

# RECORD, Volume 26, No. 1\*

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San Diego Spring Meeting  
June 22-23, 2000

## Session 42PD X(XX) Marks the Spot!

**Track:** Product Development/Reinsurance

**Moderator:** KEITH A. DALL

**Panelists:** MARY A. DIDION  
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**Recorder:** KEITH A. DALL

*Summary: Many states require insurers to comply with the Valuation of Life Insurance Policies Model Regulation, formerly known as Actuarial Guideline XXX.*

*This session explore the following questions:*

- *What product designs have emerged?*
- *How have these new product designs been affected by the new reserving requirements?*
- *What old products are still available—unscathed by XXX?*
- *How has the model regulation impacted the consumer?*
- *What has happened with reinsurance rates?*
- *Who is bearing the letter of credit cost risks?*

**Mr. Keith A. Dall:** I'm with the Indianapolis office of Milliman & Robertson. Mary Didion is from CNA Life in Nashville and Chris Shanahan is from Lincoln Re in Fort Wayne.

There are six objectives that we will cover in this session. The first two I will cover are the products unscathed by XXX and the impact to the consumer. Mary will cover the emerging product designs and the effect the model regulation has on these new designs. Chris will follow with the reinsurance impact on the new products and a description of letter of credit and offshore reinsurance.

Before I really get into the meat and potatoes of the session, I wanted to go over a little bit of the history just to give you some background on XXX, the model regulation.

First of all, starting way back in 1984 we had an actuarial guideline that was already in place called Actuarial Guideline IV. Unfortunately, Actuarial Guideline IV stated within the guideline that it applies to 1958 CSO products. If it didn't have that statement, we may not be discussing this topic today.

In 1988 there was a proposal designed to close the loopholes of Actuarial Guideline IV. It took until 1995 for the original Guideline XXX to be passed. The original

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guideline was very similar to today's model. It had the three features that the current model has. It included the different standard for deficiency reserves. It had a 15-year select factor as opposed to the 20-year select factor today. It also included a provision for the universal life (UL) with secondary guaranties just as it does in the current model. This last feature seems to be the hottest topic of the right now.

Unfortunately, there were only two states, Wisconsin and West Virginia, that actually adopted the original guideline. There were a number of states that adopted it with a 51% populous contingency, which seemed to make a lot of sense at the time to put that type of provision in the regulation. Unfortunately it never passed the 51% mark.

Then there was an industry group formed and they approached the NAIC with a proposal. This was the revised version, which was supposedly the new and improved XXX Model Regulation. Today there are 33 states that have approved the model regulation. Twenty-nine of those states have approved it with a January 1, 2000 effective date. Unfortunately, there are four states at the present time that have approved it with a different effective date: Pennsylvania is May 6, Utah is January 4, Washington is April 13, and California is July 1.

There are eight states that will likely adopt this in the year 2000 and there are eight more states that are reviewing or have a proposal in place. South Dakota and Tennessee do not plan to adopt the model regulation in the year 2000. They are not necessarily disapproving the model regulation, they're just not going to get around to adopting it in the year 2000. There are four states that have some deviations from the model regulation. The biggest state, of course, with probably the most deviations is New York.

You should definitely read through regulation 147 to get a proper handle on the differences. One of the things is that the state of New York does include variable life insurance. Illinois and Indiana have basically the same deviation. Later on we will talk a little bit about those deviations that Illinois made. The deviations are within the UL secondary guaranty language. Texas really does not have any substantial differences. They had a preamble that talked a little bit about the shadow fund approach that went with the model regulation.

There are three main purposes of the model regulation. The first one was the table of select factors. That's important because the reason why they included the select factor was that they knew that the 1980 CSO mortality table was out of date especially considering the increase in underwriting classes. Unfortunately, they knew that it would take a while to get the 2000 CSO table approved. Now the question is going to be, what is going to happen in a couple of years when they approve the 2000 CSO table? That is still an unresolved issue that the industry will have to resolve.

The state regulators are having a meeting on June 23, 2000 and they may address this issue some more. I believe it is unresolved as to what will happen when the 2000 CSO table is approved.

The main purpose of the regulation was to cover the minimum standard for valuation of plans with non-level premiums and/or benefits. The third purpose was to cover the minimum standard for the valuation of secondary guaranties on universal life insurance plans.

The model regulation applies to most life insurance plans. Some examples of plans that are included UL, whole life, pre-need, credit life, and term. The products that are specifically excluded are group life insurance plans that have an annually renewable premium feature, variable life (except in New York), and fixed ULs with minimal secondary guaranties.

The select factors from the 1980 CSO select factors in the Model Regulation XXX are quite different. The 1980 CSO select factors went out 10 years, whereas the model regulation select factors go out 20 years.

Now getting to the issue of the impact on consumers. This was a quote that came right out of the *National Underwriter*. It says, "The XXX Model Regulation will have consumers struggling to handle more complicated products, higher prices, fewer guaranties and marketing uncertainty." I don't believe this person liked the model regulation.

Well, there is some truth to this quote and we will hit on the majority of these issues. The higher prices and the reduced guaranteed periods are definitely a big part of what we're going to discuss.

On the other end of the spectrum, this was another quote I found from the past president of the NAIC, George Rider, "This regulation is very important since it concerns the required amount of reserves that a company must maintain to be confident it has the resource to pay future claims." It sounds great, but I'm going to point out later that companies need to be aware of reserve issues with some product designs.

The good news to the consumer is in the whole life product. The whole life product will have somewhat smaller reserves and probably can avoid some of the past deficiency reserves because of the X factors that now can be applied. When you look at the new whole life premium versus term premium, the difference is getting somewhat smaller. The whole life premium is either staying the same or maybe being reduced a little bit. The term premium, at least with the longer guaranties, is going to have to be increased.

In the past when people talked about buying term and investing the difference, the stock market was increasing 20% a year and the term was created lower term premiums. Now you have term premiums going up and the stock market sort of wavering back and forth. This may help increase whole life premium sales.

The premiums for a 30-year level guaranty term product had to increase by 50% at some ages. Again, the longer guaranteed term products are getting closer to a whole life premium-type product. Another issue is the commissions. The agents, I think, want to find a way not to have to sell the low-ball term product, because

they don't make much commission. The longer guarantees and cash values in a universal life or whole life product add value for the policyholder. If the difference in premium between these products and the term products is not as great, the agent will move back to the UL and whole life product.

