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Session 970F Long-Term Care Valuation Issues–Valuation Committee Update

Track: Long-Term Care

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Summary: The SOA Long-Term Care Valuation Table Committee has the daunting task of creating an industry valuation for long-term care insurance. The resulting table will have a far-reaching impact on the industry. This session examines the committee's progress on:

- *Current valuation issues*
- *Reserve adequacy issues*
- *Regulatory considerations*
- *Table constructions and implementation*

Participants discuss issues regarding current valuation standards and the work of the Valuation Table Committee

MR. ALLEN SCHMITZ: Peggy Hauser is an actuary with a long-term care group, where she is responsible for its off-shore reinsurance company and is available to assist clients with pricing, valuations, and other long-term care issues. Prior to joining the long-term care group three years ago; Peggy was a principal at Milliman & Robertson (M&R).

Frank Knorr is an actuary at AUL Reinsurance Management Services where he is

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Note: The chart(s) referred to in the text can be found at the end of the manuscript.

responsible for long-term care valuation and financial reporting for various reinsurance pools and companies. Frank worked at Aetna for 15 years prior to moving to Duncanson & Holt, currently AUL RMS, in 1990.

I am an actuary with the consulting firm of Milliman USA, formerly M&R, and have been there for approximately three years. Prior to that, I was at Fortis Insurance for eight years. Peggy and Frank are both on the Valuation Committee and I am a liaison between that committee and the Academy's risk-based capital long-term care task force.

Before we get started, we need to ask why we should have a table. The Society of Actuaries, based on the recommendation of some regulators and industry participants, requested the development of a valuation table for long-term care. The Society's long-term care valuation committee is charged with the development of that table.

One reason to have a table is to develop a benchmark for reserving purposes. Another reason is to help ensure that a company does not completely miss the mark in setting reserves or assume that the morbidity levels the Valuation Committee come up with would be more appropriate than those of a more maverick company.

One reason some regulators may have wanted a table was to help with rate stabilization. I think that the request for this table was made prior to the passage of the new rates stabilization regulation.

There are also several reasons why actuaries might not want a valuation table or feel that one is not appropriate at this time. One reason is a lack of insured experience, at least for the more modern types of plans, and particularly the later or ultimate policy durations. Another possible reason is the potential to stifle innovation, depending on how a table is applied or implemented. Also, it may take away from some of the actuarial judgments that are used in setting reserves, which some may view as another negative.

There are several other issues surrounding the creation of a valuation table, which will be addressed in this session. Some of those issues pose difficult questions for the committee to consider, so we welcome any comments on these or any other issues relating to the creation of a long-term care valuation table.

Our presentation will cover some of the work the committee has been doing today. Peggy will start with an update on the population data and discuss appropriate margins. Frank will discuss the insured experience that the committee is currently analyzing and will continue to analyze. I'll discuss the potential impact of a valuation table on pricing, reserving, and profit levels.

MS. PEGGY HAUSER: I'm going to talk about the population data sources that the

valuation committee is planning to or is in the process of looking at. As Al mentioned, Frank will talk about the insured experience. However, because the insured experience will likely not be fully credible or available in sufficient detail, we're also reviewing population data. For nursing home care, we are looking at the 1997 National Nursing Home Survey and Medicare data.

For home care, our population data sources include Medicare, the Home and Community Based Long Term Care Incidence and Continuance Table. Eric Stallard and Bob Yee published this report in October 1999. Their study was based on data from the 1984 and 1989 National Long-Term Care Surveys. In addition, we will look at the 1994 National Long-Term Care Survey, the 1998 National Home and Hospice Care Survey, and the 1996 Medical Expenditure Panel Survey. Milliman USA is in the process of compiling these home care sources and trying to find consistencies. So far, they have found it difficult to reconcile the data from these sources.

Let's talk a little bit more about the National Nursing Home Survey. Milliman USA also did the preliminary work on this survey. You might recall that the Society of Actuaries Experience Committee did a very robust analysis of the 1985 National Nursing Home Survey. John Wilkins was responsible for the bulk of that research. Milliman USA did a similar analysis. First they took the 1985 data and reproduced John's results. Then they applied those same techniques to the 1997 data. Analysis was done with both data sets to be sure that consistent adjustments were made. Further, we feel it is important to be able to compare results from the two time periods to detect trends in morbidity. However, we intend to rely on the 1997 data for an indication of the most current population results.

You might recall that in the Experience Committee's original work with the 1985 Survey data they looked at the data using three different bases: (1) the all-stays concept, (2) the benefit period concept and (3) the insurable stays concept. The all-stays concept used all of the data available and counted every single admission. The benefit period concept attempted to connect stays that would have been considered one continuous claim under an insurance policy. This combined any stays that were merely a transfer from one facility to another, or two stays separated by a hospital confinement.

The final concept is the insurable stays concept where the Experience Committee eliminated stays that would not be covered by LTC insurance. First stays were eliminated that would be present in an individual that would not be insurable. For example, stays for congenital or pre-natal conditions, or conditions such as mental retardation. Secondly, the insurable stays concept also removed stays for any conditions that would not be covered by an insurance policy like non-organic mental disorders and substance abuse.

