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Session 2PD
Life and Annuity Valuation Issues

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Summary: This session provides an overview of a range of current statutory valuation issues pertaining to life and annuity products. The major valuation issues are introduced here and covered in-depth at subsequent sessions.

Life and annuity valuation issues covered by the panelists include:

- *New valuation table for life insurance*
- *Actuarial Guideline (AG) for variable product guaranteed living benefits*
- *Actuarial Guideline for equity-indexed universal life (ZZZZ)*
- *Amendments to the Actuarial Opinion and Memorandum Regulation (AOMR)*
- *Progress on United Valuation System (UVS)*
- *Model Regulation on Separate Accounts Funding Group Contracts with Guarantees*
- *Model Regulation on Synthetic Guaranteed Investment Contracts (GICs)*
- *Regulatory concern over liquidity*
- *Regulation XXX mortality X factor*

MR. R. THOMAS HERGET: For knowledge of current events, there really is no better team than the one assembled here. The panelists have spent much time attending industry meetings, shaping the profession's position.

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I recently finished managing a large project on a GAAP textbook. In the midst of a doldrum, and in search of inspiration, I read a book on spiritual success. My mind had left the accounting world until I encountered one passage: "The past is history, the future is mystery…" and I wondered how this author got into *FAS 97*. I finished the quotation: "The past is history, the future is mystery; the present is a gift." Our speakers' gift to you is their view of the present, so that, perhaps, the future will not be as much of a mystery.

Our first speaker is Tom Campbell. Tom is vice president and corporate actuary of the Hartford Life Insurance Companies in Simsbury. He is the appointed actuary for Hartford Life and responsible for actuarial review, financial reporting, reserve valuation and actuarial compliance. Tom is actively involved in the American Academy of Actuaries' activities. He is the vice-chair of the Academy's Committee on State Life Insurance Issues; a member of the Academy's Life Practice Council; and a co-chair of the Academy's Variable Annuity Guaranteed Living Benefits (VAGLB) Work Group. He also represents the Academy as a member of the American Institute of Certified Public Accountants' (AICPA) Nontraditional Long Duration Contracts Task Force. Previously, Tom co-chaired the Academy's Minimum Guaranteed Death Benefit Reserve and the Commissioner's Annuity Reserve Valuation Method (CARVM) Multiple Benefits Work Groups.

MR. THOMAS A. CAMPBELL: I'm going to cover four topics. I'm going to sneak over to the GAAP side and talk about the work being done on the AICPA Task Force for Accounting for Nontraditional Long Duration Contracts. Then, I'm going to move back to the statutory side and comment on efforts by the NAIC and the American Academy of Actuaries to address reserve requirements for guaranteed living benefits that are written with variable annuities and for guaranteed minimum death benefits written with variable life contracts. Finally, I'm going to comment on the new NAIC Model Regulation on Separate Accounts Funding Guaranteed Benefits on Group Contracts.

On the GAAP side, the AICPA Nontraditional Long Duration Contracts Task Force is preparing a Statement of Position (SOP) that will address GAAP accounting and reserving issues for many of the new insurance products and many of the new twists on what were considered traditional insurance products, all of which have hit the market in recent years. I think this is an important development. I think everyone should be aware of it and should be following it. It could be a very far-reaching statement for some companies, and it could result in a significant change in accounting practices.

The task force expects to have an exposure draft finalized by the end of the first quarter of 2001. The draft will be reviewed by FASB and exposed for public comment. The final SOP, if all goes well, could be ready as early as the end of 2001.

In addition to working on the statement, the task force has also been working with FASB's Derivatives Implementation Group (DIG) on raising questions regarding *FAS 133* and how it applies to insurance contracts. It is also working with DIG to educate them on insurance issues.

The SOP being developed will address the diversity of practices among insurers in accounting for contracts and contract features, which were not anticipated during the development of *FAS 60* and *FAS 97*. Thus, it will be an interpretation of those standards. It will address reserves for minimum guaranteed death benefits on variable annuities, accounting for contracts with market value adjustments, and accounting for contracts that have bonus interest features. Because equity-indexed annuities fall under the scope of *FAS 133*, the statement is probably not going to address those contracts. The statement will also address separate account reporting and valuation issues because many of these products contain both general account and separate account features.

There are four key issues that are addressed by the SOP. I will comment on each of those and talk about the tentative conclusions that are in the exposure draft.

The first is separate account presentation. The statement interprets the *FAS 60* requirement for single-line reporting in financial statements for separate accounts. The tentative conclusion is that only those separate accounts that support pure pass-through products, such as variable life and variable annuity contracts, will qualify for the single line summary treatment in both the income statement and the balance sheet.

The SOP has four criteria that the product and the separate account must meet to qualify for the single-line treatment. Those products that do not meet the criteria have to be accounted for in the general account and valued as general account products. However, the SOP does allow the single-line approach for the base contract and holding the reserve for the guarantee in the general account for guaranteed benefits written with variable life and variable annuity contracts, such as minimum guaranteed death benefits and guaranteed living benefits.

The second issue involves separate account seed money. The tentative conclusion is that seed money does not qualify for separate account treatment for either reporting or valuation purposes. It must be accounted for as a general account asset, which means that the actual assets must be considered. However, if the seed money is in mutual type funds used for variable annuity and variable life, the accounting under *FAS 115* is market value.

The third issue is sales inducements. This is a somewhat controversial issue that will result in a change in practice. The tentative conclusion is that these should be treated as policy benefits rather than deferred acquisition costs. Therefore, bonus interest should be expensed immediately; enhanced interest should be expensed as it is incurred; and persistency bonuses should be expensed over the vesting period. This might be a change in some current practices.

Finally, there’s a conceptual framework that addresses GAAP reserves for innovative products and product features. This covers such things as multiple account balances with two-tiered annuities. It’s going to cover contracts in which the account balance is either undefined or unclear, such as modified guaranteed annuities. It’s also going to cover contracts with multiple benefit features, such as variable annuities with minimum guaranteed death benefits.

