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Implications Of The New CSO Mortality Table

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Summary: The 2001 CSO mortality table is the proposed replacement of the existing 1980 CSO table. Adoption of the new mortality table will have far-reaching implications, affecting reserves, product design, state filing and administration systems. Attendees benefit by learning about the new table and how it affects future product development and design.

MR. MICHAEL S. TAHT: My name is Mike Taht with Tillinghast in our Atlanta office. I'm joined by Andrew Erman from Pan American Life and Scott Berlin of New York Life. I've been involved with the development of the CSO table for almost three years now. I am chair of the Society's Individual Life Insurance Valuation Mortality Research Task Force, and have been a member of the Academy's 2001 CSO Table Task Force. I have also been working with Andrew on the 2001 CSO Implications Work Group.

I've sort of seen it through from start to finish, and I really believe that we are very much at the end of the process. Today we're going to try to give you a brief overview of the table, how it came to be and some key points with it so that you have some background on the 2001 CSO table. Andrew is going to discuss some of the state issues, reserves, nonforfeiture, cost of insurance (COI) rates, and what the new 2001 CSO table means for those issues and for that side of the business.

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

Then Scott is going to focus on some of the tax implications of a new 2001 CSO table.

Having been involved in the process and really living it for a while, it's amazing how, at the start you're thinking, "Okay, it's just another mortality table. Let's put it together, get it to bed." When you start getting involved in understanding all the different tentacles that the valuation mortality standard has and all the different places that it impacts our business and how those impacts, those tentacles, ripple out, hopefully we'll give you a sense of that and what you should look for when you see the table and how it impacts your business.

So what is the work completed to date? We've completed a draft version of the valuation basic table. The valuation basic table is the building block of the CSO table. It was released in April of 2001, and it was finalized in November of 2001. The Academy task force released the first draft of the CSO table in June of last year, and small modifications were made in December. A further draft was released then, and I'm very happy to say that the Academy report has been finalized and has been sent to the Life and Health Actuarial Task Force (LHATF) for discussion at next week's meeting in Philadelphia. With respect to the model reg, the latest draft of the model reg is dated March 15. I do expect several changes to that one, and my read of the discussions that have occurred over the last two months is that a clear path to resolution has been set out with regard to most of the open issues with respect to the model reg. So, I'm really quite excited that all these major milestones have occurred and the work product is pretty much in place.

Just to give you a sense of how we got here, there was first a development of valuation basic table and then the development of the 2001 CSO table. With the valuation basic table, we basically looked at available experience and focused on utilizing the '90-'95 experience table and then augmented it where necessary. Two major areas where we augmented it were in older age mortality and smoker/non-smoker mortality. That experience, the smoker/non-smoker experience and old age experience collected by the Society, just does not exist on an insured basis out to ultimate durations.

Once you get past issue age 75 and attained age 85-90, the Society experience is limited. So we went out there and got more experience. We then created a composite table. You might think, "There's all the smoker/non-smoker differentiated experience. Why don't you create a separate non-smoker, a separate smoker, and a separate composite?" And when I say composite, composite is unismoke. But that experience doesn't exist for the realm of the table. So we started out with a composite valuation basic table, and then utilizing that as a base, we created separate smoker and non-smoker valuation basic tables. Then the Academy task force used the valuation basic table as a base, developed a margin for it, came up with what they believed was an appropriate margin for it and then utilized a formula to appropriately distribute that margin over the table. Then you get a 2001 CSO table. Sounds easy.

With respect to the 2001 CSO table, when you've got the valuation basic table, how is it loaded? The Academy followed what would be a straight mortality margin approach, and really that's just a percentage loading over the mortality rate. There was some discussion with respect to a reserve margin. That would be: How much more do you have to load up your mortality to get an adequate reserve taking into account not only mortality, but interest and persistency? But the method that was selected was the mortality margin approach. A 15 percent target load was utilized in the creation of the margin, and the load is a function of the reciprocal of the expectation of life. This is the common load function for the CSO tables in the past, and if you look at the Canadian system and how they develop margins for adverse deviation, it's always a reciprocal of expectation of life. So that's the common function.

So, wow, we've got a table! This is the ultimate table, the 2001 CSO composite, as a percentage of '80 CSO (Chart 1). Purple is male, and red is female. One of the things that strikes me is that with females, attained ages 50 and above, there's really not that much of an improvement over the '80 CSO table and definitely less improvement than for males.

Even when we looked at mortality improvement and factored that into the valuation basic table to bring it up to a 2001 start date, the mortality improvement that we saw in females was typically less than in males, so it stands to reason that compared to the '80 CSO, the 2001 CSO table is lower for males than for females. Also, you see a discontinuity between males and females around the attained age 20 through 30 for males, and that is a higher percentage of '80 CSO than for females. I think that may have something to do with AIDS, and although we took quite a bit of care to remove a lot of the impact of AIDS, I think there might still be a residual effect in there.

Chart 2 is the same comparison, except for non-smokers. So, again, it's the ultimate 2001 CSO table as a percentage of the ultimate '80 CSO table, and, actually for anyone who's interested, it's on an age-nearest-birthday basis. One of the things you see is that it's basically the same shape as the prior chart, maybe a little higher ratio for female non-smokers as opposed to the composite table. I think that's in part due to the fact that the ratio of non-smoker mortality to composite mortality assumed in the development of the '80 CSO table was a bit more aggressive than what we saw with emerging experience and available experience in the development of the 2001 CSO table.

Chart 3 shows the ultimate mortality 2001 as a percentage of '80 CSO, but for smokers. Here again you see the same pattern, but at certain ages female smoker mortality on the 2001 CSO table is even higher than the '80 CSO table. I mentioned that as experience emerged on the non-smoker side, the view was that the non-smoker discount was maybe a little less than what was assumed in the creation of the '80 CSO table. On the flip side, for smokers, I think the ratio of female smoker to composite was around 150 percent in the '80 CSO table. In the 2001 CSO table,

we've got a lot more experience available, and it's more experience based—around 180 percent. So, that's kind of what's driven that change, and I know in working with some colleagues, they think that female smokers are the big losers with the 2001 table, but it's definitely based on experience and really is a shift from the '80 CSO table.

The next few charts give you a sense of the select version of the table. The 2001 CSO table is in a 25-year select and ultimate format. That doesn't mean that at every issue age there are 25 years of selection. It just means that that's the format of the table. —At attained or issue age 80 we don't expect 25 years of selection. You can see that the table is around 25 to 35 percent—this is issue age 25 —at issue, but grades up to where you'd see it in the ultimate (Chart 4). This is actually a comparison—2001 CSO with 25-year select and ultimate factors to '80 CSO with the 20-year select factors that were introduced as part of XXX. See age 35 again (Chart 5). You're starting in the same range, 30 to 35 percent. You, again, start to see the female smoker effect in there, and it breaks off from the rest and actually goes to a percentage greater than 100. Here's age 45 (Chart 6). You actually see the effect a little earlier on the female smokers, and you also see female non-smokers as a higher percentage of '80 CSO than males. Chart 7 shows the graph for age 55.

I'm going to spend the next few minutes talking about the status of the model reg. The latest published draft will be completed March 15, 2002.

In terms of the issues that need to be resolved coming out of the March LHATF meeting, the biggest issue was that the Academy needed to finalize the 2001 CSO table and the 2001 CSO table report. That report, as I said at the start, has been finalized by the Academy and has been sent to LHATF and is part of the package that is e-mailed out for the LHATF meetings. There's a significant body of work. The other issue that is out there and came up in January and February was the question: Can you really use a different version of the table—and when I say version I'm referring to ultimate versus select and ultimate—when you're doing your calculation of basic reserves and alternative minimum reserves?

In terms of expecting to finish, I think that the wording for the reg should be hammered out next week. I'm not sure if they'll be able to adopt the reg or if LHATF will, approve or adopt the reg in June, but I think it will for sure in September 2002.

So, what is the reg? First of all, the model reg is there. That's how the table is being promulgated. That's how it's going to be introduced. Unlike '80 CSO, we don't have to pass a law to introduce the table. It can be introduced via regulation. So, that is a change.

When can you use this 2001 CSO table? Let me read this: "A company may elect to utilize the 2001 CSO table as the minimum standard for specified plans of insurance

issued on or after January 1 of the calendar year next following or coincident with the effective date of the reg." So, hopefully that will be January 1, 2003. The reg, as it's written, says it shall be the minimum standard January 1, 2008. So you've got a pretty long window in terms of transitioning, and while the other two speakers are presenting, ask yourself: Which products do I really want to start using the table on right away, and which products do I want to wait on? What makes the most sense? Because you do have that window.