Milliman USA conducted this same analysis on the 1997 data and found two very

significant differences in the data between 1985 and 1997. The first difference was a data collection difference. The 1985 survey collected and collated information on up to two prior facility or institutional admissions. The 1997 data only gave information on one prior nursing home confinement. As a result, the 1997 data produced higher benefit period concept incidence rates, because fewer stays were eliminated. They adjusted the 1985 survey to be on the same basis as the 1997 survey and found that 1985 incidence rates increased by about 25%.

The next big difference in the data was an increase in Medicare nursing home admissions. Tax-qualified policies are not able to duplicate Medicare services. Therefore, in developing insurable stays morbidity assumptions, in theory, Medicare stays should not be counted as covered services. The committee feels the need to remove the impact of some or all of these short Medicare stays. Further, Medicare changed their reimbursement for hospitals during the mid-1980s. Prior to that point in time, Medicare reimbursed hospitals on a per diem basis. In the mid-80s this was switched to a Diagnostic Related Group (DRG), or case basis. This switch gave hospitals the incentive to discharge patients much sooner to nursing homes. Therefore, we've seen a big increase in utilization of nursing home facilities with the Medicare program.

We feel that some of these admissions need to be removed. However, right now the committee is struggling with how many of these stays should be removed. We believe that we should set appropriate and consistent criteria. Further, if we remove stays from the 1997 data and we are trying to project trends, we should also remove Medicare stays from the 1985 data.

At our committee meeting yesterday, Bob Darnell shared a great idea that we should review the data from both surveys, but only look at those people who survived 100 days to try to eliminate the impact of Medicare. We plan to rerun our data on that basis.

We have some preliminary comparisons from the two time periods, for incidence rates, prevalence rates and lengths of stay. The results, of course, depend on whether we removed the right number of Medicare stays. If we did, there has been a drop in incidences between 1985 and 1997.

There has also been a drop in prevalence and the lengths of stay have remained relatively stable, moving up and down a little bit, depending on age or gender. We still have a lot of work to complete before we are done looking at the nursing home population data.

I'm going to switch gears and talk about margins to include in the ultimate valuation table. Our goal will be to develop best estimate morbidity tables first using both the insured and population data. Then ultimately we'll add margin to those tables to create valuation tables.

To start determining how to include margin, we looked at what other valuation committees have done and how they have determined margins to add. I'm going to highlight interesting findings from the committees that did the 1994 Group Annuity Mortality (GAM) table, the 1985 Commissioner's Individual Disability Table A (CIDA) and the 1987 Commissioner's Group Disability Table (CGDT) table, then tell you what our committee took away from their research.

First, the 1994 GAM table included two components to add margins to their tables. They added five percent to account for random variation and another two percent for other contingencies. Their goal in setting the five percent random variation margin was to find a margin that was adequate to cover two standard deviations from the expected for the vast majority of companies.

They developed probability distributions to use in their analysis. They realized that as a company's volume increases, the necessary margins decrease. In trying to get to the vast majority of companies, they were hoping to have a high enough volume assumption to cover 95% of the companies.

They reviewed statutory annual statements of companies that were in the annuity marketplace. Then they determined that about 3,000 lives was an appropriate volume assumption to use. Thus, their margin would be adequate to cover 95% of the companies that were selling annuities. Using this volume assumption, they found that the required margins to cover those two standard deviations varied anywhere from 3.8–6.5%.

There were variations by age and gender. Required margins were lower at the older ages and for males, but after this analysis, they concluded that a five percent margin would be adequate for most insurance companies. However, they didn't think that was adequate to cover blocks of business with less than 3,000 lives, or to cover blocks that had variations in mix of business.

For example, if a company had variations by age and gender or income, they didn't believe that five percent was adequate. Therefore, in addition to this margin developed on a statistical basis, they added another two percent to get an overall margin of seven percent. To add margin, they multiplied their expected estimates by 93%.

The take-away for our committee, in looking at what the 1994 Group Annuity Mortality (GAM) committee did, was an interesting statistical approach to setting margins. We also realized how important it will be for us to coordinate our efforts with the Risk-Based Capital (RBC) Committee. Because if we are adding margin to cover two standard deviations, we want to make sure that when they're starting to do their RBC analysis they know that the reserves are already covering that, so the RBC requirements should cover fluctuations beyond that.

Next, I want to talk a little bit about the 1985 Commissioners Individual Disability (CIDA) disability tables. Disability, similar to long-term care, has both incidences and length of stay. The valuation committee that developed those tables felt that it was really important not to just add margins across the board, but to add margins where there is the most volatility.

They determined that experience was worse than expected more often due to length of stay rather than higher incidences. They chose to add margin only in their termination rates and not in the incidences rates. They varied the adjustment by duration of claims so there is no adjustment expected after duration 18.

This method adds margin to both active life reserves and disabled life reserves, but no margins are included for any disabled life reserves that are held past duration 18.

Prior to the development of the CIDA table, individual disability actuaries took some comfort in the fact that even though the prior morbidity assumptions might not have been adequate, there was some offset in having to use a conservative interest rate. That valuation committee felt that it was important to have explicit margins where they were needed, which would lead to more confidence in their tables.