Several approaches are being considered. One is to value GAAP reserves based on the amounts that the contractholder can get out of the contract, either cash or at some other type of benefit in kind. There's also an approach being considered that is probability-based. That area must be finished in the next couple of months. In an earlier session, Sam Gutterman mentioned efforts to develop a GAAP the reserve method for minimum guaranteed death benefits. The SOP is expected to address this, and, in many cases, it's going to result in reserves for the entire variable annuity contract that are greater than the account value, which, for some companies, will be a change in practice.

That is a brief overview of GAAP issues. There will be more details in Session 47. If you are interested in *FAS 133,* Sessions 21 and 39 will touch on those issues.

My second topic is statutory work being done by the NAIC's Life and Health Actuarial Task Force (LHATF). The work is on reserve requirements for guaranteed living benefits, also known as VAGLBs. At a recent Dallas NAIC meeting, the Academy work group presented the proposed Actuarial Guideline MMMM. The methodology is very similar to Guideline 34. The guideline is based on the work of an American Academy of Actuaries work group with input from LHATF. The guideline was exposed for comment, although there are several issues that LHATF would like to address between now and the December NAIC meeting. If things go well, it could be adopted by LHATF as early as December 2000, but adoption in 2001 is more likely. Either way, the expectation is that it's going to have a 2001 year-end effective date. LHATF, as a group and as individual regulators, would like to see companies look at this guideline and start to build reserves at this level. They're concerned with companies not adequately reserving for these benefits at the present time.

The guideline has a reserve framework that is comparable to Guideline 34; thus, it is an interpretation of CARVM. I think these benefits are really what I'll call "the poster children" for UVS. There's a probability of very high losses. It might have a very small probability, but the probability is there. UVS had the benefit of starting with a blank piece of paper; unfortunately, there was no blank piece of paper for this guideline. It must be a CARVM method, which restricted what the Academy and the NAIC could do. We have tried to put some elements of

actuarial judgment into the proposal. Finally, as an interpretation of the Standard Valuation Law, it will apply retroactively to all contracts issued after 1980.

The guideline applies to both immediate and deferred annuities that contain VAGLBs. This is a change from prior Academy reports in which the applicability to immediate annuities was not yet resolved.

Thus, it will cover all the current designs: guaranteed minimum accumulation benefits, guaranteed minimum income benefits, guaranteed minimum withdrawal benefits, and guaranteed payout annuity floors. Those first three are deferred annuity benefits; the last one is an immediate annuity benefit.

The guideline applies to all four of these types, but it also covers potential future designs by requiring a valuation actuary to exercise professional judgment in determining the applicability of the guideline to both current designs and future designs.

There are five principles that are covered in the guideline. First, as with Guideline 34, we're dealing with an integrated CARVM reserve approach where the reserve for the VAGLB is the "solved for" reserve equal to the difference between two CARVM integrated reserves. One is the reserve for the entire contract, including the VAGLB. The other one is the reserve that would be held ignoring the living benefit. This latter reserve is called the separate account reserve. It is held in the separate account, and the "solved for" reserve is held in the general account. This is consistent with the requirement that guaranteed benefits written with variable contracts should be held in the general account.

The second principle describes how VAGLBs are incorporated into the integrated benefit streams used in developing the integrated reserves. It requires that the living benefit amounts be projected using conservative net assumed returns as defined in the guideline. It also addresses reserving for variable annuity contracts that contain both VAGLBs and minimum guaranteed death benefits. The requirement is to apply the Guideline 34 drops and returns for the death benefits and apply the net assumed returns for the living benefits.

The third principle is used to derive the net assumed returns that are used to project the VAGLB costs. There are three approaches. They range from very complex, which would presumably give a more accurate reserve, to more practical.

The first method is the stochastic scenario approach, which involves a) generating "solved for" reserves for each of a large number of stochastically generated scenarios, b) ranking them, and then c) choosing a particular percentile, which is currently 83-1/3. Because this has to be done for each contract, this is only going to be used by companies with either very small blocks or very fast computers.

The second approach is a more simplified approach. It's called the representative scenario approach. This involves much fewer scenarios. It is up to the valuation actuary to pick those, so that's where judgment comes in. Responsibility goes with that judgment. The valuation actuary has to test those scenarios and certify annually that the scenarios are appropriate for the VAGLB design.

Finally, there is the "keel method" approach. It is the simplest approach. It's a single scenario referred to as a safe harbor. It can be used without any certification or testing as long as the VAGLB design meets certain criteria as outlined in the guideline.

All three of these approaches involve scenarios that vary by five different asset classes. The five asset classes are the same as those in Guideline 34. The return and volatility assumptions are based on historical returns, but are different than the assumptions in Guideline 34.

The fourth principle involves the percentile at which reserves should be established. This was set at 83.33% but remains an area that LHATF wants to look at it more closely because of the high-tail risk in these benefits. LHATF is also looking at the impact of increasing the volatility assumptions. This is, in part, due to the concern that when the benefits are "in the money," contractholders will move their money to more aggressive funds that have higher volatilities. We expect these issues to be addressed over the next couple of months.

Finally, the guideline requires that reinsurance be reflected in integrated benefit streams. It addresses the impact of reinsurance for both ceding and assuming companies. The approaches are almost identical to Guideline 34 for minimum guaranteed death benefit reinsurance.

In a related effort, the NAIC has developed risk-based capital factors for VAGLBs that were effective for year-end 1999. They're intended to be temporary factors. The plan is to develop a permanent approach once the reserve method is final. This might end up under the scope of phase-two efforts of the C-3 project, which Shirley will address.

An issue with respect to VAGLBs was raised by the California Insurance Department. In March 2000, the department rescinded authority for variable annuity contracts with guaranteed living benefits because of a lack of statutory authority to approve the contracts. Recently, the state passed legislation that has been sent to the governor and is expected to be signed shortly. It will provide the authority needed for companies to write these benefits. The department is in the process of issuing a bulletin that will set forth the criteria for this approval. The bulletin is expected to include a requirement that companies follow proposed Guideline MMMM, subject to change, following future revisions to the guideline, and ultimately, following whatever is adopted by the NAIC. This means that this guideline, while it still has not been adopted by the NAIC, is going to be a requirement in California if things move as expected. For more details on VAGLBs, you can see Sessions 17 and 48.