Now what's happened to the term insurance market and the impact to the consumer there? If the guaranteed level premiums remain the same, for the most part the premiums are going to increase, post-XXX. If you keep the premiums the same, then you have to reduce your guaranteed period. Rather than a 30-year guaranteed period, you might have a 30-year level current premium but a 10-year guaranteed period.

Has it eliminated the 30-year guaranty plan? I think a few months ago if people would have asked this, the answer probably would have been yes. However, some of the things that Mary will go over may show that the policyholders actually want longer guaranteed periods.

Another question regarding the new term designs is, "Are the XXX Model Regulation reserves adequate?" That's an important question. When you come across products with a 30-year current level premium but only a 10-year guaranteed period, they are still getting to the point where they're only holding half the Cx as the reserve after that 10th year. Is that really an adequate reserve?

Chart 1 shows the impact the model regulation has on the term premiums. If the premium is guaranteed for a level 10 years, there is not much of an impact. In fact, some of the companies actually took this opportunity to try to reduce their 10-year level premium rate. The 15-year guaranteed period goes up 5-15%, the 20-year is a 15-30% increase, and the 30-year guaranteed level premium products are now 40-65% higher than they were pre-XXX. This is a significant change on the longer guaranteed plans.

For example, let's examine an age 35, \$1 million face amount policy. The 10-year term product remains at \$600 pre- and post-XXX. For the 20-year guaranteed term product, the pre-XXX is \$750 and the post-XXX is \$900. The question is, is the policyholder willing to pay an extra \$150 to buy the 20-year guaranty? The 30-year guaranty has gone up from \$1,100 pre-XXX to \$1,650 post-XXX. Keep in mind this is just a hypothetical example.

If you as an actuary are looking at this and you see the \$150 difference for the 20-year guaranty, your knowledge of the industry and the realization that, at least if you go with a reputable company, the likelihood of them increasing the term premiums is very small. The \$150-a-year cost may not seem reasonable.

However, if you think about the general population and "Joe Schmo" sitting on the beach, who maybe isn't nearly as trusting of the insurance industry, they may take a totally different view of that \$150 cost. You have to keep in mind the general population as opposed to just your thoughts because of your knowledge of the insurance industry.

Companies should be aware of the profit stream for term products. One of the things that we're finding out when we're pricing these 30- or 20-year current level premium products with a 10-year guaranty period is that you're actually losing money in the later years. Management needs to be aware that this is still a possibility even with the new XXX Model Regulation reserves. The reason it is a possibility is because after the 10th year you start holding a half-Cx reserve. There is not enough reserve to release in the later years when you have current level premiums.

Some companies have set their reserves higher similar to a GAAP basis. A new reserve is based on their expected mortality rates and their expected interest with a provision for adverse deviations. If that reserve is higher than the XXX reserve in the later years, they will go ahead and hold that. You may want to keep this in mind. You don't want to go down the path where in 10 years you start to sell less term policies and you end up having a lot of policies on the books that actually are going to start losing money.

**Ms. Mary A. Didion:** What I'm going to talk about first is what term insurance products are out there right now and which ones it is that the consumers are buying. Basically there are two types of products. There are the fully guaranteed ones that are pretty much the same as what was being sold last year, and then there are the limited guaranteed products that have lower reserves associated with them and are lower cost.

For fully guaranteed, the main ones that are out there are 5-, 10-, 15-, and 20-year products. There's still a few 30-year fully guaranteed products out there, but I don't think many are being sold just because the extra reserve costs makes it too expensive and it's just become prohibitive.

For limited guaranteed products I think the most common ones are the 15- and 20-year. There are some 25- and 30-year out there also. The most common guaranteed period is 10 years. I think most companies have found that with the 10-year guaranty you can maximize the period of time that the product is guaranteed for, but not really increase your reserves very much and not increase your reserve costs so you can keep the premiums down.

There are some products still out there with a five-year guaranty, I'm assuming most of those are from companies that developed their products based on the original version of XXX and just hadn't changed them. There are a few other guaranteed periods out there. We have a 25-year product with a 13-year guaranty, but I think that's a little unusual.

I've got some information here on sales distribution between products. The actual numbers are CNA experience numbers, but we have talked to a lot of our competitors and they haven't given us their exact numbers, but they've given us the trends in which product they're selling more of and follow along pretty closely to what our experience is. We're actually seeing an 85/15% split as far as fully guaranteed versus limited guaranty products. This may be a little bit more of a

split than other companies, but pretty much everyone is seeing more of the fully guaranteed products being sold than the limited.

I am only aware of one company that's told us that they're selling more of the limited guaranty. I'm not sure exactly why this is happening. It probably either means that the consumers don't trust insurance companies and are afraid we will raise the rates, or it could be that agents are used to selling the fully guaranteed products and are getting somewhat higher commissions on them, so that's what they're pushing, or it could be a combination of both of those things.

Table 1 shows the distribution that we're seeing based on level periods. You see 10- and 20-year level periods are the ones that are selling the most. Our highest selling product is actually the 10-year product, which is a 10-year guaranty. We've got more 20-year here because that's the combination of two products, both the 20-year guaranty and the 20-year level with a 10-year guaranty.

TABLE 1  
DISTRIBUTION BETWEEN PRODUCTS

By Level Period	
5 Year	3%
10 Year	33%
15 Year	17%
20 Year	40%
25 Year	1%
30 Year	6%

What do you do if you're selling mostly fully guaranteed and you want to try to sell some more of the limited or shift your distribution some? There are two ways that are generally the old-fashioned ways of increasing sales on any products, either lower rates or raise commission. Lowering rates in this instance may not work because the limited guaranty products are already cheaper than the fully guaranteed and people aren't buying them that much so even lower rates may not help much. Raising commissions may help some, part of that depends on whether you think that it's the agent or the consumer that's driving the sale.

The other way is to focus your marketing materials more towards the particular product you want to sell. For instance, show examples in your marketing materials of the total premium the consumer has to pay over the 15 or 20 years that they use the limited guaranteed versus the fully guaranteed. If they actually see that total amount of extra money they have to pay for the full guaranty, they may not be quite as interested in paying it. Another option is to show the percent increase that the company would have to do at the end of the guaranty period in order for the total premium on the limited guaranteed basis to be more than the total premium would have been on the fully guaranteed basis.

