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SESSION 12

Long-Term Care/NAIC Task Force on Long-Term Care Valuation

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LONG-TERM CARE/SOA TASK FORCE ON LONG-TERM CARE VALUATION

MR. BURTON D. JAY: I'm the financial actuary in charge of valuation and the other corporate actuarial duties for Mutual of Omaha. There are four members on our panel. Before I introduce them, I will point out that we are going to try to handle this in a little different format. I'd like you to imagine that we're a workshop instead of a panel and only the five of us wrote in early enough to get our tickets of admission to the session. The rest of you wanted to come to the workshop but were too late to be issued a ticket of admission. You are coming in and sitting around the room watching those of us who got our application in by the deadline. The Society's staff is off debating whether to give you full-fledged admission in our workshop. Later on we will let you know how they decide.

Tom Skiff is senior vice president and chief financial officer of Amex Life. His responsibilities are actuarial, financial, budget and planning, underwriting, and medical. He is also responsible for pricing long-term care (LTC) for individual and group and for GAAP and statutory valuation, third-party administrator audit, maintenance of general ledger, accounts payable, commissions payable, accounting, state and federal income tax, and reinsurance accounting. Tom formerly held actuarial positions at Firemen's Fund and Occidental Life of California.

Mike Abroe is a consulting actuary and principal in the Chicago office of Milliman & Robertson (M&R). His main area of expertise is health insurance. He assists clients with administration and management, strategic planning, acquisitions, marketing, and pricing. His clients have included insurance companies, the Blues, HMOs, and PPOs. He was formerly responsible for individual and small group health actuarial at Bankers Life and Casualty. Mike has worked with long-term care policies since 1974. He is now involved with establishing reserve procedures for a number of M&R's clients.

Bart Munson heads the Milwaukee nonbenefits office of William M. Mercer and leads the firm's national development of the life and health actuarial consulting practice. Bart is a past

president of the American Academy of Actuaries and a past Society of Actuary's board member. He currently chairs the Actuarial Standards Board's Long-Term Care Task Force. He chairs the Society of Actuary's Task Force of Valuation of Long-Term Care Insurance. He's a member of the NAIC Long-Term Care Advisory Committee, and he chairs the NAIC Long-Term Care Insurance Nonforfeiture Benefit Ad Hoc Actuarial Group. He has also chaired a number of other committees and participated in a number of organizations dealing with long-term care and other health issues. In his practice, he has consulted on long-term care projects for the American Association of Retired People, a number of insurance companies, the State of Hawaii, and a number of state insurance departments.

Our fourth panel member is Gordon Trapnell. Gordon is president of the Actuarial Research Group of Falls Church, Virginia and principal of Gordon R. Trapnell Consulting Actuaries. His firms serve public and private clients in health policy, health services research, and actuarial consulting to insurers and HMOs. He has often testified to Congress, the NAIC, and other public forums. He advises Congressional staff and public officials on a number of health related items. He has been estimating long-term care costs for over 20 years for Medicare and Medicaid programs and proposals covering nursing home benefits in other public programs. He has assisted a number of insurers in developing long-term care policies. Gordon has long been an advocate of nonforfeiture benefits, inflation protection, home health care, the use of activities of daily living (ADLs) instead of medical necessity as the benefits trigger, full net level reserves for federal income taxes, and limits on premium rate increases. He asks you to judge how this squares with keeping insurance companies solvent.

Bart, you are the chairman of the Society's Task Force on Valuation Methods for Long-Term Care Insurance. Can you give us an update on the mission of that task force and what the progress has been so far?

MR. BARTLEY L. MUNSON: I will try to be brief on any one point because we're looking at a report to our Board of Governors that may have 25-30 chapters, each on a different point.

We surely don't want to go into that, partly because we're going to deal with some of the specifics later in this workshop. But let me just give you a highlight of where we're at now.

We did have our fifth meeting recently. We plan to provide a substantive report, our first report on where we're at and where we're going, to the NAIC Life and Health Actuarial Task Force for its meeting on October 16, 1992. That report essentially will be used as our report to the Board of Governors of the Society of Actuaries on October 25. There will be an article in the January issue of *The Actuary*, telling our profession where we're at and inviting people to ask for a copy of the report if they're interested in this subject, because we do want broad-based input. Our intent will be to make that report available to whoever wants it. We also will update the NAIC Life and Health Actuarial Task Force, a major stakeholder in this whole issue, on December 5. We're getting to the point where we're going to have some results to share.

Second, let me give you an overview of what some of those chapters are going to deal with. We'll make it clear that we're dealing with stand alone products, riders if they're independent, but not the accelerated, integrated type. We're going to deal with individual, "group," and true group, the latter to the extent we can. We're going to describe our general valuation approach, which is in the context of the valuation actuary. We will not have 117 tables from which one just has to pick the right one to do the valuation. We can produce innumerable tables, but none of them would be particularly valid or appropriate for what your product is; and they'd be based on very uncertain data. We're going to make it clear that it's certainly valuation actuary kind of work. The actuary will use what we lay out as a basis, we hope, and with much judgment and application that only he or she can make. We think that the Society of Actuaries will make it available on diskette, not unlike the disability income situation, where you can get a lot of good basic data at a modest price and work from that to do your valuations.

We will base that on two key foundations: one is an institutional table and the other is a noninstitutional table. Some of this could change drastically once we get these put together and do our testing. However, we don't see a better way to go. The institutional table will be relatively easy to produce. It's going to be based on the table the Society released a year

ago, which John Wilkin primarily put together. It is based on the 1985 National Nursing Home Study (NNHS). It will have continuance tables within it, so the actuary can deal with the various elimination periods and maximum benefit periods. The special difficulty will be doing the noninstitutional table for which there is very little data; we're working on that now.

The actuary will need to, in some fashion which we'll try to help describe, combine those two tables if he or she has a product that has both institutional and noninstitutional benefits. There's almost an infinite number of ways in which the benefits could be combined.

We will identify for the actuary how to make adjustments for different product features. Maybe I should just read some headings for you as to why we think there are certain adjustments with which to be dealt.

The nursing home benefit is one institutional table we're talking about. Second is the noninstitutional which would have covered such things as home health care, personal care, adult day care, respite care. We need to adjust for elimination period and the maximum benefit period, nonforfeiture benefits, and inflation protection (each of several different and significant ways). We will cover premium waiver, which isn't a big deal, but it's something to be dealt with. Benefit triggers vary so much, as we know. How important is that to the valuation of your particular product? How about the expense incurred versus the disability model (if you want to put those labels on them)? Does the policy pay just because someone fails ADLs or do you have to have paid services? You, the valuation actuary, have to take that into account when you do your valuation. We dwelt some on underwriting, which we think is important. Our workshop will comment on individual versus group underwriting as well as preferred risk, geographic risks, and occupational risks. Gender certainly is an issue.

Mortality. We've spent some time looking at that. Let's say that maybe the 1983 Group Annuity Mortality Table (GAM) is an appropriate table. It's not the table itself so much as how it fits between life insurance tables (basic and loaded), annuity tables, and what might seem appropriate for long-term care. We want some degree of conservatism; this means that we want

to make sure that we have people living long enough, not assuming that they die too early, which is backwards from what many people are familiar with in their actuarial lives.

Lapse rates. Our current thinking is that we ought to do something different from the current NAIC health valuation model, which doesn't say much about long-term care. In addition to mortality we think the reserves should permit something like 80% of the pricing lapse rate, because if you don't, at the older ages, you end up consuming all the decrements in mortality itself and have nothing left for lapse. We don't suggest the actuary ought to put a lot of lapse in the reserve, because then that too doesn't permit what seems to be a reasonably conservative reserve, which is what we need for solvency.

We have spent some time looking at other adjustments, such as for spouses. One could well justify a significant difference in pricing; and if you do, what is the impact on the reserve?

We've been looking at deficiency reserves, and we expect that we will not say that long-term care needs deficiency reserves per se. That is partly because it's a guaranteed renewable premium, although many of the developments of so-called rate stability impact on reserves. We think with such things as the emerging standard on the appointed actuary, worked on by the Actuarial Standards Board (ASB), gross premium valuations would be very significant. The actuary should not necessarily set up deficiency reserves as we previously did by comparing gross and net premiums; instead look at a gross premium valuation and make sure that reserves are adequate from that perspective.

Risk-based capital is an issue, although we've not done much about it except to observe the NAIC development does not really say or give any guidance on long-term care. The few companies that we've surveyed seem to be thinking that they'll put long-term care (LTC) where they put long-term disability (LTD), although it doesn't quite fit right in the way the NAIC development on risk-based capital defines where it should fit in the annual statement. We'll watch that, but at the moment we think we'll suggest it follow the LTD, plus the normal 5% of claims as all health products are required to do.

We're looking at one-year and two-year full preliminary term. I heard in the introduction to this workshop that one of our panelists has a view that probably neither of those is adequate. We recognize, as a task force, that a company can only deduct a two-year full preliminary term for tax purposes. That can be a problem if (as the current NAIC standard says) the NAIC eventually agrees that one year is appropriate. That can be a bit of a troubling twist for companies. I think it's appropriate to say at a Valuation Actuary Symposium, that what we're trying to do as a task force is what we think is "right," professionally, from a solvency point of view; most of us, at the moment, feel one year is better. But we haven't finished looking at that.

