something like a *K* value times those assessments minus your experience mortality, to the extent that your mortality experience doesn't have the same slope over time as your assessments. Assessments don't only include cost of insurance (COI) charges; they include other types of charges as well. You would actually end up building a reserve to that age 100 that would then fund those future mortality costs. This would be within the gross profit stream so that your final gross profit stream would be kind of a net gross profit stream over which to amortize your deferred acquisition costs (DAC). This would be periodically unlocked too as your experience emerges. You would be course-correcting to age 100 on an approximate basis.

FROM THE FLOOR: Related to that, if you are going to fund it, there are some ways to get it on a statutory basis. Are there ways to get tax credit for this thing as well?

MR. ROBBINS: Yes, right. I haven't done this yet. Take a look at the proposed guideline, A-XXX, and see if that gives you a proper secondary guarantee reserve, which would then be the NAIC interpretation of CARVM, and those consistent with tax reserve guidance.

MS. RATAJCZAK: The questioner says this: We will be heading up a team that will be replacing our old *FAS 97* system with the new system. I'm wondering if any of the experts have any experience with or any thoughts about the general topic of replacing a dinosaur system with a real system. Particular concerns that I would like to hear about include discontinuity of earnings because of system changes, and how we can analyze earnings next year after the change. We are still struggling with analyzing our *FAS 60* block after converting it. If flaws are known in the old system, should this affect the conversion in any way? For example, if the old system misallocated DAC among amortization classes, should we keep the misallocation in place for our starting balances under the new system or should we reallocate it? The old system ignored unearned liability for front-end loaded COIs. What are the implications of starting to recognize this now? Is it better just to do this on new issues or should we start accruing this from now on for all issues? I'll refer that to Craig.

MR. RAYMOND: This is actually a good question, and I'm sure a situation that a lot of you are going to be facing at some point. I've been through this a few times. I think there are a lot of different ways to approach this. I'd also say that my attitude towards the best way to approach it might be different than your auditor's way. Your auditor's comfort in treating this is going to be an important consideration. From my point of view, you need to look at differentiating the change of the systems between correcting mistakes and fixing errors in the system versus changing methodologies. That is not as straight forward an issue as it might sound because there might have been simplifying assumptions or shortcuts used in the system that you might look at now and decide are wrong. You can also take the other position and look at it and say, this was a practical, simplifying methodology. The best approach is to keep the same methodologies when you change systems. You should fix the errors and let whatever happens flow through. In the end, you're going to have to look at the impact this has, how significant that is, and obviously work that through with your auditor. I've seen a range of differences in simplifying assumptions

that you use in putting together and going from one system to another. The practical answer of making some adjustments in the methodologies in going from one system to the other to kind of get the balances to start at the same place they were at from the time of transfer has often been an acceptable result to everybody. It's so difficult to differentiate between what's fixing an error and what's changing a methodology. Am I changing something or am I just refining how I do it? I think there has to be some leeway and some reasonableness applied to how you do that. Any of you guys want to comment before we go on to the next part of this question?

MR. ROBBINS: A change in accounting is a major issue. A "change of estimate" is preferable to a change in accounting.

MR. RAYMOND: Absolutely. I think the question here is looking at a situation where you have some reverse select-and-ultimate type COIs where, when you look at it now, you believe that there should be some deferral of unearned COIs from the early years that hasn't been done. I think you really do have a question. Was this a mistake, or is looking back at it and saying that it really should have been done the other way a change in methodology? Without really seeing the situation and knowing what was behind it, it's hard to say. If it was a mistake, you should fix it. If it's just a new perspective on how this should have been done, I would argue for looking at new business and doing it differently rather than changing what was done in the past.

MS. RATAJCZAK: Question 5: How often do companies really look at DAC unlocking; how often do they actually unlock?

MR. ROBBINS: Back when *FAS 97* first was promulgated, there was very little in the way of disciplinary guidance on unlocking prospective assumptions. Currently, in my experience and in the experience of some of the other folks that have been in a consulting role, most large companies now unlock at least annually. Some unlock quarterly, especially those companies with large variable annuity portfolios with mean reversion approaches to gross profits. They unlock

perforce because of the mean reversion concept. If you're not unlocking annually, you're in the minority at the moment. It probably doesn't give you as good a picture of your economics as it would if you did unlock at least annually.