In general, what everyone would like to be able to do is to sell a product at the limited guaranty rates that are out there, but to be able to fully guaranty it. It brings up the question of, how do you make a limited guaranty product act like it's

fully guaranteed? I've got examples here of three different things that are currently being done by various companies with different types of pseudo guaranties to try to make the limited guaranty products look a little more guaranteed. I don't think any of these three are really the magic answer.

The first one is the re-entry rider. What this does is allows the policyholder to re-enter at the end of the guaranty period if they can provide evidence of insurability. Basically what this does is at the end of the level period if they qualify based on new underwriting and they're still healthy, then they get the rates guaranteed for the remainder of the level period.

The main question here is what level of evidence of insurability will be required? If you require full new underwriting or just some basic health questions, then the insured is still at risk that they may be sick at that time and can't re-qualify and may even feel that it's more likely if they don't re-qualify, then the company's going to raise their rates. They probably won't be real comfortable with that.

On the other hand, if you just have a requirement that they have to be breathing and at least capable of signing their name on a form, then that will probably be looked down on by regulators as really being fully guaranteed and you'll have to hold the full reserves. As far as I know, there hasn't really been a clear decision as to what evidence is required. I think that's still somewhat up in the air.

The next one is that you refund the last end year's worth of premium. The company guarantees that if they do raise rates, then they'll give you back the last two, three, or some other number of years' premiums that you've paid. Basically what this does is make it a little bit harder for the company to raise rates and hopefully in the consumer's opinion a little less likely that they do so. But it also may imply that if they do raise rates, it'll be a large increase to cover the extra cost of the refund.

The question that still remains with this, is what reserve needs to be held? One fairly common opinion is that you would accumulate a reserve equal to the amount of the refund up until the first point that rates could be raised. From that point on you would just leave that as a level reserve, which does increase reserve costs some, but not a large amount.

The third pseudo guaranty is to tie the rate increase to some type of future event where the company says they guaranty that they will not raise rates unless a certain specified event happens. One example that does exist out there now is that they won't raise rates unless the T-bill rate goes below 3%. There are basically two issues involved with this. One is how low can the probability of the event be before the rates are considered guaranteed? There's a pretty good chance that T-bill rates won't go below 3%, but it could happen. But say they made that 1% instead, that would be almost impossible and it would probably be considered a full guaranty and then you'd have to hold the full reserves.

The other question is, how much does the event have to be related to the profitability of the product? Interest rates do have somewhat of an affect on

profitability but not nearly as much as mortality or expenses or some other things. There has to be some kind of a correlation that there is a relationship. My company has been jokingly considering a similar product where we would guaranty not to raise rates unless the Cubs won the World Series. Obviously it's not related to the profitability of the product and also is very unlikely to happen, so I don't think it really meets either of the tests.

**Mr. Christopher S. Shanahan:** I'd like to spend my time talking a little bit about what exactly is going on "behind the scenes" as a result of XXX in the reinsurance market. I would imagine a lot of people here work for companies that are reinsuring a significant portion of their term business.

How many people here are from a direct company? How many of them believe that their company is reinsuring a significant portion of their term portfolio? A high percentage. I think it's a good idea to understand what's going on behind the scenes.

I think that's something that may have gotten some attention last year with the reinsurance contact at the direct company. From some of the things we've seen this year I'm not sure how well it was disseminated down to the product development actuaries who are actually working on the product, the valuation actuary, and so on. There are some new issues that XXX brought up in the reinsurance market and I think it's valuable for everyone to understand what is going on.

As is typically the case, there are two main ways to reinsure business: co-insurance and yearly renewable term (YRT). Probably the biggest difference between those two things in the XXX world is the treatment of reserves. Co-insurance, by the very nature of it, transfers the full reserve liability on whatever portion is being reinsured to the reinsurer. Hence a large portion, especially if it's largely reinsured, of the XXX reserve gets passed along to the reinsurer.

On an YRT basis you're essentially just transferring out the mortality risk and basically the entire XXX reserve strain is staying with the direct rider. Probably not surprisingly, we haven't seen a lot of companies, if they are choosing to reinsure a lot of their term business, do it on an YRT basis. There are some that have chosen to deal with it internally or some other external solution to deal with. Certainly co-insurance is the more common form for what we're dealing with and pretty much all of my comments that follow center around co-insurance because from a reinsurer's perspective a YRT arrangement really has very few if any XXX implications.

Co-insurance has, of course, already become very commonplace in the term market over the last several years. The same is true of doing it on the first-dollar basis, with companies keeping anywhere from 10-50% when reinsuring very large portions of their term portfolio. In that respect the basic arrangement was unchanged. It didn't bring about something new. There may have been a few companies that started co-insuring their portfolio or increased the percent they're reinsuring as a result of XXX, but for the most part I wouldn't say that has happened.

The co-insurance mechanism, as I said, transfers the quota share that they're reinsuring of the XXX liability out to the reinsurance market. Essentially what we've been able to do is use some offshore mechanisms that really aren't anything new. It can be cheaper in terms of what direct premium results for the direct company to reinsure a portion out to the reinsurance market and using the offshore mechanism we're able to effectively reduce the cost of the XXX reserves. We're not reducing the reserve itself, but we're reducing the cost of it. We can potentially handle it in a way that is cheaper to us than it is to the direct company. In turn, to the extent that you're kind of swapping it out to a reinsurance premium, you're getting a lower increase in reinsurance premium than you would if you had fully retained it.

What happens when we go offshore? Like I said, I'd like to cover the basics of what my company is doing, but I think it is probably representative of what most major reinsurers are doing. Obviously, if you get down to nitty-gritty details, each company's probably different and it's probably beyond the scope of discussion here. To the extent that you want to understand the nitty-gritty details of exactly putting numbers and such to what your reinsurers are doing, that's something you should take up with them individually. Essentially in the co-insurance transaction the reinsurer is accepting their full portion of the XXX reserve that would include any deficiency reserves that go along with it.

The mechanism can really work one of two ways, either the direct company can go straight to an offshore reinsurer or probably what's been more common is to go directly to a normal U.S.-based reinsurer that then internally does its own transaction where it's retroceding it to its offshore company. The end result is pretty much the same thing. There are a few issues between doing it the two ways, but the basic idea is the same.

