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Actuarial Guideline 38 Now and the Future

Moderator: DAVID WEINSIER

Panelists: TODD H. ERKIS
ELINOR FRIEDMAN

Summary: Actuarial Guideline 38, otherwise known as AXXX, may be the hottest topic in the life insurance industry today. Regulators, rating agencies, financial analysts and actuaries are all participating in this debate. Panelists and participants discuss and debate the various interpretations of AG 38, its implications on the universal life (UL) marketplace and product design and the future of statutory rules-based accounting. At the conclusion, participants have a better understanding of the implications of AG 38 and how it has impacted product design, reserving and capital management.

MR. DAVID WEINSIER: Elinor Friedman is with the Tillinghast business of Towers Perrin in St. Louis. She provides consulting assistance to the insurance industry in financial analysis, modeling and product pricing. She has been involved in a range of consulting assignments, which include UL product development, analysis of reinsurance and securitization solutions. Elinor also serves as the vice chair of the Society of Actuaries' Product Development Section Council and is a very frequent speaker at these meetings. I'll also add my own personal comment, and she would be considered the Tillinghast expert on the topic of UL.

Speaking second today is Mr. Todd Erkis, who is the chief actuarial officer and the appointed actuary of the Lincoln National Life Insurance Company. He is responsible for the calculation of all statutory GAAP and tax reserves and actuarial items, overseeing the hedging strategies for the guaranteed minimum death benefit

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Note: The chart(s) referred to in the text can be found at
http://handouts.soa.org/conted/cearchive/valact05/2005valact_handouts.htm

(GMDB) and guaranteed minimum withdrawal benefit (GMWB) products and reviewing new products from a profitability and risk management perspective. Todd serves on several American Academy of Actuaries working groups, including the Life Capital Adequacy Subgroup, which is working on C-3 Phase II, as well as the Universal Life Working Group, which is working on the new life valuation standards. He also participates in the Membership Committee. That said, I would like to turn over the panel to Ms. Friedman.

MS. ELINOR FRIEDMAN: I'll start with a background, which is sort of the then versus the now, and the future. I'll show an illustrative example of the impact of the revision to AG 38 on an illustrated shadow fund design, and then I'll finish up with results of a mini-survey that we conducted with regulators regarding the revision to AG 38. I might rush a little bit through the first two, because I want to save a lot of time for the survey results.

UL is a very hot product, as you can see by the outstanding sales growth over the last several years, and market share has more than doubled since 2000. Much of this increase in sales can be attributed to the competitiveness and popularity of UL secondary guarantee (ULSG). Sales at the beginning of 2005 continue to look really strong. For the first quarter of 2005, sales were up 2 percent over the first quarter of 2004, and UL sales maintained their 38 percent market share.

Reserve requirements and product designs have changed quite a bit over time. Regulation XXX became effective in 2000 and prescribed a reserve methodology for secondary guarantees that resulted in a significant increase in reserve strain for long-term guarantees. Shortly thereafter, new secondary guarantee designs emerged, the most notable being the shadow fund design. Shadow fund designs generally resulted in lower reserve strain under Regulation XXX, and these products gained a lot of popularity as well, because they offered policyholders additional flexibility in terms of choosing a guarantee period or selecting a premium paying pattern.

As mentioned, these new designs resulted in significantly lower reserves under XXX than the more traditional stipulated level premium designs, and this created a sense that there was an unlevel playing field developing in the industry. Actuarial Guide 38, or AXXX, was adopted at the end of 2002 and was intended to address the perceived loopholes in Regulation XXX. In particular, Section 8 of the guideline addressed shadow fund designs and other designs that allowed for prepayment of the guarantees. This resulted in significant additional reserves for many shadow fund designs.

What happened next was that companies went back and began repricing their products to address the new reserve requirements, and again, product design evolved. Designs emerged to manage the reserve strain and resulted again in lower reserves than some traditional designs. And that pretty much brings us to today, where over the last one and a half years or so, we've all been plugged in and tuned

in to all the discussions around the design evolution, and we're sitting on the edge of a revision to AG 38, just two short years after it was first made effective.

Now, I'll just step back a little bit because during that timeline, I used some design terminology, and it's probably my own. So I'll just set forth the three general secondary guarantee designs that we see in the market, so that we can all sort of be on the same terminology. The stipulated level premium design is sort of a traditional design, in which you have a death benefit guarantee for X number of years, as long as you pay the specified level premium each year. This type of product is clearly very easy to understand. It doesn't offer much policyholder flexibility in terms of selecting different guarantee periods and often doesn't have very competitive prepayment provisions in it. Also, under XXX, this type of design generates very significant reserve strain.

The middle one is a shadow fund design, which I mentioned emerged in 2000, and it provides a guarantee through a shadow fund. As long as the shadow fund is positive, regardless of what's going on in the UL-based policy, your death benefit is guaranteed to stay in force. The shadow fund typically operates just like a UL-based policy. It has shadow fund COI, shadow fund interest and shadow fund loads, which are all guaranteed at issue. Now this type of design does allow a lot of flexibility, because you can solve, for example, for a level of premium for life to keep that shadow fund positive, as you could solve for a premium to persist on a current assumption UL product. Similarly, you can also say, "I only want a guarantee for 30 years," and you can solve for a level premium that keeps the shadow fund positive for just the 30-year period. So it does offer a lot of flexibility. Under XXX, it also resulted typically in lower reserves. On the downside, it is much more complicated to administer, illustrate and understand.