MR. RAYMOND: I'd answer a little bit differently than Ed. I do agree with Ed. I think what you'll see mostly out there is that companies unlock annually. I believe that under *FAS 97* you should be evaluating whether you need to unlock at least once a year. *FAS 97* does not require you to always unlock if you change anything at all. *FAS 97* requires you to determine whether you need to unlock or not, and I think there's a lot of varying opinions as to what needing to unlock means. I have seen a lot of companies that typically take the approach that they're just always going to unlock (put in new numbers and go with it). My preference is very much to look at whether there has been significant change and significant change in your view of a reasonable range of estimates to determine that you need to unlock. Not unlocking doesn't mean that if you started fresh today and came up with a new set of assumptions, that they'd be exactly what's in there. Rather, it means that the assumptions you're currently using are not unreasonable to continue with.

MR. CHARLES (BUD) FRIEDSTAT: I think both of your comments are right on point. I would add one trend that I'm beginning to see a little bit more, which is that people are evaluating the need to unlock earlier in the year. You don't want to wait until the fourth quarter where the cumulative effect of unlocking might be greater. If you see a trend and see lapses emerging, even if you don't have time to do an exact calculation, do something that will give an estimate of what the unlocking will be and get it in earlier in the year. That is one thing that you are seeing. With the emphasis on earnings and things that have come out with the SEC, I think you'll see that more and more.

MR. RAYMOND: Thank you, that's a good comment. There is one other thing that I would like to clarify. I think this question was worded well. Unlocking retrospectively and truing up for actual experience versus unlocking prospectively is a different process, and I think it's virtually universal that companies are trueing up or unlocking retrospectively based on *FAS 97,* at least annually.

MR. ROBBINS: Just one other comment. I've noticed actuaries in senior positions in their companies might spend a huge amount of their time explaining their results to analysts, to the board, to rating agencies, and to regulators. One of the questions that analysts have been frequently asking companies is, what is their discipline? What is their methodology for unlocking? What is their mean-reversion approach? If you don't have a simple explanation of your discipline behind your unlocking methodology, it appears to be a less than satisfactory answer to analysts. You might want to actually have a discipline that you actually do follow on a periodic basis, simply, to a great extent, to cut down all the questions and to cut down the needed communication.

MR. RAYMOND: I just can't let Ed's comments go without making one other comment because Ed mentioned mean reversion twice. I want to clarify that although using some type of a mean-reversion approach on a variable product is very common, it is not universally accepted. It's not the only method for looking at unlocking and looking at future projections. There are some of us that feel there are better approaches than using mean reversion.

MR. MCCARTHY: You mean you don't like the interest rates that mean reversion implies?

MR. RAYMOND: I guess what troubles me about mean reversion is it backs me into making what often might be an unreasonable assumption. What we have done with our variable business is presented a view that the assumption, as far as growth in the variable accounts, is a very long-term assumption. Trying to force mean reversion is really a way to try to justify the fact that you really haven't changed your long-term assumption. The way we have always viewed it is, if I

haven't changed my long-term assumption, then I don't need to change anything. The question is, how do you evaluate the appropriateness of that long-term assumption, and how far have you deviated from that. Forcing it into an arbitrary mean reversion has never felt right to me.

MS. RATAJCAK: Question 6: This question pertains to valuation actuaries for life and health insurance companies that are members of P&C pools. What are the issues, from an auditor's perspective, of holding liabilities that do not match the liabilities as reported in the pool statements? Two examples are given here. One is pool statements based on undiscounted reserves where the valuation actuary chooses to hold a discounted reserve. There are also pool statements based on discounted reserves where the valuation actuary chooses to hold discounted reserves but uses a different interest rate.

