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# Session 82PD
# The State of Individual Disability Income (DI) Reinsurance

**Track:** Reinsurance
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*Summary: This panel examines current issues involving disability income reinsurance, presenting both the direct writer and reinsurer viewpoints, which includes:*

- *Recent experience of DI reinsurers*
- *Current problems facing DI writers and what reinsurance can do to help*
- *DI reinsurers' reaction to recent claims,*
- *The DI reinsurance market of the future***.**

**Mr. Robert W. Beal:** As most everyone is well aware, the individual DI carriers have experienced considerably poor morbidity results over the last few years. Although it may be difficult to imagine, the individual DI reinsurers have probably suffered even worse experiences. One of the biggest contributors to the dismal experience was the medical segment. Doctors are famous for loading up with all the bells and whistles offered by the DI carriers and purchasing as much coverage as the issue and participation limits would allow. Unfortunately, the DI reinsurers assumed a disproportionate share of this expense with the excess of retention reinsurance agreements. Consequently, it is not surprising that the reinsurers are now looking to improve the risk that they are insuring and to exert pressure on their clients to aggressively change the riskiest aspect of the DI product offerings. To say that the DI reinsurers are becoming more proactive may be an understatement. I've talked to a number of DI carriers this year about their

experience and specifically asked them about their reinsurance arrangements, and whether the reinsurers were requesting changes in their products and underwriting. Most companies responded that they were having serious discussions with their reinsurers, and one actuary referred to these talks as sabre-rattling.

The purpose of this panel is to shed light on the state of DI reinsurance. My three panelists are well qualified to do this. The first speaker will be Tom Bell, the DI actuary for Mass Casualty. Tom will provide the perspective of the DI carrier. He will be followed by John Lenser, the DI actuary for Swiss Re Life Company America, which is one of the few DI reinsurers that is still active in the market. John will discuss the experience of DI reinsurers and explain their strategies to improve the profitability of their DI block of business. Finally, our third speaker will be Chuck Waldron of Milliman & Robertson, who will discuss a new form of DI reinsurance that may be an alternative to the traditional forms of DI reinsurance.

**Mr. Thomas S. Bell:** The part of the program material that I'm going to be talking about is the current problems facing the DI writers and what reinsurance can do to help. I'll be talking from the company's perspective.

I noticed that the program says that a moderate level of prior knowledge is assumed, so what I say will not be new for some of you. Bob Beal asked me to specifically address certain questions.

Let me start by telling you a little bit about the company that I work for, because perhaps some of you haven't heard of Mass Casualty. Then you might understand how it compares to your company. Mass Casualty is a wholly owned subsidiary of Sun Life of Canada. Individual disability income is all we do. We hold about 1.5% market share. We have direct premiums of about $60 million, net premiums at about $50 million, 75,000 policyholders, and at any point in time, we have around 1,600 claimants. In a nutshell, our financial results have mirrored the industry's. Our losses appear to have peaked in 1994. As mentioned at another session, industry experience in 1995 seems to have been a little bit better. But its our view that it's going to take, at least for us, and probably the industry, several years until profitability arrives. We have a significant exposure of business in California, but mostly from a general agent who is essentially inactive, so that's a shrinking part of our business. We are less exposed in Florida than perhaps many of you are. And our "doctor exposure" is 20% of the book, which is more than we'd like, but less than what many other companies have.

Before getting into the reinsurance part of it, let me note that many of the issues that face the direct writers have absolutely nothing to do with reinsurance. Hopefully, solutions to those general problems will help, not only us, but also the reinsurers,

and make the reinsurers feel better about us. Let me start with "Reinsurance 101" and some of the reasons why people might want to reinsure.

The fundamental one that is generally included is risk transfer. In our case it is the morbidity risk. I suppose you could be talking about a lapse risk or an investment risk as well, but in our case one of the primary reasons for having reinsurance is to smooth out the fluctuations in morbidity.

Another reason is financing to help with handling the new business strain. One of the concerns we have with the high front-end strain on this business is finding a reinsurer who will give us enough expense allowance so we don't exacerbate what is already a surplus strain problem.

The third reason for reinsuring is underwriting and claims assistance. This is important, particularly to us as a small company. It's nice to have an outside person who's an expert. Some of the other reasons for wanting reinsurance, just to complete the picture are: (1) product expertise; (2) the risk; (3) fronting, where one company issues the policies and reinsures almost all of the risks; (4) increasing sales and profit; (5) surplus planning and tax planning, which are not of immediate concern to us; and (6) stop-loss, which can be either on a case-by-case basis or an aggregate basis.