Let me just finally say we've chuckled a lot, somewhat in frustration, about leaving this or that to the judgement of the actuary. "We'll let the valuation actuary make those adjustments." I think that's the only way we can come out on this subject. In fact, we were asked to do that in our charge and as we've struggled with it that's the only conclusion we can come to.

Let me just say as a final comment that much remains to be done, obviously. We need to develop those two tables and maybe some variations on those. We need to do a lot of testing, none of which we have done. Then we need to expose it to you and many others who, I hope, are interested.

MR. JAY: Thank you, Bart. Does anyone have any comments or questions for Bart on the work of this task force?

MR. THOMAS A. SKIFF: Could I request a copy of the report when it's done?

MR. MUNSON: You bet! As a matter of fact, Tom, it would be great if you folks could help do some testing for us. I'm sure we'll send it to you. There are companies like AMEX who have a lot of experience. I don't know how they do their reserves. It's none of our task force's business. But I'm serious in saying that some real world testing of some of the things we're coming up with will help us all. So I'll send you a report if you promise to do that.

MR. SKIFF: I promise.

MR. JAY: Okay. The next area that we want to cover has to do with the methods and assumptions that are being used for policies, premiums, and reserves on long-term care policies. Mike, I know you've recently conducted a survey of a number of companies on this. Can you show us some of the results of that survey on methods and assumptions?

MR. MICHAEL S. ABROE: We're going to show some of the implications of the reserve basis assumptions that are being considered by the Society Task Force. This is the task force on which Bart gave the update. Table 1 illustrates terminal reserves for a female age 70 at issue, no benefit indexing, a five-year benefit period, 30-day elimination period, $100 per day benefit. What we are illustrating are terminal reserves at the end of each fifth duration after issue; for example, fifth year after issue, tenth year, etc., through 40 years after issue. The base scenario is a scenario that uses a 1980 Commissioner's Standard Ordinary (CSO), 5.5% interest rate and a one-year preliminary term method. This would be considered most typical of what would be current practice today.

One point I should note, as we discuss each of the scenarios, is the one thing that remains fixed is the morbidity assumption and that is the 1985 Nursing Home Table, the John Wilkins' table that was referred to earlier. Thus, the same morbidity basis is used for all scenarios. Variance is for interest rate, preliminary term method, and the mortality table that is being used.

Alternatives three, four, five, and six would be all variations of the base scenario where the 1980 CSO would be used. There would be an interest rate variation, or a preliminary term variation. Alternatives one, two, and seven represent various alternative reserve bases that could be considered potential standards going forward. They use the 1983 GAM Table, a 5.5% interest rate, and a one-year preliminary term method. A lapse assumption is included in alternatives three and seven as indicated. It's important to look at duration five. You can see that alternatives one, and two, and seven have a higher starting value than the other alternatives,

TABLE 1

Illustrative Terminal Reserves ($000)
5 Year/30-Day Benefit – $100/Day
Female – Age 70 at Issue, No Benefit Indexing

	Duration after Issue							
	5	10	15	20	25	30	35	40
Base	3.7	8.3	11.9	15.0	14.8	N/A	N/A	N/A
Alt. 1	5.3	12.1	18.7	24.9	30.0	29.2	17.6	6.8
Alt. 2	5.3	12.2	18.9	25.3	30.9	35.2	35.7	20.4
Alt. 3	3.9	8.9	12.5	15.5	15.1	N/A	N/A	N/A
Alt. 4	4.3	9.2	13.0	16.1	15.5	N/A	N/A	N/A
Alt. 5	4.5	8.8	12.4	15.3	15.0	N/A	N/A	N/A
Alt. 6	2.9	7.6	11.5	14.7	14.7	N/A	N/A	N/A
Alt. 7	4.9	12.3	20.1	26.2	30.6	29.8	18.0	7.0

Base – 1980 CSO, 5.5, 1yr
Alt. 1 – 1983 GAM, 5.5, 1yr
Alt. 2 – 1983 GAM, 5.5, 1yr*
Alt. 3 – 1980 CSO, 5.5, 1yr, 8% lapse
Alt. 4 – 1980 CSO, 3.5, 1yr
Alt. 5 – 1980 CSO, 5.5, 0yr
Alt. 6 – 1980 CSO, 5.5, 2yr
Alt. 7 – 1983 GAM, 5.5, 1yr, 8% lapse

* Later ages extended

but, more importantly, look at duration 25. They have literally twice the reserve in place that current methods would imply. Current methods terminate under 1980 CSO at age 99, whereas the 1983 GAM continues through age 110. So you can see some of the long-term implications that the new standards are going to have.

Table 2 illustrates that. It looks at the slope of the reserve curve and shows an increase in reserves over time compared with current methods. This again just illustrates the previous comments very briefly. It expresses the reserve as a ratio or as a function to the base. You can see at duration 25, the reserves are 2 and 2.1 times what would currently be in place for alternatives two, three, and seven.

Instead of just taking one sample age, we ran several of the reserve bases through a valuation program using a live block of long-term care business. The block of business was several years old as of the date of the valuation, year-end 1991. It's 1988 and 1989 issues, so it would be

TABLE 2

Illustrative Terminal Reserves (Multiple of Base)
5 Year/30-Day Benefit – $100/Day
Female – Age 70 at Issue, No Benefit Indexing

	Duration after Issue							
	5	10	15	20	25	30	35	40
Base	1.0	1.0	1.0	1.0	1.0	N/A	N/A	N/A
Alt. 1	1.4	1.5	1.6	1.7	2.0	N/A	N/A	N/A
Alt. 2	1.4	1.5	1.6	1.7	2.1	N/A	N/A	N/A
Alt. 3	1.1	1.1	1.1	1.0	1.0	N/A	N/A	N/A
Alt. 4	1.2	1.1	1.1	1.1	1.0	N/A	N/A	N/A
Alt. 5	1.2	1.1	1.0	1.0	1.0	N/A	N/A	N/A
Alt. 6	0.8	0.9	1.0	1.0	1.0	N/A	N/A	N/A
Alt. 7	1.3	1.5	1.7	1.7	2.1	N/A	N/A	N/A

Base – 1980 CSO, 5.5, 1yr
Alt. 1 – 1983 GAM, 5.5, 1yr
Alt. 2 – 1983 GAM, 5.5, 1yr*
Alt. 3 – 1980 CSO, 5.5, 1yr, 8% lapse
Alt. 4 – 1980 CSO, 3.5, 1yr
Alt. 5 – 1980 CSO, 5.5, 0yr
Alt. 6 – 1980 CSO, 5.5, 2yr
Alt. 7 – 1983 GAM, 5.5, 1yr, 8% lapse
* Later ages extended

past the preliminary term period and would be receiving first, second, and maybe some third-year mid-terminal reserves. We did the valuations at the three points in time, 1991, 1996, and 2001 to show what the potential impact over time would be under the different reserve standards (Table 3). The lower left-hand quadrant would be indicative of a new reserve standard, whereas, the other three quadrants would be representative of methods that companies currently would be using: again, 1980 CSO, one- or two-year preliminary term, and several different interest rates. You can see the dramatic increase by the year 2001. The reserve ranges from $22 to $26 million under current standards compared to $38 million that the new reserve standards would imply.

Table 4 looks at the same block of data except uses the additional reserves defined as the means in excess of the gross unearned. Compared with the previous chart this illustrates that you're starting out with a lower value, perhaps significantly lower because of the loading that you're able to take credit for in the mean reserve. Whereas, by the time you get to year 2001,

TABLE 3

Live Block of LTC Business
Impact of Varying Reserve Basis
Mid-Terminal Reserves

As of*	Basis: 1980 CSO 1 Year PT 5.5%	Basis: 1980 CSO 1 Year PT 3.5%
12/31/1991	3,971	4,634
1996	14,473	16,495
2001	23,982	26,776

	Basis: 1983 GAM 1 Year PT 5.5%	Basis: 1980 CSO 2 Year PT 5.5%
12/31/1991	5,425	2,112
1996	20,864	12,881
2001	38,033	22,801

* Using 12/31/91 Inforce

TABLE 4

Live Block of LTC Business
Impact of Varying Reserve Basis
Excess of Mean Reserves over GUPR

As of*	Basis: 1980 CSO 1 Year PT 5.5%	Basis: 1980 CSO 1 Year PT 3.5%
12/31/1991	3,278	4,095
1996	13,793	15,971
2001	23,302	26,252

	Basis: 1983 GAM 1 Year PT 5.5%	Basis: 1980 CSO 2 Year PT 5.5%
12/31/1991	4,816	1,435
1996	20,275	12,311
2001	37,444	22,230

* Using 12/31/91 Inforce

that amount of loading that you get credit for is constant but it becomes a much lower percentage of the total reserve that's in place. So your reserve increases over time are heightened through this particular method.

MR. JAY: It is really surprising to me and maybe to some of you how dramatic the impact of the mortality assumption is on long-term care reserves when mortality is not the major coverage. Mortality only impacts the pattern of total terminations over the lifetime of the policy.

MR. ABROE: That's correct. I should point that we used an 8% lapse assumption in several of the tests, that is there is a maximum 8% for mortality and lapse.

MR. JAY: Would you like to show us the results of the survey now?

MR. ABROE: We sent a questionnaire based on the Health Insurance Association of America (HIAA) to about 65 companies of long-term care (Table 5). Of the 65 companies, 30 companies responded to the survey. The survey was intended to cover companies writing individual health and group health long-term care products. The survey was not intended to cover life benefits, accelerated benefits, or Continuing Care Retirement Communities (CCRCs). The last point to mention is that the companies surveyed represent about $740 million worth of long-term care premiums so it is a substantial portion of the total current market.