The annual renewable term (ART) design, which is the third design, is sort of a hybrid between the first two designs. It provides a guarantee, as long as a cumulative premium test is met, and the required premiums underlying the cumulative premium test are typically a stream of increasing premiums. It has many of the same advantages as a shadow fund in terms of flexibility, and under XXX, I'd say it probably doesn't have as many advantages under the current version of AG 38.

With that behind us, let's get back to reserves. As mentioned, AG 38 was effective January 1, 2003, and it introduced a nine-step methodology for calculating reserves for products like shadow fund designs. In fact, for shadow fund design, you can reduce the nine steps into this handy formula (Friedman page 4, Slide 1) in a box. As mentioned, designs sort of evolved and their evolution was sort of focused on this pre-funding ratio and managing the pattern of that pre-funding ratio to manage the level of reserve strain. Shadow fund designs that emerged include tiered interest rate structures, in which you have one interest rate applying to funds below a certain threshold and a lower rate applying for funds paid above that threshold. That has the impact of increasing that denominator. I'll back up one second,

because that denominator in here is Step 4 in the nine-step calculation. I think I referred to it later on as Step 4, and quite often as the denominator.

Other designs include high percent of premium loads or unit loads and sometimes refunds in later years of loads, excess percent of premium loads, and multiple shadow fund designs. As mentioned, what resulted is that, again, we have AG 38 reserves or statutory reserves that can vary significantly, based upon secondary guarantee design. This has generated a lot of discussion in the industry, and there have been opinions voiced by companies and regulators on both sides of the issue.

Throughout 2004 and 2005, the Life and Health Actuarial Task Force (LHATF) discussed several proposed revisions to AG 38. If you've been periodically tuning in, there were probably eight or nine different proposals, and several of them were actually exposed. Most of them were formula revisions, just tweaks to the existing AG 38 formulas. There was a proposed revision that would require stand-alone adequacy testing, in addition to the current formulas. There was a proposal to move to an attained-age level reserve methodology like the one in AG 37 for ULSG GMDB reserving.

This discussion carried on, and I guess as we approached the end of 2004 with no clear resolution in sight, the New York Insurance Department made an emergency amendment to New York 147 at the end of 2004 and made it effective for year-end 2004. The amendment prescribes two different methodologies. One methodology would apply to policies issued in 2003 through 2005, so the emergency amendment was retroactive to January 1, 2003. It had one methodology for 2003 to 2005 issues, and then a different methodology for issues beginning in 2006. The 2003 methodology was the same methodology that, at the time, was being exposed by LHATF when New York made this move. Essentially that methodology modified the denominator, or Step 4 in AG 38, and instead of it being the single premium necessary to fund the secondary guarantee, assuming that minimums have been paid to the valuation date, the denominator became the minimum shadow fund value to fund the guarantee as of the valuation date.

So I want to comment on a couple of things there. There's no requirement that you assume the minimum premiums were paid to the valuation date. You have to figure out what the minimum shadow account value is under any prior premium paying pattern. So if the minimum shadow account value occurs from paying a dump-in on day one, that's what the denominator would now be and net of all premium loads, because now it's the shadow fund value and not the single premium. So it's net of any premium loads.

How many of you have taken a look at the 2006 methodology? In some regards, it's simpler because they've struck Steps 3 through 9, but in many regards would be very difficult to actually calculate. The 2006 methodology essentially requires that at each valuation date, you recalculate your specified premiums or your minimum gross premiums, reflecting the actual premiums paid to date. As if that

weren't bad enough, you have to choose a premium pattern that results in the lowest present value of premiums and hence, the highest reserves.

It is a flexible premium product. I know I've tried to figure out an optimization rule, but it's not very easy to run through all the possible future premium paying patterns and figure out which one results in the lowest net present value. And in some product designs, it's not intuitive at all. All other aspects of that calculation are the same and defined at issue, but it's just resetting the specified premium at each valuation date.

Following that, in April, 10 companies—companies from both sides of the debate—got together and developed a compromise formula revision and submitted it in a letter to the ACLI. That compromise revision was voted on and approved by LHATF in June and subsequently voted on and approved by the A Committee, which is the parent committee to LHATF, in July. The revision, again, focuses primarily on Step 4, that denominator piece, and it would apply to issues July 1 and later. It has a sunset in it of April 1, 2007.

The denominator is essentially as described in the 2003 New York Amendment, where it's the minimum shadow fund value to fund the guarantee for life as of the valuation date, except now you're allowed a 7 percent maximum premium allowance. What that means is, you figure out what that minimum shadow fund value is for your denominator, and you can gross it up by 7 percent. There's also language in Step 4 that says that the denominator is allowed to be inconsistent from the numerator only by the amount of the premium load allowances, as defined in this step. For me, that's probably the most confusing part of the revision, but we'll talk about that a little bit later. The revision also reduces the applicable surrender charge reduction in Step 8, and for fully funded policies, there is no more reduction.

So how does this look in the real world or at least in the illustrative world? I just put together a quick example of an illustrative shadow fund product. This product has the shadow fund interest guarantee of 7 percent. The shadow fund cost of insurance charges are a percentage of the ADCSO mortality table of 20-year select factors. It has a 10 percent premium load up to target and 30 percent premium load in excess of target. So already you can see that this is a design that will be impacted significantly by that change to the denominator calculation because now the denominator is net of all these premium loads. Here's how things look (Friedman Slide 13). I didn't provide the right raw numbers, but I can tell you that the reserves are roughly 135 percent of the current AG 38 reserves. It's a pretty large increase.