The 2001 CSO mortality table encompasses sex-distinct rates, smoker/non-smoker rates, composite rates, ultimate and select and ultimate. It broadly encompasses every different version of the table. One thing to be aware of is that a 2001 CET table has not been created. Our group did get some minimal extended term insurance data which, when analyzed, didn't show any real difference between traditionally underwritten ordinary insurance versus extended term insurance. I also think that the role of extended term in the industry has lessened quite a bit since 1980 with the advancement in universal life (UL) and variable universal life (VUL), as well as fewer sales of whole life.

I mentioned that there's a section in the March 15 draft of the model reg that says you have to use the same version of the table, be it ultimate or select and ultimate, for both basic reserves and alternative minimum reserves. That was met with quite a bit of opposition from industry. At the March LHATF meeting, the Academy was charged with providing an actuarial justification for why it should be allowed to use different tables, and in the end, they never came up with an actuarial reason and said it was more an issue of law. However, it looks like this section is going to be removed from the model reg, because Section 2 states that a company, when using the 2001 CSO table, must also file an annual asset adequacy report. That was the tradeoff. If states widely adopt Actuarial Opinion and Memorandum Regulation (AOMR), this isn't much of an issue except for companies with a single state exemption.

One of the reasons this has come up is because when you look at the 2001 CSO table and compare it to the '80 CSO, it's significantly lower and guaranteed issue and simplified issue fall under the umbrella of standard ordinary insurance. I think the regulators were struggling with the fact that this one table has to be used for all sorts of insurance and all sorts of different levels of underwriting, yet they were not comfortable using this table on a guaranteed issue such as a funeral plan. The compromise was that, as long as we know there is asset adequacy, and we see an asset adequacy report, we feel comfortable that a company can use the 2001 CSO table. If we don't see an asset adequacy report, then we're not feeling very comfortable and you have to use the '80 CSO table.

Another thing that is still in the March 15 draft of the regulation, which I believe will come out of the next version, is that there was a drive by the regulators to have companies submit experience to use the table. Basically, when we were putting the table together, one of the concerns that the regulators had was that the underlying

base of experience didn't cover enough of the industry. Our reply was that you can work with what you have submitted. We went out and tried to solicit more information and more experience. It's difficult, and companies are less willing, less able or less inclined to submit experience to the Society studies. In addition, you have a convergence in the industry. I think that naturally, there are fewer companies available to submit experience. But this is a concern of the regulators. This was a way that they thought they could address that concern. But in reality, it was not feasible and it should go out in the next draft of the regulation.

Other provisions in the reg include a section on use of the table with XXX. It's pretty straightforward. There's no change in terms of the minimum X factor, and, from my perspective, that was the one area that it could change, but it didn't. There's also language with respect to gender-blended tables and how to modify the table for an age-last-birthday basis.

Now this was my view on open issues six weeks ago. The 2001 CSO table must be finalized and there must be a debate regarding the consistencies of the mortality rates for minimum and alternative minimum reserves. I think that there was a conference call May 24 and the compromise that I outlined was broadly agreed upon. The concern regarding the adequacy of rates for smaller companies and substandard risks must be addressed, and I believe the requirement of an asset adequacy report addresses that. So, in my mind, there are no open issues. However, there's a meeting next week, and more open issues could emerge. I'm hoping not, and honestly, I don't think there will be. That's my presentation. I hope you got a sense of what the table looks like, the status of the reg and how it's going to come about.

Next, Andrew Erman is going to talk about issues that have a state basis, primarily reserves and nonforfeiture. Andrew is vice-president, actuary of product innovation, at Pan American Life Insurance Company in New Orleans. He chairs the Academy's 2001 CSO Implications Working Group. He is also chair of the Academy Life Products Committee, and is active in numerous Academy and SOA task forces and working groups.

MR. ANDREW ERMAN: Thank you. This is a very exciting topic, and I think this table and the developments that we're seeing as part of this table are going to make a tremendous difference in our industry, in our jobs and in our profession. I also think it's interesting that, in terms of regulatory development, a lot of regulatory development that actuaries get involved with can be disclosure in nature. Since XXX, I think this is one of the more actuarial issues that we've seen on the regulatory front. So it makes it particularly relevant to us in our profession.

We are going to discuss statutory reserves of the CSO table and the nonforfeiture values. We're going to briefly discuss the select and ultimate versus ultimate, and I'm going to give the same qualification that Mike gave—these charts were created about six weeks prior to this presentation, some things have shifted and they have

the potential to shift a lot next week. But I'll provide some commentary to try and keep it in sync with where we are today. We'll talk about state filings, maximum COI rates for UL-type products and implications of states' actions. First let's start with statutory reserves. There were two Academy committees that did a lot of analysis on the CSO tables. One was the CSO Task Force, and they did all of the reserving analysis. I was just a participant on that committee. There were a lot of other actuaries who did a whole lot of work. I chair the CSO Implications, which is really meant to be the non-valuation side, but I'm still going to talk about the statutory reserves heavily using the reports that were prepared by the CSO Task Force. They found that the stat reserves on the 2001 CSO basis are generally lower under the new table versus '80 CSO. The biggest difference, which I don't think is too surprising, is in term insurance with some difference for UL, virtually none, only in the earlier years. They also found that the reserves are appropriate, and I can't remember how many hours we spent deciding what the right word for that would be, but I think Bill Carroll from the ACLI asked, "Why can't we just call it 'good enough'?" Perhaps that was the best phrase.

Chart 8 shows what we found for a 20-year level premium term product mean reserve, and these are percentage ratios of the reserves under 2001 CSO versus '80 CSO, split out by age and duration. You can see that for the lower ages you have a significant reduction. For the highest age shown, you can barely see that yellow line, but it kind of is floating right underneath the key. For this age, age 65, you still see some significant reductions, although the percentage ratio is less than 80 percent. You have 20 percent savings, which is not as much as the younger ages, but it's certainly there. For whole life there was also a reduction, although not quite as much as term (Chart 9). It starts off in the early years with a fairly significant reduction—40 percent less than what you saw under '80 CSO—and then it rose up between 80 to 90 percent pretty quickly, with age 65 being closer to '80 CSO than the younger ages. With the UL product they solved for the level premium to carry the policy, which I would assume means one dollar of cash value at endowment (Chart 10). I don't know offhand if they did that at age 100 or 120, - but I think it is a minor issue because in 10 years it just gets to the cash value floor anyway, and that's why you see the equivalents there. In the first 10 years you do see some reduction, but it goes away pretty quickly with UL, which again, I don't think is too surprising.

Now they prepared a model office, and the three parts of the model are the three charts I just showed you. They prepared a simple model office with whole life, UL and term, which include five different ages and both genders. Then they calculated the ratio of the proposed 2001 CSO compared to '80 CSO, and on the whole model office basis, they saw that, overall, the 2001 CSO had a 21 percent reduction in reserves versus the '80 CSO. Most of what is driving that is term. At year-20 you have a 17.6 percent reduction in reserves versus '80 CSO. The males have a lower percentage so you have a bigger reduction with males versus females, which makes sense. As Mike showed, the females didn't see as much improvement as the males. For whole life, and I think this is at durations 10 and 20, you saw roughly 85

percent of the '80 CSO reserves, or a 15 percent drop. For term you saw roughly a 32 percent drop, and for UL you saw a 5 percent drop (Chart 11). At year 10 you saw that at age 35 it was roughly 75 percent, and it was the highest at age 65 at 81 percent. Age 25 came in second right behind age 65. It's real smooth from age 35 to age 65, and then age 25 saw an increase, but they're all roughly in the same ballpark and you're looking at some pretty good reductions.

Chart 12 is another cut at the same data. For whole life, you're seeing the 10- and 20-year results at roughly 85 percent. For term you're seeing 65 percent. For UL you're seeing close to 100 percent. Overall, these are your duration 10- and 20-year results, close to 80 percent, 20 percent reduction. By issue age, and this is what I was saying before, I was a little curious how age 25 was higher when you had a smooth pattern between age 35 and age 65. I really haven't given it that much thought, but I guess that would be the males in the age 25 range that didn't see as much of a reduction. It's pretty dangerous for us to try and wing that on the spot. Mike and I actually agree, so I guess that was okay. There are reductions of 80 to 85 percent at age 25 and there are some pretty big reductions at age 35 and age 45, which is also where you see a lot of term sales, too. So that fits in nicely where I think the industry would like to see a pattern.