They recommended that more research should be conducted regarding interest rates, rather than linking this assumption to life reserve interest rates. The LTC valuation committee also believes it is important to put margins in the assumptions with the most risk. Also, we should not add margins to each assumption in a vacuum, but instead consider what we're doing overall and make sure that we're balancing the margins that are added to each assumption.

What was interesting about the 1987 Commissioner's Group Disability Table (CGDT) margins was that they put out an exposure draft where they recommended (similar to the CIDA tables) a reduction in the termination rates during the first five durations, but then to have no adjustment after durations 10 and later. Responses to their exposure draft said, "No, we think the margins should go forever."

Apparently, the data they were using were a little bit outdated, and there had been some subsequent deterioration in the experience as well as a lot of variations between the experience of the companies. The responses led the committee to change their recommendations. Our committee's take away from that committee is it's really important to get input from the industry and make sure we listen to that input.

The guiding principle that our committee is going to follow in producing margins is that we don't think it's feasible or desirable for us to have a table so strong that it's going to cover the experience of all companies. Instead, we want to have

assurance that our reserves are adequate for the most unusual occurrences. I want to wrap up by saying that I think the committee is really taking its responsibility seriously, especially after some of the discussions we had yesterday and in light of the revisions to the model regulations. We have some concerns now that we need gross premiums that are greater than the valuation net premiums plus renewal expenses.

We do not want to dictate gross premiums so we feel it's very important that we put out a table that has a lot of flexibility, which allows companies to recognize their particular situation. We aren't sure how we're going to do that, but the committee feels strongly about it.

MR. KNORR: Our committee has identified the need for getting morbidity and non-morbidity dates from the insurance industry. Wes DeNering is responsible for extracting morbidity data from the files the Society of Actuaries is compiling as part of its inter-company study. I'll be doing the same thing for non-morbidity data, which include mortality and lapse experience. The Society's inter-company data are collected and scrubbed and compiled by Bill McDonald and company at the Medical Information Bureau (MIB).

The Experience Committee has published a report which is available on the Society's Web site. I believe it's been there for about a year. That is the source of my notes here. Any investigation I've done so far has not been with the data directly, but with that report and what that committee has observed about the data.

The latest data available are for experience years 1984–1993. The data covering experience through 1999 will be available for analysis next year. The committee working on that, I believe, started in September. For the 1984–1993 data, 14 companies contributed over a million exposure records, which include almost \$400 million worth of benefits.

This is a lot of data! And it encompasses a wide variation by company in underwriting practices, plan designs, benefit triggers, marketing and so on. On the other hand, of the 311 policy forms that are in the data, since this only goes up to 1993, none of those 311 is tax-qualified policy forms. In fact, it was three years before tax qualified was introduced.

Morbidity Data – Issues

- Small amount of Home Health Care claims
- Concentration in early Policy Durations
- Open Claims, not complete
- Zero day Elimination Period
- Gender differences
- Issue Year differences

- How should values be graduated?

Here are some of the issues relating to the data from the point of view of morbidity. The first bullet has to do with the home health care claims. Less than 2,000 claims out of the 21,000 are for home health care. Also, most claims are in early durations. About 60% of the exposures are in the first two policy years, the period in which you wouldn't expect the underwriting selection to have worn off. These are pretty much select period experience records.

Also, I think claim continuance is incomplete. Twenty-five percent of the claims were still open at the end of 1993. In later policy durations, there just wasn't enough time to reach the end of the benefit period. That is, to issue a policy, to have the policy go on claim, and to reach the end of the benefit period all by the end of 1993. There just isn't enough time so the morbidity data are incomplete in that respect.

There's also the issue of zero-day elimination period. The Experience Committee identified some selection process on the part of the policyholder, selecting a zero-day elimination period, so the question becomes, "How do you use that?" Also, how would 20- and 30-day elimination periods be handled if the company did not offer a zero day elimination period? That is, would there be some anti-selection there too? There are gender differences identified by the committee. Should we recognize that in our morbidity table? Traditionally we would, even though premium rates are typically not different for a male compared to a female.

There are differences by issue year, which makes sense. The improvement in underwriting practices indicates that later issue years will have better incidence rates—better experience. So as far as the table goes, if we use the experience from the latest issue years, do we use an average, or do we trend this experience? Also, how should the values be graduated?

The mortality and lapse data come from the same data files, but there is a whole new set of issues relating to mortality and lapse. One issue is the characteristics of long-term care mortality. Is long-term care mortality similar to annuity mortality where a person benefits from living longer, or is it similar to life insurance mortality where there is an underwriting process to limit any anti-selection?

In the committee's report, they distinguish between mortality of disabled lives versus mortality of active lives. Disabled lives mortality falls more under the category of morbidity because it identifies the continuance of the claim. On the other hand, if mortality of active lives is separated from that of the disabled lives, then how can we use a standard table? The standard table should identify the total number of deaths.

If we take away a large number of deaths that occur after a person is admitted to

a nursing home, then one would think that the mortality of the active lives—the ones remaining—would be reduced. That is, one could use the standard table, though it would need some kind of a reduction.