MR. MCCARTHY: We thought about it in the following way. This is reinsurance assumed business. Let's assume for the moment, and I'll come back to this, that there are no specific provisions in the treaty about what the reinsurer will hold. We believe that the valuation actuary is free to use whatever techniques can be used by a life and health insurance company, which means that, in the examples given, the reserves as calculated and as held by the assuming reinsurer in this case would not necessarily be those on the pool statement. There are a couple of buts that come after that. One of them, as I noted, is that the treaty might say otherwise, in which case you would have agreed by treaty to do something. The second one relates to the question of mirror reserving, which might be an issue depending on your state of domicile. In my view, at least, mirror reserving does not mean, absent treaty provisions that the assuming reinsurer has to hold what the ceding insurer reported. Mirror reserving is an obligation on the ceder not on the assumer. So, if the assumer holds something different, the ceding company might want to know what that is because, in a mirror situation, it would limit the credit they could take. That might lead to a discussion between the two of them about what was really intended. Mirror reserving, in itself, would not force the assuming reinsurer to hold what is reported to it. Our concept is, first, the consumer can use its own basis unless prohibited by treaty. There could be a mirror issue that applies to the ceder.

MS. RATAJCZAK: Question 7: A company transfers a material block of in-force liabilities to another company via co-insurance. Based on company practice, the ceding company has allocated assets to this block equal to reserves. Assume $1,000 of reserves were transferred, and the ceding allowance is $100. The cash transferred to the assuming company is $900. What is the rationale for making an interest maintenance reserve (IMR) adjustment for unrealized gains and losses on the $100?

MR. ROBBINS: This was a tough one, and I feel more like an expert conduit than an expert on this one. I thought I understood what the IMR was when it first was promulgated and required in the early 1990s. It is a very simple concept that basically is a proxy adjustment of your liabilities to market value. Say you have a guaranteed investment contract (GIC) that you sold with a 7% guarantee, and you bought an 8% bond to support it. Interest rates go down to 5%, so you have a huge capital gain. If you sell the bond, you have to reinvest, so you set up your IMR and that helps bolster the reinvestment rate so you can support your guaranteed investment contract. It's kind of an increment to market value of liabilities in that simple example. It doesn't work out quite that way in the practical world. First, that's the simple concept. There's page after page of instructions on the IMR and a large body of "questions and answers." When you get that complicated, you'll have some very unclear issues. In this particular situation, the instructions are fairly ambiguous. They basically say that your assets associated with the reinsurance transaction, when you cede reinsurance, need to be adjusted. There basically needs to be an IMR increment, if the assets associated are not all sold.

I'm going to change the example a little bit. Let's just say there was $1,000 of reserves and $900 of assets associated with the portfolio. If you sold $800 worth of those assets, and took your gain and put the after-tax gain into the IMR, but you paid $100 in cash to get to the $900, that represents an opportunity cost on the $100 of assets at book value that you didn't sell. Therefore, you need to use the IMR in order to avoid being able to manipulate the IMR. There are many problems with that theory.

What does "assets associated with the liability" really mean? Should the answer really be $1,000—in other words the amount of the statutory reserve? The instructions are not clear. They simply say, "the associated assets are the assets allocable to the reinsured block of business for purposes of investment income allocation." Does that mean they're equal to the statutory reserve or the net GAAP liability or whatever? If it means $900 in this example, that makes some sense; on the other hand, elsewhere in the instructions, to my recollection, it says that when you reinsure a block, you take down the IMR associated with that block. You've basically sold the liabilities; you no longer have a supporting issue with respect to those assets, so there is some conflict here. To the extent that your associated assets are above the $900, it does not appear appropriate, from an economic or statutory perspective, to have to set up an IMR on those particular assets not sold, especially when they were not part of the actual consideration paid.

MR. RAYMOND: We were recently faced with a similar situation and had a lot of frustration when we were trying to work through it because you have IMR rules that are somewhat arbitrary. Although it goes on for pages and pages, the concepts behind the IMR are fairly simplistic. The purpose of IMR is to try to, as roughly as possible, match up the amount of assets and liabilities that you're keeping valued at book. The intent is to try to eliminate some places where you can manipulate statutory surplus through buying and selling of assets or liabilities. The result is that it doesn't always work rationally. You try to follow those rules that are, in some cases, vague and in some places complicated, Based on what you actually do in a transaction, they might not necessarily make sense. I'm not sure there's a great answer to that, other than making sure you understand what the rules are and making sure you understand how they work. In our transaction, we spent a lot of time making sure we understood how the accounting was going to work for buyer and seller. We then made sure that the provisions in the contract reflected this accounting. It had an economic impact because of the impact it had on surplus to the buyer or seller. We made sure that we recognized this impact and adjusted for it in the contract. It doesn't seem rational to me that the IMR rules might necessarily have to affect how you account for the underlying contract and possibly even the price of the deal. You have to look at it and you have to recognize the impact it's going to have.