The regulators think that this is great and very interesting, and they are glad we're doing this, but they also wanted to see how the stat reserves that we're calculating on a very formulaic basis compare to the reserves that we ought to be holding. And when I say "ought to be holding," I mean a gross premium-type reserve, but they did make some distinctions from a true gross premium reserve and that's why I called it "quasi-gross premium reserve." If you read the Academy report they call it a "comparison reserve." In any event, we compared the reserves using the 85th percentile and we reflected lapse as well as interest and mortality. This is different than your stat reserves. The regulators basically wanted to see that the stat reserves we were computing were at least 100 percent of this gross premium reserve, which is the reserve that we ought to be holding from an economic theory point of view, and they found that. They came up with that result. It was 90 to 140 percent. In some places it was under 100 percent, but that was okay. Basically, it looked pretty good, and that made them comfortable. I think for some cells it was as high as 225 percent. So that shows that you really have significantly more reserves than you "ought" to have.

In Chart 13 you can see that your whole life reserves were in the under-100 percent category, but it's close enough—97 percent or so. For term you were okay, and that was very comforting because term is really what's going to see the biggest reductions. For UL you have quite a bit. Overall, you're looking at duration for 20 years at a shade under 100 percent and at duration 1 at 10 years is a good number. By issue age I think they're okay across the board (Chart 14). At a duration of 20 years, you're seeing the older ages at slightly under 100 percent, but you've got to look at that scale. That's just between 90 and 100 percent. That should be good enough, and the regulatory community agreed.

In summary, for stat reserves we are seeing a reduction of about 20 percent across the board versus '80 CSO. The biggest difference is going to be in the term shops. We found that the 2001 CSO table is appropriate for stat reserves, and I also want to point out that the Academy CSO Task Force did a lot more work than what is summarized here. As Mike pointed out, the report is just a phenomenal demonstration of actuarial talent, skill and sweat. They looked at the appropriateness of the table during the select period, consistency of margins by gender, tobacco use and issue age. They spent a lot of time validating the 15 percent loading. They compared the results against BRAGG data. They found a few sparse areas where it could be improved, but I don't think you'll ever get to a point where it's 100 percent. They also made it very clear in their report that they only looked at valuation. This is not meant to be anything but valuation from their perspective.

FROM THE FLOOR: When they did this study, the gross premium reserve, what mortality was used for the comparison reserves? Was it more realistic?

MR. TAHT: I'm pretty certain that it was the valuation basic table because that would be industry.

FROM THE FLOOR: 2001?

MR. TAHT: Yes, the 2001 valuation basic table.

MR. ERMAN: That's the non-loaded table. The CSO report focused on this table, and they put in their caution not to use this table for pricing. It hasn't been looked at for other purposes, but there was another Academy group or still is another Academy group that is looking at that because you cannot adopt a valuation table in isolation. It's going to impact other areas.

The CSO Implication side also looked at the nonforfeiture values and we computed comparison nonforfeiture values for term, whole life and UL. We only looked at the ultimate CSO tables. We still have to look at the select and ultimate. But to date we've only looked at the ultimate. Under our interpretation of the nonforfeiture regs, we found that the table is not problematic, but there's an "if" in there that it's based upon our interpretation. We looked at the ultimate, and we have a lot of other concerns with how various entities might interpret it, and it's just a floating concern at this point. But we found that for our interpretation of the regs, the nonforfeiture values generally dropped. In some cases the drop was quite significant. An example of this is the older ages. Chart 15 is the 30-year term, male unismoke. Before, on the valuation side, we were looking at 20-year term. We did a 30-year term just because it's more obvious in terms of what happens on the cash value side, and most 20-year term products don't build up cash values. What you're looking at is a ratio of the nonforfeiture values—the cash values on the term product for 2001 CSO versus '80 CSO. If it's less than 100 percent, you have lower required cash values. And again, at the older ages, it's less of a reduction. At the

younger ages you have a bigger reduction. At age 30 you have the bigger reduction in the required nonforfeiture cash values. Another thing that our report is going to show, and we don't really expect any action on this but we wanted to document it to some extent, is in the nonforfeiture reg for term products there is a safe harbor where you don't have to produce any cash values, and theoretically you can extend that one. There's a justification for extending it, but I think in the real-world situation, no one is suggesting that we do it. It's a lot of work to do. If that's in the law, you'd have to change the law, and from a purely actuarial perspective, it makes sense. That's what the report will reflect, but it's certainly not going to push it.

Chart 16 shows your nonforfeiture values for the whole life side, male unismoke. It's generally lower. Your minimum required cash surrender values on a whole life product are lower and the reductions are greater for the younger ages. You see this funny wave pattern because of the difference in endowment age. For example, at age 65 it sort of humps and then goes back, and that's purely because of the endowment age being higher than age 100 for '80 CSO.

For UL these are maximum surrender charges, male non-tobacco (Chart 17). . The nonforfeiture law tells you to compute maximum surrender charges. It does not require minimum cash values. These are the results that you see for the maximum surrender penalties that you can have in a UL product. And again, there is some reduction, except at age 65. It's going up like this, and it's always above 100 percent, and that's due to the \$60 cap in the model UL reg. At age 65 it's at that cap. So when you're amortizing with the annuity rates for the new table, you're going to get higher cash values. I think dollar-wise it's not anything to worry about, but that's what's going to be required.

So overall, the nonforfeiture values really didn't have any surprises. Again, all of this work relies heavily on the current interpretation. If a state decides to make another interpretation, there could be different results. This also would be different if using the select period. This also assumes no rate caps on the UL COI rates, which we'll discuss shortly. We didn't see any real significant impact. There is an impact, but not material. It is nothing to worry about for the product lines. For the select and ultimate versus ultimate, as Mike indicated, this has started to gel a little bit since I created these charts. On the reserving side it's still under debate, but we're likely to be able to use different select and ultimate versus ultimate for basic reserves versus alternative minimum reserves, and that also assumes the Section 8 opinion. On the nonforfeiture side we haven't explored it deeply, and again, this could be subject to interpretation.

Regarding state filings, I certainly think you can expect to see a pretty big flood of filings as soon as this goes live. The first thing you are going to see will be the competitive term shops rushing to get this out there, and they may backlog the state filing departments a little bit, which may result in the possibility of longer approval times. I think the companies that are ahead of the curve are going to get

some benefit, and once you get in this slow period it makes it really tough if you're even a little bit behind. It's like leaving for work 10 minutes late, entering rush hour traffic 10 minutes late and getting to work half an hour late, depending on where you live, of course. The companies that file smarter, the ones that really research the regs and know what to put in their policy forms to get it right the first time, will also reap some rewards. The Coordinated Advertising and Rate Filing Review Authority (CARFRA) may help. CARFRA was created by the NAIC partly in response to the Financial Services Modernization Act where the NAIC was looking at ways that they could make their state regulation more efficient, and it's currently in the pilot stage. There are only 10 states participating in it. If you submit something to CARFRA, they agree to respond to you within a certain timeframe and they also agree, if you submit it the right way and it's a single review point, that you can get it approved in all 10 states that are currently part of CARFRA. In my opinion, it certainly can help and it will be interesting to see what happens. I don't think it's too likely that it will be a big help. It's been out there for a while but companies haven't used it. Maybe this will be a good reason for them to start using it, but it remains to be seen. On the filing side, anyone that has tried to file an extended maturity option, which is above age 100, won't get as much pressure or as many issues on that if you go out to maturity age of the 2001 CSO table. It takes away a lot of the concerns that you might have otherwise had.

Now I'll discuss the maximum COI rates on UL products. I think this could be a big issue for a lot of variable universal life (VUL) carriers. When I talk about UL in this context I mean declared rate UL, equity-indexed UL and variable UL. But for VUL carriers, I wondered to what extent everyone has really looked at this and given it a lot of thought. The question that we need to ask is whether or not this new CSO table will be the maximum COI cap. I don't think anyone really knows, but everyone is speculating that it is, at least in some states, and if you read a lot of the reports that the consultants are putting out now in terms of what they see happening, they start under the assumption that the COI can't be greater than the CSO. I think that says a lot, and it's just incredibly intuitive that you would have to have that tie-in. While it's intuitive, I also think that's the wrong answer. I don't think the CSO table should be the maximum COI cap. For one thing, the CSO Implications Work Group spent a lot of time on that, and they said it's actuarially inappropriate. If you read the CSO report, it shows that, of the data that was contributed to the group that did all the work, approximately one-third of the companies have mortality in excess of the 2001 CSO.