Now, I'd like to get to this survey. In discussing what we would present, Todd and I are both on the UL Working Group and live and breathe this stuff every day. We were thinking, what can we talk about that hasn't already been presented? We brainstormed and thought that maybe a mini survey of regulators' positions on the

revision to AG 38 would be helpful to most of us. I sent out a short survey of just seven questions to about 16 insurance departments. A few of them declined to respond at this time, unfortunately including Florida, but they said that they are supportive of the compromise agreement. They continue to have concerns over the sunset provision and are continuing to review how they can implement the new guideline.

Aside from those few that said that could not participate, 12 of my 16 states agreed to participate, and the majority of them even said that I could attribute specific responses to them. So I'll run through the summary results, and I'll try to interject some specific responses that were significantly different or interesting. Also, I'd like to say that many of the responses expressed here are subject to change, because the revision to AG 38 has not been adopted formally yet by the NAIC. Even though it's been approved by the A Committee, it still has another step to go. So these respresent the current thinking, but they're not final positions.

The first, probably obvious, question I asked was: Will you accept the revised AG 38 as a standard for your state, or will you have additional requirements or permit lesser reserves? As a follow up, I asked: Will you modify the reserve requirements for issues prior to the July 1, 2005, date? There was good and bad news. All of the states are planning to accept the revision as their standard, and all the states, with the exception of New York, have no plans to make modifications for issues prior to July 1, 2005. I spent a fair amount of time discussing the amendment with New York and the reason was that it's still applicable. New York said that it was considering its position and will finalize it after the NAIC plenary adopts the revision. However, Bill Carmello said that he expects the emergency amendment to New York 147 will apply for business issued between January 1, 2003 and June 30, 2005. Then, the revision to AG 38 will apply to issues beginning July 1, 2005, and that 2006 methodology in the emergency amendment will either be dropped or made effective at a later date. If it's made effective at a later date, he said that they could then later delete it, depending on what evolves in the industry. So we probably don't have to get those optimization programs working just yet.

Question 2 was, what leeway, if any, will you allow for companies that will have difficulty making the required administrative systems changes in time for year-end reporting? Half of the respondents said they don't contemplate providing any leeway. There were a couple of comments that this has been discussed long enough. We don't anticipate companies having any problem getting this done. The other half said that they would consider some leeway. Most of them indicated that they do expect companies to make best efforts to implement the change but would consider leeway on a case-by-case basis. My takeaway from this is, if you think you'll have any trouble getting this done by year-end, it's probably a good time to start talking to your state of domicile sooner rather than later.

The next question we asked was: Will your state be making changes to the product approval process to address compliance with a revised AG 38? None of the

respondents planned to make changes to their policy approval process. Most of them did indicate that they don't look at reserves during the policy form review process but rather will look at them during the examination process. So, there were no changes there.

In the revision, I mentioned that there's language to the extent that the denominator is allowed to be inconsistent only by the amount of the premium load allowance as defined in this step. And that's Step 4, again. We asked, as the numerator is the shadow account as of the valuation date, what assumptions should be used to calculate the denominator if the shadow account credits and charges vary based on the level of shadow account funding? Clearly, this was the most technical question of the bunch. A few of them said they had no comments or no opinion, and the rest of the responses had some variation in them. They ranged from, "use the assumptions that result in the highest reserve," to "use the assumptions that result in reasonable, not overly excessive, reserves." Several respondents also reiterated, "The numerator and denominator should be calculated using consistent assumptions."

One of the respondents, Sheldon Summers of California, provided me with an example of how he would interpret this. As an example, he said, let's assume that the shadow account credits charges that vary based on the level of the shadow account funding. And let's assume that it credits 3 percent below the threshold and 2 percent above and that our threshold is equal to $1,000. Then, he said, further, let's assume that the current shadow account value of $5,000 would fully fund the secondary guarantee, but only $4,500 would be needed instead if the entire amount were credited at 3 percent. So this would be our Step 4. In our Step 4, if the entire account got the 3 percent forever, it would only be $4,500. That would be our denominator, I guess, grossed up for the premium load allowance. If it was allowed to use the tiered interest, it would be $5,000.

In the first example, he said, if the current shadow account is $1,000—so exactly at our threshold—he would expect that the entire denominator be developed assuming the 3 percent. So it would be the $4,500 grossed up for the premium load. In his example, if your numerator is below the threshold, then your denominator should be credited the lower charges or higher interest.

He then gave an example in which the numerator, the current account value, is $1,100, and he said based on his numbers, the denominator should then be, can you guess this? Unfortunately, I don't have the detail on how exactly to get to this number. But he said that this was calculated as just $100 being subject to the 2 percent, and all of the rest being subject to the 3 percent. I assure you, because I checked, it's not a weighted average based on 1,000 versus 100. Only that $100 is getting the lower 2 percent. I hope that gives some insight, at least with respect to California.

Tomas Serbinowski of Utah said that his personal opinion is that charges should be

consistent with those that are expected to be utilized. If it is expected that in a vast majority of cases, the shadow account will remain below the threshold that triggers higher charges, then these higher charges should not be used in the denominator. The response from Bill Carmello of New York was, the assumptions to be used will have to be determined on a case-by-case basis, and he expects companies to be reasonable.

In question five, we asked, are you in favor of a preferred valuation mortality table or tables, and are there any other short-term modifications to the requirements that you anticipate may be adopted to address the reserve redundancy issue? Then, are you in favor of making such changes retroactive to prior years' issues? And 10 of the 12 said they do favor preferred mortality tables. Six said that they favored the tables be adopted prospectively only, and six said they would consider retroactivity. So, there was an even split.