My third topic involves reserves for guaranteed minimum death benefits that are offered with variable life policies. Last week LHATF voted to expose proposed Actuarial Guideline VL-GMDB. They expect to adopt it in December. If this happens, the guideline will most likely have a December 2001 effective date. The guideline is based on recommendations from the Academy's Variable Life Guideline Work Group.

What prompted this guideline was concern over the lack of uniformity in reserving practices for variable life and variable universal life. That's understandable because there are two versions of the variable life model regulation—a 1983 version and a 1989 version. They are different,

particularly for guaranteed minimum death benefits. There are quite a number of states that have not adopted either version, so they are really dealing with the Standard Valuation Law.

When XXX was being developed, there was a proposal to include variable life under its scope in order to address secondary guarantees. This caused some problems because (1) it was late in the process, and there was a push to get XXX adopted, and (2) there was no clear-cut vision on how XXX and the variable life regulation would interact for guaranteed minimum death benefit reserves.

Rather than proceeding with putting variable life under XXX, LHATF decided to develop separate standards for variable life policies and came up with this guideline. The guideline is broad enough to interpret both the 1983 and 1989 versions of the Model Variable Life Regulation. For those states that have not adopted either version, it's considered an interpretation of the Standard Valuation Law.

The guideline specifies that no-lapse and other secondary guarantee provisions written with variable UL policies are considered Guaranteed Minimum Death Benefits (GMDB) for reserving purposes. It includes a brief section on basic reserves, but doesn't get into any details beyond stating that one should apply the requirements for general account products, considering the variable nature of the benefits.

At the heart of the guideline is a section that covers both the methods and the assumptions for guaranteed minimum death benefit reserves. The method addresses the inconsistencies between the two versions of the model regulation. The 1983 version treats flexible and scheduled premium policies differently, whereas the 1989 version treats them identically. This inconsistency is addressed by clarifying that a GMDB or a secondary guarantee that has a specified premium is treated as a fixed premium policy for purposes of GMDB reserves. This results in a reserve equal to the greater of a one-year term reserve and an attained-age level reserve (AALR). The guideline also has assumptions that are used to project benefits for both the one-year term reserve and the AALR. Finally, for policies with multiple guaranteed periods,

the guideline requires reserves to be based on the guarantee period that produces the greatest reserve as of the valuation date.

I'll talk very briefly about the one-year term and the attained-age level reserve. They are two distinct calculations. The one-year term reserve is a short-term reserve. It is equal to the present value of the projected guaranteed minimum death benefit in excess of the death benefit without the guarantee where both amounts are projected assuming an immediate one-third drop in the assets, followed by the projection assumptions that are in the guideline. The projection is done over a full year, unless the guarantee period lasts less than a year.

The attained-age level reserve is a long-term reserve that allows for the funding of the excess death benefit over the guarantee period. It's a retrospective reserve. It equals the "residue" plus the "payment." The residue is based on prior year's reserves accumulated with interest and with tabular claims deducted. The payment is the annual amount that would need to be paid over the guarantee period to fund the excess death benefit. The excess death benefit uses the projection assumptions, but without the one-third drop.

One of the issues that LHATF has discussed is whether the payment can be negative. In other words, if the residue is more than enough to cover the excess death benefit, should one then reduce the residue or should one use a payment equal to zero and permit the overfunded reserve? Originally, LHATF decided to allow it to be negative. They re-opened that issue in the exposure draft by including both alternatives. However, I think that reflected an attempt to get comments instead of a change in position.

There are four outstanding issues concerning this guideline. The first one actually was addressed last week. There appeared to be an inconsistency between the basic reserve requirement in the variable life regulation and XXX. The former specifies mortality assumptions use to determine reserves for a comparable general account product, which would imply XXX select and X-factors. The latter excludes variable life. LHATF decided that the XXX exclusion prevails over the variable life regulation requirement. This position was added to the proposed guideline. The three other outstanding issues are as follows. 1) The guideline doesn't necessarily address

reserves for secondary guarantees that essentially produce whole life contracts in a variable UL chassis. 2) It also doesn't address what interest rate to use or whether deficiency reserves are required for the basic reserves. 3) It also doesn't address what to do on existing contracts with no attained-age level reserve. Now that this new requirement exists, what should be accumulated?

I'm not sure if any of these three issues will be addressed. I think LHATF has decided that it's more important to get this guideline out for uniformity than to address each and every issue. LHATF is, however, considering (in addition to adopting the guideline) moving forward with the 2001 charge to develop a new variable life reserving regulation that will replace existing variable life regulations, and, ultimately, this guideline.

Finally, my fourth topic is the Separate Accounts Funding Guaranteed Minimum Benefits Under Group Contracts Model Regulation. This regulation was adopted in 1999 and was modeled after New York Regulation 128. It applies to separate account group contracts with guaranteed benefits and excludes modified guaranteed and variable contracts. It covers both market and book value separate accounts. It covers both indexed and nonindexed contracts. It covers product and separate account filing requirements. It covers the insulation of separate account assets for these contracts, and it covers statutory reserves. It requires a stand-alone actuarial opinion.

Even though this model regulation is a year old, no state has adopted it yet. Connecticut is very close to adopting it with some modifications, but I think other states have put this on the back burner because of other priorities, like XXX.

This model regulation is part of codification, so the regulation does define statutory accounting rules for these contracts.

Finally, there might be some activity on risk-based capital for indexed separate accounts and that would result in an increase in RBC factors. This change could be in effect as early as 2001.

I want to introduce our next speaker, Donna Claire. She's President of Claire Thinking, Incorporated, which engages in general insurance consulting, with a focus on asset/liability and risk management regulatory matters. She spent over 25 years working in a variety of positions within insurance companies and as a consultant. As a consultant, she has worked on behalf of several state insurance departments. She is vice-chair of the American Academy of Actuaries Life Practice Council. She has chaired or participated in many industry advisory groups, including the American Academy of Actuaries Liquidity Group and the Life Practice Notes Committee. She has authored a number of papers on insurance issues and has been a frequent speaker at professional meetings. She is a graduate of the College of Insurance with a B.S. in actuarial science.