What the U.S. company is doing is setting up the full reserve, the full XXX liability, and as such, the ceding company is taking full reserve credit. What happens then when the U.S. reinsurer goes to its offshore company? That offshore company is setting up the entire reserve but essentially it's using normal assets to back what I would call a prudent reserve. Maybe a GAAP-like reserve is a good way to describe it. Essentially a reserve that's realistic and is certainly higher than half Cx, hence one of the two reasons why this doesn't lead to XXX not having a cost. It has a very significant cost as we've seen by what Keith showed in terms of what's happened with premium rates.

To the extent that there is a balance of the XXX reserve over what we deem to be this prudent reserve, that amount of the reserve in the offshore company is backed by a letter of credit (LOC) instead of normal assets. That's the second cost, the amount of reserve that isn't necessarily backed by a normal block of assets but is still a cost because you have to pay for the LOC. LOCs are far from free. Also, unlike a reserve, where it's really just a timely mechanism, that's a real expense out the door. Not just something that you're deferring income on.

The truth is the effect of XXX and the impact of how effective the offshore mechanism is in reducing that cost varies greatly from situation to situation. You probably know if you've looked at all, that the effect of XXX varies dramatically by

age. Deficiency reserves vary dramatically by what your premium levels are, what underwriting class you're in, and so forth.

Surprisingly on 10-year, XXX certainly helps keep premiums pretty much at about the same level, but the effect isn't terribly great. Obviously as you get out to the longer guarantee periods it becomes more and more dramatic because the difference between the XXX reserve and this prudent reserve starts to widen and widen and widen. Yet, on the 30-year there is probably a 50% or so increase, which I think is fairly consistent with the numbers Keith shared. It's a long way from saying that a XXX doesn't matter because it does.

What's new here? This is obviously something new going on. But what are the implications of it? What does it mean? One is that, as I was describing the mechanism, we've got this LOC and effectively the way the market has settled for term reinsurance, that's for the most part a reinsurer problem. LOCs unfortunately cannot be secured at issue to cover the life of the policy. They have to be purchased every calendar year and that introduces two uncertainties: availability and cost.

We're essentially building into, for the most part, a guaranteed reinsurance premium, a cost structure for the LOCs that we don't know. Certainly we know that the demand's going up. There are other things. The capital requirements for banks are changing and essentially the LOC market is not as favorable probably as it was a few years ago, and that's a significant issue to the reinsurer.

Early on I think there was some talk of this risk falling to the direct writer, but for the most part I think the talk settled on this as the reinsurer's thing to deal with. Obviously it's built into the pricing that we do to be able to absorb some increase in the future cost of LOC. There are certainly LOC capacity issues. There's a limit on how many LOCs you can have on your books. That's something that the reinsurer has to manage very carefully as well to make sure they don't put themselves in a situation where at some point in the future they're going to have a problem.

Obviously the LOCs come from the XXX reserve building to a large gap over a prudent reserve. As you look at the pattern of reserves on a 30-year term plan absent large deficiencies, although that can be part of it too, we're talking about something potentially 10 or 15 years down the road.

Another issue that has resulted is X factors. These are something new that helps control the deficiency reserves and are obviously important pieces of the new XXX regulation. To me the most striking thing about this is what it does to the direct company-reinsurer relationship. You care what each other's mortality assumptions are more than you used to.

It used to be you were potentially interested and you may have worked together with the reinsurer on it, but for the most part the mortality assumptions of the direct company and the reinsurer didn't necessarily have to match up very well. That's not to say they have to match exactly now, but it's important to understand

that in the process of setting up your reinsurance arrangements the reinsurer needs to know accurately what reserves they're going to be sent.

For the most part, the direct company wants to send the reinsurers the reserves they're going to set up. Knowing what those reserves are on the deficiency reserve side means essentially knowing what X factors the direct company is going to use. In the ideal situation what we're really pushing for is to all be using the same X factors. It's probably not something that has to happen, but it introduces some interesting challenges, especially administratively.

In the era we are in of self-administered reinsurance, what if the direct company and the reinsurer are going to hold different reserves? The topic of how allowable that is came at the XXX seminar, and I think from what I heard, it was acknowledged that for the most part it's okay if you're using reserves as long as they're valid. If the direct company is choosing to be more conservative, but the reinsurer is using an X factor that is realistic and reasonable, and holds up to scrutiny, and this leads to the difference in deficiency reserves, it's acceptable.

There's nothing necessarily wrong with the direct company ceding X dollars of deficiency reserves to the reinsurer and the reinsurer setting up something less than that, and the direct company still taking full credit. But that's administratively very difficult and regardless it's important for the reinsurer to understand what reserves they are going to be asked to hold on this. That's something that previously really wasn't much of an issue, and it certainly didn't get into what mortality was being used because for the most part, under most product designs, the products were structured to drive things down to a half-Cx reserve that doesn't vary from company to company.

That's really what you have now on the deficiency reserve side: reserves are company specific and product specific. It requires a lot more communication between the reinsurer and the direct company as well as bringing in not just the product development side but also the valuation side. It's important that everybody is talking to the valuation actuary, the pricing actuary, and the reinsurance-pricing actuary. You need to all be talking to each other about how X factors will be handled.

Another issue of X factors is what happens if they change? X factors have to be reviewed retrospectively. What's going to happen if you get into a situation where at some point down the road your X factors fail against retrospective analysis and you need to raise them? Is your reinsurer going to follow you on that? I think that gets into the basics of what ideally the reinsurance market is, which is a kind of partnership with a client company. It's "follow-your-fortune" kind of logic. Certainly our intent is to set things up and understand that if the X factors need to be changed retrospectively, then the reinsurer is going to probably participate in that.

But that's another reason why it's important to be talking to each other, and why the reinsurance side wants to understand what the direct side's doing with their X factors, is to see if they're unduly high and holding reserves they don't need to

hold, and also to make sure they're not unrealistically low. If we're being asked to participate in a potential increase after the fact, then obviously you can't collect more premiums after the fact to recoup that cost. It's important we make sure that the X factor is being set in a way that is realistic and is going to hold up down the road.

Another issue, and Keith alluded to this a little bit earlier, is shorter guarantee plans. Most of what I talked about here is focused on the fully guaranteed plans, in particular the ones longer than 10 years because that's where XXX has really had an impact. As both Mary and Keith have talked about, the other phenomenon we have now is the concept of the 20-year level term with a 10-year guarantee or a 30-year level term with a 10-year guarantee.