We didn’t get much back in terms of what other modifications they might consider. One respondent did say that he’d be open to it, but he didn’t have any in mind. A couple of respondents also expressed concern about distracting resources away from the development of principles-based reserving. One said he believed short-term fixes "are a waste of our resources. All of our resources should be used to develop provisions to the standard valuation law to create a more modern valuation system, one that relies on the actuary to establish appropriate reserves." And another who favored developing preferred tables did say that he favored it, but he wants available resources to retain their focus on the development of principles-based reserving.

We also asked: What are your current expectations regarding the level of reserves under a principles-based reserve system? Would they be similar to current levels, higher or lower? Current level in our survey was the revision to AG 38. Six said they expected reserves to be lower or slightly lower. Four expect the relative level of reserves to vary by product and/or company, and two were either not sure or felt that they would be about the same.

The last question in our survey was intended to be a catchall. We asked: Do you have any advice for valuation actuaries when calculating reserves under the revised AG 38? Four advised that we do the right thing or be ethical. Three advised that we be careful or very careful. Two advised that we document our work well. Two offered no advice. One advised that we also look at asset adequacy, not just formulaic reserves.

Sheldon Summers of California said, "Although most opinions by regulators regarding principles-based reserve methodology have been positive, at least among those who have shared their opinions, the experience with AG 38 has resulted in some distrust, or maybe caution is a better word, by some regulators. I strongly suggest that the valuation actuaries use their best efforts to comply with the intent of the revised guideline. Any attempt to circumvent the guideline reserve

requirements could harm progress in developing a principle-based reserve system." And the response from Bill Carmello of New York was, "Be straight, don't be cute, and ask the department if you have any issues."

It's been my experience, through performing this survey and also through project work for which I've approached insurance departments on behalf of a client, that most insurance department actuaries are very open to discussing these issues. I think this can really help in avoiding some misunderstandings in the future.

I'll end my presentation with another respondent's advice, which was, "Do the right thing, live long and prosper."

MR. TODD H. ERKIS: Elinor talked quite a bit about the past and did a good job about the now. I'll talk a little bit about the now and also try to talk a little bit more about the future. I think it was very interesting to hear the survey responses. I know for someone who has to implement this and thinks about this quite often, knowing what's on the minds of the regulators and how they think with regard to the revisions is really important. Unfortunately, as you can see, since there weren't single answers to some of those questions, the responsibility is still up to us to try to look at how to interpret even the new AG 38 and do the right thing.

I'll talk a little bit about the now, just to focus on a couple of things from an implementation perspective on AG 38. It sort of hit home for me. The first thing, which is I guess a little unexpected, is that it actually hasn't been adopted officially yet by the NAIC. Although I think everybody certainly expects it will be, we're in a little bit of a quandary right now, because you have the adoption by LHATF, you have the adoption by A, but it hasn't been formally adopted by the plenary or executive committee of the NAIC.

I'm actually asking my group to do the calculation under the revised value now, and then have it be something that, even though we may not report it as of third quarter, certainly I make sure that my senior management is aware of. Then obviously, you have to talk to your tax area to make sure that they understand what the situation is, because the current statutory regulations for AG 38 are still the old version, until it's officially adopted. We're in a little bit of an interesting situation now from that perspective.

I wanted to focus just a little bit more on the surrender charge deduction removal in the endnote. I don't know that everybody caught it. Elinor mentioned it, but it is something that could have significant implications to policies that are fully funded or expected to be fully funded later on—that the surrender charge reduction goes away. It's certainly different than what was there before and something just to point it out as you're looking at your reserves moving forward. The other thing that we've seen in doing some of our testing and looking at generic examples is that, even though under the new method the overall reserves go up, you can get a different mix between your basic and your deficiency reserves. You may want to

look at that and see how it affects your product, in particular policies that have higher shadow account loads and also policies that are less funded. It might be something that you want to look at just to make sure you understand it.

In talking about preparing for this coming year, we talked a little bit about the fact that we have multiple systems here, multiple AG 38s, that you have to deal with during the year. It's a little bit unprecedented. It's certainly something that we can all handle, although it's just one more thing, given the fact that we all have pretty busy valuation departments or are doing the calculations ourselves. Obviously, there'll need to be some valuation system modifications. Hopefully people are out there thinking about that now, talking to your system providers or doing your own calculations to make sure that you get the system modifications in. As I said before, certainly identifying any issues for senior management now is very important. We've certainly talked about the tax issue internally. We've also done projections of what this will mean to us and talked about whether we should be talking with our auditors. Certainly if you have any issues of how this applies, go to your insurance department. As Bill Carmello talked about in the survey, it's obviously a very good thing to do to make sure that you understand.

Just looking ahead, given that we have a situation now where we have multiple reserve calculations for essentially the similar block, I'm expecting that there will be increased time when we get to year-end from internal reviews, just to make sure that we are doing the calculations correctly since there was a change. Also, when you get to your external auditors or later on when you have statutory examinations, there'll obviously have to be more cells tested, and there will be more work there.

Just overall—obviously this applies to the new AG 38 and the other one as well, the prior version—something that I want to take a little bit of time to talk about is how I look at the ULSG business at Lincoln. Depending on how close the valuation actuary is to the pricing and is to talking to the pricing actuaries, there are some things that maybe some companies don't see or aren't looking at. I thought maybe I would mention a little bit of that here, still talking about the now. Then I'll move on to what AG 38 in the future looks like, in my view.