MS. DONNA R. CLAIRE: My talk will concentrate on what else is new on the statutory life insurance front.

"CSO 2000"

The project to update life insurance mortality tables is alive and well. The basic experience table, which is derived from 1990–95 SOA experience data, has been published. It is available on the SOA Website. There is another SOA mortality committee, headed by Michael Taht, that is working on turning this table into a valuation table. Issues involved with this include graduating the table, looking at older age mortality, and company margins used in prior Commissioners Standard Ordinary (CSO) tables. They expect to be done with their work in the first quarter of 2001.

There is also an American Academy of Actuaries group looking at this project, and working closely with the SOA committee and the regulators. Faye Albert heads this committee. They are looking at the practical issues. For example, in the past, there used to be separate tables for extended term insurance and credit insurance. Should the concept of separate basic tables be continued, or should there be a single basic table? Also, a new table will present many questions regarding its effect on reserving, nonforfeiture, accounting, and taxes. The Academy group is currently identifying the issues. It has not yet developed positions.

Another major question is whether, as with Regulation XXX, a company will use the basic table, but can apply factors to it to reflect its own experience. It is also a bit of an embarrassment that the current CSO table is 20 years old, so some thought is being given to how a valuation table can be modified. For example, the group annuity mortality table is now a generational table. There is a question as to whether this should be done on the life side also. The work on this table is expected to be completed by the end of 2001. After this work is done, the issue still has to go through the NAIC process, and be adopted by states. It might be a while before a new valuation table is used in the U.S.

Actuarial Guideline ZZZZ

Actuarial Guideline ZZZZ is the equity-indexed universal life guideline. This has passed all levels of the NAIC and will be effective at year-end 2000 in states that require actuarial guidelines to be followed. Like the equity-indexed annuity guideline, it allows a book value methodology for determining reserves if certain conditions are met; otherwise, it requires a market value methodology to determine the worth of the equity-indexed feature. There was a change to the regulation in the past year, allowing a quasi-book, quasi-market-value approach, if some conditions are met. For those writing this type of business, I recommend reading the American Academy of Actuaries' paper on equity-indexed universal life insurance.

Liquidity

Perhaps one of the hottest regulatory topics at the NAIC is liquidity. Liquidity is one aspect of risk management, although certainly not the only one. It came to the forefront due to the situation with General American. General American had a number of factors that hit simultaneously, causing a liquidity crisis. These factors included the issuance of $6 billion in funding agreements, which allowed the customers to demand the book value of the contract from the insurance company with as little as a seven-day notice. In addition, there was a problem with the company that had been reinsuring 50% of the risk. Also, many of their assets were not immediately able to be liquidated without a substantial haircut. Liquidity is also a major topic with rating agencies. For example, Standard and Poor's has developed a questionnaire that assigns factors to the assets and liabilities, and develops a liquidity ratio. Moody's is also very interested in this, and was one of the parties that brought the General American liquidity question

to the public. The NAIC has a Life Liquidity Risk Working Group, chaired by Neil Vance of the New Jersey Department of Insurance. There is also an American Academy of Actuaries group, chaired by me, that is studying this issue, and has issued a draft paper on this. The final paper will be made available on the Academy Website, www.actuary.org.

In general, stress liquidity scenarios, would, for most companies, be considered outside the realm of probable scenarios, so many appointed actuaries might not pay that much attention to this. However, there are definitely times where liquidity risk should not be ignored. For example, if the probability of a liquidity crisis is within the realm of reasonable scenarios, it should be tested. One way this could happen is if a company has large amounts of funding agreements that can be triggered if the company's rating falls below AA3; if the company is at AA3 now, liquidity certainly should be looked at. Also, if there is any current problem with day-to-day liquidity, such as large liability maturities coming due, but the assets are in long, illiquid securities, this should be examined by the appointed actuary.

There are many products that present potential liquidity risks. This is a subject that many actuaries will probably need to get more familiar with. The General American situation was triggered by funding agreements with short put options. There are also other institutional products that can cause large amounts of money to move to the insurance company with little warning. For example, there are corporate-owned life insurance contracts and variations thereon (such as bank-owned life insurance contracts), where insurance is issued on individual lives, but there is an institution controlling the fate of the contracts. Individual insurance contracts can also move. For example, if a company gets bad publicity, a number of agents and their clients might demand their cash values. Standard Guaranteed Investment Contracts can also allow for cashouts in certain circumstances.

A relatively new risk for reinsurers is a provision being added to many new contracts that allows the ceding company to cancel the treaty and get the book values of its reserves back with no penalty if the reinsurer's credit rating drops below a certain amount. There are also provisions in some assets that make them less liquid. For example, a number of customized assets are now being developed for insurance companies that can provide high ratings and higher yield, but at

the expense of liquidity. There are also some derivative instruments, such as swaps, that can be unwound at the current value if one party's credit rating falls. Some insurance companies also provide liquidity backstops to other companies, which can cause a liquidity strain.

Because liquidity is becoming important for a number of companies, one must know the risks and be able to measure liquidity exposure. There are a number of ways liquidity risk can be managed. For example, in the normal course of investment management, one would not want all assets to mature simultaneously, instead, a laddering of maturities is preferred. On the liability side, one would not want huge amounts of GICs, for example, maturing at the same time. Some companies set up a limit as to how much of certain products, for example, funding agreements with put options, they will write. Other companies will purchase liquidity in terms of bank credit lines. One can also purchase custom-made credit or liquidity derivative instruments. Another choice is to set aside capital to cover liquidity exposure.

The New York Insurance Department has taken the most action with regard to liquidity. They issued Circular Letter 35 in 1999, which asked a series of questions regarding liquidity. Depending on the answers to these questions, the department followed up with another series of questions and invited some companies in for a discussion. The New York Department is in the process of revising its interrogatories, and it expects to send them to all companies doing business in New York. The answers will be based on December 31, 2000 data, and will be due back to the Department on April 1. Illinois has an informal process of handling their companies. The department discusses products with potential liquidity problems with the company, and might ask the company to revise or withdraw contracts with certain features. Other states are also inviting companies in to discuss liquidity concerns.