When you start to look at nonforfeiture values it doesn't make sense anymore. If you're a company that is subject to this cap and you have high mortality other than that, it's actuarially inappropriate. It forces companies to reduce their COI charges, it could put them in a solvency position that we don't necessarily want to create and it is about one-third of the companies out there.. That third was also in the aggregate, and when I say aggregate, I mean the combination of preferred and standard underwriting classes together. When you take out those preferred categories and just look at the residual mortality you're going to have even more

than one-third. So when you're just looking at standard, non-tobacco VUL-type product design, you can have a lot of companies that have their mortality in excess of the 2001 CSO table. I'm guessing a half, but we couldn't actually come up with a solid number.

There has also been a lot of industry differences since 1980 when the earlier CSO table was begun. UL and VUL were not prevalent back then—it was whole life and term. The evolution of preferred classes is very different and it causes me to be a little concerned about this. But the other reason I don't think the CSO table should be maximum COI cap is because it's tantamount to rate regulation and most state statutes do not give their departments the authority to regulate rates on life insurance products. Not all departments are like this, but I think a good number of them are, and if they're saying you can't have rates in excess of this, it seems like rate regulation. The third reason is we looked at the nonforfeiture law. We looked through the NAIC nonforfeiture law and we did not see anything that indicated a cap. It doesn't talk about limits on your premium loads, limits on your administrative charges or limits on your COI charges. It talked about a nonforfeiture table being equal to the CSO table, however, nonforfeiture tables are used in calculating surrender charges, not maximum COI rates. That was our conclusion. We'll see what happens.

Now I'll discuss implications of the state actions. You're going to have a lot of competitive term refilings in 2003, assuming it gets adopted for January 1, 2003. The companies that have term products as an accommodation to their product line will probably be a little bit behind. A lot of those companies use their reinsurers to help develop the products. The reinsurers are first going to pay attention to the ones that are giving them a lot more business, so it might be a little bit longer and they'll get it done somewhere between 2003 and 2005. and I don't know what'll happen with the maximum COI charges, but by 2009 you might see some companies exit the VUL market in states where they start imposing these restrictions. You might see the industry respond with innovative ways to get around it and if there is innovation, just like we saw with XXX, you'll certainly see follow-up guidelines and interpretations. Maybe we'll see an Actuarial Guideline ACSO similar to Actuarial Guideline AXXX. The sources of information I used here are basically the CSO report from the other Academy committee and also the one I'm involved with.

MR. TAHT: Thank you, Andrew. Next up is Scott Berlin. Scott is corporate vice-president, advanced markets product development, with New York Life in New York City. Scott has been very active at New York Life and really delving into the different issues that come about with the introduction of a 2001 CSO table, and I think they're actually quite ahead of the curve. Scott is going to tell us his thoughts on the implications from a tax perspective.

MR. SCOTT BERLIN: My topic today is the tax implications of the 2001 CSO table. When we're talking about tax implications we're really going to be talking about two

different sides of the house. We're talking about the implications on company taxation and the implications on policy taxation. Life insurance company taxation is covered by Section 807 of the Internal Revenue Code, and life insurance policy taxation is covered by Section 7702 for the definition of life insurance and Section 7702(a) for the definition of modified endowment contracts. I'll also touch briefly on the administrative system implications of administering the new CSO tables.

To provide some history, in 1984 the U.S. Department of the Treasury and Congress were looking at ways to generate more revenue. They came up with the Deficit Reduction Act of 1984 (DEFRA). With DEFRA they looked at life insurance companies and said, "Okay, you guys are netting the increase in your reserves against your current revenues in determining your taxable income, but the reserves that you have are conservative statutory reserves which are really built for solvency purposes and not to necessarily match the present value of your liabilities. So what we're going to do is define a federally prescribed reserve, which, without getting into too much technical detail, should more closely mirror your actual liabilities, and of course, having lower tax reserves will generate more revenue for Treasury."

The question now becomes, what are federally prescribed reserves? Federally prescribed reserves, without going into too much technical detail, are based on prevailing commissioner's standard tables. Prevailing commissioner's standard tables—and this comes right out of Section 807—had five major points. These include the most recent commissioner's standard tables, they're prescribed by the NAIC and they're permitted to be used in computing reserves by at least 26 states when the contract was issued.

As Mike said, it will probably be adopted by the NAIC in September of this year. The new CSO table will be the most recent commissioner's standard tables prescribed by the NAIC. When these new tables are adopted by at least 26 states, they become federally prescribed tables for contracts issued subsequent to that date. It's important to note that even if a state allows a transition rule, the federal clock starts ticking when the tables are permitted to be used within the states, which is the beginning of the transition period.

To discuss the transition rule, I have included the following quote from Section 807:

"If the prevailing commissioners' standard tables as of the beginning of any calendar year is different from the prevailing commissioners' standard tables as of the beginning of the preceding calendar year, the issuer may use the prevailing commissioners' standard tables as of the beginning of the preceding calendar year with respect to any contract issued after the change or before the close of the three-year period beginning on the first day of the year of the change."

As an example, if the tables become prevailing during 2003, the old tables can be used through the end of 2006. Section 807 seems to allow the selection of a table

on a product-by-product, or perhaps, even on a contract-by-contract basis. We can expect guidance from the Service on the transition rules.

One more pertinent section in 807, which is a special rule when more than one table and more than one option is available, is to hold the lowest reserves because we want to have as much money as we can get out of your taxes. The American Academy of Actuaries reports that ultimate mortality is generally lower than select and ultimate mortality. A weighted average of smoker/non-smoker distinct reserves is approximately equal to those under aggregate reserves, so it concludes that smoker/non-smoker distinct ultimate mortality is appropriate.

Moving on to life insurance policy taxation. This is going to be somewhat of a qualitative review of 7702 and 7702(a). We're primarily dealing with cash value accumulation-type products such as UL, VUL, - and since a lot of the quantitative analysis would rely on funding scenarios, product design and things like that, I decided to keep it more qualitative. Let's review. Life insurance is afforded favorable tax treatment. It comes in the form of deferred tax on cash value gain and potential tax-free death benefit to beneficiaries. Internal Revenue Code defines life insurance for the purpose of receiving the favorable tax treatment. A contract is life insurance if it is a valid contract and if it passes either the cash value accumulation test or the guideline premium test and its associated corridor requirements.

To pass the guideline premium test, the cumulative premiums paid in the contract at any given time need to be less than the guideline single premium or the sum of the guideline level premiums, and it must also maintain a specific corridor relationship between the cash value and the death benefit. The guideline single premium is based on reasonable mortality charges. It's also based on reasonable expense charges and a discount rate of six percent. I'll come back to what is meant by reasonable mortality charges and reasonable expense charges. The guideline level premium is the same as the guideline single premium except that it's an annual premium paid to maturity. Maturity needs to be between ages 95 and 100, and a four percent interest rate is used instead of a six percent interest rate.

What are the issues with the guideline premium test? The first issue, which is coming up pretty slowly, is that reasonable mortality charges are those that do not exceed mortality charges in the prevailing commissioner's standard tables. Basically what they're saying is that they want you to use your mortality charges and your expense loads that you reasonably expect to charge, but they are going to give you a safe harbor, and that's equal to the prevailing commissioner's standard table. This is where the effect of the new table is going to be felt under the guideline premium test. It is important to note that even though the new table is going to age 121, Section 7702 specifically sets the maturity date between ages 95 and 100, and that's unlikely to change with the new table. Also, corridor factors are hard coded into 7702 and they're also unlikely to be changed. I think it would take an Act of Congress to open 7702 back up.

What is the effect of the new table? Lower reasonable mortality charges will tend to lower the guideline premium and the lower guideline premium will result in a lower limitation on the premium funding for a particular face amount. So for any given face amount, you put less money into the contract, and this will reduce the amount of money that can be invested in an insurance contract on a tax-deferred basis which may make insurance contracts less attractive relative to other investment vehicles. One thing that you might see on the guideline side though, are some policy design changes. Since the guideline premium test not only allows reasonable mortality charges, for which the commissioner's standard table act as a safe harbor, it also allows reasonable expense loads. If we design our products with lower current COI charges and higher expected expense loads, we can maintain the higher guideline premium. That may be one way that companies look to alter their product design.