We like to look at the ULSG business separately. Elinor talked about the asset adequacy proposal that was out there. Lincoln was actually one of the companies that was advocating that position prior to the change from the LHATF moving to the new AG 38. I suggested something that you should all think about. Obviously, it's not something that you have to do for your asset adequacy testing. That's still combined, and you can look at your UL together or life insurance together, however you feel is the most appropriate. But certainly something that I think is important to think about from a company perspective is: What exactly are you looking at with your ULSG block? You wouldn't want to implicitly have any subsidization of other blocks in your cash-flow testing for that. I just feel like it's important to know. Things that we look at are sensitivity testing of low interest rate scenarios and

decreased lapses, which are obviously both things that can go against ULSG values. Then, as you probably have heard or seen and certainly there's been white papers out about it, the combination scenarios are not linear at all. If you have a low interest rate scenario and then you have fewer lapses, if you do a sensitivity that just does your lower lapses, and you do a sensitivity that's just your lower interest rate, you'll end up getting worse results when you combine them. If you're not looking at that, you should. Just make sure that you understand from a valuation perspective that you're comfortable that your reserves cover those moderately adverse scenarios and understand the tails as they hit.

You also obviously could do some gross premium reserve testing, and stochastic testing is something that's definitely important. I know a lot of people look at these products somewhat on a dynamic basis, certainly from a pricing perspective. But certainly, the stochastic testing and understanding the tails are really important. As I talk a little bit more about the UL Working Group, that certainly is something that we've been focusing on and talking about with regard to what the statutory reserve of the future will look like.

I'd also like to talk just a little bit about what companies might be doing in response to the new AG 38. I'm sure many companies out there are just trying to think about, do we keep our existing structure? Do we just change rates? Do we change our structure? What do we do? Something that I find very important is to make sure—in particular with the kinds of issues that Elinor was talking about in the survey, when it's still not as black and white as maybe some people think—that your pricing actuaries know what reserve position you're taking and how you're looking at the interpretations. If you have a product that is affected by the changes, obviously that's something you're probably talking about.

But there may be situations when the pricing actuaries, if you're not in constant communication, are looking at different structures on which maybe you don't have the same view. If they know that before the product hits the street, everybody can be consistent, and they can build in the right level of reserves. It goes back to what the regulators were saying. Let's all make sure that we're all together, so that the valuation actuaries are doing the right thing and having positions that everybody is comfortable with.

Let's move now a little bit toward the future. What will AG 38 be, or what's the next version? I'm sure many of you have heard about principles-based reserves and think, "That might be coming down the pike. What exactly is that? Is that something that I have to worry about?" Well, it definitely is. I actually think it's not a worry. I think it's a great thing, and it's something that people should be really excited about. We've been working quite hard, led by Dave Neve and Tom Kalmbach, and certainly many, many people have been working. We have monthly face-to-face meetings, and there are probably 10 or 11 conference calls every week. There are 11 subgroups, and it's just a great effort. The industry is coming together, and I think it's doing a wonderful thing.

We have talked about the principles of principle-based reserves. We came up with some principles that were exposed by LHATF and had many industry comments that were very productive and helpful. Thank you to those who commented, and we appreciate everybody's interest and feedback.

We're focusing on ULSGs, UL term and variable universal life (VUL), and we actually have added whole life. I think there's a trend here. The trend is that it will apply to all life insurance products. We'll try to come up with something that really fits the principle of how to reserve for life insurance. It's something that we've actually made a strong point about, and I want to reiterate it here. The UL Working Group was not something that was put up because of AG 38. I am talking about it here because it does affect ULSG, and it does affect universal UL products. But don't take that to mean that the Universal Life Working Group or the principles-based reserve is here to sort of solve AG 38. It's a sea change. It's something that I think everybody feels is a good way for us to go to really help the long-term basis of how to do reserving for all life insurance products. We have done some modeling, and I'll talk a little bit about that in a few minutes, about the kind of results we've seen.

I wanted to go into a little bit more detail about the methodology and where we are right now. The methodology is the greater of a deterministic or a stochastic reserve. The deterministic reserve is done seriatim. The principle is that not all products would have to do a stochastic reserve. Really, you want to look at the risk that is embedded in the product. The way I think of it is, you want to look at what exactly is the function of the reserve, and what's the variability of the result? We're doing a gross premium reserve. That's our recommendation. So it's present value of your benefits and expenses, less the present value of your expected future gross premiums. We want to make sure that it's appropriate for the risk. We also want to make sure that it isn't something that is so onerous to do. You may sit there and say, "I have an ART term product with annual changes. I have a lot of leeway. Why do I have to do a bunch of stochastic scenarios?" You may not have to. That is actually something that we're in the process of trying to develop—exactly what the requirements are for having to do each.

But the way I like to think of it is, the deterministic reserve is sort of your single scenario. It's designed to try to help you calculate. Without knowing exactly what the future will be, it gives you a path. What the stochastic is trying to do for products that have tail risks is to help be a sensitivity. We're trying to say that when you get to the point where certain events in the future happen that increase your risk, we want some mechanism to be able to increase your reserve appropriately.

Let's talk about secondary guarantee UL. If I have a situation where I have a value that is calculated at issue, I'm making predictions on what's will happen in the future. You may have tail risk, but you may not totally understand at that point where it will be. It's pretty uncertain. You could have deterministic reserves that

will go through and have a single scenario. Then you have your stochastic reserve that comes through, and maybe the stochastic reserve is relatively low because you're assuming that you'll have good premiums and things like that. But what happens if that doesn't happen? If you're a few years out and your account values are relatively low, then you would expect your tail scenarios would then be higher, and that's when the stochastic reserve would come in. It's almost like an early warning device. It helps raise the reserve as the risk increases. That's the principle behind it.