There are two areas that we want to cover very briefly. The first area is the claim liability methods that companies are currently using. The first question is, what method are companies using? Table 6 shows the tabular method is by far the prominent method being used. Sixty percent of the companies use that method. The case method, surprisingly, comes in second. I wouldn't have predicted that in advance. Some companies use an expected loss ratio, developmental method, or various other methods, but tabular and case methods are the two predominant ones.

TABLE 5

Companies Participating In Survey

AAL	The Hartford
Aegon (Life Investors)	JC Penney Life
Aetna Life & Casualty	Mutual of Omaha
American Integrity	Mutual Protective
Amex (American Centurion)	Pioneer Life of Illinois
Bankers Life & Casualty	Principal Financial Group
BC/BS of Connecticut	Pyramid Life
BC/BS of Rochester	Sentry
California Blue Cross	Standard Life & Acc.
Capital Holding	Time Insurance
Central States Health & Life	Transport Life
CNA	Travelers
First Penn-Pacific	Union Labor Life
John Hancock	

Above companies represent $740,000,000 in LTC premiums.

TABLE 6

Claim Liability -- Method

Method	Number of Companies Reporting
Expected Loss Ratio/Claim Cost	2
Developmental	1
Tabular	18
Case	5
Combination/Other	2
Unknown	2
Total	30

The next question that we asked was, in developing your claim liability, did you explicitly or implicitly include any margins in your long-term care liabilities or claim liabilities? Six of the companies indicated that they used an explicit method, a specific loading factor of one form or another (see Table 7). Eighteen companies indicated that they had implicit or implied margins

in the liability. To give you an example, a response of one company indicated that, yes, there is an implied margin since we used the 0% interest rate. There were a number of companies that made that type of a remark.

TABLE 7

Claim Liability -- Margins

Margins	Number of Companies Reporting
Explicit	6
Implicit	18
No Margin	6
Not Specified	0
Total	30

Because the tabular method was the predominant method, I'll share a couple of other survey results. The question asked was, what was the experience base that was used in the tabular method? As you can see from Table 8, seven of the 18 companies using the method said the 1985 Nursing Home Survey, five said their own company experience, and three said pricing assumptions. I would interpret pricing assumptions in this case to mean the 1985 Nursing Home Survey or something similar to that. Probably at least half of the companies are using the 1985 Nursing Home Survey, but there are five companies that indicated their block of business would be sufficiently large enough us use their own company experience.

TABLE 8

Claim Liability -- Tabular Method
Experience Base

Source	Number of Companies Reporting
1985 Nursing Home Survey	7
Company experience	5
Pricing assumptions	3
Other	1
Not stated	2
Total	18

The next question that we asked was, what interest rate is being used in the tabular method? Three companies are using 0%, one is at 3.5%, three are at 5%, nine are at 5.5%, and one is at 6% (Table 9). Many companies indicated in their survey that they were tying the interest rate on the tabular method into the interest rates on their contract reserves and varying the results by issue year. Those fall into the 5.5% category since that's the rate that the companies were currently using and that was the context of the question.

TABLE 9

Claim Liability – Tabular Method
Interest Rate

Rate	Number of Companies Reporting
0.0%	3
3.5%	1
5.0%	3
5.5%	9
6.0%	1
Unknown	1
Total	18

The last question we asked is whether companies had changed their method over time. I think the important thing to glean from Table 10 is that there are six companies that switched to a tabular method. That implies that more companies will probably switch to a tabular method going forward as the experience base or the volume of the business grows.

TABLE 10

Claim Liability – Changes in Methods

Changes	Number of Companies Reporting
None/Very Little	16
Fewer Approximations/ More Data	3
Switched to Tabular	6
Other/Unknown	5
Total	30

Let's discuss the contract reserves that companies currently are using. First is the interest rate, and you can see from Table 11 that there's a spattering all over, but the 5.5% again tied to the prevailing life rate which predominates. The companies noted as "combination" would typically be companies that used a lower interest rate previously, and are using a 5% or 5.5% rate currently.

The mortality basis is 1980 CSO (Table 12). That's the standard. Five use a combination of 1958 CSO and 1980 CSO. Again, that would be for companies whose earlier issues were reviewed using the 1958 CSO.

TABLE 11

Contract Reserve -- Interest Rate

Rate	Number of Companies Reporting
3.0%	2
4.5%	1
5.0%	2
5.5%	16
6.0%	2
Combination	5
Unknown	2
Total	30

TABLE 12

Contract Reserve -- Mortality Basis

Basis	Number of Companies Reporting
1980 CSO	22
Combination 1958/ 1980 CSO	5
Other	1
Unknown	2
Total	30

MR. JAY: No one is using an annuity table?

MR. ABROE: Absolutely nobody is using the 1983 GAM annuity table today.

The next area that we looked at is the morbidity basis for contract reserves (Table 13). Here, 12 companies indicated pricing assumptions. We believe that those are likely to be 1985 Nursing Home Survey or some comparable source of morbidity. Another 11 companies indicated the 1985 Nursing Home Survey. You see "other government data" as a source, which probably means the 1985 Nursing Home Survey in combination with some other governmental data. Three companies said their own experience. Obviously, the 1985 Nursing Home data predominates.

TABLE 13

Contract Reserve -- Morbidity Basis

Source	Number of Companies Reporting
Pricing	12
1985 Nursing Home Survey	11
Other government data	2
Own experience	3
Industry experience	1
Unknown	1
Total	30

The next area, preliminary term, split almost evenly between one-year and two-year preliminary return (Table 14). The combination one- and two-year preliminary term generally would be companies that use a one-year preliminary term currently, and used a two-year preliminary term for previous issues. But as the survey indicated, there are at least 10 companies still using the two-year preliminary term method.

TABLE 14

Contract Reserve -- Preliminary Term

Preliminary Term	Number of Companies Reporting
1 yr. Preliminary Term	12
2 yr. Preliminary Term	10
Combination 1 & 2 yr.	7
Unknown	1
Total	30

The last item surveyed looks at the reserve method (Table 15). The question was, how are you setting up your additional reserves? Twenty companies indicated that they're using the mid-terminal as their additional reserve, so the total reserves would be the mid-terminal plus the gross unearned premium. Eight companies indicated that they're using the excess of the mean over the gross unearned premium for the additional reserve. In those particular cases, the companies are taking credit for the loading -- the difference in the net versus the gross unearned premium in setting up their reserves. The primary advantage to that method is the minimization of statutory strain in the year of issue.

TABLE 15

Contract Reserve -- Method

Method	Number of Companies Reporting
Mid-terminal plus GUPR	20
Mean reserves	8
Unknown	2
Total	30

MR. JAY: What does unknown mean, Mike? Does that mean that you don't know or they didn't know?

MR. ABROE: It means that we could not decipher the question to a sufficient degree to be satisfied.

MR. JAY: We see a fairly wide variety of methods and assumptions in company practices. Gordon and Tom, we haven't heard from you yet. Do you have some opinions on what companies ought to be using or any observations on what we've just seen?

MR. SKIFF: I have a short opinion and I'm sure Gordon has a longer one. I think it's obvious that people are very concerned about the relationship between statutory reserves and tax reserves. The fact that the great majority of people are using the 5.5% interest rate says to me they're using the maximum rate that they are allowed to by law to minimize the statutory versus tax reserves. They seem to be fairly split between one-year and two-year preliminary term. Again, I've talked to actuaries who say, "Until I can deduct the one-year preliminary term from my tax rate I just can't stand the tax drain caused by using one-year preliminary term." At least my understanding is that the 1958 CSO is the required mortality table for tax reserves and it would be a tremendous strain on companies if we were required by statutory mandate to go to an annuity mortality table if I couldn't also use that mortality table in my tax reserves.

MR. GORDON R. TRAPNELL: First of all, I don't want anything that I say to suggest that there's an easy solution to the tax problem. I want to address what you would put in the basis of reserves if you took the traditional actuarial principles that have worked so well in life insurance annuities and applied them to long-term care. I will make a comment about the tax reserves. I'm sure you've poured over those regulations a number of times trying to figure out what they mean, if anything.

MR. ABROE: Yes.

MR. TRAPNELL: The real problem is that the tax laws are based on a different kind of product from long-term care, and have been applied as a result of historical accidents, not any

legislative design, and are understandably not appropriate for long-term-care policies. Thus the reserves that are needed to meet the obligations of a valuation actuary are very different from those allowed under IRS regulations. Further, since the tax basis may lead to substantially lower reserves than are appropriate from a valuation perspective, insurers face taxes on revenues that they do not really have.

Reserve Basis

Let me first discuss what appropriate valuation standards for long-term care should be for policies that represent real values for consumers, i.e., with guaranteed (i.e., "noncancellable") premium rates, nonforfeiture values and low lapse rates. I will avoid discussion of the lapse-supported products that currently dominate the market place, but address only policies that have lapse rates comparable to whole life insurance policies. When insurers have unlimited rights to raise premium rates and confiscate policyholder equity upon lapse (i.e., without nonforfeiture values), it is not clear that any reserves are needed to assure solvency, since an insurer can raise the premium rate by enough to force enough lapses to assure that premium income will pay claims -- without any reserves. The other extreme case is a single premium policy without nonforfeiture options, since protection is necessarily for life without lapse or premium increases.

