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MANAGING CEDED REINSURANCE

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- o Retention limits
- o Facultative programs
- o Administrative expense
- o Overall cost
- o Surplus relief role

MR. MELVILLE J. YOUNG: This session is meant to represent a viewpoint of reinsurance from the buyer's perspective. Although I will participate on the panel, you will have to excuse me for certain biases during my presentation because having come from the reinsurance community, I do have some biases in that direction. But, the other panelists are with direct primary companies and they will offset my biases.

The panelists include Carolyn Stontz who is with E. F. Hutton. Carolyn is currently involved in product development work in interest-sensitive lines for E. F. Hutton. She had reinsurance responsibilities in her earlier affiliation with Transamerica Occidental. She was one of Transamerica Occidental's reinsurance actuaries, so she has a long history in the reinsurance business. Carl Wright is currently with Union Central Life. He is their chief individual actuary. He was with Interocean prior to Union Central and before that Carl spent a great many years with Union Mutual. He has had extensive experience managing the reinsurance function in all of those affiliations.

What we are going to try to do today is cover four subjects. The first subject we are going to discuss is relationships with your reinsurer. The second area

is reinsurance administration. The next topic is going to be setting retentions and the last area is financial reinsurance and the regulator.

Those of you that are on the buying side of the reinsurance business may have noticed some changes in recent years in not only price but also in the attitude of the reinsurer. You may think that perhaps your reinsurer is just getting ornery for no reason at all. One of the things I want to do today is start by explaining that maybe some of the changes in attitudes have a reason behind them. Maybe you have some options that you can exercise to help improve some of the relationships with your reinsurers. I will start off with a historical perspective just as a means of explaining how we got to where we are now.

When I first came into the reinsurance business, about 16 or 17 years ago, it was not at all unusual for companies to have a single reinsurer or for reinsurance relationships to have lasted 30 or 40 years. In some cases, reinsurance rates had remained unchanged for a significant length of time even though primary company rates were changing drastically. Reinsurers frequently made up for the fact that they had rates that hadn't changed with some extra contractual "give me's." When a company needed some help from their reinsurer, either in time, advice, consulting help or maybe even financial help, the reinsurer typically was there to be of some assistance. Reinsurers were making enough money to gladly offer that assistance.

There was a definite partnership philosophy that existed between the ceding company and the reinsurer. Frequently the underwriter, who was usually the person that controlled the reinsurance relationship, thought twice about giving his reinsurer a bad case because it was more important for him to maintain the profitability of his reinsurer's business than his own. So there was a real partnership philosophy that existed and because of this, the reinsurer was ready, willing, and able to help.

Sometime in the 1970s we started seeing a definite shift. Companies began to coinsure individual plans of insurance. Often these were term plans and coinsurance for these term policies often was with a reinsurer that the company had not been doing business with before. This led to companies changing reinsurers on a fairly regular basis. The reinsurance business became much more creative but also more competitive. The margins that existed earlier disappeared and

reinsurers started doing business on extremely thin margins. As a result of the demise of the long-term relationship, reinsurers could no longer depend on making the money back later on in the relationship from noncontractual concessions. And because of the reduction in margins, the reinsurers could no longer provide the kinds of help that I mentioned earlier. In addition, there was a new pressure among insurance companies for earnings. That pressure really didn't exist to the same extent in earlier decades. Because of that, there was a lot of pressure among the ceding companies to get the most they could out of their reinsurance relationships. All of this contributed to a significant change in the relationship between ceding companies and reinsurers.

Recently I have been encouraging companies looking for warmer relationships with their reinsurers to try to reestablish some of the atmosphere that existed in earlier days. Not to overpay for their reinsurance, but to establish an atmosphere where the partnership philosophy can reenter the relationship. This could allow a company to develop a long-term relationship so long as both parties are living up to their end of the agreement. If this were to occur the deterioration which may have been experienced in the reinsurance relationship might start reversing.

What lies ahead in reinsurer relationships is the next item to discuss. Reinsurers have been experiencing extremely tight margins and as a result several reinsurers have started moving away from the direct individual reinsurance line. Certainly many reinsurers have become much more conservative in their approach to the market, both in underwriting and pricing. I suspect that there is going to be a further reduction in the number of companies that have been actively pursuing reinsurance business and that is going to reduce the competitiveness even further. A lot of reinsurers, I believe, are going to start offering services other than reinsurance services which are going to help justify their staying in the business. (In the same way that agents have diversified into real estate ventures and mutual funds, and primary insurance companies have been branching out into noninsurance businesses.) I think that many reinsurers are going to start to offer services in order to increase their profitability.

MR. CARL B. WRIGHT: I am going to share some of my own experiences, having gone through this shift that Mel talked about. You are going to find that I am not a great supporter of what happened. I basically believe in

long-term arrangements that worked both for the ceding company and for the reinsurer. I would offer a premise that one of the difficulties in the insurance industry right now is that there is far too much capacity for the amount of available business on the direct side. And I would like to suggest that the same thing exists on the reinsurance side. I think the transition that occurred in the mid-1970s was a symptom of that -- there were just too many companies out there chasing what business was available. For a variety of reasons it became necessary for ceding companies to shift reinsurers. The companies I've been with have always had long-term reinsurance relationships. But unfortunately I have to say that I'm not certain that some of the reinsurers haven't begun to take these relationships for granted. I have recently gone through that in our own company with our disability income line of business.

I became very concerned about the relationship we had with one of our reinsurers and whether or not it should continue, and so I went out looking for bids from new reinsurers. The ultimate conclusion is that we are going to split the business between two reinsurers, one of whom is our original reinsurer. But, we did shake them up quite a bit because I think whether they would admit it or not, they were beginning to take us a little too much for granted.

One of the things that came along during this era of the big change is what I call low-ball sweetheart arrangements. I want to tell you from the viewpoint of a ceding company that over the long run, those aren't good for us. They are not good for the reinsurer and they are not good for the ceding company. Those arrangements, from my standpoint, can and have had a negative impact on our own sales force.

Back in 1982, a reinsurer approached the president of our company and suggested that he could get us into low-ball term market. Our president's question was how to do that within the normal retention limit. The reinsurer's suggestion was that he could do it if he did quota share reinsurance. So our CEO, being an enterprising person, promptly announced to the field that we were going to have a low-ball term product on a certain date, without having talked to the actuaries about designing it.