The cash value accumulation test (CVAT), without getting into too much detail, says that you need to maintain a relationship between the cash value and the death benefit. This relationship is that the cash value can never be greater than the net single premium required to buy that amount of insurance at any given time, calculated at four percent interest, using reasonable mortality charges and maturity between ages 95 and 100. Under the cash value accumulation test, no expense loads are considered. This is on a net basis, not a gross basis.

What is the effect of the new table? Again, lower reasonable mortality charges will lower the net single premium, as well as produce larger corridor requirements. If you read Section 7702 in the CVAT section, they don't mention anything about corridors. I tend to think of this net single premium relationship as a corridor. The reciprocal of the net single premium is the corridor that you need to maintain between the cash value and the death benefit. The larger corridor requirement will result in a larger amount of insurance needed to be purchased for a given amount of premium, and since more insurance will be required, you'll have higher COI charges in UL type contracts. Return on investment or cash value internal rate of returns (IRR) will be lower. And again, this may make insurance contracts less attractive relative to other investment alternatives.

Chart 18 shows the comparison of the cash value accumulation test corridor percentages under the 2001 CSO and 1980 CSO tables. You can see that the corridor is always higher under 2001 than it is under 1980 CSO. It is interesting to note that at age 55 it's between 110 and 115 percent. You need to have between 110 and 115 percent more insurance for a given amount of cash value. An exception is female smokers, which ties into what Mike was saying earlier. Female smoker mortality is not really significantly better, and in fact, at age 55 the CVAT corridor is about 100 percent of the 1980 CSO.

Now we move on to Section 7702(a), which defines modified endowment contracts. In 1989, the Treasury took another look at what was going on and said, "There are a lot of annuity contracts that are disguised as life insurance. What we're going to

do is make a further restriction. If you're heavily funding your contract to a certain extent, we're going to tax withdrawals from that contract as annuities rather than as life insurance." That limitation is commonly referred to as the Seven Pay Test, and basically says that, at any given time, you can't have funded your contract more heavily than a seven pay whole life contract on a net basis, again, not on a gross basis. The calculation rules are the same as for the net single premium calculation under the CVAT test.

As I mentioned, modified endowments are taxed as annuities on withdrawals. On life insurance, when you take withdrawals or loans from an insurance contract, loans are intact. Withdrawals are taxed basis first, so anything you're taking out of your contract that was money that you put in is not taxed. In annuities it's the opposite. You're taking out your money gain first. That's why you might not want to have modified endowment contracts (MECs) I think of it as a retirement plan or a deferred comp plan where you're putting money in till retirement age, and then you want to withdraw it. If you're looking to make those withdrawals, you might not want to have an MEC. Then you have material changes. If you materially change your contract, you basically have to consider that as a new contract and recalculate your seven pay limit and have another seven pay period. The effective of the new table is to, again, lower the reasonable mortality charges which lowers the seven pay premiums, which is going to lower the limitation. So if withdrawals are anticipated, they could reduce the amount of funding to maintain favorable tax treatment. Chart 19 shows the seven pay premiums, and it is the same thing you see at most attained ages—you're between 80 and 90 percent of the 1980 CSO, except for female smokers, which are up about around 100 percent.

What are the outstanding questions? Relating to the transition rules for 7702(a), 7702(a) seems to point to 7702, which seems to point to 807, which gives you the transition rule that I gave you earlier. Since it's not a direct link, we're going to look for the Service that gives us guidance on transition rules. This next point, which may be the topic of an entire session, is grandfathering of contracts and material changes. I don't have much to report, but I think it is one of the more important issues here. It's clear that the 1980 CSO contracts will still be governed by the 1980 CSO table, and what I'll call 2001 CSO contracts will be governed by the 2001 CSO. The question is, What happens on 1980 CSO contracts when there is a material change? If you do something to the contract, it causes you to need to look at the contract as if it's new. This could be precipitated by a face increase, a death benefit option change or other issues. For me, this is very disquieting because for the last 15 years in the UL/VUL market, we've been illustrating contracts with option changes, maybe with future premiums coming in and without saying that the policy is going to be an MEC because it was governed by 1980 CSO. Now, you bring the 2001 CSO table in, and the policy owner does exactly what we illustrated and the contract becomes an MEC. I think that it is something we need to have the ACLI contact the Service for guidance.

Now I'll provide a summary of the life insurance policy taxation issues. The new CSO mortality table can be expected to reduce the effectiveness of accumulation type products. Guideline premium test contracts may be restructured to maintain guideline limits, but cash value accumulation test does not provide the same flexibility. Seven pay limitations will further reduce the effectiveness of cash value accumulation type products. As Andrew mentioned, lower statutory reserves will increase profitability and/or competitiveness of term products and UL term substitutes. We can expect a rash of new protection-oriented products at the beginning of the transition period. I would expect a fire sale of cash value accumulation products during the transition period, and then I would expect new accumulation-focused products to be introduced towards the end of the transition period.

I'll briefly discuss the systems implications of the new tables. Many legacy administrative systems were not built to handle the more complex requirements of DEFRA and the Technical and Miscellaneous Revenue Act of 1988 (TAMRA). TAMRA brought in modified endowments. If your administrative system is more robust, it may just be a simple table change, but if systems require recalculation of storage of guidelines, seven pay, CVAT corridors and so on, it could be a big job. Some additional considerations include that we will likely need to keep both tables during the transition period. We may need to be able to handle adoption on a state-by-state basis, and we may want to look at product portfolio policy form-by-policy form and state-by-state. This needs to be well planned.

MR. RICHARD GREER: This falls under the heading of transition rules, and it's probably an issue you can't give a definitive answer on, but I'd like your opinion on the subject of 807 allowing the three-year deferral to when the new table is implemented for tax purposes. Will that three-year deferral carry over to 7702 for guideline premium and CVAT calculations?

MR. BERLIN: My guess is that it will. I think it's clear on the 807 side. It's specifically spelled out. It's not really spelled out in 7702. It's very unclear in 7702(a), but my guess is that we will have the same transition rules.

MR. TAHT: Yes in 7702 it refers to that section, but that section has a lot things in it, one of which is the three-year transition. It really depends on what attorney you're talking to, but I agree with Scott's comments. I think the likely outcome is that we would see the three-year transition. This is an issue the ACLI is aware of, and I think they are waiting for the table to be adopted by LHATF and then approach the Service.

MR. ROBERT MARKS: In a simplified issue market or guaranteed issue market, is there any allowance for allowing for higher than 2001 CSO mortality in the maximum COI rates?

MR. ERMAN: The maximum COI rates is a nonforfeiture issue that is not being discussed at LHATF. LHATF looks at NAIC rules, and the NAIC rules do not refer to any COI maximums. Therefore, LHATF does not look at those issues. Somewhere in the regs there is provision for simplified issue and guaranteed issue to use higher COIs. There's some percentage applied to those for various items. It's certainly not COI caps. I remember seeing that, and I can't recall offhand exactly what it is. Certainly a lot of thought has been given to those markets.

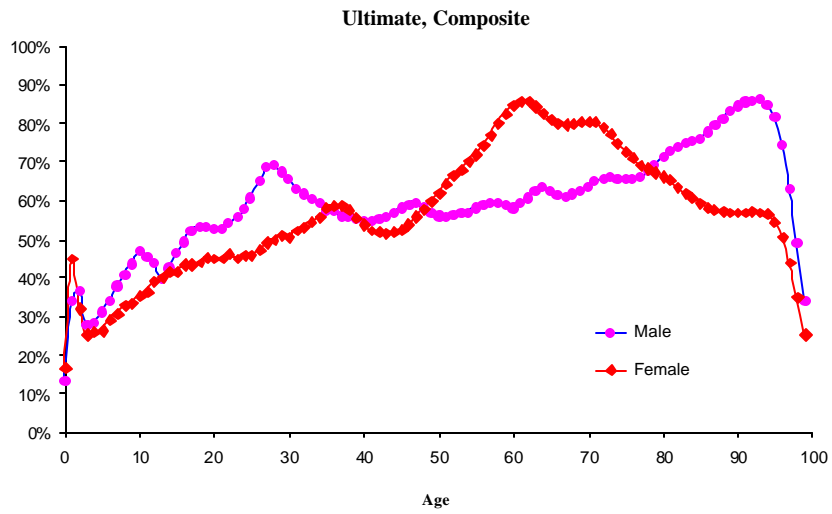
MR. BERLIN: On the tax side, the requirement is reasonable mortality charges, and those are really what you would expect to charge. You do have the safe harbor at the 1 2001 CSO table, but I would expect that you could use that in your calculation of tax issues if you're charging greater than that.