MS. RATAJCAK: Question 8: Please provide comments regarding running into the minimum guaranteed interest rates and how companies are dealing with this in their asset adequacy testing and their investment strategy. I think we all would have comments on this one.

MR. MCCARTHY: It's going to be a tough year. Don't assume credited rates below the minimum guarantees!

MR. RAYMOND: That made everybody feel better... Ed, you have notes.

MR. ROBBINS: I don't have any notes on this one. One of the main things, of course, outside of asset adequacy testing and investment strategy, is there are many companies out there that still have minimum guarantees at above 3%, let alone following the migration to the 1.5% in the proposed nonforfeiture law. Just get those interest guarantees down as quickly as possible, and pull the so-called violating forms off the market. With respect to asset adequacy testing, I think you let the chips fall where they may. I think one needs to deal with Questions 7 and 8 together.

MR. RAYMOND: Just before we leave this, I have a couple of comments. I do think there are some things you need to consider that, in the past, might not have been as significant in looking at liability modeling. Now that you're going to be looking at a number of scenarios that are hitting your minimum guarantees, as a valuation actuary, you're going to need to look much more closely at the company's nonguaranteed element policy to determine how you will react in a situation. Look very closely at how you define your nonguaranteed element policy. Are you looking at things in aggregate or element by element? On a block of universal life business, your policy might be that you're going to look at all your nonguaranteed elements in aggregate, similar to the way most companies set their dividend scales. So your management reaction to this might be that you could be looking at COI increases in the future if you stay at the minimum guarantees too long. Or there might be expense charge increases, depending on where you're getting your margins and how you're setting your nonguaranteed elements.

As a valuation actuary, I'd look very closely both at what management feels they're going to do, and how this business is going to be managed, as well as what your written policies are so that you feel comfortable that you're modeling the reality of what your policies and actions would be. These are clearly issues that are going to be much more important. You also need to look back at your models as Ed said, when you've set higher guarantees, whatever they are. Pull out the policy forms. Make sure you've modeled them appropriately. I'd look much closer at some of the older blocks to verify guarantees. When you built the model three or four years ago, you might not have worried too much about whether you grouped together policy forms that had 3% and 4% minimum interest rates. Look back at your models and maybe separate those out because it could have a big difference in your results.

MR. MCCARTHY: One of the points that Craig mentioned is this notion of aggregating your nonguaranteed elements. I have a caution there that is particularly applicable on some older universal life forms where you probably have built up bigger reserves. A fair number of those older forms contain more restrictive language about your ability to change certain nonguaranteed elements, almost linked to item-by-item expectations rather than the aggregate. There has been a fair amount of litigation in situations like that where companies began using an aggregate approach where their policy form would suggest that, for example, COI changes needed to be linked to changes in expected mortality.

MR. ROBBINS: One other thought, if you can build up your formula reserves, especially if you can use approaches to make your higher formula reserves tax deductible, it might help you in terms of asset adequacy testing.

MS. RATAJCAK: Question 9 is related. The question is, what additional analyses should the appointed actuary undertake at year-end in view of the poor equity and credit market? Is running the cash-flow testing model based on the New York 7 sufficient?

MR. ROBBINS: No.

MR. MCCARTHY: Even New York would agree with that.

MR. ROBBINS: The forthcoming Actuarial Opinion and Memorandum Regulation (AOMR) doesn't really mention the New York 7 anymore. Basically, it speaks to methods of analysis that are appropriate. The New York 7 are pretty much on the way out in general. What I've seen basically is special testing of, for example, guarantees on variable products. It is basically apart from the main body of the actuarial memorandum where the New York 7 are required and the normal stochastic testing on the other general account liabilities are being tested. At my former company, we basically did a lot of stochastic testing on equity paths as a separate addendum to the memorandum. We actually did a stochastic risk profile.