In summary, the major needs for my company are really the three I had at the outset, which are the risk transfer, new business financing, and the underwriting and claims expertise.

Without getting into the details, I would suggest to any of you who haven't read the Conning Report that you might want to do so. It's a great report that summarizes the current state of the art, in our view. We pretty well agree with everything that's there. If you haven't read it, you will be pleased to know that it ends on a fairly upbeat note, certainly relative to their 1993 report.

Let me talk now about recent trends and experience. As I said before, my company's experience is similar to the industry in 1994. I hope it will have turned out to be the worst year. We have found, like I think some of you have, that there's a hint that the incidence rates are getting better, while the termination rates remain a concern.

Let me quickly run through some of the causes of financial problems, as we see them. These are generic within the industry, and several speakers did this same thing, so I won't spend a whole lot of time on it. There are about eight or nine reasons that always get mentioned at these meetings. The increased moral hazard is

one (that is, people do not feel the same about the ethics, morals, fraud, and malingering) and the advent of managed care is another. The fact that the game has changed, and perhaps is going to change even more in the future for doctors, has had an adverse affect. There have been new types of claims and an increased incidence of the types of claims that were already there. For example, we receive a lot of low-back claims. A claimant's doctor says he's disabled; our doctor says he's not disabled and neither of us can prove anything. Chronic fatigue seems to be a very fashionable type of disability to have these days, and yet you'll find certain doctors who say there's no such thing. And other claims, like AIDS, are more prevalent than they were. Mental, nervous, drugs, and alcohol claims are at unheard of levels.

Some of the product design features that are always mentioned are the high-issue limits, lifetime benefits, cost-of-living adjustments (COLAs), and the underwriting standards that were used until relatively recently.

In the past, as most of you know, a multitude of sins were covered by the fact that the investment returns were very attractive. With interest rates being lower, you don't have this built-in cushion. The claim situation in what have come to be called the Sunshine States are particularly bad. I guess if I had to pick a single culprit, I would pick the replacement ratios. There's no magic number over which problems start; it's sort of a continuum, but when people are better off being disabled than going to work, you have violated a fundamental tenet of insurance.

I don't personally believe that noncancellable is the sole problem, but all else being equal, you'd obviously want to have a chance to change the premiums. Who wouldn't want that chance? There are many problems that go with guaranteed renewable insurance, so I don't think that it's a panacea. It would be great if we could come up with some sort of flexible premiums, but right now, the state regulations are a bit of a problem.

The other problem with any of those solutions is that while it is nice to increase the premiums, you'd also like to change the contract provisions. We probably should be selling the kind of products that Lloyds of London does where you insure the person for five years and then after five years, it's a new ball game and you must look at the person again. But, in our business if there's a change in circumstance to the person's advantage, we improve his or her rate. For example if the policyholder moves to California, then he keeps the same rate, but if he moves to a lower area, he demands a lower rate, and that's a real problem. I won't dwell too much on this because we've been through it so much.

Just a quick word on what's going on on the West Coast. It is a very litigious area. You pick up the *L.A. Times*, and you'll see all sorts of ads, like "Come talk to us if you are stressed out at work," The attitude is a real problem. The mental health stigma is not as high. Economic conditions, managed care and a retirement ethic attitude seem to permeate the Sunshine States.

Table 1 shows my own company's data, but I think it's fairly representative of what's going on in the industry. It shows how our direct reserve is split by occupations. Obviously, being actuaries, our first question will be, is that disproportionate to the exposure or not? I'll tell you it is. The reserve on doctors is a much bigger portion as compared with the in-force business. The same is true of dentists. I think most of you would have data that are similar to this.

TABLE 1
DIRECT RESERVE DISTRIBUTION BY OCCUPATION

| Occupation | Direct Reserve Distribution |
|---|---|
| Physicians | 27% |
| Managers | 3 |
| Office Workers | 3 |
| Attorneys | 3 |
| Laborers | 3 |
| Small Business Owner | 3 |
| Dentist | 18 |
| Executive | 3 |
| Police | 6 |
| Podiatrists | 5 |
| Other | 26 |

Table 2 shows how my company's reserves are split by cause of disability. A big part of the problems is the spine; there's also a big amount reserved for the psychiatric claims and the nervous disorders.