The outstanding characteristic of the long-term-care risk is that the incidence of services grows exponentially with age, and most of the benefits for any cohort of issues will be paid between the ages of 85 and 95. (The probability of using services increases approximately exponentially at least to age 100, but mortality reduces the proportions of benefits paid at the higher ages). For most issue ages, this will be many years into the future. As a result, for nearly all benefits payable, the amounts paid will be determined by the maximums in the policy (per day of visit, etc.), rather than the cost of the services. The primary determinants of the cost of benefits are the utilization rates, the rate of investment income, mortality rates, lapse rates if nonforfeiture benefits are substantially less than policyholder equity, and federal income taxes.

Although the investment rate is among the most important, it does not differ from other insurance prospects with similar characteristics, i.e., a set of payments which may be many

years into the future and that are largely fixed in dollar terms (at least as to the amounts payable per day or visit, etc.). In the absence of cash values (which should not be included in long-term-care policies), there is the advantage of limiting the investment risks to earning enough income before the benefits become payable. There is no risk of increased cash outlays when interest rates rise.

Utilization Rates

The most important element of the valuation is the set of assumptions for the benefit incidence, i.e., the rates of admission to nursing homes, the continuation table for length of stay, and incidence and average payment amounts for the various home care or adult day care benefits. The only truly valid basis for these rates would be a study of actual experience for persons insured under long-term-care policies with similar benefits sold under comparable conditions. It will be many years, however, before valid experience is available under policies with comprehensive benefits (e.g., that pay without a prior hospital stay, with home care as well as nursing home benefits, etc.) and relatively low lapse rates. While we wait for enough experience to be gathered and for the Society's Committee on Mortality and Morbidity to analyze it, we are largely reduced to using data from public sources.

As a result of the 1985 National Nursing Home Survey and the tabulations by my colleague, John Wilkin, there is a reliable table of incidence rates for nursing home admissions and continuation tables for length of stay. Unfortunately, there is no equivalent table for home care services, which depending on the benefit structure can constitute as much as half of the benefits payable under a long-term-care policy (but usually much less). Several consulting firms now provide tables (including us) that are suitable for use as the basis of reserves. Some provide for a considerable degree of tailoring for the benefit design, including the types of home care or adult day care services provided, ADL level, and type of limit on daily expenditure.

From the perspective of a valuation actuary, there are reasons for strengthening these assumptions, especially for policies with benefits payable many years into the future. For one thing, the utilization rates in the NNHS reflect the average national experience, which varies

greatly by region and state. An insurer's sales will usually not reflect the national distribution of the aged population, and tend to be greater in areas with higher incidence rates. It is sobering that the experience reported from the Connecticut study showed much longer stays than found in the NNHS, producing overall days per capita that is significantly higher.

The relevant question for the valuation actuary, however, is what the incidence rates will be in the years in which most of the benefits under a long-term-care policy are payable, which may be several decades into the future. This requires projecting utilization rates for 40-50 years. An intriguing question that must be faced is whether the general decreases in mortality rates are accompanied by similar decreases in incidence rates for frail conditions. Three hypotheses can be formed about the impact of lower mortality on frailty rates, and hence on the need for long-term care:

- The optimist view: that lower mortality is the result of improved health generally, which is also accompanied by lower age-specific frailty rates.
- The Darwinian view: that lower mortality is achieved primarily by keeping those alive who would otherwise die, and that the average functioning of those alive at any age is thus progressively worse.
- The obvious intermediate "independent" hypothesis: that age-specific frailty rates are independent of mortality rates.

In the absence of any knowledge on this subject, the prudent course is to presume some increase over time in the basic age specific incidence rates of frailty, i.e., in the proportions of persons at each attained age who will fail activities of daily living (ADLs) or meet other tests of frailty.

Another consideration is possible changes in the proportion of frail persons who are confined, or who use services when not confined. This is an especially important parameter for nursing home confinements because at present there are as many persons living outside nursing homes who would be eligible under most policies if they were to seek admission.

There are three basic reasons to expect the proportion of users to rise over time:

- Changes in the population that will leave a higher proportion of aged individuals without family support that makes staying at home feasible;
- Changes in the supply of nursing home beds, both in number and quality;
- Changes in the interpretation of the insuring clauses in long-term-care policies that make more persons eligible for benefits.

The first factor includes the impact of declining numbers of intact first marriages among aging persons (the kind in which the members are most likely to care for each other), the declining number of children and siblings that might be care givers, a declining degree of general commitment among the population to dedication to family care, etc. The generation now over age 85 where most frailty occurs is unlike those approaching these ages. This was a very tough and self-reliant generation that withstood the Depression without overthrowing the government and fought World War II with minimal complaint. I question whether the generations approaching the frail years will generate as much self-help as these oldsters accepted without question. In contrast, the younger you look, the more pronounced is the trend to smaller family units, living in widely spread geographic locations, with fewer intact first marriages.

There is also the possibility that the low rate of building new nursing homes will be reversed in the future, especially if insurance holdings expand enough to provide the income to pay for the benefits. One should not be beguiled by the trend in nursing home beds per aged population (best measured by the ratio of beds to an age-adjusted demand). There has been a sharp drop in the number of beds per population over age 85 over the last 15 years since "certificate of need" restrictions became prevalent. The result has been a shift toward use of nursing homes for the very frail. But if you look at the trend in nursing home beds per aged population over several decades, a very different picture emerges. Over a long time span, there has been a steady progression to greater use of nursing homes, especially the well-equipped ones. But over the last two decades, the Medicaid program has made state and federal government the primary payers for nursing home care. This has led to restrictions on payment, as the cost of Medicaid

has ballooned to bust most state budgets and add significantly to the federal deficit. This trend could easily become reversed if there is enough private funding from insurance for nursing home care. Instead of certificate of need (CON) we could have a national policy of building new nursing homes to meet the urgent needs of our senior citizens. At a minimum, the rate of new beds should reflect the aging of the population and the reduced availability of family care.

There is also the likelihood of "judicial creep," the process through which the proportion of persons found eligible under a specific policy provision tends to be broadened over time from "hard cases." Most of the critical language in the insuring clauses on long-term-care insurance policies is new and untested in court. The one thing that the experience of insurers with the court system makes clear is that it is unlikely that the policies will be interpreted to mean what they say. Only time will tell what the courts will decide the requirements to fail such tests as activities of daily living mean in practice.

Offsetting some of these increases in utilization rates, there may be improvements in productivity that reduce the cost of providing care in a nursing home setting, such as robots and electronic monitoring. But quality enhancements are also likely that will more than offset any cost savings, given the low level of quality that generally prevails in nursing homes. And if the quality of nursing homes improves enough to make them preferred places to stay, much larger proportions of those whose condition makes them eligible for benefits may take advantage of the insurance to help pay for it. Of course, the cost of care will also increase to reflect the higher quality of care, so that other sources of income will be needed to afford such luxury nursing homes. Nevertheless, on balance, there is reason to fear major increases in utilization rates for nursing homes, and consequently, it would be prudent to include a margin of safety by projecting increases in basic utilization rates of perhaps 1% per year.

Mortality

The only truly valid basis for the mortality table would be a mortality study of actual experience for persons insured under comparable long-term-care policies. The study should take into

consideration select and ultimate mortality rates, perhaps in relationship to established mortality tables. While we wait for enough experience to be gathered and for the Society's Committee on Mortality and Morbidity to conduct such a study, we are reduced to speculation concerning what the most valid analogy is for the cumulative selection forces that will determine mortality rates for long-term-care policyholders.

Given the uncertainties and the responsibilities of the valuation actuary, however, there is an important proviso. That is that uncertainty should be resolved in the direction of prudence. If it is unknown, for example, whether mortality rates under long-term-care policies will be more like annuities or life insurance, the prudent basis for reserves is the mortality rates of annuities.

There are two primary influences on the selection underlying the mortality of long-term policyholders: the expectations of needing benefits and, if lapse is a possibility, the expectation of continued need at each premium payment date. In each case, the prospect for need is equivocal: the perceived need is greater with a prospect of ill health, but less if the applicant or policyholder does not anticipate living long enough to use the benefits. Which of these contending forces is the stronger is unknown, and the process through which they are manifest is not necessarily logical. When faced with unknowns, the valuation actuary should pay attention to what is in the policyholder's economic interest. Benefit payments will be higher if mortality rates are low, since utilization rates rise sharply with age. Thus the prudent choice of mortality rates is an annuity table.

The choice of actuarial assumptions should reflect the degree of incentives as well as their direction. Thus it is reasonable to suppose that the degree of selection by long-term-care applicants and policyholders is not so strong as found in individual single-premium annuities, especially those without guaranteed benefits. But the kind of mortality found in group annuities, which reflect average mortality among employed individuals at pre-retirement ages and those electing annuities at retirement (normally with some guarantee period), might be a reasonable

compromise. Since lower mortality increases benefits, the mortality rates should be fully projected by year of birth cohort.

At the other extreme would be a life insurance table such as any of the CSOs. The CSO tables have positive margins to produce higher mortality to provide a margin of safety in life insurance policies. But higher mortality reduces the cost of long-term-care insurance. The margins for ages over 100 are particularly conservative (for life insurance), since the table assumes everyone dies at age 100. Further, it is based on relatively old mortality experience and not projected for future declines in mortality. In addition, the incidence of the table is very different from general mortality statistics, such as for group annuity experience or general population data.