When we got a design and went to the reinsurer, the response was, "We don't quote on those kinds of contracts anymore." We did find a reinsurer who was

willing to quote on it, who was fairly new in the U.S. market, but didn't have their own actuarial staff yet. They engaged a consultant and came up with a quote that made the product viable for us. However, six months later when they did get their own in-house actuary, he took a look at the agreement and realized it might be viable for us but it wasn't viable for them. Less than nine months into that agreement, we found ourselves faced with a drastic change in the terms of the agreement that simply wasn't acceptable to us given where we were at that point in time. So we moved to another reinsurer and in this case that was not someone who was new to the market.

They had been around many years but there was still an emphasis upon market share. They had this idea that maybe we could make it up on the volume. Our agreement went along fine for about two years until they came back and said they were having mortality problems on this whole block of business. They didn't feel the terms of the agreement could be honored anymore and they wished to change it. In the meantime, we had felt that there were a lot of problems with the particular product design and we were in the process of designing a new product so we could discontinue it. The reinsurer's circumstances were such that they were not willing to live with us for six more months under the old arrangement and that is what created the difficulty on our executive floor. We made a decision on the marketing side to continue with this product for six more months even though it meant we would probably be losing money in doing so.

I have to ask a rhetorical question. When you know you have a product that needs changing and you are in the process of changing it, if a reinsurer can't live with you for the next six months, what does that do in terms of trying to develop a long-term relationship? I will tell you honestly, it doesn't do much for me. I look at the situation and say, "I really needed help here; I've gone through a lot with this. You changed the rules of the game on me and there doesn't seem to be anything that I can do about that. That is not a good way to achieve a long-term relationship with me as a ceding company."

I'd like to make another comment that relates to the premise that I started with about the excess reinsurance capacity in the industry. I'll be more than happy if less companies will come to me and offer me facultative arrangements. To me a sign of this excess capacity is when ten companies want to offer me facultative

capacity and then eight or nine of them come back and are unhappy with their closing ratios on that business. I'm not sure what they expected, but it isn't likely they are going to get a decent closing ratio because there are just too many of them out there willing to offer me something.

I have some concerns about facultative arrangements. I have concerns about the expectation that they create in the sales force writing the business and also some concern about the credibility of my own underwriting department. I had seen an article suggesting that with the tightening up of the facultative area, maybe our direct underwriting departments will gain more credibility with our field force. I certainly hope so, because frankly, with our underwriting department, if they get a case that is not going to be rated standard, they have no choice but to shop it. If our agents can't write it with us, they will go with someone else. The fear, of course, is that eventually they will find another company, or maybe even one of the companies that quoted, who will give that agent a better arrangement. So there is a real fear among underwriters about rating a case and then not shopping it. You can bet if one of you comes up with a better rating than we gave it, you've got the case.

If we don't feel that rating is really how we would have rated it, we are probably going to try to give you a high percent of the case. What are we trying to do? We are trying to protect ourselves. We have seen some cases where we have come up with a Table 4 rating and we have sent it out facultative and it has come back with three standard quotes. What choice do we have in that? I think we have to protect ourselves with our own field force and underwriting department, but I am really concerned about the credibility of our own underwriting department with our field force and also the expectations we have created in the field. If we come up with a rating, they say, "You must be able to find some reinsurer who will give it to you standard."

MR. YOUNG: If I could just intercede on three points that you raised. I think I might have left it in your minds that I thought that the deterioration of relationships was caused primarily by the buyer and I didn't mean to say that. I do believe that reinsurers have to do a certain amount of work to rebuild relationships. We all, myself certainly included, did some silly things during the time period we alluded to earlier. There has been a certain amount of overreaction that has resulted because of that.

It would be very useful for those of you who are actuaries for buyers of reinsurance to take a look at what your underwriters are doing when they buy reinsurance. I have found that it is not at all unusual for underwriters to buy facultative reinsurance strictly based on the table quotes that they get from reinsurers. So you could get three reinsurers that have quoted on a particular case; one quotes Table 4, one quotes Table 8, and one quotes Table 16. The underwriter will say, "Of course I will take the Table 4 quote." I have found situations where the Table 4 quote could have been the most expensive quote of the three. It is a relatively easy process for the actuary to provide underwriters with the information they would need to intelligently buy reinsurance under these circumstances.

MR. WRIGHT: I think that this is true and we do do that with our underwriters. We do provide them with information that indicates to them that sometimes higher tables with one reinsurer may be a better deal so they don't always pick the lowest one.

I think we have got an obligation to do some educational work with our field force about facultative underwriting and the need for it. Maybe we should stand our ground sometimes and, if they want to take it to another company, so be it. We may want to question whether they want to develop a long-term relationship with us. Because another aspect from the field force standpoint is that many field people are beginning to recognize the need for long-term relationships which were there for years and years. But in this same period, those relationships got really shaken up and they became very short-term. They would give the sale to the company that gave them the best quote.

What I'd like to do now is move on and just share a few thoughts about the administrative side of reinsurance. I think the administrative question always comes down to whether you are going to self-administer the business or have the reinsurer administer it. I think in part, a lot of the movement towards self-administration arose because of the multiplication of reinsurers. It was very straightforward when you had a long-term relationship with one or two reinsurers and you let them do the recordkeeping. At most, what you had was maybe two different types of reporting that you had to work with. But as we saw this era of the 1970s and the early 1980s develop, you suddenly found yourself shifting reinsurers and doing a lot more facultative business. Very quickly

you could find yourself with 15 or 20 different reinsurers with a whole host of requirements which you couldn't possibly meet. I think this was one impetus for companies moving in the direction of self-administration.

In our case, there was another impetus and I can show it best by just quoting you some numbers. In 1980, we reinsured 2,000 policies out of Union Central Life. That was life and disability income. At the end of 1985, we had 50,000 policies reinsured. Had that level of reinsurance continued on out over the next five years until 1990, we would have estimated over 100,000 policies reinsured. When we got to that level of insurance we felt we needed self-administration to have better control of what was happening. We had to know what the business was doing. I'll say in going to self-administration, I have never kidded myself that I'm going to save money doing it. I really don't feel that is the objective at all. The whole purpose of self-administration from my standpoint is to have more control over the business and to develop the means to measure the effect of the reinsurance costs on me. It is a lot different when I have reinsured 2,000 policies out of a block of 250,000 than when I reinsured 50,000 out of a block of 300,000. The key in being able to do that is to build the systems.