Also, there are large variations by exposure period. Should we use a projected trend? Variations by policy durations, in looking at the exhibits in the report that the committee put together, look smaller than I expected. I expected the underwriting of long-term care to also eliminate quite a number of deaths in the early years, but it seems like that's not that dramatic.

What kind of variations should we include in a mortality table if we adopt a life insurance table? Life insurance varies by smoker or non-smoker. Should we include something like that in our long-term care valuation table? Also, the Experience Committee expressed some concern that there was a large under-reporting of deaths. The main reason for this might be that there are no death benefits, so there was no need to count deaths accurately. The under-reporting of deaths means an over-reporting of lapses. That's one of the issues when we're looking at lapses.

In the report, you'll notice some very large lapse rates in the 5th, 6th, and 7th policy durations that don't seem to be realistic. They were assumed to be replacements, so how do we adjust for them in the inter-company study? There seem to be more gender differences in the lapses than expected. Could these be the deaths that were really reported as lapses? I expect deaths to vary by gender, which may show up there.

Regarding simplified underwriting—there are quite a lot of records coded as simplified underwriting. These may be association groups rather than simplified underwriting which are the dominant features that control the lapse. As expected, broker business has higher lapses versus career agent.

Also, policies with inflation protection have lower lapses than policies without inflation protection. Would we include variations in underwriting, broker business, and inflation protection in valuation tables? Would we include things like mode and elimination period in the lapse assumptions of a valuation table?

A big question in my mind is what we consider to be the ultimate lapse rate. At one time, I saw 10% used as an ultimate lapse rate, but the experience just isn't showing that. In fact, I've seen some instances where the actual experienced terminations, that is, the combination of lapses and mortality, are less than the assumed mortality. In that case the experience lapse rate would be negative or very low.

In addition to the assumptions that we're coming up with, there are also other things that we need to deal with as a committee. We need to have some kind of

instructions on how to calculate reserves for inflation protection and guaranteed purchase options, as well as some guidance on spousal discounts or underwriting classes. Preferred classes may be based on lifestyles at the time the policy is issued. Does that mean that this would wear off after awhile or would it actually be constant in the future?

The last question is how to set reserves when there's a rate increase. This has always been a problem, which we've touched on a little bit in our committee meetings. With that, I'll turn it over to Al to talk about the impact.

MR. SCHMITZ: I'm going to talk about the potential impacts of the valuation table. First, I will touch on some additional issues associated with the development, and then we'll take a look at the potential impact—the pricing, reserving, and profit levels by way of a few examples.

I will start with a brief discussion or comparison to the life insurance industry, since they're currently attempting to develop a new table to replace the 1980 CSO. Even though there are many differences between life and long-term care, there's a great deal more mortality experience for life insurance.

For example, life insurance products are not as complex from the standpoint of having an incidences rate, but that's about it—you don't have to worry about the benefit period or the length of a claim. However, I think there are still several issues that the life insurance folks are working through which may have some parallels to what we're doing.

I want to bring up a few points from the April issue of the *National Underwriter*, which reported on the NAIC spring meeting discussions surrounding the new CSO table. Larry Gorsky of the Illinois Insurance Department noted the need to achieve a balance of reserves that's adequate but not excessive.

That seems like a reasonable goal to have for a valuation table, but other than that, the article also noted that it's going to be difficult because adequacy is going to vary by company, especially with the broad variety of underwriting products, even in the life insurance industry. The article also mentioned an opinion on the development of the table that any recommendation affecting pricing could have some serious anti-trust implications. This is something else that we may need to consider.

It's interesting to note one of the data differences between the life insurance industry and long-term care relative to variation in company experience. A recent SOA study of mortality variation by company noted the differences between the highest and lowest company. That ratio of experience was about two to one, and if you compare that to information about long-term care in a company study that Frank discussed, that difference is more than ten to one.

The life insurance industry is also trying to address the issue of margins. There's been discussion on the life side regarding the extent the actuary is involved with the post-issue review of reserves through capital testing, asset adequacy testing, etc. He or she might be able to incorporate some lower margins into the table because of that additional testing.

That leads to another issue—the level of actuarial judgment that's allowed in setting the mortality assumptions. The life insurance industry is also trying to determine to what extent an actuary can reflect underwriting differences or company experience differences. It will be interesting to see how they end up on that issue.

One interesting difference regarding the development of a valuation table for life insurance surrounds the tax issues 7702 and 7702A, which will cause some people in the life insurance industry to actually want a higher valuation table. This is because that allows the accumulation type product to allow higher investments or lump sums and still allow the products to meet the favorable tax status of a policy that meets the life insurance definition.

One last item of comparison to the life insurance industry is the idea of mortality improvement. The Long-Term Care (LTC) Committee is looking at the idea of morbidity improvement, and if that can be credibly identified, should that be reflected in the table? What the life insurance industry decided to do on this issue is to reflect mortality improvement up to the dates of the table creation, but not projected any further into the future.

A valuation table could have an extremely far-reaching impact on pricing, reserving, profit levels, and even risk-based capital. As in the life insurance industry, we need to determine how best to allow for actuarial judgment. Do we need to create some kind of a standard for a company to apply credibility?