Part of what Keith talked about looking at essentially is half Cx, which is essentially the reserve you can pretty much still get back to, especially after duration 10. Is that really a realistic reserve for these plans? On a standalone basis, it's not and that's not a new issue, that's an issue that's been around for years. I think most companies, probably not all, have been playing this game for a number of years where you hold a half Cx reserve on a 30-year term plan and it begs the question, is that an appropriate reserve?

Some companies, including mine, have adopted a policy which says from now on the answer to that question is no. Part of the rationale or the support for the off-share mechanism is getting to a prudent reserve, getting to a reserve that is economically correct based upon the assumptions with some reasonable load over them. By the same logic that reduces the cost on say a 30-year plan with a 30-year guarantee, you can ask the same question of a 30-year with a 10-year guarantee, does half Cx meet that test of a prudent or a logical reserve?

Our feeling is the answer is no, it's not. As a result we will hold, and like I say, I'm aware of some other companies who are doing the same thing, kind of that prudent reserve logic is being held on the 30/10 as well as on the 30/30. Basically we're holding the same reserve regardless of guarantee period. The difference is you don't have the significant LOC cost, at least from our perspective, on top of it because there isn't any excess to the full stat liability. You're actually holding above the statutory minimum technically speaking.

That's the issue on shorter guarantee plans we're dealing with and there are other reinsurance intricacies that have come up. They're more detail-oriented. Historically, reinsurers have not participated in policy fees in reinsurance arrangements. They've been excluded. Now they're set up so that we do participate in the policy fee, but we provide 100% allowance on it to align and make sure again the reserve calculations are a mirror transaction.

Otherwise, if the company's including the policy fee in their reserve calculations and the reinsurer contractually says you don't participate in the policy fee, you're in a different situation in terms of reserves, in particular, deficiency reserves.

There are also some issues that have come up with regards to recapture. I'd say most reinsurance treaties have called for recapture on level term plans that are equal to the level term period or 10 years, whichever is longer. A new issue now is that there are still some treaties out there that have 10-year recapture just across the board. Generally, no one ever really cared much about those because it really didn't make much sense to recapture a 20- or 30-year term plan after duration 10 when you're hold half Cx reserves.

The remaining outlook for that product didn't look too attractive. The issue now is you've got this very large XXX liability that is attached to it, a duration 10. It begs the question: if the direct company were to recapture after 10 years on a 30-year fully guaranteed term plan, should the reinsurer be transferring assets backing the reserves back to the direct company? That's something that generally has never been practiced and it wasn't much of an issue in the half Cx world, but it's important to understand where you stand on that issue so that we don't get into a situation 10 years down the road in which we have a real misunderstanding.

As you've seen, a significant portion of the assets that are backing the XXX reserve on a fully guaranteed plan in most cases is LOC, which I guess in theory you can transfer back. I'm not even sure you could transfer that, but if you could, it's going to expire in a year and now it's back in the direct company's lap to deal with that. In addition, the whole logic of using the LOC kind of falls when you send it back to the direct company because it's not an offshore company. That might mean that the direct company may only want real assets backing the whole thing. That doesn't work because the reinsurer didn't price it that way.

The whole point of the reinsurance mechanism in the first place was for the reinsurer to hold less real assets so they could drill the cost impact on the reinsurance premium down. We essentially collected less "excess" premium in the early years because we had less to fund. We can't go back and refund the full excess because we never collected it.

There are just some of the more picky details of things that are pretty easy to work through. I think the solution to that has been to make sure that the recapture period is equal to the guaranteed level term period. On a 30/10 it's not really much of an issue because after duration 10 you're back to a half Cx reserve again. I think the bigger issues are the ones that I already talked about: X factors and really just understanding what is and is not going on behind the scenes in your reinsurance arrangements.

**Mr. Dall:** Through 1999 and really into the first quarter of 2000, most companies were concentrating all their efforts on the XXX Model Regulation towards their term block of business. Now companies are starting to look towards the UL secondary guaranty reserves. Actually, it may be better said that the regulators are starting to look at this a lot more closely than what they had in the past. The secondary guaranties are defined within the model regulation with two premium definitions. The first is to include UL secondary guarantees subject to paying a specified premium. This includes any UL product that will stay in force if you pay a certain premium amount. That is a very cut and dry definition within the model regulation.

The next definition is the minimum premium. If minimum premiums are less than the valuation premium, you use them to calculate the reserve. It is this second definition, the minimum premium that is creating some concern. The shadow fund approach uses this definition and that is what the regulators are currently reviewing.

The state of Illinois, because of the shadow fund approach or the phantom fund type universal life secondary guaranties, has decided to make their model regulation a little bit more flexible. Larry Gorski, Life Actuary of the Illinois Insurance Department, added to the definition parenthetically, "or imputable by the terms of the policy," which means that if you have a shadow fund approach, at least according to Mr. Gorski's presentation, and you actually can pay a level premium plan to keep that policy in force, then you have to hold a reserve that would be equivalent to a whole-life-type reserve. This means it would be the full humpback reserve.

Another change he made to the regulation was adding the words "that policies with secondary guaranties include, but are not limited to." Again, he's trying to add some flexibility into the model regulation to cover some of these creative designs. Remember that Indiana also has applied this to their model regulation. I know the state of Kentucky, at least in May 2000, was saying that they would also use the Illinois approach as opposed to the traditional XXX Model Regulation.

The definition of the minimum premium is in the model regulation itself. If you set the account value at time  $T$  to 0, then the minimum premium, which is the variable you solve for, less the guaranteed cost of insurance rates, less the guaranteed loads, plus the guaranteed interest, gets you back to a zero account value at the end of the policy year.

Now, getting back to the more traditional designs that use a specified premium. The common guaranteed periods are 20, 30, 40, or 50 years or all the way out to age 100. The pre-XXX designs did not add any specific charges to the policy for the secondary guaranties.

The shadow fund approach takes on many different designs, but it's usually a combination of guaranteeing the current interest rate, cost of insurance charges, or policy loads.

Prior to XXX, some companies were not holding additional reserves for the secondary guaranties. That is what actually caught the regulators' eyes and that's why they wanted to include it in the model regulation. Some companies, though, were using the higher guaranties, especially in the shadow fund approach, to calculate the UL Model Regulation reserve. Other companies, especially those that were not setting up any specific reserves were depending on the cash flow testing results. These companies use the actuarial memorandum regulation as a catchall for adequate reserves in aggregate. That was all pre-XXX.