I think as all of you know when you start talking reinsurance with your systems people, somehow it always ends up on the bottom of the list. Clearly if you don't have a marked volume of business, the systems considerations will be such that it may not make economic sense even if you don't expect to save money on it. Volume is a key and you have got to have the systems to support it. We have done fairly well so far. But, to give you an idea of what we are talking about at Union Central, in 1980 it took half a person to handle our reinsurance, so it was a half-time job. I now have a reinsurance division of eight people who do nothing but reinsurance. We find ourselves expanding fairly regularly. We have told the company that we will continue to expand at the rate of one to two people a year until they give us a system. There doesn't seem to be any way around that.

When you think about the administration of reinsurance, all too often we tend to think of only life insurance. If you are a disability income writer, you have got to consider the disability income reinsurance aspects too. One of the difficulties that I see in most of the existing systems available for purchase is that they are

life systems. I've got 10,000 policies reinsured on disability income. So that is one reason I am looking at it internally.

MS. CAROLYN J. STONTZ: As a person responsible for the ceded reinsurance of your company, where do you start? You need to implement a reinsurance program that best meets your needs. On the surface, it sounds fairly simple, but how does it work in practice? I want to address three specific topics: (1) the pool design of reinsurance programs, (2) whether self-reporting is for you, and (3) to offer some predictions on the future of reinsurance programs.

The design of your reinsurance program depends on your specific needs. I am a firm believer in the pool structure because I believe it offers the best possible balance of meeting needs and maintaining flexibility. With the pool structure, as with any other reinsurance program, you want to make sure that you have adequate automatic outlets, adequate facultative outlets, and all of this at a reasonable price. On the facultative side, because most reinsurers today are reluctant to give you any facultative coverage unless they have a piece of your automatic coverage, the structure of your pool is often determined to a large extent by the facultative needs of your company.

The first step in determining who the pool participants should be is to sit down with your underwriters. Find out what they feel their underwriting strengths are and what their weaknesses are. For instance, we feel we are very strong in underwriting coronary risks. Other companies may not feel that way. If you feel you need support in a specific underwriting category, you want to make sure that one of your pool participants can complement your weaknesses.

Another step in analyzing your needs is to determine how much service and special favors you will require from your reinsurers. Mel and Carl have also touched on this in their presentations. My own feeling is, determine what service you want and what your cost considerations are and go forward with your own belief of what you need. You should recognize any risks that are inherent in that. For instance, if you are solely after price, you have to recognize that maybe that reinsurer is not going to be there forever and that you will have to be changing your reinsurance program quite often. However, if you are in for service, you might be able to establish a long-term relationship. Certainly, if you feel your company is entering into a partially unknown area, you

will want to find a reinsurer with expertise that you do not have. This will probably cost in the price area.

I have some ideas here on how you might be able to minimize the cost of your reinsurance program. We have tried some of them. My first idea to minimize reinsurance costs is to establish an automatic binding limit that will handle the vast majority of your clean cases. With a binding limit this large, you will avoid facultative costs associated with reinsuring cases that would only be reinsured because the face amount was too large to qualify for automatic coverage.

A second idea to reduce overall reinsurance costs is to negotiate a larger expense allowance with one of the pool members by offering them a larger piece of the pie. Of course as many of you have found out and as Carl has alluded to, once you have negotiated better terms from one reinsurer and you mention this to your other reinsurers, you may find them willing to reconsider their offers also. If this happens, who are you to disagree with them? You might be able to really reduce your reinsurance costs in this manner.

Another idea that we have tried with limited success is to write our own treaties. This goes along again with some of what Carl has said in getting better control on your own reinsurance program. We feel that by writing our own treaties, we can get more uniformity in the nonprice areas of the treaties and the treaty administration will be streamlined which will result in administrative cost savings.

For example, our claims personnel can save time by avoiding detailed treaty research as to which reinsurer requires prior claims approval on which claims and our policy change personnel have uniform rules as to the handling of policy changes. Again, I also feel we have better control over the contents of the treaty if we write it. I found that a pool of three or four reinsurers answers all of the points I have raised:

1. Our facultative needs can be met.

2. Our automatic binding limit can be maximized.

3. We can offer a meaningful amount of reinsurance to all participants which ends up resulting in better quotes.

4. Although not perfect, I feel our administrative costs have been reduced by writing our own treaties.

Should you self-administer? Certainly this is pretty common today with the complexity of today's products. But, if you decide to self-administer, one of the first discoveries you make is that your direct administrative system was not designed for reinsurance needs. This means that, somehow, you have to merge the policy information from your direct system with knowledge of which reinsurer gets how much of which risk at what price and subject to what limitations. We have been self-administering our business for the past five or so years. Every month we identify the net amount at risk on each policy and apply a reinsurer/ cost matrix to develop monthly reports which we then send to our reinsurers. I have found that coordination of the data collection and education of in-house personnel as to the terms of the treaties is an ongoing process. Quite often, it is an uphill battle because that is not their top priority. This is especially true for a portion of our program that we cannot automate, the facultative portion. I know many of you with self-administered systems must have the same problem?

By definition, the facultative program is determined by the underwriter as he analyzes each case. His priority is to underwrite the case and to get facultative coverage as he deems appropriate. Somehow this facultative information must get into a self-administered system on a timely basis. How can you capture this information? One possible solution is to have a reinsurance clearing desk. This person would review every facultative session before it went out, making sure it is coded correctly on the system. A clearing desk such as this would allow the underwriter to keep his focus on the priorities of his job and it would maintain the data integrity of the self-administered system. But here is where we begin to enter into the controversial issues of self-administration. That is, how much effort is the ceding company required to put forth in maintaining controls and insuring squeaky clean reporting on a self-administered business?