MR. MARKS: Do any companies have concerns regarding not being able to charge a premium that would be high enough to mature the policy on a current interest rate basis with the new guideline premiums being lower? In other words, since the interest rates are being credited or say, in the 5 to 5.5 percent range, and there's a six percent interest rate in the calculation of guideline single premiums, would there be a concern that you couldn't even fund the policy on a guaranteed basis?

MR. BERLIN: I've heard of that issue. Your guideline level is calculated at four percent. This is just my feeling, but I don't think that we want to approach the Service to reduce the interest rates from four percent to say, 2.5 to 3 percent because then it opens 7702 up for scrutiny and a whole host of other issues. Sometimes the evil you know is better than the evil you don't.

Chart 1

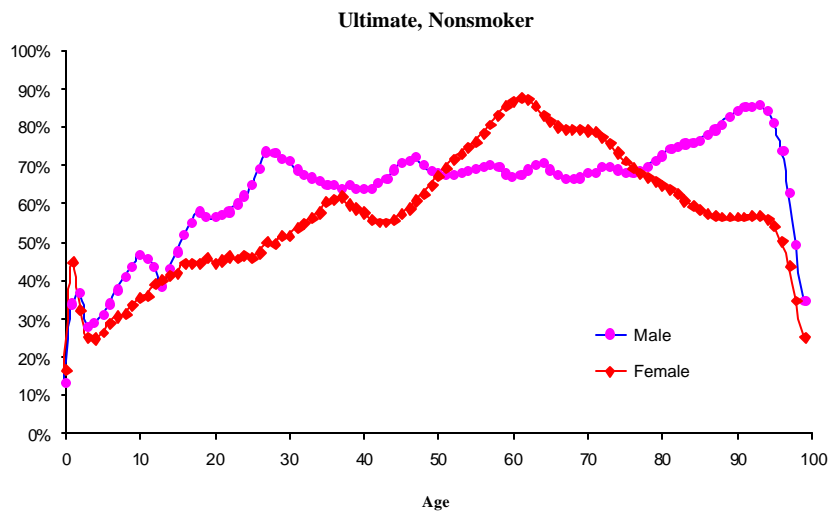
Proposed 2001 CSO Table as a % of 1980 CSO Table



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Chart 2

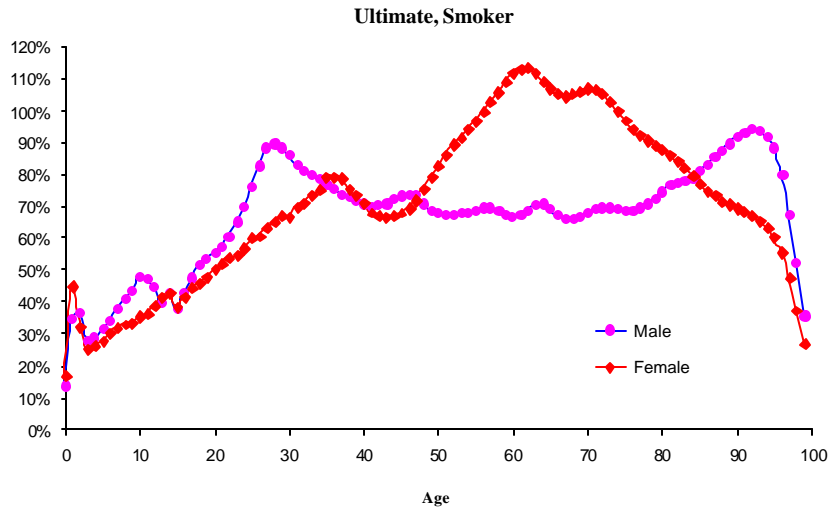
Proposed 2001 CSO Table as a % of 1980 CSO Table



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Chart 3

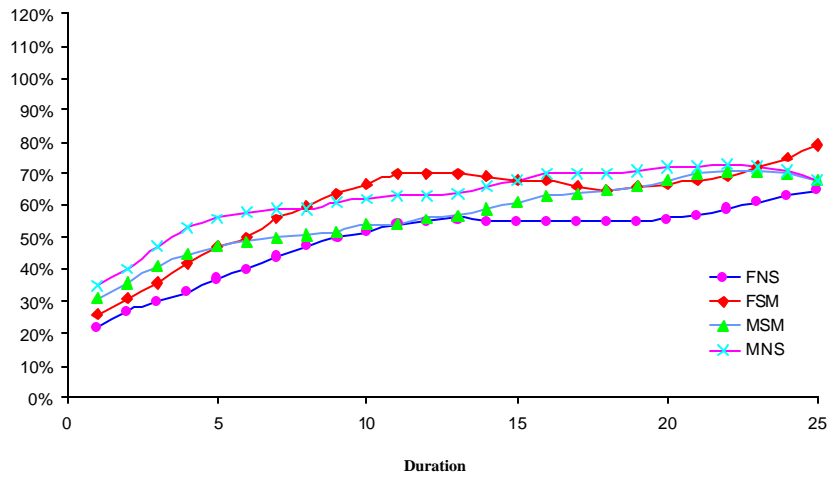
Proposed 2001 CSO Table as a % of 1980 CSO Table



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Chart 4

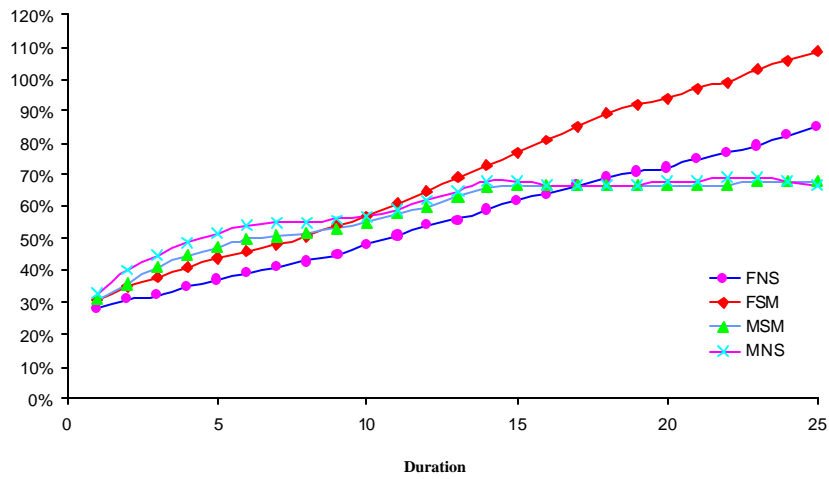
Select and Ultimate 2001 CSO (25 years) as % of 1980 CSO w. 20 year selection factors — age 25



8

Chart 5

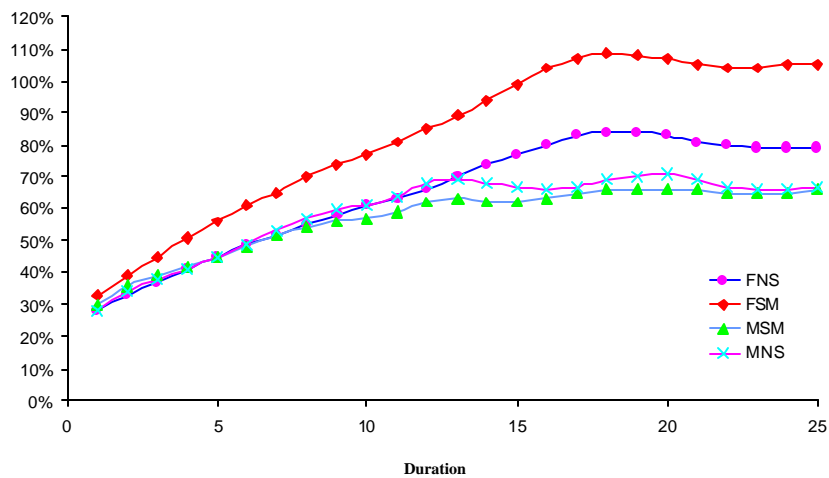
Select and Ultimate 2001 CSO (25 years) as % of 1980 CSO w. 20 year selection factors — age 35