XXX

The regulation fondly known as "XXX" is probably the biggest item valuation actuaries have had to pay attention to in 2000. It has passed in most states, with many states having an effective date of sometime in 2000. It is very important that the valuation actuary demonstrate the reasonableness of the "X" factor used to determine mortality. There are a number of sources of information on XXX, including handouts from the SOA XXX seminar; articles published in the

Financial Reporter, and the Practice Note, which is in draft form. Steve Moorhead of Zurich Kemper is the chair of the Practice Note group on XXX.

There are a few things to watch out for with regard to XXX and reinsurance. There is an optional exemption where the reinsurer can choose to value yearly renewable term (YRT) reinsurance using the tabular cost of mortality based on the 1980 CSO. If the reinsurer is holding reserves on this basis, the ceding company cannot take reserve credit greater than the reserve set up by the reinsurer. It is important for ceding companies to be aware that they are responsible for knowing the basis of reserving their reinsurer is using. If the reinsurer is using "X" factors, the "X" factors being used by the reinsurer and the ceding company do not have to be the same.

The Life and Health Actuarial Task Force of the NAIC believes that the new mortality factors cannot be used with variable life or variable universal life. In fact, there is a proposed actuarial guideline on minimum death benefit guarantees for variable life and variable universal life that specifically states that the "X" factor mortality cannot be used. This proposed regulation was exposed for comment at the Dallas NAIC meeting.

Another topic of concern is the number of products designed to get around XXX. For example, these products might promise that premiums will remain level, except if certain, very unusual circumstances occur, such as if Treasury rates fall below 3%. There were a number of comments made like, "If it looks like a duck and quacks like a duck, it's a duck," or "If it looks like a whole life insurance policy, and acts like a whole life insurance policy, it is whole life insurance." At the last Life and Health Actuarial Task Force meeting, the *National Underwriter* editorial of August 28 was quoted regarding these types of products. It said: "...Finally there is something profoundly dispiriting about this kind of conscious corporate evasiveness. Having to talk to insurance companies about trust should be as unnecessary as reminding someone to breathe." Many regulators feel that they have enough power within the existing XXX regulation to insist on XXX reserves for look-alike products. There is also a proposal of an actuarial guideline, written by Bob Potter of North Carolina, to specifically address universal life products with secondary guarantees. These products promise that, if certain minimum conditions are met, such as a minimum premium payment, the policy will not lapse. During one of the Life and Health

Actuarial Task Force calls on XXX, a comment was made: “90–95% of the universal life products with secondary guarantees should be valued as level premium products.”

There is a question of, when, if ever, universal life products with secondary guarantees should not be reserved for, assuming a level premium. There is a possibility that they can instead be viewed as YRT, if the premiums are not stated as level, if the marketing material does not show level premiums, and if they are not sold with level premiums. I recommend that a company selling these products discuss the reserving method beforehand with its friendly state insurance departments.

Another issue that can affect universal life coverage with secondary guarantees is nonforfeiture. There is a proposed guideline on this, and a counterproposal by the ACLI Actuarial Committee. I expect more discussion on these proposals over the next few months.

I would like to make some final comments regarding XXX on the state variations. One is to note that New York Regulation 147, which covers these products, does differ from the NAIC version of XXX. For example, it does specifically include variable life and variable universal life products, which means all XXX rules apply to variable products, and the lower mortality factors can be used. Another difference in Regulation 147 is that it requires an assumption of endowment of the policy at age 100 if any benefits go beyond age 100. This is still an emergency regulation. A copy of this is available on the New York Insurance Department Website. There are minor wording differences in other states as well. For example, Illinois and Indiana make it clear that universal life products with secondary guarantees are covered by the regulation. However, most other states believe this is true, even without the word changes. In summary, the regulators will be very interested in seeing compliance with this regulation.

MR. HERGET: First, I will talk about codification. Codification was started in 1991 and finished last year. It’s a result of a need for consistency between states. This became a major problem for auditors who wanted to provide an opinion that said these financial statements conform with statutory accounting principles, when the accounting principles themselves weren’t clearly or consistently defined. With codification a company still prepares state-of-domicile and

state-of-filing calculations for reserves, but it will calculate a different set of reserves for the codification footnote. Other parts of the blue book such as investments, risk-based capital (RBC), etc. remain on a consistent basis from state to state. One of the objectives of codification was to remain surplus neutral.

To master codification, you will need to acquire a set of books every year. Last year, it was one big purple book; this year there are two green books. They consist of a preamble, which outlines the rationale for codification. They contain 73 statements of statutory accounting principles (SSAPs). They include appendices and supporting issue papers. The ones you'll need to read for sure are:

- SSAP 50: Contract Classification
- SSAP 51: Life and Annuity Reserves
- SSAP 52: Deposit Contracts
- SSAP 54: Health
- SSAP 55: Claim Reserves and Claim Expense Reserves
- SSAP 56: Separate Accounts
- SSAP 59: Credit Insurance
- SSAP 61: Reinsurance

How will this impact the actuary? Is this a replacement of an existing accounting basis? Actually, no. It is a replacement for the accountant, but, for us, it's really another set of books. Where will these results go? They will be disclosed in a footnote and displayed in the annual statement. It might be more of a schedule than a footnote. Codification itself does not usurp a state's rights. Three times in its preamble it states: "Codification is not intended to preempt state's legislative and regulatory authority." Does the actuary have to sign an opinion on these reserves? No. Will there be an explicit audit opinion on these reserves? No.

What is the reserve methodology? For policies issued on or after January 1, 2001, you are to use the methods that are prescribed in the SSAPs and its appendices. For the most part, these are standard NAIC model laws and regulations. For policies issued on or after January 1, 2001, you

are to use all actuarial guidelines, whether or not your state has adopted it, and you are to use all actuarial standards of practice, which, of course, you're doing anyway.

For policies issued prior to January 1, 2001, you are to use the state of domicile laws and regulations.