At some point, the administrative costs that your reinsurers say you are saving by establishing a self-administered program are more than replaced by the cost

of administering the program itself. The tangible costs of your self-administered system are fairly easy to identify: the salaries of the people involved, the rental for the square feet that they occupy, the postage for mailing all your reports, the cost of implementing the systems, etc. Some of the intangibles are not so easy to identify. For example, how much time is spent by your personnel with reinsurance auditors? How many questions are asked by reinsurers because they do not have access to the information? Each company has to weigh the advantages for itself. However, one intangible benefit of a self-administered system is that now you are developing your own in-house reinsurance expertise. Hopefully, this would result in fewer clerical errors, misunderstandings and possible arbitrations.

If today's reinsurance programs are so cumbersome to administer, what will tomorrow bring? Things obviously have to get simpler. The primary reason some of us find ourselves with an enormous administrative burden is because when universal life first came out, we all thought that the net amount at risk on the policies would change almost daily; in fact, minutely. We set out to track these changes in net amount at risk on a monthly basis. As it turns out, however, net amount at risk patterns on these products are much more predictable than first imagined.

How can things become simpler then? One idea is to use one set of yearly renewable term rates as a base for all products and then just negotiate the reduction percentage that will apply for each reinsurer. This will avoid our current situation of having to store and coordinate reinsurance terms which are based on a different set of allowances applied to different sets of cost of insurance rates for each product.

Another idea I have considered to streamline reporting procedures is to use the accidental death benefit reporting method. That is, at the beginning of a given period, identify what your reinsured net amounts at risk are and group these by age and then apply a reinsurance premium. This is your initial premium. At the end of the reporting period, say maybe a calendar quarter, you would make a final premium adjustment by calculating the average net amount at risk in force for that reporting period.

I also foresee the ceding companies taking more of a lead in reinsurance negotiations and design. As competitive pressures mount, companies will be looking for more places to increase productivity. With in-house personnel becoming more knowledgeable about reinsurance matters, it will become a natural step to use this knowledge in new ways. For example, we may see ceding companies setting up their own reciprocity pools and eliminating the reinsurer as the middleman. On the automatic side, we are already beginning to see the impact on the reinsurance industry. Companies can send all cession data to their reinsurers on floppy disks which are then fed into the reinsurer's billing and administrative systems. On the underwriting front, certain cases already can be underwritten with electronic assistance. Today, this process is limited to the really clean cases, but who knows how far automated underwriting will take us. Will we ever reach the point where all reinsurance negotiations and administration can be handled by the telephone and the networking of everyone's mainframe? I hope not. Nothing can replace the across the table, face-to-face discussions with our reinsurers.

MR. YOUNG: I have a couple of comments on administration. I guess I disagree with you, Carolyn, on your comments on binding limits. There has been a movement in recent years to increase binding limits. This was particularly encouraged because of pool setups. You might, at one point in time, have had binding authority four times your retention with one reinsurer. Now you might find automatic binding to be nine times retention, three times each with three different reinsurers. Reinsurers tend to look differently at their experience on facultative business than they do for automatic business. If a company ends up with nine times binding and has one large automatic claim with its reinsurer, it might color the way the reinsurer looks at the account in the future. Whereas if that case had been facultatively underwritten the reinsurer might not look at the situation as negatively. I think a balance must be struck between saving some time and expense initially with a higher binding limit, and the potential negative impact of a large automatic claim. A large reinsurance customer could absorb the greater potential fluctuation in automatic reinsurance results in which a high binding authority could result.

I am going to start off the next subject, setting retention limits, by explaining a theoretical approach. Carl is going to give you some of the practical considerations. This theoretical approach comes from a paper written by Irving

Rosenthal, "Life Insurance Retention Limits," *RAIA*, Vol. XXXVI. You can probably develop more precise approaches particularly with today's computer capabilities. This is an approach you could use to come up with an idea as to what your theoretical retention should be. After going through this exercise, most companies would ignore the results and look to the more practical considerations which Carl will cover later.

We start off by developing expected claims. My approach is to simply take a look at the average claims over a five-year period and develop an average claim rate based on the five years of claims. The next step is to develop expected claims based on this rate and the net amount of risk. Exhibits 1 - 4 that follow hopefully are self-explanatory.

For each of the possible retention levels being studied we develop the possible mortality fluctuations. From this one can get some idea of the possible outside limits of claims for the practical implications as well as what the saving in reinsurance costs will be. That is the extent of the theoretical discussion.

One of the things you may want to do to determine where your retention should be, is to look at where your competitors are. We have taken the A.M. Best tapes and added retention levels to them so we are now able to produce the kind of report described in Exhibit 5 and 6. You can see that virtually all of the companies with $2 million or less in capital and surplus have retentions of $25,000 or less. Most of the companies that had capital and surplus in excess of $125 million, had retentions that were either in the $500,000 to $4 million range or the $150,000 to $500,000 range. You can use something like this analysis, in addition to the practical considerations that Carl will be talking about, and maybe a theoretical analysis just to see if the retention that you are setting is reasonable compared to what your peer companies have.

MR. WRIGHT: The question of setting the retention limit is dependent on where it is right now. We had a rather strange retention, $600,000. It seems most retention limits are usually multiples of 25 and then multiples of 100 until you get around 250 and then multiples of 250. For us, the question always became, why not change or increase the retention limit? We were not concerned very much about the issue of automatic binding limits. Some of the comments about pooling and retention limits have to do with what your retention limit is now.

EXHIBIT 1

Retention Analysis

$$\sigma = (1\text{-}R) \times \sqrt{N \times p \times q} \times \sqrt{\sum a_i^2 \times n_i' + N} \quad *$$

q	=	0.0035	:	p	=	0.9965
μ	=	(Net in Force	–	Net Reserves)	×	q
μ	=	(233,362,000	–	609,484)	×	0.0035
μ	=	814,634				
R	=	Net Reserves	+	Net in Force		
R	=	609,484	+	233,362,000	=	0.002612
(1-R)	=	0.997388				
N	=	Number of Lives				
N	=	0.90	×	Number of Policies		
N	=	0.90	×	77,145	=	69,431