Some have argued that antiselection against insurers will produce insureds with higher mortality rates as a rationale for using a table such as the CSO. This contention, however, presumes irrational conduct by the applicants, who must live to frail elderly ages to be likely candidates for long-term care. It has seldom proved prudent for insurers to presume that insureds would select in a way that it is profitable to the insurer, and from the perspective of the obligations of a valuation actuary, this cannot be assumed without very strong evidence from actual experience to justify it.

Lapse

To the extent that a product is supported by lapses, the lapse rates assumed may be a major component of the actuarial assumptions. Here again there is no real substitute for actual experience, which for most offerers is only a few years. Although some insurers have been selling versions of nursing home policies for over a decade, most of these early policies had very limited benefits compared to the policies now sold. Further, the appearance of policies with publicly sanctioned improvements (e.g., eliminating the prior hospital stay, inflation protection, including home care, etc.) has inflated the lapse rates for these older policies. Even for those companies that have been selling for over a decade, there are so few left that it is difficult to establish what lapse rates are in the longer run.

Again the relevant question is what is prudent to use as the basis of valuation standards, rather than what reflects the best insight into the level of lapses that will occur. With the paucity of experience to rely on, the prudent course is to assume that the actions of the insured will reflect their financial interests, and that they will be come increasingly reluctant to forfeit ever larger amounts of equity in the policies as they age. Thus, the lapse rates assumed in the longer run should constantly decrease to reflect the large losses that the insureds will suffer if they lapse. The most prudent assumption would be that lapses cease after some duration.

Premium Rate Increases

An implicit risk in any long-term-care policy that is supported by lapses is that premium rate increase requests will be honored. There are reasons to anticipate that rate increases may become extremely difficult to obtain in some states. As the public understands the fraud in policies that permit rate increases without nonforfeiture values, more and more insurance departments, pressed by consumer representatives, will simply refuse all requests.

Tax Reserves

With regard to the critical actuarial assumptions, the IRS will only recognize reserves that are based on a "recognized" morbidity table, 1980 CSO, and an interest rate no greater than that promulgated by the Treasury, that is essentially the current rate on a 10-year Treasury bond. Reserves must be on a two-year preliminary-term basis. There is no requirement that lapses be taken into account.

Utilization

There would appear to be no impediments to using the tables compiled by John Wilkin from the NNHS as the basis of reserves for nursing home benefits. Further, adjustments can certainly be made to reflect the distribution of policies sold by state, using the ratio of nursing home beds to the population over age 85 (the primary users of nursing homes). Adjustments can also be justified for other reasons as well, but with a lower probability that they will be accepted by the IRS if they were subjected to an audit. These would include adjustments for a projected positive trend in utilization rates, for differences in the nature of the insured group

(e.g., higher utilization rates to reflect the average income of purchasers, antiselection by persons on the basis of family histories or insight into the chances that other family members would keep them at home, etc.)

For home care there are no established tables. Several consulting firms now provide tables that would probably be acceptable.

Mortality

The regulations appear to allow some wiggle room that permits the actuary to make "appropriate adjustments" to the CSO Mortality Table. Justifying adjustments should be easy. In fact, as a valuation actuary, it would be difficult to justify use of an unadjusted CSO mortality table as the estimated mortality rates for any long-term policy that will pay more benefits the longer a person lives.

The first adjustment would be to remove the margins. The next would be to extend to age 110 or age 115, which can be justified by national mortality data. Next reduce mortality rates at ages over 75 by factors that bring the incidence of the table more in line with group annuity experience. Then project all rates to the average year to which the policies will be held (which may be easier to explain to the IRS than actual year of birth cohort projections). Select rates for the early policy durations would be appropriate. Additional adjustments can be made if each is "justified" in an academic manner, i.e., based on something found in print (the "literature").

The critical question is what adjustments the IRS would allow, if it were to contest a filing. My experiences with the IRS (both personal and professional) amply proves that this is not a question of logic, or even legal position, but more one of current IRS policy. If you are prepared to take the IRS to court, i.e., the amount of money involved is large, its position can be radically different than if you are not. As one IRS agent summarized it succinctly for me: "We do not approve these applications if it will reduce tax income, regardless of merit. This is not the Justice Department." Accordingly, I will not try to advise what the IRS will approve, or what an actuary should advise. I will only note that the technical case for the adjustments

noted is beyond rational question and that it will only be an issue if the IRS decides to make it one. Currently the IRS's policy with regard to long-term-care reserves is to avoid making any decisions that would restrict future policies.

Interest

A few years ago, the limits on the interest assumption were confining, since short-term Treasury rates were higher than many actuaries believed it was safe to assume for the long run. The current low interest rate policy of the Federal Reserve, and the continuing political pressure on the Fed from threats to its independence -- has cured that problem, at least for the next few years.

Lapse/Rate Increases

The absence of any IRS requirement to include lapse rates or provision for premium rate increases appears to give "guaranteed renewable" policies without nonforfeiture values complete freedom to claim any reserves they wish. Insurers of policies with nonforfeiture options equal in value to reserves, however, do not obtain any relief from this provision. Thus tax policy promotes issuing policies that at least meet the needs of consumers. This is sort of par for the course for federal regulation of insurance.

Two-Year Preliminary-Term Basis and DAC

The most egregious failing in the IRS regulations from the perspective of offering products that meet consumer needs is the requirement for two-year preliminary-term reserves. This basis may be alright for products that use up most of the first two years of premiums in sales and issue-related expenses, but penalizes a product designed to meet policyholders long-term needs. A policy with guaranteed rates, nonforfeiture options, and full indexing for inflation protection and that minimizes sales and issue expenses will have a positive cash flow even in the first year, and if the underwriting is any good, the policy will provide almost all of the second-year premium for reserve buildup. Yet tax policy is to declare all of the cash flow for the first two years to be taxable income, and add to that the absurd DAC tax for good measure!

The effect is to tax as income revenues that the insurer does not really have, or rather needs to be setting aside for benefits to be paid many years in the future. The analogy that I like to use is to the Federal Reserve taking a certain percentage of bank deposits as reserves. The effect is that banks cannot pay as high an interest rate since they cannot lend out the portion of deposits that are on reserve with the Fed. Similarly, insurers are forced to "deposit" with the Treasury up to 34% of the cash flow from the policies and another 7.7% of each premium until such time as actual benefit payments and expenses exceed income on the policy by enough to be able to claim them as deductions. If the corporate income tax remains at 34%, the money will be reclaimed. (If the tax rate is increased, there will be a slight positive investment return). The overall effect is to cut deeply into the amount of investment income that insurers can credit on long-term-care policies, and discourage products that meet consumer needs the most.

Commentary

How did we get into this state of affairs? The tax policies relating to long-term care appear to be the result of historical accidents. First, the tax policy for A&H lines evolved to regulate that small portion of the market for health insurance that sought to claim deductions for reserves on individual policies. Since the average duration of these policies was only a few years, mortality rates were not an issue. Further, since lapse rates were not included, higher mortality rates just offset lapses to some extent (although the incidence is all wrong). The only companies that had a major stake in the reserves were those with policies that tended to stay on the books for a number of years, especially those selling cancer insurance and similar franchise products. The major insurers of individual health insurance policies either were not taxed, did not claim reserves, had other deductions that were easier to claim, or had other issues that were much more important. Following the principle of the squeaky wheel getting the grease, policy has largely evolved to meet the needs of a minor segment of the health insurance market.

An additional accident was the classification of all long-term-care policies as Medicare supplement insurance. This occurred as a result of laws passed to regulate Medicare

supplement that defined it to include any policies with a nursing home benefit -- despite the very minor coverage of nursing homes found in either Medicare or most Medicare supplemental insurance policies. Thus although long-term-care policies are much more like long-term disability or life insurance, they receive the regulation that evolved for issuers of Medicare supplemental policies (other than Blue Cross and Blue Shield plans) and specialty products such as cancer insurance.

The critique above suggests an obvious agenda for reform, at least for any insurers interested in creating a market for products that serve both consumers and their own interests, i.e., long-term vehicles for prefunding the cost of the services needed by over half of all aging individuals (and not just the winners of the tontine of 5% plus lapse rates found in most policies sold). Such products would have the characteristics that made whole life insurance the foundation of the insurance business for many decades -- for both consumers and insurers. It is very discouraging that tax laws undermine offering such products.

The reform should have the following features:

- Up to full net level reserves if an insurer demonstrates that expense rates justify the reserve method.
- Maximum interest rates no higher than found on Treasury bonds with maturities that match the investment horizon of the policy series.
- Group annuity mortality, with full projection by year of birth cohort, with provision to substitute any mortality tables derived from intercompany experience.
- Provision for adjustments for the actuarial characteristics of the insured group, and that are projected for changes that can reasonably be forecast to occur in the future.

If the insurance industry had pushed for these changes five years ago, there would have been little opposition, since the staffs of the Joint Tax Committees and Congressional Budget Office would have estimated the impact to be trivial. Now, however, a significant cost would be "scored" and passage would be very difficult to obtain. Thus our national policy of

discouraging responsible long-term-care policies and rewarding irresponsible policies is likely to continue for the indefinite future. This can be added to the many ways in which our tax system and federal social insurance systems discourage savings and investment and encourage consumption so that politicians can deliver more benefits to constituents now, and pass the bill to future generations.