MR. RAYMOND: Over the last few years, I've been becoming a convert to stochastic testing. As you look at the environment we're in, I think it's going to be hard, in a lot of situations, to get comfortable without doing some level of stochastic testing. I've always been an advocate, in most situations, that doing a limited number of deterministic scenarios should be enough to provide comfort to the valuation actuary that the reserves are appropriate and sufficient. I think as you're running into the guarantees, you're going to find many situations where a limited number of scenarios is not going to have enough information to make you comfortable. I do think, particularly if you're looking at a mix of variable business and general account business, that looking at a range of stochastic scenarios is going to be an important process to go through to get comfortable with your reserve levels this year.

MR. MCCARTHY: One of the things we talked about in our conversation on this was default rates. They are obviously running high at the moment, and there's going to be an issue there as to the period of time over which you average experience or indicators in selecting them. It seems to me quite likely that what people will be using this year is higher than it had been. I think that's appropriate. I don't think it's necessary to use one year's experience alone because this is a long-term test; however, this is something new that comes into being. Another issue that will stand out this year, particularly for general account annuity blocks, is what I would call the rebound risk. We're talking about problems with rates going down and running into guarantees.

For scenarios that involve significant increases in interest rates, I think those are going to produce some difficult results to deal with, probably not for universal life, but for annuities.

MR. ROBBINS: I have a comment about the new proposed quad-M—living benefits on variable annuities. The forthcoming rules are an accumulation of retrospective fees on the contracts currently in force and then subject to asset adequacy testing on those particular benefits. That strongly implies that even if your other business shows plenty of adequacy, you cannot aggregate the cash-flow testing with the rest of your company and that could give companies an additional problem this year.

MS. RATAJCZAK: Question 10: Can you discuss deficiency reserves in relation to critical illness coverages such as ALBR or stand-alone critical illness products? Are deficiency reserves required? If so, what are the situations in which we need to hold deficiency reserves, and how do we calculate such deficiency reserves?

MR. MCCARTHY: I'm going to answer this question without knowing what ALBR means, because I decided it wasn't necessary to answer the question. First, under codification, Paper 54 says you do hold premium deficiency reserves on individual health insurance. The guidance there is not as extensive as it might be, but it's clear, first, that you hold, and, second, that it applies for policies sold in 2001 and later. Specifically, it does not apply to earlier sales. The guidance says that for earlier sales, you look to the policy (it says the formal or informal policy of your state of domicile), and figure out whether you have to do that or not. In any event, even if you felt that there was some older business on which your state did not require that, I believe you would wind up taking it into account in your asset adequacy testing. Of course, in your asset adequacy testing, it could be offset against other sufficiencies, so that might matter. Overtime, more and more business will have been issued in 2001 and later so the codification guidance will be more extensive. For most of these things, you don't have tables. In any event, you need to use judgment as to your experience and what you can reasonably expect to do by way of rate changes over time. That, of course, is a complicated subject because rate changes don't happen simply because somebody snaps a finger. The question certainly suggests that they do believe

that they have a block that's deficient. When you look at those rate increases, if you work in this business, you know that there is a very significant antiselective lapse effect, which sometimes gets you in a position where you just can't catch up. I guess I would summarize by saying, premium deficiency reserves are required for sales in 2001 and later. You are using experience and anticipations, including rate increase anticipations and anti-selective lapse resulting from that. For older business, it might or might not be required depending on the state, but you need to fold that stuff into your adequacy testing anyway.

MS. RATAJCZAK: That concludes our submitted in advance questions. We'd like to take questions from the floor.

FROM THE FLOOR: I have a general question on cash-flow testing for the actuarial opinion. When you reach a point where the liability cash-flow needs exceed the asset cash flow, you can obviously sell an asset to provide those needs. Do regulators accept any other means of providing cash flow at that point such as borrowing?

MR. ROBBINS: You can use borrowing, and that often is done for small interim situations. If you are looking to a situation that is significant or long-lived, I have been aware of some regulators who asked if that would be an implementable strategy or not. My experience is it is OK to fill in gap, smooth out bumps, and model things and all that kind of stuff; however, if it gets to be significant, there's a reality test.

FROM THE FLOOR: If it's a timing issue, then it's an appropriate strategy.