EXHIBIT 2

Retention Analysis

Distribution Computation

Amount			a_i	%	$a_i^2 \times \%$	$\sqrt{\sum a_i^2 \times n_i' + N}$
0	—	5,000	3,000	51.00%	4,590,000	
5,001	—	10,000	7,500	35.00%	19,687,500	4,104
10,001	—	20,000	15,000	8.50%	19,125,000	6.187
20,001	—	25,000	22,500	1.00%	5,062,500	8,087
25,001	—	30,000	27,500	1.00%	7,562,500	8,752
30,001	—	40,000	35,000	1.00%	12,250,000	9,356
40,001	—	50,000	45,000	1.00%	20,250,000	10,406
50,001	—	75,000	62,500	0.90%	35,156,250	11,226
75,001	—	100,000	87,500	0.20%	15,312,500	12,547
100,001	—	150,000	125,000	0.20%	31,250,000	13,379
150,001	—	200,000	175,000	0.10%	30,625,000	14,671
200,001	& Up		250,000	0.10%	62,500,000	15,520

Retention Analysis

$$\sqrt{\sum a_i^2 \times n_i' + N} = 8{,}752 \quad ; \quad \text{Retention} = \$25{,}000$$

$$\sigma = (1\text{-}R) \times \sqrt{N \times P \times q} \times \sqrt{\sum a_i^2 \times n_i' + N}$$

$$\sigma = 0.997388 \times \sqrt{69{,}431 \times 0.9965 \times 0.0035} \times 8{,}752$$

$$\sigma = 135{,}831$$

$$\sigma = 135{,}831 \times 11{,}226 + 8{,}752 \quad ; \quad \text{Retention} = \$50{,}000$$

$$\sigma = 174{,}239$$

$$\sigma = 135{,}831 \times 12{,}547 + 8{,}752 \quad ; \quad \text{Retention} = \$75{,}000$$

$$\sigma = 194{,}743$$

$$\sigma = 135{,}831 \times 13{,}379 + 8{,}752 \quad ; \quad \text{Retention} = \$100{,}000$$

$$\sigma = 207{,}651$$

EXHIBIT 4

Retention Analysis

Mortality Fluctuations

Retention Limit	Range of Adverse Mortality Fluctuations	Standard Deviations	Probability Mortality Fluctuations Would NOT Exceed Range Shown
25,000	135,831	1	84.13%
25,000	271,662	2	97.73%
25,000	407,492	3	99.87%
50,000	174,239	1	84.13%
50,000	348,477	2	97.73%
50,000	522,716	3	99.87%
75,000	194,743	1	84.13%
75,000	389,485	2	97.73%
75,000	584,228	3	99.87%
100,000	207,651	1	84.13%
100,000	415,302	2	97.73%
100,000	622,953	3	99.87%

EXHIBIT 5

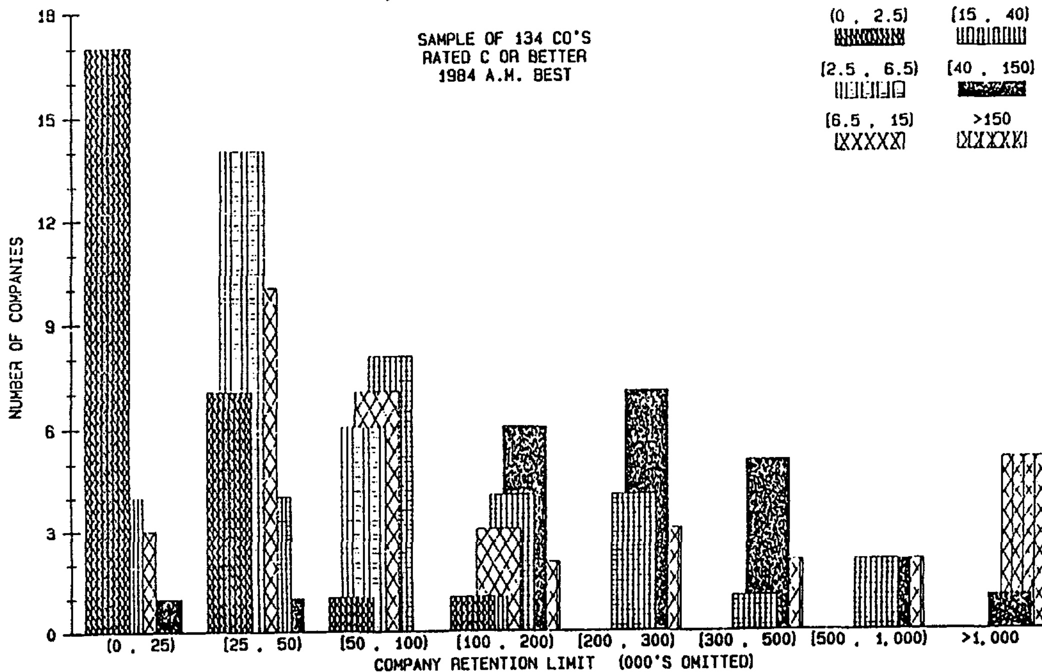
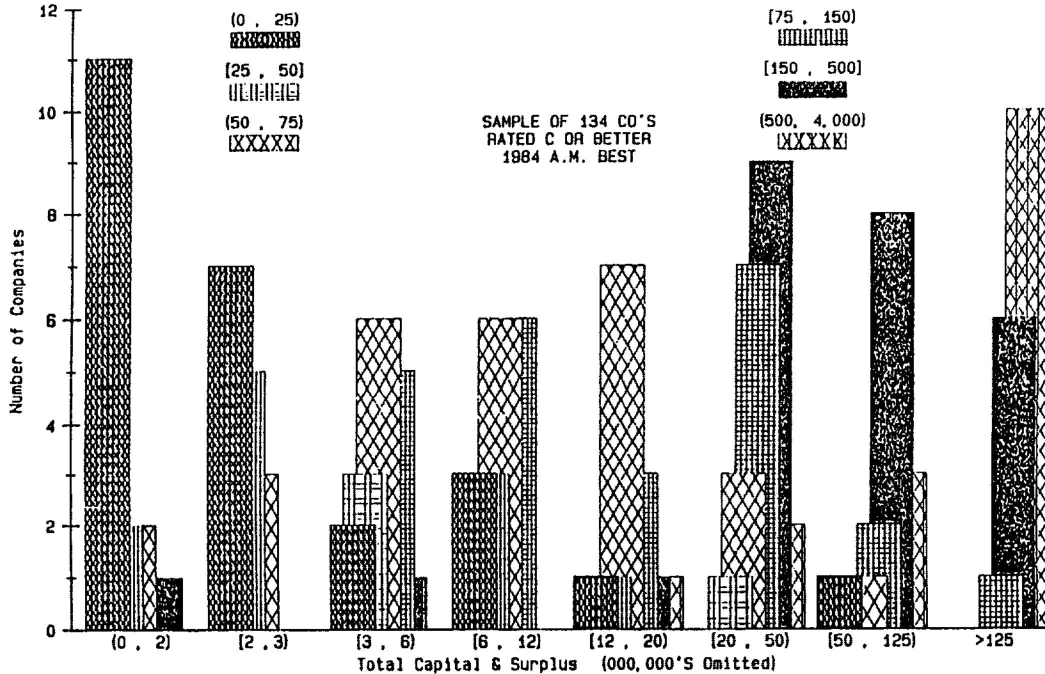