What's kind of interesting, is that when people think of what disability may happen to them, they tend to think of themselves getting into a car accident and getting smashed to smithereens. But the real disabilities that hurt us are the soft ones. It's particularly troubling because the percentages are growing and because of the very subjective nature of these claims.

TABLE 2
DIRECT RESERVE DISTRIBUTION BY CAUSE

| Cause | Direct Reserve Distribution |
|---|---|
| Spine | 22 |
| Psychological | 19 |
| Nervous System | 11 |
| Joints | 10 |
| Heart | 6 |
| Eye disorders | 6 |
| Cancer | 4 |
| Other | 22 |

Let me talk next about the impact of this on our financial results. I said at the outset that all my company does is disability income. We're run as a totally separate company from Sun Life, so we don't have any issues of allocating expenses or allocating investment income. Whatever we get is what we get, so it's pretty easy for us to know what's going on, and it hasn't been pretty.

Each year we analyze our business in many ways. For a small company, the question of credibility is a real problem. Morbidity, expenses, lapses, and waste all provide valuable insights when viewed over a long enough time period, but they have to be carefully interpreted. One set of statistics that regulators and others are fond of studying is loss ratios. We calculate these once a year in great detail and from time to time during the year on an ad hoc basis.

There are some merits to loss ratios. We have to calculate them out of curiosity, if nothing else. They have the merit of combining many variables and being relatively easy to calculate from the available data. But they suffer from being heavily influenced by the proportion of business in different issue years, different rate series, different plans, and so on. And, of course, for a small company the static in the system often hides the underlying truths, particularly when we subdivide the data.

With all these caveats, our experience does show that the reinsured business, which tends to be portions of the large policies, has had worse morbidity recently. For us, for example, in 1995 our overall loss ratio on a direct basis was 92%, but on a net basis it was 74%. It's much lower. Similar results show up in the morbidity studies, which of course just isolate the morbidity and are a little easier to understand. So,

in the past few years, we have been very thankful that we've had reinsurance, and my reinsurer isn't quite so happy about it.

Let me talk briefly about the history of Mass Casualty's reinsurance. The amounts of excess cover have changed over time. At one time Mass Casualty used to reinsure amounts over $1,500 of monthly income. Currently, we insure amounts over $3,500 a month.

Consequently, we are reinsuring around 10% of our new business and 20% for the in-force block. At one time it was as high as 30% for the in-force block.

Another interesting reinsurance agreement we have is a stop-loss reinsurance agreement with our parent, Sun Life. It's fairly complex, but the guts of it is that if our loss ratio, after our outside reinsurance, exceeds 65%, then Sun Life bears the excess risk. If we were a stand-alone company, my view would be, we'd need a whole lot more reinsurance. I've been involved with Mass Casualty for the last five years, and one year our claim reserves went up $3 million, another year it went up $16 million. That's a big fluctuation for a small company.

The next topic I'd like to discuss is reinsurers' reactions. Bob summarized it a little bit in his introductory comments. The reinsurance industry, as far as I see it, is not actively seeking new customers. They're trying to accommodate existing customers as best they can. They seem to want to go to a yearly renewable term (YRT) type of rate basis with perhaps a short-rate guarantee. That doesn't seem to match our needs at all. It's not so much the YRT; it's the fact that the rates are not guaranteed. Well, if I put myself in their shoes and ask, when would you raise the rates, they would say, "When things aren't going well?" When would they not raise the rates? When things are great. It strikes me that we would lose either way. We are discussing this issue currently with our reinsurer, as well as looking at other alternatives.

I would like to discuss recent actions by Mass Casualty. I think that they are pretty common in the industry. They're the same kind of things that everybody has been doing as far as I can tell. We require financial documentation on all applications. We have changed a lot of the occupation classifications and lowered the issue and participation limits a bit. Blood testing on all applicants is required. I don't know if other people are doing that on all applicants, but they sure will be soon with the home testing AIDS kits that are available now. We don't sell lifetime benefits any more. We have a 24-month lifetime mental nervous provision. We don't sell 30- or 60-day business in the Sunshine States. In fact, for our high occupation classes, we don't sell 30-day business at all. We've cut back on where we offer residual. Podiatrists and trial attorneys seem to give us a tough time, so we don't write

residuals anymore. We probably have a more extensive set of area factors than most other companies, although we still do not have as wide a range as we should.