The assumptions that would go into both of the calculations are best estimate with margins for adverse deviation. The issue here, which I think is very interesting and something that all of you need to start thinking about, is that it will be based on company experience, where you actually have studies and credible data. From a valuation perspective, where we are today is that we have a rules-based system. We go in, and they say use 4 percent ADCSO, so we use 4 percent. We use ADCSO. In the future, we'll be saying, "What does our experience look like? Do we have the experience studies? Do we have the ability to look at the data on a credible basis?" And the better data you have, the more you'll be able to use your experience. If you don't have these experience studies, and you don't have the data, you'll have to use industry or prescribed experience, which probably won't be as good. So, it's something to think about.

One of the things that the working group thinks is very important—and this is also something that we've gotten from the feedback from state regulators—involves assumptions where there's really no company experience you can talk about. Let's think about what will future interest rates be? Actuary A might have a different view of what future interest rates will be versus actuary B. The working group and regulators feel quite strongly that one company should not be rewarded by having lower reserves because they have a more aggressive view of what future interest rate assumptions should be. Obviously that's sort of contrary to what we really should have, right? You shouldn't be able to say, "I think interest rates will be at 8 percent, and so therefore, my reserves are lower."

One of our principles—and this is something that I think gives a lot of comfort to the regulators—is that for assumptions for which there really is no company control or for those that are out in the future, assumptions will be prescribed. Although this is principles-based and actuaries will have a lot more leeway, you'll actually have very, very strong limits on certain assumptions, in particular on things where you can be more aggressive and that would lower your reserve.

Those assumptions that are company-based are not locked in. Right now, obviously, 80 CSO is 80 CSO. Here, you might use industry mortality until you actually get company experience, and then your company experience will start kicking in. If you have certain periods of time where you have bad experience, you'll have to raise your reserves. If you have good experience and you can demonstrate it, that will show your reserves are less. That's principles-based. The

idea is that if you're having bad experience and your risk level is higher, that's something that should be recognized. But on the other hand, it will provide more volatility. It will provide more difficult times for valuation actuaries to predict, what might my statutory reserves be next year or five years from now? You'll have to look at that from a capital perspective and from a statutory income perspective.

We've been working very closely as the UL Working Group with the SVL 2 Working Group, which is another Academy working group that's been looking at governance and the standards of peer review and exactly what actuaries will need to be able to provide from a certification and so forth. Those will be very important, as will developing boundaries for what's acceptable. Industry practice will have to develop over time.

Some of the things that we struggled with and that we've sort of come up with some solutions for, but that are still being worked on—and these are things that we'd certainly like feedback on—are things that we think will be very important. One is, first of all, premiums. For ULSG products, we all know that premiums can make a big difference in what kind of level of risk and funding you'll have, so we struggled. Do you let companies have best estimate assumptions? What if you're now in a situation where you have some companies that will have really high premium assumptions but maybe that's not realistic?

Where we came out was, using the same principle that we won't allow companies to make aggressive assumptions that will lower their reserves, we are still allowing companies to use best estimate assumptions. But we're asking companies, at least under the current draft, to test boundary conditions. The boundary conditions would be things like minimum funded or funded to highly funded, level premium funded and short-pay funded. I think then the other one is best estimate. So there are four—and I might have said five, but I think there are four—main boundary conditions. The idea is not that you necessarily have to use any of those conditions, but we feel it's very important for the actuaries to understand that some of those assumptions may be adverse to your best estimate. One, you need to be able to show the regulators what theirs would look like. But two, we feel it's so important that actuaries understand that and that we're asking them to calculate it and take that into account when they do their best estimate.

You don't have to think that just because a minimum funded will hold my higher reserve, that's where I have to be. But we also don't want you to say, "My best estimate provides this, and I won't even look at minimum funded because I don't think that's ever going to happen." If that means that you have twice the level of the reserves, you'll need to take that into account. This is another one of these areas where I think best practices will come into play over time, and we'll have situations where standard practice will come through.

Lapses and interest rates are other ones that we've talked about. There will be minimum and maximum lapse rates, depending on which side of the equation

you're on. We are certainly saying that you can't have any lapses when you have your secondary guarantee effect and no future premiums required. That one seems pretty obvious. Then on interest rates, we'll actually provide a specific generator to do the stochastic interest rates, and like I said, long-term assumptions will be provided, so it won't be a situation where two actuaries would have two different opinions on what future interest rates could be. Obviously, people are allowed to have honest differences of opinion, but when it comes to doing reserves, we want to take that out of the equation because it's just not really something that makes sense.

There are some outstanding issues. I'm not trying to say that we have all the answers right now. We certainly have come a long way. Our timing here is that we're trying to have something we can provide to LHATF at the December meeting that can be exposed as a complete draft and that will have hopefully all or most of these things satisfied. We're making really good progress. We didn't have the September meeting unfortunately for lots of reasons, but we did have a presentation that we planned to go through at the LHATF meeting in New Orleans that didn't happen. I'll actually go through some of that here and talk about some of the preliminary modeling results to show you what we're seeing.

Now I want to offer a bit of a disclaimer here. This is very preliminary. I want to make sure everybody understands that we are not making any representation that these numbers that we're showing are where the ultimate results will come out. This is a stipulated, specified premium design, not a shadow account UL, and it is a hypothetical example. But it does give some really good background about how the methodology might work and what it might look like. So this graph here (Erkis page 7, Slide 1) shows the test results. It's a 20-year seasoned business, so it's a business that's been in force for a while, and it's specified premium UL contracts. We tried to make it adequately priced, middle of the road something that's hypothetical so we can see. This is the risk curve, so this is the range of gross premium reserve on a present value basis of the 200 scenarios that were run. The line that goes the middle is the deterministic scenario, which starts at a 6 percent interest rate, grading down to 5 percent. You can see that there are some tails that are higher than the deterministic scenario, and then it runs down to a point where you have some that are below. It's not that much different.