EXHIBIT 6



We ended up with a $1 million retention. It was through a very ethical way that we got there. We did a lot of analysis that Mel talked about. I have the good fortune to have an actuary who is a statistical nut and likes to work out these kinds of problems. Then I have another actuary who is very practical and likes to look at tons of numbers and he ends up with charts. He did an analysis; he compared retention limits to surplus levels, assets, reserves, amount of insurance in force and the mandatory securities valuation reserve (MSVR). What we ended up with is what you would expect. We ended up with companies all over the place. It was hard to know for sure what a reasonable level was. We ended up with a bunch of objective numbers that we then had to make a subjective interpretation on. There is just no other way to do it.

One of the key factors for us is the probability of getting excess claims. For us, an excess claim is one over $1 million as opposed to one over $600,000. That came out to be one in six. That didn't concern us a whole lot because the annual expected savings from both administration and reinsurance trends was about a quarter of a million dollars a year. More important then, was the probability of two of them happening. The chance was one in 800 that we would have two excess claims over $600,000 in one year. It is just a judgment call as to how frequently we think that will happen. Well, we changed our retention limit on January 1 and we hit our 1 in 800 chance in January. (We lost two people in a plane crash down in Central America.) But fortunately it was under our previous retention limit.

In the end, what it really comes down to, and I'm sure many of you have experienced this, is the comfort level of your chief executive officer. What is he going to feel comfortable with? Up to a point you can use a lot of theoretical and practical and rational arguments, but it becomes a feeling kind of thing. What does he feel comfortable with and is he reasonably convinced that the results will be acceptable? How high he may go may depend upon the situation you find yourself in financially.

A very important issue to us is that we have had such rapid growth in new business that we are suffering significant amounts of surplus strain right now. So we had to look at changing the retention limit in that context. We still made the decision to do it knowing that there is going to be a period of two or three years where there will be some concern about our capacity and the surplus

strain of putting on the new business. We have also done a little bit of financial surplus relief business.

MR. YOUNG: Before you do, if I could follow up. I do think that it is important, we being actuaries, that you do some statistical analysis whether or not you plan on changing your retention. The approach that I have here is a quick and easy way to do it. It is relatively easy to at least get some handle on what the statistical situation looks like. I just want to add and reiterate a couple of things that Carl mentioned. It is very important, getting back to the relationships that we talked about earlier, that you have a certain amount of reinsurance business going to the reinsurance community. If you have very little reinsurance business going to the reinsurance community, it is not going to be terribly interested in helping you when you need help and there are going to be some instances where you are going to need help (underwriting assistance at least). One of the considerations then would be to maintain a viable amount of business going to your reinsurers. We mentioned cost and the administrative expense. If you are a stock company, usually what happens when you recapture reinsurance, is you get some GAAP benefit from the recapture. Having more reinsurance than you need sometimes will give you the luxury of being able to later on down the road go through a recapture program and pick up some GAAP benefits.

Carl mentioned something that I want to underscore. The president of your company ultimately has to sign a check. A real big factor in setting your retention is setting it at a level that the president is comfortable with.

MS. STONTZ: As Carl alluded to, financial reinsurance typically deals with the retained portion of your business. This is the part that you would reinsure for financial planning purposes. During the past few years, financial reinsurance has received much discussion. In the past, it has been used traditionally as a means of funding new business or entering into a new line of business. However, over the past few years financial reinsurance has also been a powerful financial planning tool primarily because of the significant effect it can have on your operating results.

Perhaps the most common use of financial reinsurance is to fund the surplus strain associated with a new product. If you do not use financial reinsurance,

what can happen if you have limited surplus? You may find that your new product is selling so well that the surplus that was allocated to fund its strain plus the surplus that is generated by existing products is not enough to keep your surplus from being depleted. Of course, a company could always stop selling the new product when it depleted the amount of surplus that you have allocated to that new product. I don't think that many of us would find that to be a viable solution. This is where surplus relief reinsurance comes in.

Through a surplus relief reinsurance agreement, a reinsurer can absorb this initial surplus strain. This is accomplished by reinsuring most or all of the portion of the new business that normally would be retained by the ceding company. In return for absorbing this initial surplus strain, the reinsurer receives the statutory profit on the block of business that is reinsured, at least until the strain is repaid. Under a typical surplus relief agreement, the reinsurer charges a risk fee equal to a percentage of the outstanding surplus relief at the end of each calendar period. This risk fee is in addition to participation in the experience on the reinsured block of business.

Surplus needs in excess of a breakeven statutory position may be created if the strain generated by writing new business outweighs the profits on existing business. If you find yourself in a situation where your surplus is being depleted, you may need to find some more surplus to help you absorb the experience fluctuation on your existing business. This is especially important in view of the rating agencies, especially A.M. Best. One of their primary measurements is the amount of surplus you have available to absorb these adverse fluctuations. In their rating formulas, they use a weighted average of insurance in force and reserves outstanding to determine appropriate levels of surplus associated with its different rating categories. To maintain an A.M. Best rating of "A," for example, may require an additional layer of surplus above that required for a breakeven surplus strain result on a given product.

Over the past few years, one of the reasons that surplus relief has become such a topic of conversation is due to our current products. Today, many of us are offering current interest rate guarantees for an extended period of time. The use of surplus relief reinsurance peaked about two years ago when the difference between a product's credited interest rate and the statutory reserve interest rate reached a maximum.