Particular concerns are in the medical and dental business, which we no longer sell policies to in California and Florida. In certain states we've lowered the limits for doctors, and we don't write individual doctors over age 50. We think those are the ones that are the most likely to bail out if the medical business doesn't operate to their liking. We don't sell to medical associations. We have done similar things for dentists and they give us a hard time. We've lowered their occupation class. We don't write them in certain places, and we don't offer residual. They are offered a lower benefit. We also don't write any dental associations.

The one thing that is particularly encouraging to us is when we take our existing block of business and strip out all the things that we don't do anymore. The 1995 loss ratio that I mentioned at the outset drops from 92% to 51%. It doesn't prove that would happen, because of the old question, did the poor risks buy the 30-day plan and now will they just buy the 60-day plan? Who knows? But at least it was encouraging.

What are possible alternative reinsurance strategies? We would prefer to keep the current relationship. Our people know the people at our reinsurer, the claims and underwriting people, and it's working very well. I'm hopeful that we'll be able to work that out, but if we can't, the question is, what do you do? So many reinsurers have dropped out, as you know. Others say they're in the market but don't really seem to be looking for new customers. In the last month, I've been approached by two different reinsurers that are actively looking for customers. Maybe they think with all the changes that everybody is making, this may be a good time to get into the DI market.

The third option we have, because we are owned by a large, multinational, billion-dollar corporation, is to reinsure some more of our business with Sun Life. However, we already have a stop-loss reinsurance agreement with them, so that probably wouldn't be our first choice. It doesn't transfer the risk outside the Sun Life overall business, which is the downside. And it doesn't provide us with the expertise that we seek. That would not be our first choice.

Let me conclude by making a couple of other observations. It is a fascinating time to be in the business. I think, from an actuarial point of view, the disability business is one of the most fascinating parts of the business. I'm not sure an investor sees it that way. In terms of the actuarial viewpoint, things may be improving. The market is becoming more rational, and ultimately, that's good for all of us. It's good for the companies, good for the reinsurers, good for the agent, and good for the investors.

We do have this dilemma. We need to overwhelm the existing block of business. Capital requirements are very high, and the volatility is high if you keep the large amounts. On one hand, you'd want to keep a great deal of the new profitable business to speed up the date when you become profitable. On the other hand, you have the capital concerns. It's a fine balance. What we need are partnerships with our reinsurers, and it's going to be a real challenge.

**Mr. John M. Lenser:** I would have to agree with Tom that it is a fascinating business, but I'm really getting tired of the fascination. It's wearing me down.

## INTRODUCTION

The program announcement for this session says that the panel will examine current issues involving DI reinsurance from the point of view of both the direct writer and reinsurer. I'm the member from the reinsurance side of the disability insurance industry, so I'll try—at least, in a limited sense— to bring a reinsurance perspective to the discussions.

I say limited because I have spent very little of my career in reinsurance. I've spent about half of it with direct writers, and about half of it in a consulting firm. For the past eight months I've been in reinsurance, so my view, until very recently, was that of a direct writer. I know from my work with the direct writing company that, as recently as two years ago, or less, we were still actively being pursued by several different disability reinsurance companies that were trying to persuade us to place our reinsurance with them. That situation has changed. And I think that's why we are all interested in this topic.

Obviously I can't speak for the disability industry in general; just as direct writers bring a variety of views and approaches to our industry's current problems, so do the reinsurers. Those views are, in fact, set in senior management meetings and in board rooms all around the world, and those views reflect varied perceptions and inclinations towards risk-taking. But I think, far more than anything else, they reflect concerns about the uses of capital and the risks to which their invested capital is exposed. And I believe that this emphasis on adequate return on investment is something that is true of the industry in general. I'm going to talk about reinsurance results at my company, Swiss Re Life Company America and about aggregate direct writer results, as well as describe some of our views regarding the current reinsurance marketplace. In addition, I've gathered some information on how two of the other large reinsurers have fared in their disability reinsurance operations in the last few years.

## PERSPECTIVE

Let me give you an idea of the direction that my presentation will take by describing my personal view of the current situation.