When you look at the actual assumptions, compared with what you have in the principles-based versus the formulaic reserves, there are some interesting differences. Obviously, these are things that we all will have to get a better understanding of. With mortality, instead of 80 CSO with an ultimate of 100, the reserves in the modeling had used ultimate mortality up to 120. Use company experience, which in this case is hypothetical, grading to an industry table. Interest used was a 4.5 percent level. The current reserve is 4.5 percent. Obviously, it will be 4 percent sometime soon. The methodology here is an actual earned rate. You would look at what your assets are doing now, and then you would be using a reinvestment strategy with the interest rates that are prescribed. It would be sort

of today's curve running down on a deterministic basis. Then under the stochastic basis, it would be the interest rates under the stochastic scenarios.

We don't have any lapses in today's formulaic reserves, but this one did have some low lapses that did have some pads, which obviously would mean the lapses would be less than what your best estimate might be, although it may be that it's more in the early years and less in later years if you have a situation where you're running out of money. Again, this is something that we have to think about from a principles-based perspective, and not just throw on stuff because we say, padded means we have less. If you have a high cash value product, you may want to have higher lapses. This is really where it comes down to what's the valuation role? And it's going to change.

Here are the numbers (Erkis page 8, Slide 1). Again, I want to offer a disclaimer. We are not trying to say that these are numbers that we expect to happen. I think this is sort of consistent with what Elinor got back from the regulators—that the numbers, at least for this design, are slightly lower. It ended up being about an 18 or 19 percent decrease. This is purely hypothetical and based on one set of assumptions, but I thought it would be good for you to see.

I want to talk about now the future. What could the valuation department look like? Obviously, it's very hypothetical. What's the actuary of the future? I was thinking about this, preparing for this presentation and thinking about what my valuation area will look like in 2010 or maybe even earlier if we can get this thing adopted sooner, which would be nice. There will be no more safe harbor. We can't just go back and say, "I know the rules. A plus B equals C, and everybody is happy." It really will be modeling. How good are your models? Think about that. Are you on systems? What do you do for new products? Will you be able to have a situation where your product development area puts out a product in July? Will you be able to do the reserves? When will you be able to do the reserves? How fast can you get the models? How fast will you be happy with the models? How about your experience studies? This will be experience-study-driven.

Our role as valuation actuaries, appointed actuaries, will change. It's something that I think is actually very exciting, but it's scary. You need the computer power to run these scenarios. If you have to run these boundary conditions on your premiums, you have to run the deterministic. You have to run the stochastic. If this applies to all my life insurance, how many runs will that be? Do you have the people? Do you have the resources? Do you have the computers?

I know it's 2005, and we're talking about 2007, 2008 and 2010. But, as we all know, budgets don't move overnight. Systems don't get developed overnight. Processes don't get put together overnight. It's definitely something that I would strongly suggest everybody think about. I know I've been thinking about it. If you have older projection systems and things, if you're not on systems on which you feel comfortable being able to do stochastic, start thinking about that.

Just to wrap up, it will be interesting to hear what people think about whether the AG 38 controversy really will be over with this new round. I sure hope so. I'm not totally sure. I wish I had all the answers. Certainly listening to the survey, I think, is very helpful. When Elinor and I were talking about what a valuation actuary at the Valuation Actuary Symposium would want to hear about AG 38, we thought maybe that would be a good thing. It certainly was an issue near and dear to me. What do the regulators think will happen with this new AG 38? What if I have a multiple shadow account design? What if I have a situation like Sheldon was talking about, where I have situations in which I have funding that has different interest rates, whether I get to a different threshold? I think that's good stuff. I wish some of these weren't six on one side and six on the other side. That doesn't help me too much, but it certainly is good to know.

Obviously, principles-based reserves are on the horizon. Let's get prepared. Dave Neve has done a great job, and there have been a lot of people in the industry involved in moving this forward. There are some significant short-term challenges. We have some tough things to handle—taxes, when to aggregate, what aggregation will do. There's been some great help from the Tax Working Group and from other people in the Society and the industry with how to get this to be as tax-friendly as possible. I'm very encouraged that we'll get there. It will be a very positive thing for us. From a valuation actuary perspective, this is really, in my view, the next generation. We had that time years and years ago, when we were the back-office people in the room doing the big spreadsheets with the abacuses or whatever else was used. Then, we moved into the computer age, where we were more in the foreground. I really think this is the next step to really bringing the valuation area out to the forefront because this will be so important to companies. The challenges will be volatility, being able to predict where you'll be and just, in general, understanding what your experience and risk are.

We are risk managers—all of us. I think that this something that will just help a ton. It's a very exciting time to be a valuation actuary. I hope this will help students coming up want to go into the valuation area because I don't think it will be that dull area anymore. It will start being much, much more exciting and interesting.

That's all I have, and we'd be happy to answer any questions.

MR. WINSTON WISEHART: I'm with Swiss Re. I'm just curious why there's such an emphasis on producing principles-based reserves, while leaving the capital requirements perhaps unprincipled? I think the strength of the C-3 Phase II methodology is that they are linked, as they should be. When you talk about boundary conditions, I think "risk-based capital."

MR. ERKIS: That's actually a great point. I appreciate you raising it because it's something that I really should have talked about. We have started the Risk-Based Capital UL Working Group, or whatever we'll be called now, and it is something that

we are expecting to develop in the same time frame. It is something that, even in the first days of this project, we had thought about. The issue was really the chicken and the egg. When do you start looking at capital? We wanted to get some traction on the reserves to be able to move ahead, but it's absolutely there. We are looking for volunteers to help us. In particular, the risk-based capital group only has eight people on it. So certainly with any of the UL working groups, even though we do have a pretty good turnout, more certainly would be welcome. And certainly the risk-based capital group is moving, and we will continue to move ahead.