So what comprises a state law and regulation? A law is adopted by the legislature; regulation is generally established by the insurance department. You will want to know what a regulation and a law are. Behind codification is the elimination of permitted practices from state by state. For example, say you receive a letter at Halloween from a certain state regulator. Would that be considered a regulation? The answer to that is no; that would not be considered a regulation.

How are actuarial guidelines made effective? My observation is that their adoptions vary from state to state. Some insurance departments will formally approve an actuarial guideline. Others convey the position that you should follow it. Some insurance departments will actually reject an actuarial guideline.

At the recent Dallas LHATF meeting, the general counsel presented her viewpoint of actuarial guidelines and exactly how they are effective. Thirty states require the Commissioner to *consider* actuarial guidelines. They're required to *consider* them. Three states say the Commissioner *may* consider them. Four states have laws that require the use of the Examiner's Handbook, which does contain the actual guidelines. Eleven states have something similar, but it's only a regulation.

What type of permissiveness are you allowed in the calculation of codification reserves? I would like to contrast this with some other bases. Tax reserves are prescribed to the penny. There's not a whole lot of room for leeway. For statutory, you generally hold a minimum but can go higher. For GAAP, you generally have a target that you strive to attain, but you do have some leeway there.

Where does codification stand? If you read the SSAPs, they sound very prescriptive.

However, the appendices indicate otherwise. For A&H, see appendix A-010, paragraph 35; for life and annuity, see appendix A-820, paragraph 15. These state that you can hold higher reserves. Even though one of the goals of codification is consistency, even though we have hundreds of pages on how to do it, there are two paragraphs that say you can hold something higher if you so desire.

Codification introduces some new valuation considerations for the actuary. Life due premium over 90 days is not admitted. Gross premium reserves do serve as a minimum for health. There is no XXX in this year's codification. Cost of collection has been dropped. Deficiency reserves start at the modal point, not the next anniversary. You will have a deferred tax asset or liability. You are to do cash-flow testing within codification, but presumably you will be comparing your codification reserves and not your Blue Book reserves. Your regular cash-flow testing should acknowledge the existence of deferred tax assets or liabilities, which will be part of the Blue Book.

The next topic is the Unified Valuation System. I will talk about background, deliverables, the type of valuation, current efforts, and the outlook.

We started this three years ago. It was a response to LHATF's concern over trying to fit square pegs in round holes. LHATF invited the Academy to address how reserves should be determined, starting with a blank piece of paper. We've met 30 times in the past three years; actually, the task force's work is starting to wind down. We have presented the following: advantages/ disadvantages, catalogue of methodologies, study of other countries' systems, draft model regulation, draft actuarial opinion, numerical examples, and a sample viability report. To recap the nature of the valuation, it will be principles-based, not rules-based and will involve substantial use of the actuary's judgment. We will calculate a range of possible outcomes. The NAIC would designate a percentile of which reserves would be quantified. You could think in terms of 80%, 83.33% or 85%. It is some place in that range. It is possible that RBC could be a by-product of this exercise as well.

What are the current efforts underway in UVS? Viability analysis is one. A viability report will demonstrate that the insurer can meet its obligations based on its business plans. This document would likely not be public. We have a numerical example seminar coming up in a couple of months, and we have instigated more research at the SOA level.

What is the outlook for UVS? That's a very good question. Will we be doing it next year? I don't think so, but where do we go from here given that the Academy has about wound down its work? I think LHATF is very interested in not continually creating bright lines where people bump up against them and look for ways around them. I think LHATF is favorable towards a principles-based system, but it will not move further until the industry is prepared and willing to advance as well. I think if LHATF senses that the actual profession is ready to do this, it will proceed.

Finally, I'd like to make some comments on Actuarial Guideline 9C. This applies to substandard annuities. The original Guideline 9A had language that said, in the near future, we'll look at substandard annuities. We now have them 11 years later. This project did start and end quickly. It does cover income-paid annuities. It's for those annuitants who have demonstrated shortened expectation of life at issue. The methodology will be very similar to what we have for Guideline 9A right now—basically the constant addition to a mortality table. What is the prognosis on this? It was exposed to the industry at the last LHATF meeting. I am not aware of any significant opposition to it. We'll probably have it in a couple of months.

Our next speaker is Shirley Shao. Shirley is a vice president at Prudential and works on many Academy and Society groups. She's also a member of the Board of Governors.

MS. SHIRLEY HWEI-CHUNG SHAO: I will cover four topics: *FAS 133*, RBC C-3, the Actuarial Opinion and Memorandum (AOMR) and fair value.

The key changes *FAS 133* introduces are: all derivatives are recorded on the balance sheet and carried at fair value. A type of hedge accounting continues, but the treatment varies according to the type of hedge: fair value, cash flows, or net income in a foreign operation. A portion of the

hedge considered ineffective is recognized in earnings and not deferred, creating volatility in earnings.

Derivatives are now defined based on distinguishing characteristics rather than by specific types of instruments. Therefore, *FAS 133* significantly expands to include many items that were not previously considered to be derivatives.

Certain embedded derivatives (ED) are included if they were freestanding or would be considered derivatives under *FAS 133*. Instruments that contain EDs are referred to as hybrid instruments. *FAS 133* requires that in certain circumstances EDs be bifurcated and measured separately as freestanding.

In addition to "traditional" derivatives, like swaps and futures, certain EDs are included to deter companies from hiding derivatives in a nonderivative instrument.

In determining whether a hybrid instrument contains an ED that warrants bifurcation, *FAS 133* focuses on whether the economic substance of the potential ED is clearly and closely related to the economic substance of the host contract. If the economic characteristics of the ED are *NOT* clearly and closely related to the economic characteristics of the host policy, the ED must be bifurcated from the host policy and marked-to-market with changes in value flowing through income.

Possible contracts included under *FAS 133* are equity-indexed annuities, synthetic GICs, variable annuities with guaranteed living benefits and stable value wraps (corporate-owned life insurance or COLI).

FAS 133 excludes traditional insurance contracts that compensate the policyholder as a result of an identifiable insurable event or an adverse change in assets or liabilities for which the policyholder is at risk.