The increased use of surplus relief and the significant effects on companies' operating results drew increased regulatory attention to these agreements. Many states felt that the amount of reinsurance reserve credits a company was taking in its statement was not proportionate to the amount of risk transferred. Accordingly, in March of 1985, New York passed Regulation 102 which concerned the types of reinsurance ceded reserve credits a company could take for certain types of reinsurance agreements. Shortly after New York's 102 came out, California followed with a bulletin and the NAIC adopted a model regulation for surplus relief reinsurance in December of 1985. Both of these have similar requirements to New York's Regulation 102.

Basically, these regulations disallow any reinsurance agreement entered into for the principal purpose of surplus relief if there is little or no transfer of risk to the reinsurer. The treaties involved are very complex and it is not always clear to the regulators what risk if any is being exchanged for what price. The regulations mentioned intended to define how much risk is required for a treaty to be legitimate but, unfortunately, there is still room for disagreement.

In this financial reinsurance arena one of the prime topics is mirror image reserving. That is, some regulators are demanding that the reserve credit that you take on your statement must be exactly equal to the reserve liability of your reinsurers. Does this make sense? The answer depends on who you talk to. It has been suggested that the ceding company's reserve calculation and surplus is the surplus and reserve to be adjusted if there is any difference in the mirror image approach. This means if you are the ceding company, you have to make sure that your reinsurer is setting up reserves at least equal to the reserve credit that you are taking. If you as a ceding company are in a state where the valuation standards are more stringent than those of the reinsurer, this can be a particular concern. To avoid any mirror image adjustment, you will have to calculate your reserves, pass them on to the reinsurer to set up in their statement if it is a self-recorded block or you will have to, in some manner, insure that they are reserving on adequate standards for your state insurance department.

But, an associated question with this mirror image reserving is what if your reinsurer is not a U.S. domestic company? Several foreign countries rely on an opinion of a qualified actuary within each company to determine what is the

appropriate amount of reserve liability to hold for the risk involved. If you are a ceding company using a foreign reinsurer, there is no necessary reason why the reserve liability should or would mirror what you have taken as a reserve credit. In effect, in the good old days before Regulation 102, many deficiency reserves were dropped in the Atlantic ocean by using foreign reinsurers. What you could do then was take a large reserve credit for your deficiency reserves and the reinsurer was not required by its laws to set up any offsetting deficiency reserve liability. But again, in light of Regulation 102, this is not possible today.

Should mirror image reserving be limited to the situation where both the ceding company and the reinsurer are U.S. domiciled? How do you address this problem if, in fact, the regulators come down? You do have to exhibit mirror image reserving. The industry is opposed to mirror image reserving for some of these reasons plus some other practical reasons. From your perspective as a ceding company, you may not care which side of the mirror image reserving controversy wins. You just want to know which side will win so you can plan accordingly. So until the dust settles, you have to make your best guess as to which way it is going to go and operate your reserves on your reinsurance treaties accordingly.

In the past, another use of financial reinsurance was for tax planning. For those of you that may be new to the reinsurance industry, the use of financial reinsurance for tax planning purposes was effectively killed with passage of the 1984 Tax Act. Section 845 of that Act gives the Secretary of the Treasury the authority to adjust the taxation effects of any reinsurance agreement whether taxation benefits was the primary purpose or not.

So if you are considering a financial reinsurance agreement, where would you start? My advice to you is to first find yourself a knowledgeable reinsurer. This is where I believe service comes in. You may find yourself as we did in a situation where you are unable to use a plain shelf treaty, the good old modco combination that most of us used a few years ago. You may find that you have to tailor make a reinsurance agreement to meet the definition of transferred risk that your state insurance department applies to surplus relief reinsurance. I don't know about you but at our company we don't have the resources or the in-house knowledge to accomplish a suitable treaty. The financial impact of

these agreements are so large that you don't want to assign this task to a rookie. I also feel that financial reinsurance agreements accentuate the partnership philosophy. The reinsurer is supporting the experience of your business. The reinsurer has to rely upon you to control the experience of that block. Mutual trust and sharing of information must exist for these agreements to be successful.

On the administrative side, the increased regulatory attention has also increased the administrative burden. In addition to the scrutiny of the state examiners and the increase in level of risk transfer, in 1984 the AICPA issued a Statement of Position entitled, "Auditing Life Reinsurance" which became effective December 31, 1985. This position paper makes recommendations to the independent auditor on how to determine if your company has sufficient internal controls on the reporting of your assumed and ceded business. The result of all of these changes is that we find our records must be maintained in even greater detail than they have been in the past under the old traditional treaties. We have found that we have had to design special systems to capture this specific data for each treaty. Besides the additional system's expense, we now have a greater coordination effort within our company to insure the integrity of the data and to insure that transactions are reflected correctly on our statements. Unfortunately, if we were to enter into a new agreement, we are pretty much locked into a design that can be supported by our existing systems.

MR. YOUNG: There has been a lot of activity on the regulatory side. The situation may not be quite as bleak as one would assume either from a tax viewpoint or a regulatory viewpoint. Interested groups of people have been working through the ACLI and the NAIC with the regulatory community trying to identify and, hopefully, over a period of time, address the regulators' concerns. Most regulators are not opposed to surplus relief and, in fact, are often users or encouragers of surplus relief when they have a company they are administering or regulating that has a surplus problem. They are trying to regulate how it is done to make sure it is being done in a healthy way. They are also trying to make sure that there is adequate disclosure.

The following is a list of items which have been raised by regulators as areas which concern them.

MANAGING CEDED REINSURANCE

1. There is a lack of consistency in wording between reinsurance treaties. Most regulators who examine a company and look at a company's reinsurance agreements are not experienced in reinsurance. It is very important to them to have a knowledge somehow as to what the reinsurance treaty is trying to do.

2. Several regulators have expressed an interest in having some kind of a summary of the reinsurance treaty attached to the treaty. Some industry representatives trying to address these concerns believe it is impractical to try to provide such a summary.

3. Should reinsurance treaties be preapproved? My gut feeling is that the answer should be no. There has been at least one instance where a state tried to do that kind of thing -- that was Florida about a year ago. They found it impracticable.