MR. CARL J. NAUMAN: I'm from GGY Axis Inc. In the version of AG 38 that I have, it has wording to the effect that now for 8B you have to interpret to the end of the secondary guarantee to the end of each segment end and take the greatest. So when you're calculating the denominator, you have to go to each segment end and take the greatest. Has that wording been deleted from the version they approved?

MS. FRIEDMAN: I have a copy of it here.

MR. ERKIS: This is an open forum. Anybody else who might have the answer, please come to the microphone and help us out.

FROM THE FLOOR: It's still there.

MR. NAUMAN: Have you tried to calculate it that way?

FROM THE FLOOR: If you don't have segments, it's not a problem.

MR. NAUMAN: That was one of the biggest differences.

MS. FRIEDMAN: It certainly is still there.

MR. NAUMAN: Just one comment about maybe principles-based. You said you were wondering about your future, but you should look north of the border because Canada has been on that for 15 years now.

MR. ERKIS: We actually have quite a bit of input from actuaries who have Canadian experience in the UL Working Group, and they've been incredibly helpful. We do look to the Canadian principles-based as a model. We're happy that it's been there because it certainly gave us something good to point to.

MR. MICHAEL T. HOLLOWAY: I'm with Northwestern Mutual. I have two questions, the first one relating to growth in UL sales. You noted secondary guarantee popularity growing there. I'm wondering if there's any even anecdotal evidence of how much of those sales numbers are driven by replacement business. A second, unrelated question is in regards to the question that you posed of, do folks expect reserves to go down significantly? I guess my question is, if that is the

case, why haven't the capital markets grabbed onto that, and has there been securitization done as it has on the term side?

MS. FRIEDMAN: I'm not aware of even anecdotal studies or numbers regarding replacement, so I can't speak to that. I'm not sure I understood your second part.

MR. ERKIS: I think the question was, if people are securitizing reserves—let's say XXX reserves—but there's a possibility that those reserves might go away, is there an issue? I'll give you sort of two answers to that question.

MR. HOLLOWAY: There have been a number of securitization deals as far as term insurance reserves, because the markets viewed them as significantly redundant. But to my knowledge, there haven't been any ULSG securitization deals, and I'm wondering why there haven't been.

MR. WEINSIER: I think I can take a shot at that. I think I can say that there are a number in the works, but none has been announced publicly just yet.

MR. ERKIS: At least that's what we hear. The other point, which I actually thought was the question you were asking, was what will happen with securitized deals? If you securitize AXXX reserves and then we go to principles-based and maybe principles-based is retroactive, then what happens? I think that's a really good issue. The ultimate issue is: Will it be retroactive or prospective only? Nobody really knows for sure.

MS. FRIEDMAN: I guess just to add to that, my view from the response to whether regulators would allow preferred mortality tables, which some could view as a step toward principles-based, it was split 50/50, with six respondents saying prospective only. Of the ones who said they would consider retroactivity, some of them also said maybe retroactive for a few years of issue. I think it'll be even a greater hurdle to imagine that we'll make principles-based retroactive for all issue years.

MR. DANIEL J. McCARTHY: I'm with Milliman. The two tests in the life insurance illustration reg depend not only on the level of reserves, but also on the incidence of increase in reserve over time. I wonder if in the testing that you've done you've looked at the implications of the pattern of reserve change over time for illustration purposes.

MR. ERKIS: We actually haven't. I don't think so. That's a good point, Dan. There are a bunch of issues that we need to understand. Certainly that's one of them.

MR. ARMAND M. DE PALO: I don't quite have a question, but I have a few statements that I'll make. I'm with Guardian Life. I think this is a very, very important process we're going through. Our profession recently has gone through a serious schism that has been very harmful to the industry. It's rare that we see a

situation in which CEOs have to get together to try to resolve an issue that's a difference of opinions among actuaries. The process has started. Now we do have AG 38 modifications. Like any set of words, it can be manipulated. There is no absolute where someone will not say, "I can find some way to read these words and hold something else." What's different is the regulators now believe they have a standard that they can compare what companies do versus what the compromise was. Now we all have to move off the compromise.

The point I'm making here is, this is the biggest thing that has happened to our profession in the last 40 years. I still see the same 45 people being involved. I've gotten up in front of actuarial meetings for the last 10 years, making this statement: get involved. You're asking a handful of people to do the work for the entire industry. I don't care if you join the Society of Actuaries and work on mortality tables. I don't care if you join different committees, work groups and subcommittees of the Academy. I don't care if you join the committee that I'm the co-chair of at the ACLI. We need more labor. That's the important thing. Be involved.

This will change our industry in many ways. Maybe it's the greatest "job guarantee act" for the profession we've ever seen, and the consultants and staff will do very well on this because there will be a lot more work. I don't know if the CEOs realize that yet. But be involved. The schism has to be put behind us. There's a clean slate going forward. Now let's just get this resolved. Time frames are only what people think. I've been involved in regulation for a long, long time. You can say it's a date. The date will be whatever the date turns out to be. But the more people who are involved, the faster we'll get to something that can bring us all to a level playing field. This is the key point I'm making.

It will not work if we end up with a situation in which two actuaries don't have about the same type of reserve. No one is talking about keeping excess redundancy in reserves. We're all talking about getting to a level playing field. At the end of the day, if we're not on a level playing field, this schism will continue. Be involved. That's all I can ask all of you because if you're not being involved, you're not part of the solution.