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Chart 6

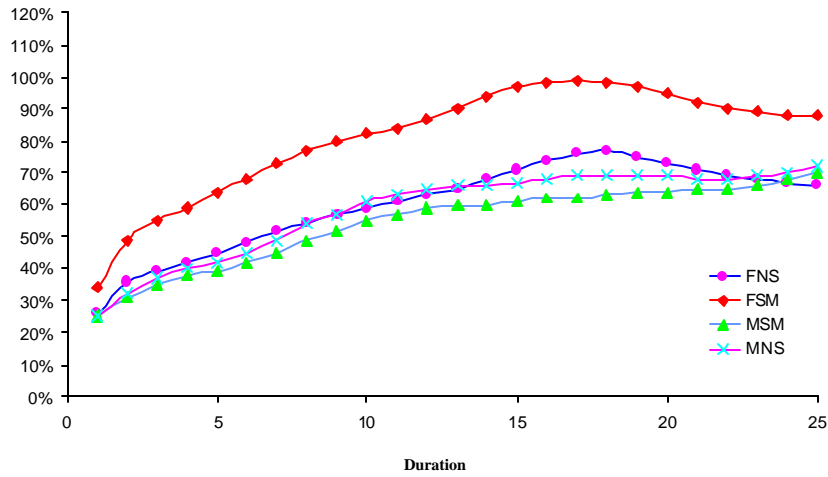
Select and Ultimate 2001 CSO (25 years) as % of 1980 CSO w. 20 year selection factors — age 45



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Chart 7

Select and Ultimate 2001 CSO (25 years) as % of 1980 CSO w. 20 year selection factors — age 55



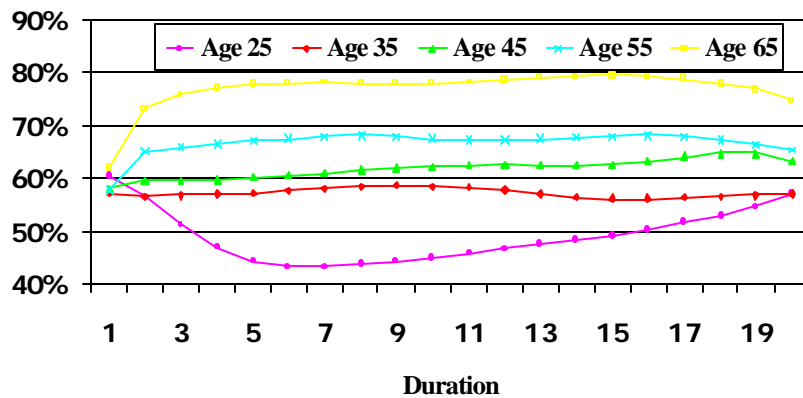
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Chart 8

Statutory Reserves -- 20 Yr Level Prem Term Mean Reserves



Proposed 2001 CSO as a % of 1980 CSO, Ultimate, Composite, Male



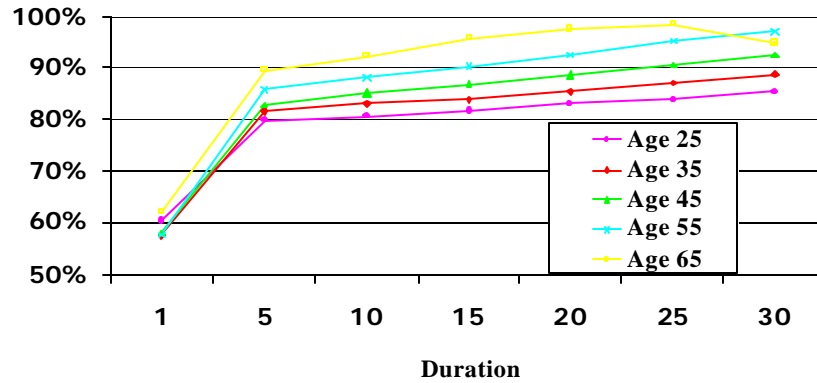
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Chart 9

Statutory Reserves -- Whole Life Mean Reserves



Proposed 2001 CSO as a % of 1980 CSO, Ultimate, Composite, Male



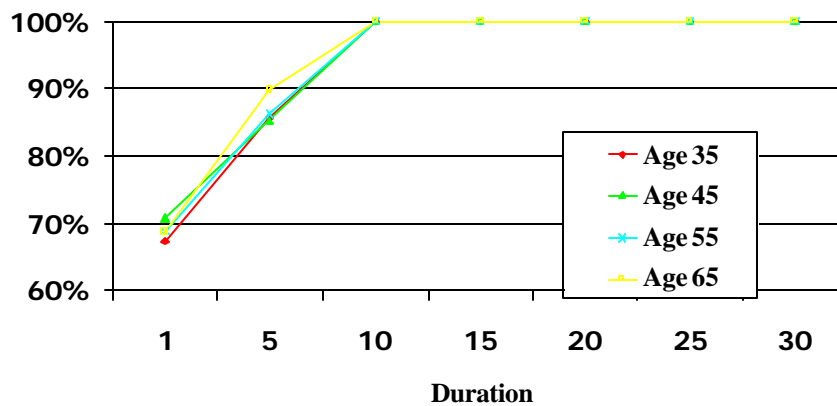
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Chart 10

Statutory Reserves -- UL Level Prem to Carry



Proposed 2001 CSO as a % of 1980 CSO, Ultimate, Composite, Male



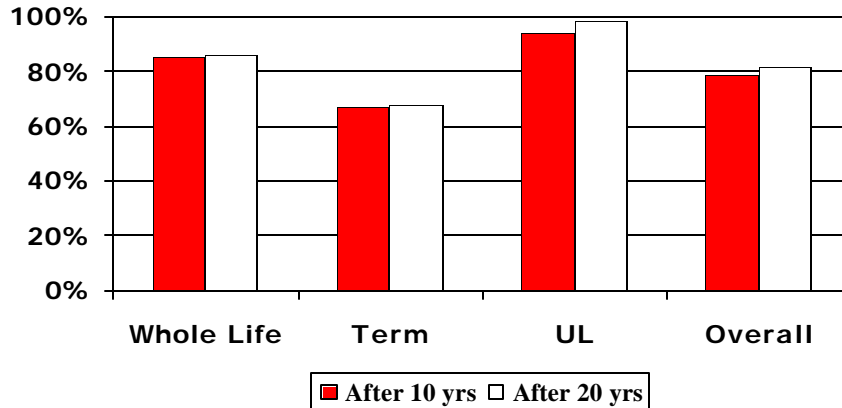
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Chart 11

Statutory Reserves -- Model Office



Graphically, by Product Type



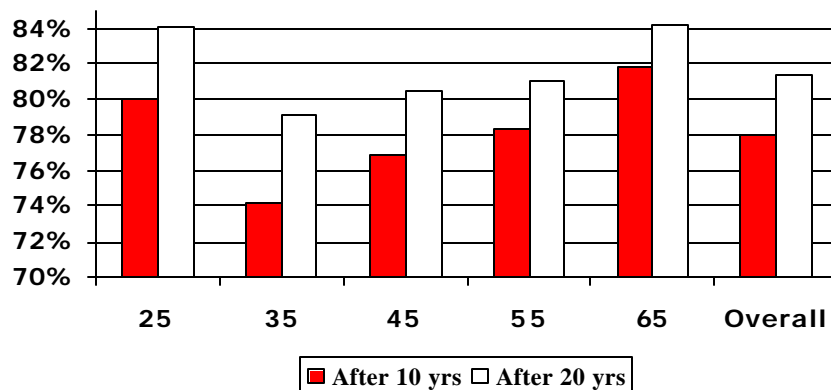
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Chart 12

Statutory Reserves -- Model Office



Graphically, by Issue Age



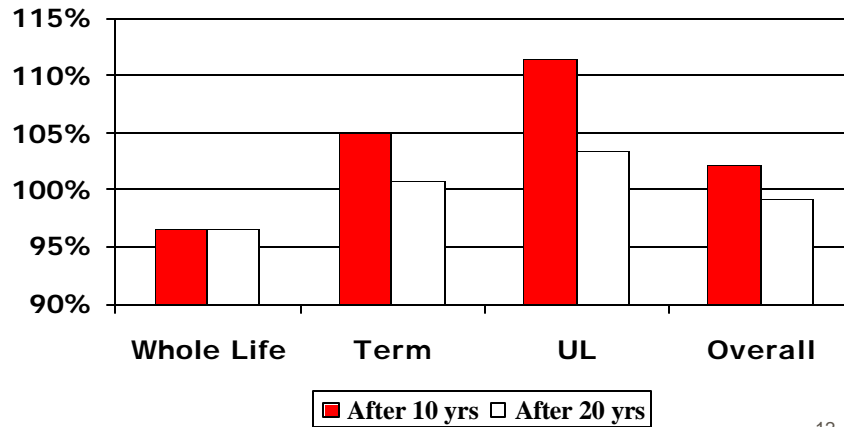
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Chart 13