There's clearly going to be a need to use judgment in order to adjust for benefit differences from any standardized table, which leads to some of the issues surrounding table development. Should there be the creation of one table or even one rate and let the actuary make judgments from there on how to cover different benefits as a plan design? Or, should several tables be developed? If so, how many plan variations should there be?

How many different benefits, services, or different riders, including the more exotic ones such as shared care or family member coverage, do we have to address in the development of a table? Should the committee develop a different table for single or limited pay plans? Or, should they suggest a margin that might be appropriate for those end reserves? If so, then how do you reflect different premium classes? Should there be a different table for married versus single?

Should there be such distinct tables, preferred, and standards? And, in terms of

underwriting, how would you define preferred and standard and how do you reflect different underwriting levels in the industry?

In terms of company experience, to what extent can that be brought into the picture? This brings things like credibility into question which, can again, circle back to the actuary's judgment.

The table will consist of some incidence rates and continuance tables. It's possible the committee could develop some net annual claim costs that could be used for active life reserves. The various incidence rates and continuance rates bring up the question of how to reflect integration of policy benefits.

Various companies do this many different ways. We've seen models that use a care path matrix, transition probabilities, or a conditional probability model. Some of them even use the simple load to the nursing home table. The question is, "How is the committee going to reflect the integration of benefits?" Also, the data from the inter-company study might already reflect policies with these benefits that may become a somewhat easier issue to deal with.

Frank touched on policy termination rates. Experience from the inter-company study raises these issues such as, should the committee try to suggest appropriate termination rates or is the lapse limiting formula sufficient? Regardless of whether or not the committee chooses to address lapse rates, the table will be developed not in a vacuum, but being cognizant of the other valuation assumptions, lapse rates, mortality rates, and interest rates surrounding current regulation.

I'll also talk a little bit about the impact of the new table on several financial items. The new table will obviously impact statutory reserves. Regarding risk-based capital, there definitely should be coordination of reserve standard and risk-based capital formula development. I think both committees are cognizant of this and there has at least been some communication between them regarding the level of margin that might be appropriate for a valuation table.

Regarding tax reserves, if a new valuation table is developed and it's lower than what a company is currently using, then that table is adopted in 26 states such that it becomes a tax reserve standard. A company actually could be in the position where they'd have to hold lower reserves which would hurt them from a tax position. Therefore, I think there definitely needs to be a reasonable amount of conservatism built into the table. Also, as the life insurance industry discussed, adequate but not excessive may be an appropriate goal. We'll discuss the pricing impact with a simple example.

Table 1

Potential Impact		
<ul style="list-style-type: none"> ◆ Baseline <ul style="list-style-type: none"> ■ Priced for 15% Return ■ Premiums <ul style="list-style-type: none"> ● Without Inflation: \$1,359 ● With Inflation: \$2,865 ◆ Statutory Reserves 		
Duration	Without Inflation	With Inflation
2	674	1,712
5	2,142	5,949
10	3,509	11,330
20	2,936	13,923

For that example, I have just assumed that a table is developed and will directly apply to the hypothetical product that I’m going to talk about (Table 1). It’s a simple, typical tax-qualified plan. We’ll look at the impacts on pricing, reserving, and profit levels based on the relationship of a new table for what was assumed in the base line plans.

That baseline hypothetical plan was priced for a 15% internal rate of return. The premiums shown here are \$1,359 and \$2,865, based on a composite of three issue ages, 45, 65, and 75. The specifics of the plan aren’t really important for what I’m trying to illustrate with this example, but the reserves used were based on the pricing morbidity consistent with the NAIC lapse-limiting formula and interest rates.

Table 2

<h2 style="margin: 0;">Potential Impact</h2> <p style="margin: 0;">Baseline with Level 10% Higher Valuation Claim Costs</p>		
<ul style="list-style-type: none"> ◆ Profit Impact <ul style="list-style-type: none"> ■ Without Inflation: 13.3% IRR ■ With Inflation: 12.4% IRR ◆ Premium Impact (Holding 15% IRR Constant) <ul style="list-style-type: none"> ■ Without Inflation: \$1,398 3% Increase ■ With Inflation: \$2,999 5% Increase ◆ Statutory Reserve 		
Duration	Without Inflation (Increase from Baseline)	With Inflation (Increase from Baseline)
2	742 (10%)	1,883 (10%)
5	2,356 (10%)	6,544 (10%)
10	3,860 (10%)	12,463 (10%)
20	3,230 (10%)	15,316 (10%)

Table 2 shows the impact of that valuation table which has ten percent higher claim costs than what one might assume in pricing. The profit impact changed that Internal Rate of Return (IRR) from 15 down to 13.3.

On a plan with inflation, as you might expect, the impact is greater—15 goes down to 12.4. The premium impact holding the IRR constant at 15% was a 3% increase to premiums and a 5% increase for a plan with inflation. Of course, the reserves are exactly 10% higher. (Please note that the impact of these examples assumes that a new table would not be retroactive.)