MR. ROBBINS: It depends on how long a time frame you're referring to. If the time frame is moderate and could be chalked up to modeling error or just minor things that a company in an ongoing situation would have on their cash flows, then I believe it would be accepted. If it is significant or long-standing, then I think there's a real reality test there you're going to face.

MR. FRIEDSTAT: I'll follow up because Craig has such passionate feelings on mean reversion. I want to ask this question not for mean reversion, because there is not one mean reversion method. There are surveys that are being undertaken, and they're all over the map so let me phrase the question this way. Do you take a step back from whatever method you are using to determine your near-term interest rates for *FAS 97* purposes? How do you justify that those rates are your best-estimate assumptions, which are supposed to be the assumptions that you're using for *FAS 97* purposes? As far as best estimate, what little guidance there is in the accounting literature talks about the mean and the mode. This sort of ties in with the comment of the analysts at the opening session. However, you determine your rates in the near term, and forget that it's mean reversion. What process do you go to to get yourself comfortable that those satisfy that best-estimate definition?

MR. RAYMOND: I've always struggled with the words in *FAS 97*. I think if you go through GAAP literature, you need to take a perspective of what best-estimate means. There are a number of comments throughout GAAP literature that refer to a range of best estimates. There's a reference in *FAS 5* that you should err on the conservative side if you have a range of reasonable best estimates. The approach that I have always felt was appropriate for looking at the definition of best-estimate under *FAS 97* is that when you're looking at unlocking, you need to look at the assumptions you've made and determine whether, with that as your starting point, the number you have is still a reasonable best estimate based on what you know today. I view it as the difference between a reasonable number and an unreasonable number. There's a range of numbers that I would say could be reasonable best estimates. If I'm comfortable that a number is still within that range then it is still a reasonable best estimate. Even though it may be different than the number I would choose, if I had to close my eyes and start fresh and pick my single best estimate as of today, I would not change it because it is still a reasonable best estimate and it's not appropriate to unlock.

FROM THE FLOOR: Your concept that you're applying seems to be very similar to a claim reserve and whether it's a range. Management chooses any reasonable number from within the given range. I think that's probably true and consistent with what you're saying. With near-term interest rates, what is your range of reasonableness?

MR. RAYMOND: The way I've always looked at the assumption, as far as fund growth within a separate account, is that it is not an assumption as to short-term returns because I don't know what's going to happen tomorrow. What I do know is the variable funds are going to go up and down. I can't reasonably make an assumption as to what short-term returns are going to be. Instead, what I'm making is an assumption as to what the long-term growth is going to be. I agree with Bud's comment. I think that if you're looking at short-term returns, you would have a much tighter range of what would be a reasonable assumption. My view is that the right approach for variable business is that I don't know what's reasonable for short term. In my approach, what I need to do is look at that long-term growth rate and decide whether I am still comfortable with it.

MR. MCCARTHY: By the way, Bud referred to an analogy of a claim reserve in a range of estimates. I think there's another analogy you might look at that supports what Craig was saying. If you look at the Actuarial Standards of Practice giving guidance to pension actuaries and talking about selecting rates of interest, this whole concept of the range and the long-term rate is very much there. Although there isn't a standard on the particular subject that Craig is talking about, I think it's a very appropriate analogy because you're dealing with the same question.

MR. ROBBINS: There's a major difference between the concept of a best estimate and a mathematical expected value. When you're dealing with nonlinear functions, such as the expected economic value of a minimum death benefit guarantee liability, as you get closer to "in-the-money," and then as you get further "into-the-money," the economic reserve is an extremely nonlinear function in the bad scenarios. "Best Estimate" and "Expected Value" can be very different numbers. That's part of the problem with this whole best-estimate concept, which is fairly rooted in GAAP and has been for years. The other comment that I want to make is that the

concept of mean reversion has to have some fairly severe limitations to make sense. I've seen one example of ridiculously high future growth rates to get back to where you should have been according to what you planned at the issue date. You really need to have some kind of a cap on your future expected equity growth rate in the short-term future to make any sense at all. You've got to have some feeling of responsibility for that. I'm not completely endorsing any type of mean-reversion method to get you back to your at-issue assumptions. I think that would be absolutely wrong.