The XXX Model Regulation reserves for UL secondary guaranties works the same as the term products. You have to look at each segment reserves and compare those

to the unitary reserve. You will either use again the specified premium or a minimum premium amount for that reserve calculation. There may be deficiency reserves especially in the older ages and the longer guaranties. The minimum reserve is going to be the sum of a basic reserve and the deficiency reserve, or if greater, other regulations governing UL. You still have to calculate the UL Model Regulation behind the scenes and see if it's greater.

The difference in reserves can be quite dramatic and it depends greatly on the design of your product. Chart 2 shows an example of a low-premium design UL product. The low premium causes it to have a more significant difference in pre-XXX and post-XXX reserves. The line at the bottom is the pre-XXX reserve, which is the UL Model Regulation reserve that was calculated. The two upper lines are after XXX. Again, this was a 20-year secondary guaranty, so you can imagine if you go all the way out to age 100, there could be a significant difference. Keep in mind the XXX impact is so dependent upon the funding level. Policies with high premium levels will have UL Model Regulation reserves that are greater than the XXX reserves.

**Ms. Didion:** I'm going to discuss the shadow fund in a little more detail and also what types of secondary guaranties survived XXX, what is still out there, and what's being sold. To start with, I have divided the long-term guaranties into three different types. There are the long-term ones that are anywhere from 20-50 years or to age 100, 95, 85, or something that's for long term. There are the 10-year guaranties that basically go back to limiting the reserves to similar to what a 10-year term guaranteed reserve has. Then there are the shadow funds, which I'll go into a little more detail on.

The long-term guaranties, which again was the 20-50 year or to age 100, has significant reserves related to it as Keith was talking about. Basically you have to hold the XXX reserve based on the full-guaranteed period and the level premium that is required for the guaranty. There's definitely a cost associated with this. There are basically two things that a company can do with this cost. They can either just hold the higher reserves and absorb the costs themselves and basically take lower profits, or they can pass the extra cost onto the consumers and raise the rates that they're charging for these long-term guaranties.

The 10-year no-lapse guaranty, maybe the more prudent way to go, adds very minimal extra reserves to it. The main issue with this though is, will the product sell? Can you sell a UL product with only a 10-year guaranty if there are other products out there that have a 50-year guaranty, to age 100, or something like that? That's something that companies need to decide on their own.

Now let's discuss the shadow fund. Keith already described it. I'll go into a little bit more detail and describe it a little different way. Basically what a shadow fund does is guarantees that the policy will stay in force as long as the shadow fund is positive. The shadow fund is basically a third account value. At issue the policy has a projected current account value with the current cost of insurance (COI), interest, and expenses, and a guaranteed account value with the guaranteed COIs and interest.

Now you have a third account value, you use a different interest rate or a different set of COIs or factors that are somewhere in between the two. If you can set up these factors or shadow fund COIs so that they don't increase any more rapidly than the 1980 CSO with the 20-year select factors, then you should be able to just have one segment and avoid some deficiency reserve problems. Of course this is under a certain interpretation of how to reserve for these.

There are some varying views on how shadow funds should be reserved for. I'll try to go through what some of these different opinions are. When the shadow fund first came out I think a lot of people were saying that it avoided XXX. It was exempt from it and you didn't have to worry about it. I think now pretty much nobody believes that.

Some of the companies that are selling it are interpreting that the reserves are based on a set of ART premiums. These ART premiums are basically the minimum premiums, which Keith talked about before. The minimum premium is the premium that gives an account value of zero at the end of the year if you started with an account value of zero at the beginning of the year, which basically comes out to be your COI or in this case your factor adjusted some for loads and interest.

Again, under this interpretation if you can keep your factors from increasing faster than the 1980 CSO, then you can avoid a change in segment and help lower the deficiency reserves.

Some of the regulators, on the other hand, have been coming out lately saying they don't agree with that type of reserving. They're saying that the reserves should be based on an input level premium based on whatever duration you're guaranteeing the policy will stay in force for under this shadow fund. You would calculate a level premium that would keep the policy in force for that period, and that's the premium that you have to assume for calculating your reserves that give you the traditional humpback reserve design.

There's a new actuarial guideline that's being worked through the system that will make this the official way to reserve for the shadow fund. But as of right now, I think there's still some disagreement and discussions going on.

What are companies selling? What kinds of guarantees are out there? I have a survey of 25 insurance companies that are selling UL products in the U.S. and a list of what types of guarantees they have on their products. The highest percentage is with the 10-year guaranty. The 50-year columns also include to ages 95 or 100. I lumped them together, but then I split them into two columns. One is the companies that kept the same rates that they were charging last year, the companies that are basically eating the extra reserves themselves.

The other column is the companies that raised their rates, so they've passed the extra reserve on to the consumer. If you add those two together, you're getting close to the same number of companies that are selling the 10-year guaranty. Also, I know there's at least one company that came out at the beginning of the

year with a 10-year guaranty and then soon after went back and put their age 100 back in there for competitive reasons because so many companies had left the long term guarantees out there.

It will be interesting to see over time what happens, whether it skews more towards everybody going back to the long-term ones and lowering the profits on ULs, or if more companies decide to move back towards the shorter guaranties.

**Mr. Shanahan:** I'm going to try to be brief here; I'm starting to cross out of my area of expertise. Truth be told, I think there's far less consistency in the reinsurance marketplace as to how to handle these things. While there are differences here and there, I think you can discuss things as this is how the term reinsurance market is working.

My understanding would be that it is less likely when it comes to secondary guaranties, partially because of all of the uncertainties associated with them. There's a lot more uncertainty here in terms of what regulators think, and as such, this impacts any reinsurance options as well as they do the direct side. All of those issues that are outstanding really make it hard to pinpoint down exactly how you reinsure it.

The basic problem I think is similar to term. You've got a potential reserve liability, especially depending upon which reserving approach you take, that produces a very high reserve that you could argue is unduly high. The primary reason for that is maybe not flawed methodology, but the mortality assumption being used to calculate it; 1980 CSO even with the 20-year select factors is higher than what most companies are using as a pricing mortality assumption. You'd like some kind of relief from that. It's not as simple as just co-insuring your UL plan to your reinsurer for a number of reasons.

Traditionally UL plans have been just YRT reinsurance for the most part, at least on the traditional reinsurance side. Again, that's something that I think differs from term. Like I said, there's a new twist that was put on the term reinsurance with regards to XXX, but the basic idea has been there. Companies were co-insuring a high percentage of their term products on a first dollar basis already. They still are, and we just worked through the reserve implications of it.