Table 3

Potential Impact		
Baseline with Steeper Valuation Claim Costs		
<ul style="list-style-type: none"> ◆ Profit Impact <ul style="list-style-type: none"> ▪ Without Inflation: 12.2% IRR ▪ With Inflation: 11.1% IRR ◆ Premium Impact (Holding 15% IRR Constant) <ul style="list-style-type: none"> ▪ Without Inflation: \$1,432 5% Increase ▪ With Inflation: \$3,108 8% Increase ◆ Statutory Reserves 		
Duration	Without Inflation (Increase from Baseline)	With Inflation (Increase from Baseline)
2	785 (16%)	2,000 (17%)
5	2,516 (17%)	6,979 (17%)
10	4,155 (18%)	13,349 (18%)
20	3,507 (19%)	16,488 (18%)

As we're all aware, it's really the slope of the claim costs that can impact your reserves, so I assumed the same baseline claim costs with a steeper slope, assuming that at age 45 the ultimate claim cost level is 80% of the original. I graded that to 100% at age 65 and then up to 120% at age 75. The results shown here are 15% IRR down to 12.2; with inflation the IRR is at 11.1. The premium impact without inflation is 5% and with inflation is 8%. There is also a large impact on the statutory reserves.

It's interesting to look at age 45 alone under this example. If I take the present value of the claim costs at the IRR rates, that present value of the claim costs under the new steeper slope is actually lower, yet the impact on reserves is greatest there because of the slope change. In fact, on a 45-year-old with inflation, the premium impact was 12%, holding the IRR constant.

Table 4

<h2 style="margin: 0;">Potential Impact</h2> <p style="margin: 0;">Baseline with Steeper Valuation Claim Costs</p>		
<ul style="list-style-type: none"> ◆ Profit Impact <ul style="list-style-type: none"> ▪ Without Inflation: 12.2% IRR ▪ With Inflation: 11.1% IRR ◆ Premium Impact (Holding 15% IRR Constant) <ul style="list-style-type: none"> ▪ Without Inflation: \$1,432 5% Increase ▪ With Inflation: \$3,108 8% Increase ◆ Statutory Reserves 		
Duration	Without Inflation (Increase from Baseline)	With Inflation (Increase from Baseline)
2	785 (16%)	2,000 (17%)
5	2,516 (17%)	6,979 (17%)
10	4,155 (18%)	13,349 (18%)
20	3,507 (19%)	16,488 (18%)

Table 4 shows the impact if the committee were to decide to change the lapse rate assumption and requests that a 1% lower lapse rate than what is assumed in my baseline. The impact is shown here on profits—the 15 drops down to 13.7 and 12.2. The premium increases two and five and you can see the impact on reserves.

Table 5

<h2 style="margin: 0;">Potential Impact</h2> <p style="margin: 0;">Baseline with 1983 IAM vs. 1983 GAM</p>		
<ul style="list-style-type: none"> ◆ Profit Impact <ul style="list-style-type: none"> ▪ Without Inflation: 14.0% IRR ▪ With Inflation: 12.9% IRR ◆ Premium Impact (Holding 15% IRR Constant) <ul style="list-style-type: none"> ▪ Without Inflation: \$1,379 2% Increase ▪ With Inflation: \$2,966 4% Increase ◆ Statutory Reserves 		
Duration	Without Inflation (Increase from Baseline)	With Inflation (Increase from Baseline)
2	708 (5%)	1,839 (7%)
5	2,253 (5%)	6,395 (7%)
10	3,687 (5%)	12,150 (7%)
20	3,067 (4%)	14,850 (7%)

Table 5 shows the impact of a similar change, assuming the prescribed mortality table changes. To illustrate something, I just compared changing the table from the 1983 GAM to the Individual Annuitant Mortality (IAM). The impacts on profit and premium are shown on this table.

The last item I want to mention is that the committee is examining the idea of unlocking a reserve assumption. I think this relates primarily to reserves on a GAAP basis under FAS 60 and only to the active life reserves. Current assumptions are locked in unless experience indicates a significant inadequacy on the reserves. The committee, from my understanding, prefers no lock-in, but rather a change only with the significant difference in experience. Twenty-five percent was a discussion point. I think the key the committee is discussing is that they would like to have them go both ways, such that unlocking would be permitted even if the experience is much better than expected. This, of course, is something that would require significant discussion with the accounting profession to make such a change.

MS. KIM TILLMAN: I'm from Lutheran Brotherhood. You've mentioned that there may be different morbidity tables for different plans. Does that mean there's going to be a nursing home table, an assisted living table, and a home care table? Or, is there just going to be one table for people on claim? Also, I wonder how you're going to handle different cost levels of care in the tables.

MS. HAUSER: I don't think the committee knows yet. I don't think we've gotten that far. I would be surprised if we'd be able to find enough credible ALF (Assisted Living Facility) experience to have a separate table for that. I think we would choose to include assisted living facility care with home care. However, until we start getting our hands dirty with some real data that includes home care, I don't think we'll know the answer.

MR. BARRY EAGLE: I'm from General Cologne Life RE. I'll start at the end of the three or four tables that gave me pause. You use a lot of assumptions to really validate the answers that you put on the charts and to make sure that they are framed very succinctly. Frank mentioned the lapsed assumptions that we know have been coming down. Way back when, somebody said that the final answer was okay, even though we knew there were pieces within the formulas that were all wrong.