MR. MCCARTHY: It's interesting. Warren Buffett has commented on that subject in the context of *FAS 87* assumptions for pension plans in talking about the growth rates that are being assumed and getting back to where you had expected to be and the trap that can get you into.

FROM THE FLOOR: I wanted to pick up on one of Dan's points regarding the statutory opinions and the asset default rates. Based on your experiences, and with regard to a company's asset default rates for its investments over the last 10-20 years, would it be fair to try to take the company's own default experience into account as opposed to perhaps looking at Moody's industry average ? Any thoughts on that.

MR. MCCARTHY: I suspect we will all have something to say about this. Whether you are looking at company experience or other experience, you would be doing it by asset class and by credit rating. To me aggregate studies of industry default would mean nothing. I think you need to drill down more than that. Also, I think that your approach is very much a question of company size and the credibility of your default experience. There are companies—this is particularly true for larger companies with a lot of private investments—that their experience has some credibility. They can link their experience default rates on those investments to some analogous public class to give them a way of tracking them and smoothing the default rates. Companies that have mainly public investments, in my experience, don't usually do that; they could, but they don't usually. Because of their public investments, you have huge bodies of credible data out and usually follow that. I guess the other thing I would say about privates is that

would include mortgages. People try to look at their experience on their mortgage portfolio or sometimes run away from it. The ACLI has published an industry average by class of mortgage, and there are some companies that use that.

MR. RAYMOND: The particular comment I would reiterate that Dan made was that you need to look at the credibility. There are limited companies that really have enough default experience unless they're extremely actively involved in below-investment grade security investments to have good experience. I guess you have a lot of investment departments that tell you that, prior to last year, they never had a default in ten years, and they're better than everybody else. However, you have to put that in context. I think you also have to put in context the assets that you have, and what actions are being taken in your investment department. Even if you have had better experience in the past, are they being more aggressive at taking credit risk now? Do they have better experience in the past because they were very selective? That's something a lot of companies are seeing now when they look at their credit portfolio, particularly as you look at below investment grades. The reasons why you're holding below investment grade securities are different now than they were a few years ago. In the past, many companies had below investment grades because they made an active choice to buy them. Many companies now are holding below investment grades because they're fallen angels. I'm not sure it's necessarily appropriate to reflect your own experience in how you managed that portfolio before when it was an active portfolio versus holding fallen angels. Are you going to correct me on anything?

MR. ROBBINS: I agree with everything you said.

MR. MCCARTHY: I would stress the importance of the question because that is going to be a key assumption this year. Those of us who were doing asset adequacy testing in say 1989 to 1991 or 1992, recall really having to struggle with this. We're back in that kind of environment again—it is not quite to that extent, but we're there.

MS. RATAJCZAK: I have a question. In the life and annuity valuation issue session, there was a lot of discussion about projects that would be starting to, once again, take a look at our valuation system. It would be a long-term view to come up with methodologies that have the proper balance of formula and principles that would fit all these innovative products that we're developing. You had a group that worked on the unified valuation system for a long time, and they did a lot of good work and came up with a lot of good information related to methodologies and such. What is it going to take, in your opinion, to move that process along? I don't think anybody would disagree that we need to come up with something that better handles the way in which our products are evolving over time.

MR. ROBBINS: I guess I have a couple of thoughts. Some of my compatriots in Canada have told us that the way regulation evolves in Canada, they look at the ideas put forth in the U.S., and then they adopt it 20 years before the U.S. adopts it. Our 50-state situation doesn't make it easy. There is action right now towards a federal charter, which would make it easier to deal with. There is only one party and that might be going forward. It might go on a fast-track eventually. There might be someone else in the room who can speak to the current status of that federal charter initiative. There is another issue related to the unified valuation system that has been forthcoming. The status of that, as of a year ago, was that it was a combination of formula and somewhat of a fair-value type approach. There are several problems with the pure fair-value approach. One is that fair value without margins front-ends all your earnings, which gives us significant tax issues. If you put margins on for statutory purposes, the Treasury could take the margins away very easily via congressional work and so forth. This was why formulas were basically entered into in the UVS initiative. I'll leave it at that and let you comment.