Today most of your ULs are "YRTed" to cover the mortality risk and that doesn't do anything to address the XXX issue. You've got a little more of a complex thing to deal with the fact that UL is a much more complex product than term, which not coincidentally is the reason why it was being "YRTed" in the first place. You get into things like cash flows which are not as predictable. You've got non-guaranteed elements. You've got a lot more product management issues that if you're reinsuring a significant portion of it, get into conflicts on how to manage that between direct company and reinsurer.

All in all, co-insuring UL historically speaking, at least especially for traditional mortality transfer reasons, hasn't been a very viable or desirable option. Instead it's been done via YRT.

Now what? We need to work through those problems. You can take out some of those things with things like experience refunds, but that gets a lot more complicated and may not cover the desired transfer of mortality risk. Essentially you need to develop a new twist on surplus relief (and surplus really maybe is a poor choice here) like we did a new twist on term. I think that's being done, but unlike term it's much more company-specific, it's much more situation-specific, it's not as streamlined of a solution.

I wish I had that answer to share with you, but I think there are things that can be done and you can talk to your various reinsurers to do that. Anything that's done has to of course meet the scrutiny of applicable regulations: the two primary ones being the life-health model regulation and the credit for reinsurance model regulation. The latter covers reserve credit from unlicensed reinsurers, mainly the offshore company, and then obviously the model regulation on life-health agreements. Mainly, if you're talking about co-insuring, you've got to transfer all relevant risks.

LOCs are again going to be a key to anything that is done and it can be magnified from the standpoint of the LOC strain could be much higher as you can potentially give very long guaranties. Mary threw out numbers like 50-year guaranties, but we don't to my knowledge have 50-year guaranteed level term. Not surprisingly just as we discussed the impact of 10-year versus 20-year versus 30-year and it grows very rapidly, you can imagine extrapolating that out to a 50-year guarantee.

Further, as I alluded to at one point about things being company-specific, the effect is greater for the most part at older issue ages. UL has older issue ages than term does, so again, this is leading to greater reserve situations to deal with. On top of that, from a reinsurer capacity standpoint, it's very possible this type of arrangement is not going to be a pooled arrangement with five reinsurers each taking 20%. If you use one reinsurer 100%, then that further magnifies things.

**Mr. Stephen L. Kossman:** You showed the changing of net reinsurance rates and using offshore is about 15% and 35% increases for a 30-year guarantee. You also showed the impact to consumers for 30 years of a 40-65% increase in premium. Was the impact to the consumer assuming offshore reinsurance or is there something implicit in reinsurance that there's a bigger impact than there is on the premium change to the consumer?

**Mr. Shanahan:** Keith can help me answer this question. I think his numbers probably came from just kind of observing what's actually out there in the market.

**Mr. Dall:** My numbers came from a survey at the end of 1999. That was early on in the process before a lot of the reinsurers were quoting much more competitive rates.

**Mr. Shanahan:** Where I was going to go was that to the extent that you look at what happened to reinsurance rates or the major term players, I think it's safe to say the majority of those major term players are reinsuring a significant portion of their portfolio of term products. In almost all situations, behind the scenes, the

reinsurers are taking it offshore to help lower the reinsurance cost. I guess the end answer becomes, yes, it's assuming it. If a company didn't do some form of solution offshore, I don't think you could probably support long-term a 30-year term plan fully guaranteed and only raise your rates 50% or so.

**From the Floor:** On the reinsurance related to term, you had indicated that a realistic reserve would be held. Separately you talked about there seems to be a lot of risk related to LOCs that will essentially become more of a financial burden as the products age. Does your realistic reserve reflect the fact that you're going to be charging the ceding company level reinsurance rates but your LOC costs are going to be somewhat back ended?

**Mr. Shanahan:** Just to clarify a little although it doesn't change the question all that much, is depending upon the presence of deficiency reserves that can be a little bit of a less true statement. If you get very high early deficiency reserves, you get more of a level pattern because you start with the deficiency reserve then you hit the hump and write it down, which diminishes that somewhat. I would say in general the answer is probably no.

Well, it's hard to describe. I would say explicitly no, implicitly yes. That's probably a better answer because the reserve that's being set up is not just taking new account premiums in mortality, it's looking at the overall profit picture and LOCs are very much a part of that. Implicitly I would say the answer to that is yes. It also introduces some surplus issues and obviously there's an issue of just how aggressively you want to price those future LOCs and that's certainly taking into account in the pricing, especially on the longer guaranteed plans.

**From the Floor:** You talked about some pseudo guaranties and some possible ways the companies can get around those guaranties. Are you aware of any states that actually approve policy forms with that kind of language?

**Ms. Didion:** Yes. The three pseudo guaranties I talked about all are being currently sold right now. But I think in some states there's a discontinuity between getting a policy form approved and the state actually agreeing to the way you're reserving for it. They are being sold right now, but somewhere down the line someone may come back and disagree with the way they're being reserved for.

**Mr. Dall:** Mr. Gorski discussed the fact that he was aware that the state of Illinois had approved one of these pseudo guaranty riders and it was unbeknownst to him. He was going to go back and look through their regulation and review that rider again to see if they could disapprove it or at least get some understanding of how the reserves would be set.

**From the Floor:** The other thing was you listed a factor that 85% of the companies are selling the full guaranteed products and only 15% were selling the revised guaranteed products.

**Ms. Didion:** That was CNA results in that 85% of our sales are fully guaranteed and 15% of our sales are limited guaranty.

**From the Floor:** I was curious if that included the 10- and 5-year products as fully guaranteed products?

**Ms. Didion:** Yes.

**From the Floor:** Okay, because that kind of skews that a little.

**Ms. Didion:** But even within the 20-year product, the percentage of the fully guaranteed is a lot higher than the 10-year guaranty.

**Mr. Shanahan:** Also one thing I'll just throw in on that is, from the reinsurance perspective, obviously having some benefit of seeing a lot of companies' products come through onto our books, while it's certainly very early on consistent with what Mary said on the 20-year, we've seen for almost all companies the fully guaranteed vastly outselling the short guaranty, thus far.

**From the Floor:** Okay. You also described a 20-year term product which started losing money in the later years. I'm assuming that was a non-illustrated term product?

**Mr. Dall:** It was a product that had a 20-year level current premium but a 10-year level guaranteed period. After the 10th year, the guaranteed premium started to increase which essentially left you with a half Cx type reserve.