There's one more feature worth discussing -- a disability-based insurance clause. This is a policy that doesn't require a service at home for payment, but pays simply because a person is in the insurance status, such as failing a required number of ADLs. In other words, it's really a disability policy where disability is defined to be failure to be able to perform a certain number of activities of daily living or perhaps to be in a certain mental state. When you consider the potential for the courts to decide what that means over the long run, I think you need some very positive margins in your disability rates to ensure that insurance companies will be solvent in the long run.

MR. JAY: Thank you, Gordon. We have already gotten into the next topic in talking about claims as well as other methods and assumptions for reserves. We see fairly wide fluctuations in claim costs and persistency from one company to another or one product to another. Does anyone else have comments on how that's taken into account in pricing and reserve assumptions? Tom, do you have a comment on that?

MR. SKIFF: Maybe. I know that we are one of the companies that takes persistency into account in our reserve assumptions and, obviously, we're big enough that we think we have a reasonably good handle on what our persistency is. I also know when comparing rates to other companies, that there's a wide variety of opinion about claim cost assumptions; at least that's the only thing I can come up with to explain why those other companies are charging less than I am.

MR. MUNSON: Burt, I might throw in that on the issue of different claim costs, some of you know that the six pricers among the Ad Hoc Actuarial Group for the NAIC did pricing

of long-term care for them in our study that was released on June 2. We tried to define a set of common policy specifications, so we're pricing the same policies. We defined common pricing assumptions except for claim costs. Of the six pricers, three are on this panel (or represent those in our offices who did the pricing). Look in that report and you see quite a wide divergence of price among those six people. Allegedly these are six people each of whom knew what they were doing, or at least had some experience in pricing long-term care, and tried to pin down the assumptions as much as possible. That illustrated to ourselves and the regulators, of course, that there is some divergence. There are several valid reasons why they're different. But I think we were surprised how different our prices came out, even though we tried to work from a common base.

MR. JAY: I guess down the road we'll have better industry experience to work with than we do today and I know that there is a Society task force on long-term care costs. Mike, you mentioned that you had recently visited with the chairman of that task force. Do you have any predictions on what we might expect in the near future?

MR. ABROE: Yes, thanks. There are three things that I'll mention. One is that it's anticipated there will be an update of the Wilkins report, the 1985 Nursing Home Tables. This particular update is intended to include ADL variations. The original report did not. Indications are that this is at least several months away, so I would expect that this time table still holds somewhere around the end of the year perhaps.

The second thing is the Intercompany Experience Study. This is intended to include experience through 1989 and it also might include 1990 experience. This is, at a minimum, at least several months away, probably into next year at the earliest.

A third area that the Society Committee is looking at, although this is on the back burner, is gathering state experience from various sources, but considering the timing of the other two reports this is something that would certainly be a long time away.

In addition, Duke University is currently studying most recent governmental nursing home data (the 1990 Nursing Home Study 3).

MR. JAY: Does that mean the government presented it to Duke and then to no one else for some time?

MR. ABROE: My understanding is that Duke has an exclusive on that right now.

MR. TRAPNELL: I'd say only if you enjoy useless higher algebra would you want to be involved with the Duke mathematics.

MR. JAY: Are there any other comments or questions in the area of methods, assumptions, or claims before we move on to the next topic? The next topic should be a fun one to talk about. It's one in which there has been a lot of controversy and discussion in recent times and that has to do with nonforfeiture options. I'd like us to address what the various nonforfeiture options are that are currently seen in long-term care policies, what regulation with respect to nonforfeiture is being considered by the NAIC, and what will the Ad Hoc group of actuaries that is advising the NAIC recommend? Who would like to get this discussion started?

MR. MUNSON: Maybe I should, since the report has been sent to about 30 people Airborne from Milwaukee. The 30 people are an Ad Hoc group of 10 actuaries, the NAIC Long-Term Care Task Force, and the nine coordinating committee members that are leading the Advisory Committee to the NAIC, the latter consisting of some 40-50 people. The NAIC is going to address it in a few days in Cincinnati.

Let me just quickly say a word or two, because we could turn this into a nonforfeiture benefit session if we aren't careful. I think what we want to make sure we relate that to valuation and solvency.

The forms of nonforfeiture benefits are the forms we've heard about before -- kind of a life insurance analogy of cash, reduced paid-up and extended term. But the form of choice among regulators and the consumer groups these days is shortened benefit period, a benefit form that wasn't even mentioned because it wasn't known a year ago when the Actuarial Standards Board (ASB) adopted the long-term care standard of practice. It's kind of a merger of reduced paid-up and extended term. It's the benefit of choice, I say, because that is what the NAIC asked us to price and study in the work we've done this summer. It's the benefit of choice said publicly by the consumer representatives on the Advisory Committee. So that's the one that's going to get the attention.

MR. MUNSON: Well, Jim Glickman has a different version of it than was in their policies sometime ago. In some ways I've been "blamed" for the NAIC's version in the last six months. We put it in a report we did for the American Association of Retired People (AARP) and it did strike the fancy of several people. The NAIC will take some position on this soon and I believe it will adopt something by December. The question is whether it will be mandatorily included in all long-term care policies or whether it must be offered. Clearly, we're going down a path where policies will have more and more benefits and, perhaps someday, mandatorily included long-term care nonforfeiture benefits. How rich, how thin? Things like that bear a lot on valuation. It just adds to the back-end loading challenge we have and the uncertainty of solvency for this product.

MR. JAY: Very good. Mike?

MR. ABROE: I'd like to add more comments and highlight on a couple of things that Bart mentioned. These are going to be based on the work that was done for the ad hoc Nonforfeiture Task Force. There does appear to be a very significant increase in valuation risks when we start talking about shortened benefit periods (SBPs). The risk is incurred primarily because the shortened benefit period significantly back ends the risks for the insurer or the risktaker. For example, let's look at what I would consider a base lapse rate scenario or somewhat of a low lapse rate scenario compared to many products in the industry today

(Table 16). A minimal five-year shortened benefit period schedule will result, in the same number of people in current active premium payment status as in a shortened benefit period 20 years after issue. Thus, in a sense you double the number of insureds under risk by adding the shortened benefit period. Once a lapse occurs after five years, the person goes on shortened benefit period and mortality thereafter is the decrement. So as lapses occur after the 5th year in this particular scale they keep on adding to the books of insureds under the shortened benefit period and will lapse away only by mortality.

TABLE 16

Implications of SBP Non-Forfeiture
Inforce Count by Duration (1000 Policies Issued)
15/10/5 Lapse Scenario

		Additional Policies on SBP Status	
Duration	In-force	5-Year*	10-Year*
5	631	0	0
10	403	111	0
15	240	147	64
20	129	132	76
30	28	62	42
40	6	25	18
50	1	7	5

* SBP Threshold: Lapses after year eligible for SBP

The second point is if you look at a higher lapse rate scenario at the same 20-year period after issue, the number of people under the shortened benefit period are three times as large as those paying premiums (Table 17). So you can obviously see the risk implications that you've got.

MR. JAY: Wow!

TABLE 17

Implications of SBP Non-Forfeiture
In-force Count by Duration (1000 Policies Issued)
30/20/10 Lapse Scenario

		Additional Policies on SBP Status	
Duration	In-force	5-Year*	10-Year*
5	416	0	0
10	204	132	0
15	93	157	59
20	39	129	63
30	5	52	29
40	1	19	11
50	0	5	3

* SBP Threshold: Lapses after year eligible for SBP

MR. ABROE: And, again, I would indicate that this is a shortened benefit period that begins five years after issue. You obviously can have the situation where once a person goes on a shortened benefit period, there is no rate relief available. The only relief you have would be the excess interest on reserves that you are holding.

The next point I'd like to make is that the shortened benefit period increases by duration. The additional morbidity under the shortened benefit period tends to occur at later durations. During the first five years after issue, there is no additional mortality by adding this particular provision since there's no shortened benefit period available until the sixth and subsequent year's lapse (Table 18). By the time you get 21-30 years out after issue, you'd expect your claims under the shortened benefit period to be 33% of your claims under the active premium paying status. By the time you get 31-40 years after issue your expected claims are going to be 82% of those under an active premium payment mode. When you think of those increases in claims over the lifetime of the business and you reflect that this is a minimal shortened benefit scale that represents, over the lifetime of the business, an additional 5% level premium charge, you can see how much this back ends the additional morbidity risk. This is the minimal scale that we tested in doing the shortened benefit period scales. It's a scale that starts at 1% of benefits at

the end of five years, increasing 1% per year thereafter. So if you get a 33-82% increase in benefits through a minimal scale, you can let your mind imagine what the increase in risk would be under higher scales.

TABLE 18

Durational Claims Implications of SBP

	Ratio of Anticipated Claims With and Without SBP	
	5-Year	10-Year
1-5	1.00	1.00
6-10	1.01	1.00
11-15	1.06	1.01
16-20	1.14	1.06
21-30	1.33	1.18
31-40	1.82	1.54
Premium Ratio	1.05	1.02

Obviously, this increase is compounded by the aging curve and is also compounded by benefit inflation. So there's some very serious decisions that the valuation actuary is going to have to make in terms of loadings and in terms of charges that have to be put in for appropriate margins for conservatism if the shortened benefit period approach winds up being adopted by the NAIC.