When we're evaluating blocks of business, whether it's for profitability or for acquisition, in going forward the results are greatly dependent upon what you put into your numbers and your valuations, etc. As you go through this, when you see technical mistakes or something wrong with a piece of your valuations, yet you're okay with the totality of the answer, is there some kind of responsibility to raise your hand and say that something wrong with the piece? Or, can you just look at the bottom and think for now the total is okay, because it can change very dramatically depending on, for instance, which of those last four tables you use.

MR. SCHMITZ: I think that's a good point and I think it brings up the necessity or the importance of the actuary when he or she is making these assumptions and testing the sensitivity of each one individually. Because, just as you said, a small change in one of them can have a dramatic impact on your final answer.

MS. HAUSER: Now, as companies become aware that data are being used to help form valuation tables, hopefully companies will also realize the importance that data be submitted accurately. Also, in the past the experience has merely been presented to the industry to do with what they want. Now, if we're using inter-company data for this purpose, I think it's really important that we're not setting our assumptions solely based on it. I think that's a point well taken.

MR. KNORR: I have to agree that these anomalies, these things in their data that may be errors need to be quantified and disclosed. They may have an impact on the types of margins that we put into these reserve tables.

MR. SCHMITZ: I think it comes back to whatever the committee is going to develop. I think there's still going to have to be a large amount of actuarial judgment. As I sat down to write up some comments for this discussion, I was amazed at how many issues there really are and how many things there are for the committee to consider. It's going to be very difficult for them to address all these

issues, and I think a large amount of actuarial judgment will be used in the end.

FROM THE FLOOR: One of the limitations of the current inter-company studies is the way the results are presented. If you're looking at some difference, and you don't know if it's real or one of several underlying uncontrolled aspects of the data, I hope that one of the outcomes of your efforts will be to develop a basic table or to develop the unloaded table for use as an expected basis in future inter-company studies. This way, the results can be more directly applicable to the work that we do every day and not just give us some indication of possible trends.

MR. KNORR: I believe there ought to be some kind of standard table that we can compare everything to. Right now, most of the information is compared to the 1985 National Nursing Home Survey. I don't know that this latest study will modify that as the standard, but maybe the valuation table will become like a standard table.

MR. BRAD LINDER: I'm with GeneralCologne Re. Is the committee going to consider guidance for the limited pay products? It seems as if a great deal of them were not offered at the time you took the data, but there's been a great increase in variation, style, and design for those products now. It seems that may be a very difficult hole into which everybody will be looking for guidance.

MR. SCHMITZ: We'll consider that.

MS. HAUSER: I can't imagine we'll have any experience in that area, so I think that will be one of those items that require considerations for the actuary.

MR. RICHARD PITBLADDO: I'm from GE Financial. First of all, I really endorse that effort about integrating between the RBC committee because at the end of the day, it's the amount of total assets you have to back for liabilities.

Looking out further in that context, we see a lot of possible macro changes in the statutory and GAAP environments in terms of whole new systems coming in. Have you given much thought about what the path of your work would line up to, say, unified valuation system on the stat side? Or, are you intending to use this for GAAP and the fair value accounting kind of steamroller that's coming up?

MR. KNORR: Those are good issues. I don't think they have been discussed, at least in any of the meetings I have attended for the valuation committee. However, they are definitely things to keep on the agenda.

MS. KAREN KIRBY: I'm with KPMG. Can you speak to premium waiver and what you're considering in terms of both the active life side and the disabled side? I ask this since the definition of premium waiver is not uniform for anybody and it's probably less uniform on the disabled side than on the life side, so there might be

something to consider in terms of how it gets handled.

MR. KNORR: The premium waiver is very closely related to whether the table would be applied to active lives as opposed to in force, and we've had some discussions about that. That is, if you only apply it to active lives, it implies that you'll not be getting any more premium for this policy, but you will be paying claims on it. This is because there will be disabled life reserves set up for it, but no active life reserves.

FROM THE FLOOR: I don't think everybody waives their premium at the same rate and maybe some people are more conservative in terms of the way the table is constructed, whereas right now, if they handle the waiver premium on the disabled life side, they can go with their own waiver premium.

MR. KNORR: Right. Waiver premium is something that was discussed when the CIDA tables were put together and I don't know if it was resolved at that time, to the satisfaction of many people. It's something that we need to discuss. Waiver premium is a benefit and we need to establish proper reserves, whether in active life or in table life. It needs to be considered. It needs to be somewhere.

MS. HAUSER: If you have a strong viewpoint, the committee welcomes any input. You can send an e-mail to anybody on the committee. We have a long list of issues to cover and we should add waiver of premium to it.

MR. JAMES GLICKMAN: (LifeCare Assurance Company) I think it's very important that we get a valuation table out and that we get it out quickly. We need a valuation table that will do the job for most without worrying too much about being flexible for everybody.

One of the big reasons for that is a lot of companies and representatives who are on the committee don't want to get tagged with having the worst experience in the worst companies to come to valuation standards. Therefore, there has to be a lot of flexibility. I really think that the companies that have had the worst experience, and should theoretically have the highest reserves, are actually using the judgment abilities of the current system, both in terms of table modifications and assumptions, to wind up generally with the lowest reserves.