4. What is the definition of what constitutes a reinsurance treaty? What are the categorizations and definitions of the various forms of reinsurance agreements in use today?

5. What constitutes a legitimate reinsurance transaction? Should there be a requirement for significant transfer of risk? Many regulators look at transfer of risk to mean, is the reinsurer going to lose money? I believe what they should be looking at is, is there valid transfer of risk? Is the reinsurer of this block of business going to pay claims when someone dies or pay a surrender value when somebody surrenders?

6. The next issue is the issue of fronting. The New York Insurance Department has on three different occasions in recent years tried to produce a fronting regulation. So far, they have been unable to. We think through the various discussions that the industry is having with the regulators that we may be able to establish a standard whereby many of the types of fronting arrangements currently in use would be deemed to be acceptable.

7. I get asked all the time, "How should I book the financial reinsurance treaty that I just entered into?" My answer to people is to be as up-front as possible in every way you can with your regulator and your auditor.

Book all the entries just as you would any traditional reinsurance treaty so that the regulator has the kind of information that he needs, to know about what you have done. If you want a regulator to think kindly of what you are doing, the most important thing you could do would be to be up-front and show the complete transaction.

8. Reinsurance reserve credits are of prime importance. There has been a movement among regulators to press for mirror reserving. The ACLI reinsurance subcommittee has written a paper on the issue of mirror reserving which makes a very good case opposing the premise.

9. Another area of concern to the regulators today is the treatment of offshore reinsurance and letters of credit. Using letters of credit in life reinsurance could be looked on as using a short-term asset to secure a long-term liability. Certainly, there is going to have to be some standards set (and that process has begun). There is a movement among regulators to force additional disclosure in the insurers' financial reports.

10. The last item is affiliated company reinsurance. Some regulators feel that a consolidated financial report would be helpful to them in performing their job. This is an issue the industry is going to have to grapple with.

MR. PAUL D. YEARY: I want to comment on changes from the 1970s to the 1980s in relationships that have really bothered me. How about reinsurers that promised to take into account the uniqueness of your market, if you were in a niche, and then came along with arbitrary rules that caused the relationship to have to be severed? One of our reinsurers said we had to take at least 20% of the risk, and they would continue that, even though they had never had a claim. Another reinsurer changed their philosophy and raised rates. A request to decrease rates crossed in the mail. There was another reinsurer that didn't want to look at $100,000 risks. Anything lower than that is facultative. So we parted company in the 25th year of doing business with them. Another company proposed a small expense allowance if we ever got to $50 million of insurance in force. At that time, we thought that was a big joke, but it turned out to be a reality.

I just want to say that I feel that one of the big problems is that when you enter into agreements and disclose the uniqueness of your business, arbitrary rules are then made that cause you to have to part company.

MR. YOUNG: I can't take the proper time to respond to your remarks. But I would say, I think there has been some overreaction from the reinsurers. But in some cases the actions that they have taken were justified. I received some comments similar to yours when I was still with my prior employer who is a reinsurer. I believe reinsurers have imposed rules across the board because they found it very difficult going to the vast majority of their clients, trying to convince them to do something that they thought they would find distasteful, if they didn't apply them to all of their clients. That may not sit well with you but that has been an explanation I have heard used.

MR. CHARLES E. MOES, JR.: I would like to thank the panelists for their presentation. I think it was objective and very evenhanded. I know I certainly appreciate that as an employee of a reinsurer. My question is for Carolyn and it has to do with the administrative impact of what we call continuation. If there is a conversion or an exchange or a rollover to a policy that is now covered by a new reinsurer, the original reinsurer likes to continue to have the reinsurance on a point-in-scale basis for the new policy. Could you comment on the administrative difficulties that this creates for the ceding company?

MS. STONTZ: Part of the reasoning is, how can you go to a new reinsurer if you haven't asked for evidence on the rollover, the internal replacement, and say this risk is good? "We underwrote him ten years ago but trust us, it is a good risk." So we went with the point-in-scale approach and one of our problems is that when we set up our self-administered system, we didn't foresee this coming three years down the road. So now what we are faced with is a major overhaul of our self-administered system. Quite frankly, our direct administrative system is not very convenient. It does not save the original issue date, for instance. That is one of the primary items that you need in treating it as a point-in-scale continuation. What we have to do is create a new field on our reinsurance record and carry our duration with us. Every time we go through this calculation, we find out what duration it is.

PANEL DISCUSSION

MR. YOUNG: To those primary companies in the room, could you give an informal show of hands on how many companies handled that problem the way Carolyn has described it? (7 hands.) How many companies have moved the reinsurance to a new reinsurer when there is a replacement case? (No hands.) It seems to be unanimous for the first case.

My position on that is that most companies have a policy change manual in their offices, and these manuals typically provide for the approach that Carolyn has alluded too. So I think that if you are going to do something else, you need approval from your existing reinsurer and your new reinsurer.

MR. MOES: I might briefly suggest a quick and dirty solution. I don't know how applicable or suitable it would be for E. F. Hutton, but in some instances, we have been willing to assume an average duration. For example, say that the rollovers occurred in an average duration or durations -- 3, 4 or 6 -- we might mutually agree that all of them that happen will happen at that average duration.

MR. JOHN E. TILLER, JR.: I would like to go back to one of the early points that Carl Wright raised, choosing a reinsurer and the fluid situation, where you are constantly changing reinsurers. I think that the approach to choosing a reinsurer has to be determined based upon the company's basic marketing strategy. For example, if a company wants to come up with a rate book and have one set of plans for five years, I think it has a right to expect to negotiate a reinsurance relationship that will last for that period of time unless there are major changes. On the other hand, if the company has committed to having the lowest term insurance product in the marketplace, I ask you to recognize that every six to eight months it is going to be bringing out a revision of the product and it has to expect a revision in reinsurers. I don't think most ceding companies or reinsurers really try to look at the strategies enough when they go that way and it leads to some hard feelings sometimes. I sympathize with your concerns over a pullout, but that might have been part of it. They may not have really understood the niche they were in.

MR. WRIGHT: I'll just make one comment. The particular product went through no changes during the time we went through the changes in reinsurance or the changes in the terms with the last one, but I can understand what you are saying in regard to changes in the product.