MR. JAY: Is there any chance that it could be mandated on a retroactive basis and apply to policies already in force?

MR. ABROE: Oh, I hope not.

MR. TRAPNELL: Not without major premium increases. I want to ask Bart to give us an illustration of what the shortened benefit period percentages would be.

MR. MUNSON: I don't know what they would be, Gordon. We priced, as Mike said, many scales that they asked us to. Let me describe what some of them are. They asked us to price

SBP scales starting at the end of policy years three, five, seven, and ten, so we've done all four of those. We've started at 1%, going up 1% a year, which is terribly small, and we've said that to them. We think they're inconsequential and you shouldn't consider some of those. We've started at what I call the cliff start where if it starts at duration *X* you start with *X*%; so as Mike was describing, you start at duration five at 5%, and then we priced going up at 1%, or 2%, or 3% per year.

MR. JAY: Of the maximum benefit period specified?

MR. MUNSON: And those would all be applied to the maximum benefit period for the base policy regardless of the issue age and regardless of whether the policy has inflation protection or not. We've shown all of those combinations in the report that's currently in the mail. We have not told them, and it's not our business to tell them, what scale they ought to use. There is no one scale that always does a good job, I think, under most definitions of "good."

Back up one step. We spent most of our summer fussing with trying to do a baseline scale based on essentially natural reserves. What is the balance between lapsers and persisters that one ought to strive for? Well, that's in the eye of the beholder and there are many beholders on this subject. But what is a rich scale? What's a thin scale? We did come up with scales that vary by issue age and with and without inflation protection. All six pricers did that. We worked on it for a long time to give a feel for what is a reasonable return. It would be a scale that's insensitive to lapsation after duration five, or seven, or ten. Now, we're not suggesting all that ought to be given back, necessarily, but that's our baseline scale and then we compare all these other predefined scales to it. I have no idea which one the NAIC will favor. None of those predefined scales fits very well with all those combinations. I can't really answer your question better than that.

MR. TRAPNELL: But I would point out that the purpose of a nonforfeiture benefit is to make the ongoing policyholders indifferent as far as the prices they pay relative to the lapsing policyholders. Another way of looking at it is if the insurer does not alter the premium that

they charge with a high or low lapse rate schedule, the nonforfeiture benefits will be perfectly priced or perfectly set. And with the types of scale that you all have been investigating, it would appear to me to be fortuitous if they work out that way.

MR. MUNSON: We tried to do that with this baseline set of scales to illustrate where that magic might fall, although we say that's a range not an exact scale in any event.

MR. TRAPNELL: Of course.

MR. MUNSON: And so we tried to show that with this natural reserve work we did.

MR. ABROE: Part of the problem with a couple of the scales that follow the natural reserve approach is they produced numbers or benefits that appear to be significantly less than what some of the people putting pressure to include the shortened benefit period would indicate they consider to be a reasonable scale.

In addition, because the shortened benefit period does increase the long-term risk I think that there would be additional risk margins or other margins that an actuary may consider to be able to cover the long-term care risk or the increase in the risk by the addition of the shortened benefit period. Those are issues that the pricing actuary and valuation actuary would need to consider.

MR. TRAPNELL: I have two responses.

First, it is not clear that rate increases are the right answer to the problems faced by insurers in forecasting the cost of long-term care. Rate increases penalize those aging policyholders unlucky enough to be still alive and paying premiums. Reasonable margins in the premium rates and perhaps lower target loss ratios would be more appropriate responses to the risk.

Second, I think it is important to distinguish between the traditional problems that insurers have dealt with and the unique new risks posed by insuring this new product. There is a vast difference between requesting a rate increase because the insurer overestimated the lapse rates or the investment income than in missing an abrupt change in the supply of nursing home beds or a court case that forces payment for home care for anyone with normal aches and pains who would like help with the chores. I see no reason why insurers should be bailed out for the inability to forecast or make adequate margins for identifiable risks.

Another observation is that the question of guaranteed rates may be settled for insurers by regulators, when the full facts of the situation become known well enough to provide a rationale for them to refuse requests for rate increases. This is a real danger faced by many insurers issuing products today for which they appear to be unaware. I expect that within another five or ten years, it will become very difficult to obtain premium rate increases based solely on an insurer's loss ratio. Insurers may have to demonstrate that there have been changes in circumstances that could not reasonably be predicted by a prudent actuary to support a case for higher rates. This may be difficult to do under any circumstances, but if there is an overreaction to the present stance of the insurance business (as seems to occur with some regularity in public processes), it may be impossible for even the most responsible insurers to obtain rate increases for completely valid reasons. Further, if these are genuine risks, then the valuation actuary should take them into account.

It is important that the elements of determining nonforfeiture values be consistent with guaranteed prices as opposed to guaranteed renewable premium rates, because in the long run, that's where the industry will likely wind up.

MR. JAY: With guaranteed prices?

MR. TRAPNELL: Oh, I think prices will be fixed effectively within five or ten years. I ascertained this from the perspective of some of my clients with Blue Cross/Blue Shield plans in heavily regulated states. During long discussions with them they were unable to provide a

scenario in which they'd be given a rate increase for a long-term-care product. If that's your perspective, you are, in effect, guaranteeing the rate. And I think there's the same potential with this product for organizations that represent the aged other than AARP that, of course, has a vested interest in rate increases with its own products. These consumer organizations must understand that there aren't the same reasons for giving rate increases in this product that you have for the hospital/surgical policies or Medicare supplement policies. I think in state after state there's going to be inexorable pressure on insurance commissioners not to approve them unless the insurance company can point to some set of circumstances that could not have been predicted by a reasonable actuary or prudent actuary. Although I would be interested in the perspectives of the other people on this panel as to what those circumstances may look like.

MR. JAY: Any reaction?

MR SKIFF: I am the one actuary up here who really has to live with rates and probably will have to be at least responsible for the person signing the Annual Statement of Opinion. I am responsible for the poor valuation actuary that's actually going to sign my statement. I think we can't take the point of view that we can't change rates in the future when the potential changes in utilization that Gordon has pointed out in detail and at great length might occur. We have to presume that he is clairvoyant and take those into account in our current pricing. Therefore, I think it is unreasonable. We should be able to use relatively good current experience and then adjust those rates as the potential of these changes actually occurs. I would also say the same about regulatory mandates. For example, you asked if anyone is talking about making nonforfeiture benefits retroactive. Although it gives me a heart attack to think that that would happen, the reality is I know there has been more than one discussion about that type of retroactive change. The fact that I could not get a rate increase to help me in that situation is totally unreasonable to me. I agree that if I don't accurately predict my own expenses, that's probably not reasonable and I would have a hard time getting a rate increase. But I know that proposals on limiting or eliminating rate increases are farther out than five or ten years. We might have a much smaller private insurance market than we have today.

MR. MUNSON: It was mentioned earlier in the discussions that it may be 20-30 years from now before there is any accurate experience on nursing home benefits.

MR. JAY: Industry experience?

MR. MUNSON: Industry experience, etc. It could be the death of the industry if there would be noncancellable pricing without any accurate experience in which to even base any projections.

MR. TRAPNELL: I would disagree with that. I just think that actuaries will have to do their homework and demonstrate a lot more expertise than they've had to in a product that had no risk because they knew that when you raised the premiums you can always increase the lapse rates.

MR. ABROE: Which led to worse experience, which led to rate increases.

MR. JAY: Are there any other comments with respect to nonforfeiture values or other factors that affect premium accuracy that are difficult to predict and control. How about the impact of regulation? Do the regulators help or are they part of the problem?

MR. MUNSON: I don't know. There are lot of things to say about those questions. Our Society task force has already started a little modeling on the lapsation, antiselection issue because we want to know a little more about it and we want to say something about it in our report diskette for the valuation actuary. You need to be careful of what you assume. Are you going to improve your financial condition if you have more lapses? You may have some reserves that are released, but you'll still have the bad risks with you. We need to model that more as a profession, and we are starting to do some of that as a task force.

You put together all of these things we're talking about, including paid up nonforfeiture benefits, however rich, throw in some rate caps (rate stability is the phrase the NAIC is using

these days) to limit rate increases, and introduce some element of noncancellable, along with our other uncertainties and, at the very least, the valuation actuary has to be on his or her toes. We have some real challenges.

MR. JAY: Let's move on to some of the valuation actuary questions that have been discussed at some length by the task force. Does asset/liability management or cash-flow testing apply to this product or are there other tools that actuaries have that do as good or a better job in testing the adequacy of premiums and reserves? Tom, do you have a comment on this?

MR. SKIFF: For those of you who don't know, long-term care is the major line of business for my company; so, cash-flow testing is probably more important to me than most of the people in the audience. We're going to try to do a much more elaborate job than is appropriate for many people. We will do some asset/liability matching and cash-flow testing this year. My guess is we won't do as much as could be done, but, hopefully, it will be as much as should be done, at least at this point. I expect this to continue and to get more elaborate over the next two or three years as we understand more.

I would also comment though that I don't think that the C-3 or C-1 risk that you're worried about in cash accumulation products and annuities is the concern. That's not nearly as big an issue as the C-2 risk is. A lot more work on variations in morbidity and variations in claim trends is going to be a much bigger issue in terms of overall adequacy of the reserves.

MR. JAY: Now, Mike, based on your survey what are companies planning to do in 1992 with respect to satisfying the requirements of the revised valuation law?