If you set the reserves at appropriate levels for the masses, you will wind up with reserves that are more stringent on those that you may be worried about. How do we make sure that those who are doing things less responsibly or more aggressively are holding adequate reserves? On a couple of specific issues that I heard, there were some very good ideas. One of them is unlimited pay.

I think there are two aspects that you should look at which are really separate from the limited pay. One is that the real issue on limited pay is not the limited payment period, but the paid-up status and the non-cancellability afterwards. Even though

there aren't any annual pay non-can policies at the moment, I think the issue on loading should be about when the product becomes non-can and what the loading to those claim costs should be at the point it becomes non-can present value forward.

On the other side, limited pay also has all the premiums come up front. This means you don't have the reinvestment risk and you generally have higher interest rate assumptions and abilities that you can lock in with longer duration investments. This allows you to have a somewhat higher valuation interest rate appropriate to the limited pay. The two of those will probably lead to a slightly higher limited pay reserve, but they won't do so in ignorance of the other factor.

Lapse rates are one of the areas that I believe, like life, should be eliminated as a specific and explicit product-by-product assumption. The reason is that the companies have generally found valuation relief by taking if not an aggressive stance, a current stance in a trend that has been continually downward to the mortality assumption by its nature.

This is almost regardless of what version you come up with, and will wind up having some margin, whether it's explicitly for lapse or because you're now projecting improvements and you're generally not using select and ultimate to a current mortality standard when you use an annuity table. I also think you should come up with a combined mortality table that you feel has some element of lapse in it, but then not vary the lapse by individual companies.

The interest rates generally should look upon the valuation interest rates from the standpoint of the longer investment horizon that's usually used even on the annual pay. You should perhaps use a slightly higher valuation interest rate than on life for the same coverage.

The one other issue I want to raise is in regards to the 1997 table. When you said that the table reflected lower incidences, was there any implicit or explicit assumption made with regard to the fact that back in 1984 there really wasn't any assisted living facility information? Everybody's expectation is that there's been some shifting.

How much shifting is another question. Some shifting of nursing home space is to assisted living facility space, therefore, the incidences of looking at the 1997 nursing home data might, in fact, just represent those people who are now in assisted living facilities who were classified as being in nursing facilities in the 1984 study.

MS. HAUSER: That may be one of the reasons that the incidences rates appear to have dropped. I also think by comparing the 1985 and 1997 data, we're only looking for morbidity trends on nursing home care. We need to address non-institutional benefits separately and somewhere address the assisted living facility.

Your point is well taken and is probably part of the explanation.

MR. KNORR: I'd like to address a couple of the other points you made, Jim. First of all, our committee felt that the timing of the releases of the table is important. However, we decided not to wait for the updated inter-company study, even though it will have very valuable information. We wanted to start on the inter-company data right away.

If it turns out that they're ahead of schedule instead of their normal timetable, then we may be looking at that data also. As far as limited pay, I agree with your comments about the interest rate and its timing. I also feel that the lapse rate is very important for limited pay. People who have a ten pay invest quite a bit of money up front and if you see any lapses in that tenth year, I'd be very surprised.

I feel that it's very important to continue the discussion on interest rate, because this has the greatest impact on the difference between GAAP reserves and stat reserves.

MR. DOUG PRICE: I'm from Wakely & Associates. I don't know if the committee has ever thought of expressing reserves on a per-dollar of annual premium basis given the hoops that you go through when you price these products now, getting the sign-off that you're not going to raise rates, etc.

It seems like you can express reserves in duration five at issue age 45 at some function of annualized premium. We've done that a lot with blocks of health insurance. If the pricing actuary says this is a reasonable cost for the policy, then the reserves, to me, are defined by the slope of the client costs, but it's going to be all over the board. I don't know if any of you do that.

Let's say you have a company with 80,000 policy forms and they want you to establish a reserve. What you might do is come up with the Medicare policy as a slope, follow the Nelson Ward tables, then make sure that the net-to-grosses are 60–65%, 70%, or something like that. Given that you think the premium rates are level and the loss ratios run at 70%, that those reserves, by definition, ought to be right. It might make life a lot simpler.

MR. KNORR: I agree that checking the reserves as a percentage of premium is a good verification of the value of the reserves, but I don't think it's a good idea to actually set the reserves as a percentage of premium, especially when we're developing a table. I think we need to identify the benefits that are being offered, and that means having a variation by age, elimination period, and benefit period.

Also, the topic of having reserves in a simpler form was brought up when the CIDA tables were put together and it was decided that the benefits should drive it. If there is some under-pricing, there shouldn't be an under-reserving to compound

any problems.

MR. SCHMITZ: I agree. If I understand what you're saying, you're using a loss ratio as a way to get to your net premium so everything is related back to premium. Like Frank said, I think that's a very good check and something that should be done, but I think loss ratios can vary a lot by plan. It's going to be important to have some kind of a table. Having things related back to premium would definitely simplify things and may be an appropriate check.

MS. HAUSER: That approach concerns me quite a bit. Maybe I'm pessimistic in thinking that the new rate stabilization regulation is not going to solve all of the industry's problems and that we're still going to have the conservatism and aggressiveness that people price with. This is why I would be leery of allowing somebody with a lower premium to hold a lower reserve.