However, the FASB believes that some insurance contracts might contain derivative-like features. It has been difficult to define what "some" refers to because the guidelines and definitions for "clearly and closely related" are not clear or closely understood.

Once overcoming the challenge of deciding what is in and what is out, the challenge then becomes how to value those hybrids that are in.

At inception of the policy, the carrying value of the host policy would be determined by independently calculating the fair value of the ED and assigning the remainder to the host. This treatment is consistent with the fundamental GAAP principles that gains and losses emerge over time.

The host policy would then be accredited from its inception value to its guaranteed liquidation value at a constant interest rate. The guaranteed liquidation value would be a contractual surrender, death or annuitization value at the policy maturity or other expiration date.

For valuation actuaries, the ED poses a new and challenging valuation exercise. *FAS 133* requires fair value, which is defined as the amount at which willing and unencumbered counterparties could transact. Active market quotes are the best source of fair value, but if unavailable, prices of similar instruments and results of valuation techniques like option-pricing models could be considered. There is little valuation guidance in GAAP. Some people believe that *FAS 123*, Accounting for Stock-based Compensation, provides guidance on valuing equity-indexed EDs.

For financial reporting purposes, the hybrid instruments (host and ED) would be reported as a single item. Some people believe that this single value will be further subject to prior FASB pronouncement, such as *FAS 97*. Therefore, if the carrying value under *FAS 133* is less than its corresponding *FAS 97* carrying amount, an adjustment would be required.

To sum up, valuation actuaries need to review product design in determining if the product falls under *FAS 133*. Guidance is not clear.

If the product has an ED, valuation actuaries need to use valuation techniques that are consistent with the objective of measuring fair value. Little guidance has been provided.

After completing with *FAS 133* valuation, valuation actuaries then must see if a floor adjustment is needed. Conceivably, these EDs, once separated from the host, could be designated as hedging instruments in other hedging relationships to reduce earnings volatility.

FAS 133 is effective for fiscal years beginning after June 15, 2000, but the company might elect to adopt at the beginning of any fiscal quarter prior to that date. Most insurers will delay adopting *FAS 133* until January 1, 2001, when adoption is required. There is also a grandfather clause to waive any EDs prior to 1999.

The FASB determined in June that all insurance-related issues (both unresolved and cleared items) are to be reviewed with the objective of developing a consistent model for determining which contracts should be included/excluded.

Since the FASB has not changed the adoption date, valuation actuaries need to use their own judgment to decide which products should be valued and how.

My next subject is RBC C-3. The NAIC introduced a refinement to the C-3 component for certain interest-sensitive products.

The proposed method capitalizes on cash-flow models used for asset adequacy testing, by requiring these products to be evaluated against a set of adverse interest rate scenarios and the results used in place of current tabular factors.

As a way to provide flexibility in the trade-off between effort and accuracy, the NAIC provides a set of 50 scenarios, with reasonable calibration, and a more conservative 12 scenario set. Which set to use is the choice of the insurer.

The statutory surplus position should be captured for every scenario for each calendar year of the testing horizon. The statutory position is derived from the projection of assets and liabilities.

For each scenario, C-3 is the most negative of the series of PVs from each calendar year, discounted by 105% of the after-tax one-year Treasury rates for that scenario. Then the scenario-specific C-3 measurers are ranked in descending order, and the C-3 measures from 5th to 17th ranked scenarios are adjusted by prescribed weights and summed to get the final C-3. The goal is to cover about the 95th percentile of the interest rate risk.

In addition to the scenario-generated result for tested products and the tabular factors under the old method for untested products, the NAIC added a third component for assets, which are callable and below the current statutory carrying value.

The NAIC requires the sum of these three be compared to the tabular C-3 under the current formula. The final C-3 under the new method is constrained to the range of half to double the amount determined by using the old method.

The RBC submission must be accompanied by the appointed actuary's certification that, in his opinion, the assumptions used for these calculations are not unreasonable for the products, scenarios, and purposes being tested.

Another trade-off between effort and accuracy is that the NAIC allows companies that are highly capitalized with a modest C-3 risk element to be exempt from scenario testing.

The two exemption criteria that must be satisfied are:

- the C-3 component should be less than 40% of total RBC under the old method; and
- increasing the C-3 component under the old method for those products in the tested group by 7.5 times would not trigger regulatory action.

The NAIC has adopted this refinement, which has an effective date of December 31, 2000. Most companies will be exempt for all practical purposes.

Beyond this phase, the Academy was asked to develop a C-3 method to measure mismatches other than interest-driven ones, such as those associated with equity-indexed products.
My next subject is AOMR. The proposed AOMR differs from the existing AOMR in four areas: 1) it grants an option to use the state of filing; 2) it eliminates the Section 7 exemption; 3) it requires summary information, and 4) it relies more heavily on Actuarial Standards of Practice (ASOPs).

Under the existing AOMR, the appointed actuary has to opine that reserves meet the requirements of the law and regulation of the state of domicile and are at least as great as the minimum aggregate amounts required by all filing states.

This continues to be the standard under the new proposal; however, the proposal also allows the commissioner in filing states to choose among one of the three alternate options listed here. Commissioners might accept a domiciliary state opinion plus certain conditions. Those conditions could include "standards and conditions" predefined by the commissioners. The Academy would like to see that these standards and conditions mean something like "provided the domiciliary state is accredited." Another condition could be an individual approval from the commissioners. The last possible condition is to leverage the codification efforts with a confidential disclosure of the differences between reserves under codification and reserves held for predefined product groups.

Currently, Section 7 companies are not required to file an actuarial opinion as to reserve adequacy. Under the new proposal, all companies, regardless of size, must opine on the adequacy of reserves based on asset adequacy analysis (AAA).

The proposed AOMR relies on the ASOPs to define the appropriate methods of analysis to be used under the AAA.

Because most states do not require appointed actuaries to send in the actuarial memorandum, the proposed AOMR requires a summary of key issues in addition to the boiler-plate actuarial

opinion. The summary includes: descriptions of interest rate scenarios used, changes in assumptions, and comments on interim results if there are any significant concerns.
The proposed AOMR removes some of the specificity and relies on actuarial judgment in things like the type of interest rate scenarios to be used. The NAIC would like to make it very clear that cash-flow testing is only one possible method used under the AAA since a lot of the Section 7 companies' concerns are related to the costs of performing cash-flow testing under this proposal.