MR. ABROE: Table 19 shows the results of one of the survey questions regarding plans for cash-flow testing for 1992. Of the companies surveyed, eight said yes. Let me make a couple of points about those companies. One company said that they're going to be testing all of the New York interest scenarios as well as what they feel to be the appropriate sensitivity tests. By far, what most of the companies indicated is that for this year-end, what they're going to

plan on relying on the gross premium valuations such as those used for GAAP loss recoverability tests or so on and use those in the sensitivity analyses included in there as they're testing the end of this year. Obviously, what that indicates is that outside of the company it didn't appear that there would be any specific asset testing unless they're going to be doing that with other combined lines. Five companies indicated minimal testing. They would expect to do something in the future which, again, is a no for the end of this year. Thirteen companies indicated no. Most of the companies that indicated no, felt that the block was immaterial and small and was not of sufficient volume in force to be able to study. Their line of long-term care business in relation to the total company's line was not a material line. One thing that concerns me about that large number, and I would add the five to the 13, is that it appears that most of the companies were probably looking at in-force volume or a similar measure in terms of deciding what materiality is. You really need to be looking at your claims risk -- the reserve that you should be setting up.

TABLE 19

Cash-Flow Testing for 1992

Testing	Number of Companies Reporting
Yes	8
Minimal, expect in future	5
No	13
Unsure	3
Not stated	1
Total	30

MR. ABROE: Some of the companies that considered their block immaterial on the basis of in force may not consider it immaterial on the basis of the volume of reserves that they're holding.

MR. JAY: Interesting! Any other comments on the asset sufficiency requirements? Let's briefly touch on the impact of federal regulation. I don't know that there's been a lot of actual federal regulation for long-term care yet, but I wonder if the threat of federal regulation hasn't

already had some fairly important impact on what's happened at the state level and elsewhere. Tom or Mike, do you have a comment on that? What is the indirect result of potential federal regulation?

MR. SKIFF: I'd certainly agree with you that the NAIC has been led by the threat of a federal takeover in this area of regulation. I sometimes feel they spend more time on this than any other line of business. A general comment on the changing regulation of long-term care is just how much effort it has taken to stay current with long-term-care regulation and changes in the last five years. It affects every aspect of it from valuation issues to product design. In many cases you might ask if you want to be in this business or not. However, it is mostly threat and not reality. There are still half a dozen bills in Congress, and I think that, depending on the outcome of the Presidential race, the most likely short-term outcome is some kind of federal mandated minimum benefit for long-term-care policies. It will be interesting to see if they feel they can make something retroactive.

MR. JAY: Let's hope not!

MR. TRAPNELL: I would note a different perspective on that is, yes, there has been a tremendous degree of movement in the state regulation of long-term care but, by George, it needed it. Six or seven years ago you had insurance departments approving the sale of cancellable term policies for benefits that really didn't have any value to the purchaser unless they keep it for their full lifetime. Most of these policies were cancelled as premium rates were raised to unaffordable levels.

I have reviewed operations in which a broker was basically fronting a policy and then looking for an underwriter to take it on a term basis from year to year. This led to the underwriter paying virtually no attention whatsoever to underwriting. After all, the short-term risk might be very low with this product, but if you're sloppy enough, you can get in trouble even with that. And so maybe it was a blessing that these operations failed rather quickly through the sloppiness of the underwriting. By taking people who were already in nursing homes and such

it's surprising that more people didn't get burned in a worse way in the long run by paying premiums for a number of years before the insurable died. You've had such an incredible variety of abuses in this field because of the inattention by regulators, who do not appear to have given any serious consideration of the characteristics of this product. And I also will note that the industry hasn't helped any by opposing each and every movement toward any further regulation of this product.

Let me also comment a bit about what is happening with the federal government. To understand the federal government's approach to this product, you have to understand the committee structure in Congress. You have two sets of committees that are interested in health insurance. You have an activist group that is based on the Health Subcommittees of the Interstate and Foreign Commerce Committees. In the House you have Congressman Widen who is very bright, very articulate, and understands a lot about insurance although there is an awful lot that he doesn't understand as well. And he has a very active staff that is very interested in direct federal regulation of the insurance industry and they are looking at every opportunity to increase the federal role in regulating insurance. You have an entirely different set of committees, the Finance Committee in the Senate and the House Ways and Means Committee in the House, each of which now have Subcommittees on Health, who have been the traditional federal regulators of health insurance through the tax code and through the social insurance programs, especially Medicare and Medicaid. They are reactive at this point.

I had the experience several times of being called in by people from the Health Subcommittees. But where I said that this product should be regulated through taxation. They weren't interested because they wouldn't have jurisdiction. What is really dangerous here is that their model of how to regulate LTC insurance is the Medicare Supplement Bill. The ideas I find among the staff are what do we want to put in our bill to regulate long-term care using that as the model. They're interested in things like what benefits do we require, but nothing to change the taxation which is the real problem that's holding this product back.

MR. JAY: We still have one more topic that we haven't touched on yet which is the impact of underwriting, or lack thereof, in selling long-term care and the rigorousness of claims administration and its impact. Since we only have a little bit of time left, let's open it up to the one topic we haven't covered, plus all the other ones that we have covered. It's your turn to make comments and ask questions.

MR. MICHAEL A. SHUMATE: I have some concerns about virtually everything that was said. One of my concerns is in the topic of reserving, pushing to go to one-year preliminary term instead of two-year. As Mr. Trapnell correctly pointed out, on the short-term basis this product has very little risk. We see substantial claims coming in the three- to five-year range. Before that there are very few claims coming in. So it seems to me that there may be significant redundance in going to a one-year preliminary term. In addition, we have found in our block of business that the mortality more resembles population mortality than it does any insurance mortality. Therefore, we feel that the 1958 CSO has sufficient margins in it when used without any lapse rates. Between those two, there is sufficient margin to qualify as a statutory amount of redundancy. So I'm a little concerned about going to something like an annuity mortality basis where I think you would have a significant increase in reserves over that which would be necessary to cover the product. From that standpoint I think that the movement that you've suggested may be of significant cost to the companies relative to what the product actually costs. I have some serious objections also to nonforfeiture values. With your argument one would go back and put nonforfeiture values in term insurance which I think no one here would suggest is a reasonable course of action. You know that's the thing you pay for all your life and then it may or may not pay off if you withdraw. I think the same sort of argument should be used for nonforfeiture on long-term care. This is already a very expensive product. It is already out of the reach of most of the population and to add nonforfeiture will severely shrink the remaining population for sale of this product. If anyone up there thinks at that point that we're going to have significant experience with this product into the final durations I think they'll be kidding themselves. The market is going to be so shrunk I think we're not going to have anything left to work with.

MR. JAY: I know a number of actuaries agree with many of the things that you've said.

MR. TRAPNELL: I want to address the mortality rate. All of my remarks about mortality were for the pure mortality portion. I've been assuming that there were explicit assumptions of what the lapse rate would be as opposed to providing a margin in the mortality rate to allow for lapses, which strikes me as a clumsy way to do it. But with the high rates of lapse being experienced with this product, the mortality rates of the continuing population could be significantly different than what you would expect if you took an entire population and followed it through until all policies had expired. It may be that some combination of one set of mortality rates while the product is subject to a high rate of lapse and another set of mortality rates after a nonforfeiture benefit became mandatory might be appropriate. Would you think so, Bart?

MR. MUNSON: Possibly.

MR. JAY: Bill, I want you to get your comment in.

MR. WILLIAM C. WELLER: As one of the industry representatives with the Health Insurance Association of America, I have to object to some of the comments that have been made. "The industry" has not opposed each and every reform. In addition to proposals on nonforfeiture, replacement/lapse issues and policy upgrades, HIAA does support a change to the minimum reserve standards model from two-year to one-year for long-term care. We also support a change in the model to allow for a mortality table other than 1980 CSO, which is the current minimum. I hope that Mr. Trapnell did not charge the client very much when he adjusted the CSO mortality because the period of time that it will be able to use that work and qualify those reserves is very short. It depends upon how long it takes for states to become certified by the NAIC. For a state to be certified, it has to adopt the minimum reserve standards, which few states had done prior to the certification process. Once 26 states are certified, you won't be able to adjust the tax reserve table, which is based on what is used by the majority of states.

HIAA is working to change the minimum reserve standards model. I have not seen Mr. Trapnell at any NAIC meetings asking for the changes that are needed.

MR. TRAPNELL: When enough states do adopt a group annuity table for minimum valuation standards, the problem noted with respect to the CSO Mortality Table will be relieved. Until that time, however, actuaries must still compile and certify reserves on tax returns.

MR. JAY: Bart, one last comment.

MR. MUNSON: Mr. Weller's comments are difficult to respond to for three reasons. One is that I think it was more a statement rather than a question, however well said. Second, there are a lot of items he touched on. Third, I'd still rather hear from the audience. But I think he, overall, illustrates some real difficulties that we face in knowing what the proper reserve standards are. I'm not sure many, if any, companies would really claim they do yet. We're all struggling, I think. We haven't helped the regulators a whole lot, and that's understandable -- it's a new product, it's emerging, it's complex. But they do want some help. Our task force has a theme: do an imperfect job soon rather than a perfect job never. Some people think that we're already on the track of doing a perfect job never. It's very easy to get all tangled up in this subject with all its complexities and that isn't going to help the industry, the regulators, or, certainly, and importantly, our profession. We need to go ahead and try to do what we think is right.