Statutory Reserves vs Quasi-GPR



Graphically, by Product Type



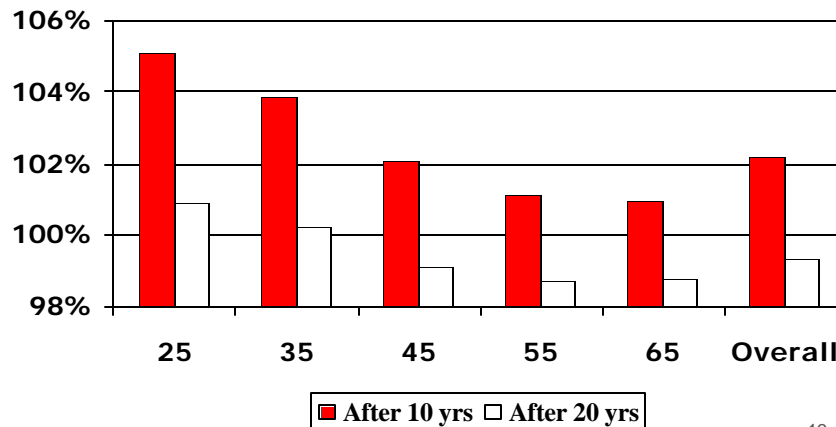
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Chart 14

Statutory Reserves vs Quasi-GPR



Graphically, by Issue Age



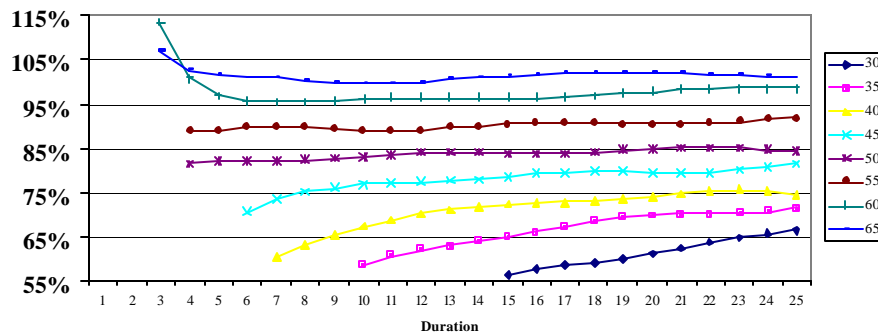
- 13 -

Chart 15

Nonforfeiture Values -- 30-Year Level Term



Ratio of 2001 CSO to 1980 CSO Nonforfeiture Values
by Issue Age and Duration, Male Unismoke
Ratios Shown for NF Values \geq \$10



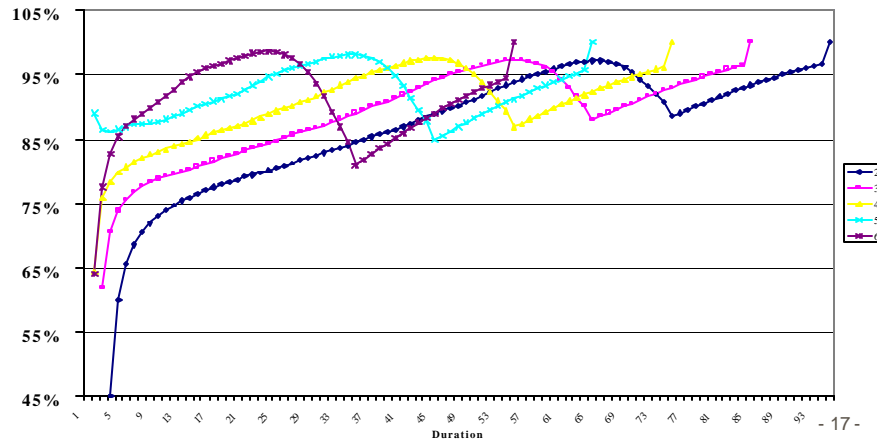
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Chart 16

Nonforfeiture Values -- Whole Life



Ratio of 2001 CSO to 1980 CSO Nonforfeiture Values
by Issue Age and Duration, Male Unismoke



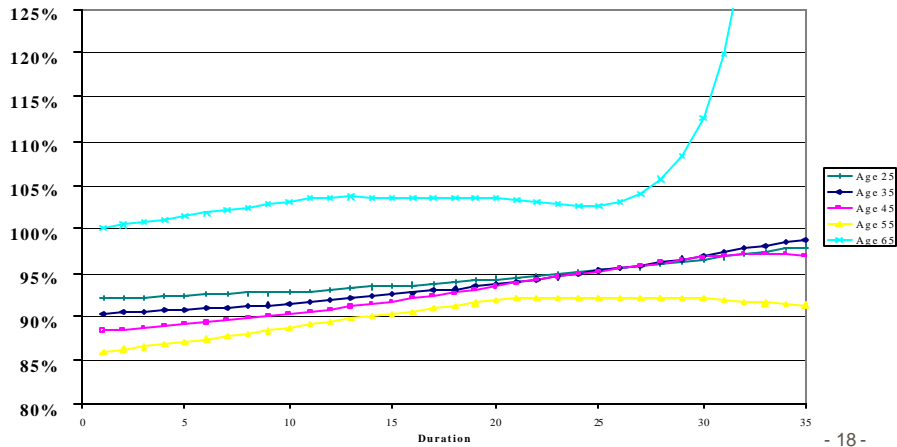
- 17 -

Chart 17

Nonforfeiture Values -- UL



Ratio of 2001 CSO to 1980 CSO Nonforfeiture Values
by Issue Age and Duration, Male Non-Tobacco



- 18 -

Chart 18

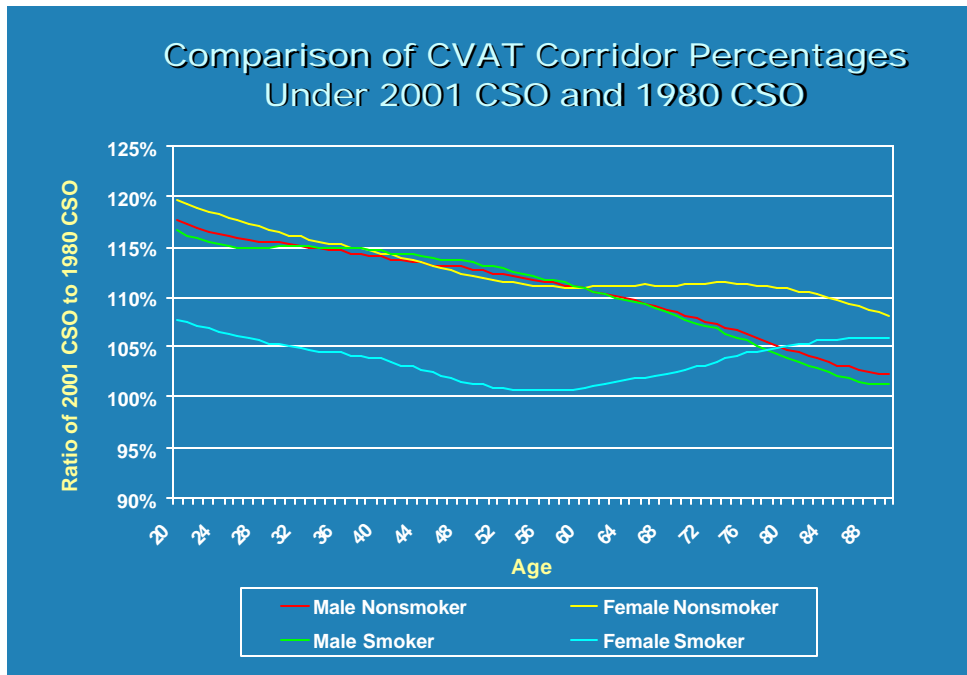


Chart 19