Any discussion previously found in ASOP 14 has been moved to ASOP 7 or ASOP 22.

ASOP 22 on AAA has been expanded to include some of the ASOP 14 standards on when to perform cash-flow testing, but perhaps, more importantly, to provide more guidance on which analysis method should be applied to certain products and/or investment risks. For example, a gross premium reserve test is appropriate where the product is sensitive to policy cash-flow risk and the duration of the assets and associated liabilities are reasonably consistent. This might be appropriate for term insurance backed by noncallable bonds, where a gross premium reserve test would emphasize deviations in the underlying mortality and withdrawal assumptions.

This revision would eliminate Actuarial Compliance Guideline No. 4, "Statutory Statements of Opinion Not Including an Asset Adequacy Analysis by Appointed Actuaries for Life and Health Insurers." In addition, the required interest rate scenarios (the "New York 7") have been eliminated.

At a recent NAIC meeting, LHATF voted to expose the draft AOMR for comments. The Academy is also reviewing the ASOPs and plans to release a draft for comments in November 2000.

My last topic is fair value. At Session 1, Sam Gutterman made it clear that the spotlight this year has been on fair value. Both the International Accounting Standards Committee (IASC) and FASB are asking for input to move forward with this monumental task. I would say that the FASB is already there with selective products under *FAS 133*.

Sam also discussed, at length, the purpose and the process IASC is going through with the eventual goal of developing standards for insurance contracts.
The IASC identified 20 basic issues and incorporated 83 subissues, a document of over 500 pages. I'll present some principal issues.

The IASC intends that the eventual standard will address accounting for insurance contracts rather than insurance enterprises in order to avoid accounting arbitrage. It is important that the same accounting standards be used for identical contracts issued by different categories of financial institutions.

The IASC provides a definition of the insurance contract that concentrates on the transfer of risk element and the uncertainty associated with the benefit payment. Consequently, most modern deferred annuity contracts would not be included in the definition.

The IASC suggests that elements of an insurance contract that are *clearly identifiable* from the terms of the contract should be accounted for separately. This seems to have a familiar ring.

The IASC proposes that the unit of account be groups of similar contracts combined with a closed-book approach (i.e., future renewals of existing business should be recognized only where the insurer is committed to a specific pricing structure).

The IASC favors an asset/liability measurement approach (basically a balance sheet approach) over the traditional deferral and matching approach (which emphasizes the income statement). Within such a framework, the IASC opts for a strictly prospective valuation of liabilities with a fresh start approach to the determination of assumptions at each valuation. It should be noted that there is no place for deferral of acquisition costs, the liability for a block of policies can be negative, and it is possible to record a profit at issue of a policy.

The IASC argues that, theoretically, since the assets that support insurance liabilities could be traded instantly for an entirely different portfolio of assets with no real change in the insurance

obligations; therefore, the insurance obligations should be valued independently of the assets held (except where the benefits depend on the specific assets held as in variable life contracts).

Strictly speaking, the IASC does not directly advocate fair value. It does say that a) if fair value is mandated for financial instruments in other enterprises, then it should apply to insurers, and b) if all other financial assets and financial liabilities of an insurer are at fair value, then insurance contracts should be as well. There will be a separate paper defining the fair-value financial instruments in October 2000.

The IASC is undecided as to whether future investment margins should be included in determining insurance liabilities.

The IASC raises the issue of the insurer's credit standing but does not draw a conclusion. Instead, it opted to defer to the Joint Working Group.

The IASC might develop an RBC system on top of the IASC accounting measures as a means to guard against insolvency. This would replace the traditional regulatory approach of imposing overly conservative valuation methodologies and assumptions.

The IASC seems to waffle a great deal on the issue of whether a minimum demand floor should be incorporated.

The IASC does not address the issue of the role of the actuary. Unlike the IASC, FASB supports fair value very explicitly. The ultimate objective is to report fair value for all assets and liabilities. In fact, it's interesting that FASB got frustrated with the resistance from the industry to move forward with fair-value insurance liabilities. FASB had heard the industry complain for years about how allowing fair value on quite a few assets and book value on the liabilities created inconsistencies. FASB thought that it was really doing the industry a favor by getting all assets and liabilities on a fair-value basis.

FASB would also like to ensure that consistency is achieved between products and among institutions. It is also interesting to see that FASB is not really sure at which level the valuation should be performed. Some requirements in the statements are related to contract level, while others are related to entity level.
FASB defines fair value to be the market exit price (i.e., the amount realized if settlement occurs on the reporting date). Fair values are applied to assets and liabilities separately (i.e., there are no longer any discussions on the indirect or actuarial appraisal methods). FASB wants estimated exit prices based on observed transactions, including similar assets, to the extent possible. If that is not possible, then a valuation model is required to estimate price. If this model is based on the present value of expected cash flows, the principles in FASB's exposure draft should be used.

The present value approach is built around expected values. These estimated cash flows and interest rates used to discount cash flows should be free from bias and on an arm's-length basis. The most controversial discussion is FASB's belief that the entity's credit rating should be reflected in the interest rates used to discount insurance cash flows. Therefore, everything else being equal, if a company receives a credit downgrade, its surplus will increase.

I went to a meeting between the Academy and FASB in June, where the Academy presented its response to the proposed concept statement. FASB appreciated the Academy's work and commented that the actuarial profession remains the most impressive profession in FASB's dealings in terms of the level of knowledge and dedication.

However, FASB at this point has not decided if, when or how to report fair value. One person commented at the FASB that it would take at least two years to go through the process if all agreed with the concept statements today. The parties are not even close to agreement at this point.

I see fair value gaining momentum. I see IASC's work and IAA's extensive analysis moving us forward. I see FASB feeling the threat to catch up with IASC or risk having fair value being defined by IASC's rules. I see the actuarial profession converging on various issues. Finally and happily, I see actuaries proactively involved in shaping how fair value should work.