MR. RAYMOND: It's a very difficult issue. I spent a lot of time over the last 15 years working on trying to find ways to move things forward. I spent a lot of time with the UVS project. Conceptually, there are a lot of reasons why we need to move away from what we have now and rationalize the system. The practical issues involved, and one of them is taxes, are huge. We've got a tax structure that's built on the assumption that we have formula reserves for statutory. Dealing with that and any other major change to statutory will be a huge issue. Getting both the

industry and the actuarial profession comfortable with an environment that is going to rely heavily on the actuary's judgment with regard to what the reserves are and how the reserves move from period to period is a big step from what we have today. We are putting actuarial judgment in piece by piece. Although it feels frustratingly slow, I think we are making progress. When we start talking about a change that totally eliminates the formulaic, even if you can get beyond the practical issues, the jump in the level of dependence on professional judgment is just too big of a jump to take all at once. I'm optimistic in that I think we're moving slowly in that direction. As we move slowly towards it, I struggle with the discontinuities we continue to have between newer methodologies to try to deal with newer products and old methodologies for old products. We spend a lot of time finding ways to either work around rules that exist or fix rules so that they can't be worked around. That's wasting a lot of time and effort right now. How do we get through a transition to a point where we have a better balance? As Ed said, I think it has to have some formulaic basis. We need to allow more judgment and more flexibility to recognize what's really going on in the product. We will have to rely on more actuarial judgment, which is going to be a difficult transition. A consistency of regulation across all of our companies and business will help move this forward.

MR. MCCARTHY: Or it will hurt it. It's an all-or-nothing approach. Then you find out what you have. By the way, my understanding is that nobody expects the federal charter to move all that quickly, notwithstanding industry cooperation between the insurers and the banks. Craig said most of what I would have said, and I agree with all of it. I would make just two other points. Variable annuities with living benefits have become, as one of the people at the Academy said, a poster child for this question of developing an ultimate reserve basis. It is therefore taking on more importance than the subject itself would warrant. That's probably a good idea because it teaches us a few things about walking through mine fields. I would support the notion that although the dreamers like to think about changing the system entirely and abruptly, I think incrementalism is the way we're going to go. That just means we need to keep pushing the pedal and not saying, because it will take a long time, it's not worth trying. It is worth trying, and it's the only way to get anywhere.

MR. RAYMOND: One comment I would make, Dan, is I do agree. I think a lot of the work going on in new products, like the guaranteed living benefits, have shown us the difficulties in trying to apply new concepts. One of the things that also makes it more complicated is that we're trying to do this within the current framework.

MR. MCCARTHY: I agree.

MR. RAYMOND: If you do try to do something that is too much of a change, you have to be grounded back into reality. Anything we're doing is still interpreting the existing law, which makes it even harder to make an incremental change.

MR. MCCARTHY: It seems to me, at some point, incremental change could involve some change in the existing law. When you get to that point you say, in the legal structure, we have to fix A, B and C to make that happen. That's not the same as changing the whole world overnight.

MR. ROBBINS: Speaking of the whole world, there are many other countries right now that basically have statutory, GAAP, and tax as one financial model. Many of you are aware that there is a movement in international accounting to have one global comprehensive standard, basically to put one comprehensive system in place worldwide based on the fact that we're living in a global economy. It's a quasi fair-value system that they're pushing. It is not quite fair value the way it's turning out. It's more what they call entity-specific value, which is almost fair value. The major difference is that under the category "Entity Specific," a company uses its own mortality and expense experience as the respective assumptions, as opposed to a "value-in-settlement" approach. There is a draft statement of principle that came out in November 2001 on international accounting for insurance contracts. It's a rather large document. There is a lot of controversy surrounding it. The Canadians are supporting it. The ACLI, the Japanese Insurers Association, and the German Insurance Association have written letters in opposition to it for a bunch of reasons that I won't go into now. Anyway, there's an initiative that's moving. Their

initial approach was to have it in place at year-end 2005 for companies publicly traded in the European Union. It looks like that date is going to be pushed back, but that is the status of that. It's possible that eventually we're going to be subject to it in the U.S.

MR. MCCARTHY: Initially, it will be for GAAP only.

MR. RAYMOND: So one more set of accounting?

MR. MCCARTHY: Yes, that's probably correct.