**From the Floor:** But if that were a product that would comply with the illustration regulation, you wouldn't be able to sell that. It's not self-supported.

**Mr. Dall:** It depends on the accumulation of surplus. There is always a decision on these term products of using a full guarantee and not having to comply with the Illustration Model Regulation or using a partial guarantee and complying with the Illustration Model Regulation.

**Mr. André Piche:** With respect to the realistic reserves being held on shorter guaranties plan. While I agree that in isolation holding half Cx is probably not appropriate and there's probably a more realistic reserve that could be held, if the distribution of the business between full guaranties and short guaranties is as, let's say in line with what Mary discussed, I would also argue that XXX isn't necessarily what I would call the realistic reserve. When you take those two types of guaranties together, the total reserve you're holding is probably still way above what you would consider a realistic reserve. I think you have to be careful to think that half Cx is maybe not appropriate for shorter guaranties given.

**Mr. Shanahan:** That's a good point, and I think that's a very company-specific determination. If I put that in a way kind of condemning a company that wasn't, that's not the way I meant it. Essentially in our perspective because of what we're doing as a reinsurer and taking in terms of what we're backing with real assets, the excess over what is a reasonable reserve on the fully guaranteed plans, is being driven down. We've taken out that sufficiency and that's how we've lowered the cost of essentially on a fully guaranteed plan so we don't have the luxury of that.

You can use that sufficiency in both places. But certainly if you're not going offshore, then that's a very valid point.

**Mr. Piche:** Second is on the change in the net reinsurance rates, you show on the 30-year term that if you go offshore, the increase in the net reinsurance rates is let's say about 50% versus 35% if you don't go offshore. What kind of LOC charges would you use in this example? I guess my thinking here is that if you actually have LOC charges that are guaranteed for 30 years, I would say the increase in your net reinsurance rates would be more than 50% compared to your pre-XXX reinsurance rates.

**Mr. Shanahan:** That example was intended to be illustrative. In terms of answering your question more specifically, generally what we're doing in our pricing is essentially building in a cushion to allow for the LOCs to increase. You're right, you get into situations where if a client company, and this happened to some earlier on as people are evaluating options, although it's the minority of cases, said, "Well, maybe I don't want to pay for that guaranty."

For whatever reason, the company may be willing to take that risk. You will pay today's LOC rate, and to the extent that it goes up, you bill us for the difference. What if you guaranty it up to a certain point? That certainly does affect the impact of the pricing.

**Mr. Robert E. Wilcox:** A question on pseudo guaranties. How do you make a limited guaranty product look like it's fully guaranteed? That sounds a lot to me like how do you deceive the policyholder. I have some real concerns about the whole concept of trying to make a limited guaranty look like a full guaranty. No problem with limited guaranties or full guaranties, but I have a problem with that statement.

**Ms. Didion:** I guess I don't think companies are trying to come up with anything that makes the policyholder think something's going to happen when something else could. They are just trying to give them a little more comfort that possibly it won't.

**Mr. Dall:** I think, too, it goes back to my point earlier when I was commenting on the actuaries here maybe having a lot more knowledge of the fact that insurance companies really haven't increased their premiums over the years and therefore have a better idea of trying to value that \$150 difference. The policyholders may not have an understanding of the value of the true guaranty versus the partial guaranty.

**Mr. Shanahan:** I think we'd all agree. Like Mary and Keith have said, I don't think the intent there is to deceive and to make you think one thing is going to happen when another happens. But certainly I think it's a case where this is something new when you go to a non-guaranteed term plan like this. It's different from what we've been doing. Regardless of the pseudo guaranty, to me that's almost the smaller issue. From a market conduct standpoint it's important that companies educate their field force on selling the short guaranty properly with or without a

pseudo guaranty and being careful about what they're representing. Obviously, we don't anticipate that there are going to be increases, but it's important that the policyholder understands that the premium can increase.

**From the Floor:** If you're holding a half Cx, it seems to me as an actuary who has to sign the statement that I don't see how I can comfortably sign a statement looking at that earnings unless I expected that in the future I was going to raise my rates. I just don't see how any actuary could sign a statement knowing they're holding a half Cx on a longer-term guaranty if they expect to maintain that level of premiums.

**Mr. Dall:** There are definitely some companies that are holding a GAAP-like reserve. There are other companies that are holding the proper reserve in aggregate for the company and using essentially the actuarial opinion memorandum regulation basically as a catchall.

Chart 1  
Select Factors  
80CSO vs. Model Reg

35 Male, Nonsmoker

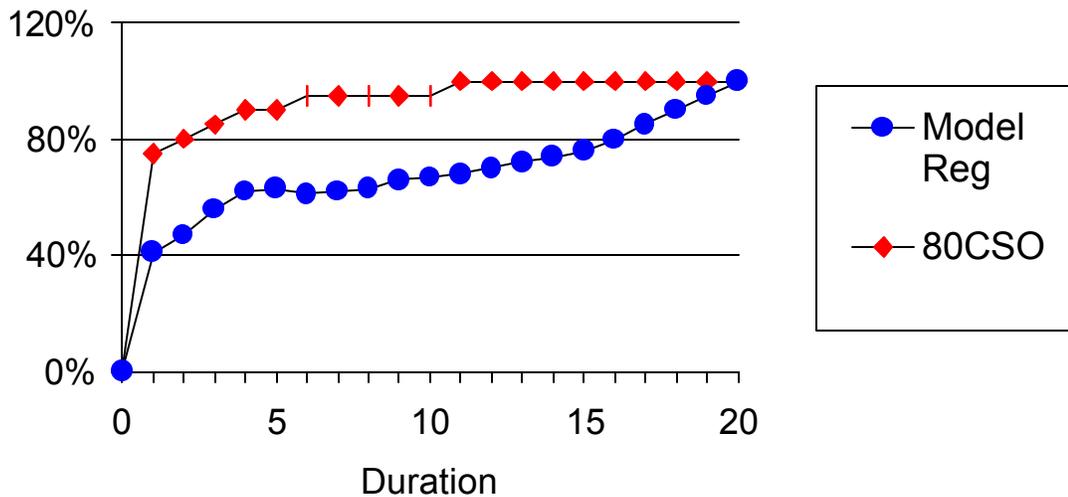


Chart 2  
Universal Life 20 Year No Lapse  
Guarantee Statutory Reserves