First, enormous losses have been suffered by both direct writers and reinsurers in recent years. We all know that. Second, corrective actions have been taken, but many more are required. While they will generally have the same impact for both direct writers and reinsurers—that is we both need the same thing to be done with the product in order to benefit from it—there are some differences. Those differences have to do with, in large part, the spread of risk, or the lack thereof, for reinsurers in general, and my company in particular. This has caused differences in the pattern of losses for reinsurers versus direct writers. That's something that Tom cited implicitly when he mentioned historical results versus recent results.

My third point is that our companies need to regain the confidence of the people who invest in us and the people who make the decisions about the form of our continued operations and our continued existence.

So that's the perspective that I have of the state of the industry today, and I'm going to work from those three basic points in my presentation.

## MEASURES OF INDUSTRY AND REINSURER EXPERIENCE

Let's begin by looking at some measures of industry experience. The sources I've chosen for industry financial experience data is one that isn't new to any of you. It is the data published annually in the *Disability Newsletter* for the nine largest non-cancelable companies.

I've totaled the premiums and the losses in the period 1983–95 to show the amount of the losses in this period, as well as losses as a percentage of premium over this period.

I began in 1983 rather than earlier because that period ties into the time period for which I could conveniently get somewhat comparable statutory-like data for my company.

My interest was in the level of the losses and the pattern of the losses for direct writers versus reinsurers. The results don't present a pretty picture for either the direct writer or the reinsurer over the 13-year span from 1983 to 1995.

I have to say the 1995 piece of that result is estimated. I haven't seen the numbers yet, and I don't think they've appeared in the *Disability Newsletter*. I looked at some data that Bob Cushing at my company prepares. I looked at how those results

changed in 1995 versus 1994, and I used that as kind of a guide in order to estimate the industry results for 1995.

Over that time period, the loss is approximately $1.367 billion for the direct writers on an estimated premium volume of about $20.351 billion, for a loss that equals 6.7% of premium.

For my company the figures are much smaller. The roughly comparable figures are $680 million of premium, $50 million of loss, and on a percentage basis a loss that's equal to approximately 7.4% of premium.

What is not evident from this data is the pattern of losses. The nine company industry data began to show losses in 1986, as most of you probably know, and there is a generally increasing trend of losses from 1986 to 1995. Losses at my company began in 1990, which was preceded by a minimal gain in 1989. Given possible reserving issues, it may have been a loss as early as 1989. We've generally, but not always, had very large losses in each year since then.

The Swiss Re Life Company America losses in this little analysis that I've presented here averaged 7.4% of premium, while industry losses were smaller at 6.7% of premium. This would suggest that if we had simply reinsured a pro rata piece of the industry, we would have had better results than by selecting the particular risks that we did select. (I should point out, however, that I haven't addressed the matter of the impact of the timing of the losses. The direct writers paid out their losses earlier than we did, and my figures are simply sums of annual data.)

I believe we had a certain spread of risk problem. This analysis suggests that this is the case, but there are also other data that support the notion that we have spread of risk problems on the insurance side of the business. We know, for example, that we reinsure disproportionately more physicians. And we know that our risks are concentrated in policies with larger amounts of monthly income. Both of these factors contributed to our heavy losses in 1993, 1994, and 1995 (or at least 1994 and 1995); we, however, had smaller losses or even gains on our portfolio several years earlier. What about the other reinsurers?

## TWO OTHER REINSURERS: LINCOLN NATIONAL AND PAUL REVERE

I've also gathered some data from the published annual reports of Paul Revere and Lincoln National in connection with their individual disability reinsurance operations. These financial results are on a GAAP basis, while the other data I presented were statutory.

The Paul Revere data on their 1995 annual report indicated that during 1995 they strengthened reserves in the excess risk disability reinsurance line by $59 million.

For the year ending December 31, 1994, the company collected $26 million of premium, just to give you an idea of the size of business relative to reserve strengthening. In 1994, their DI reinsurance business contributed a loss of $10.6 million. As all of you know, Paul Revere suspended new sales activity on its excess risk disability and reinsurance effective in March of 1995. It continues of course to have reinsurance in force on contracts written earlier, and interestingly, as you all know, it has continued to be a major direct writer of individual disability income insurance.

In Paul Revere's description in the 1995 annual report, it makes a sharp distinction between the risk-taking situation facing a reinsurer and that which the direct writer faces. Lincoln National has reported losses since 1991. Reserve strengthening occurred in 1993 and 1995 with amounts of $32.8 million and $121.6 million, respectively. Disability income has been a difficult business for reinsurers, and it has also been a difficult business, obviously, for direct writers. The aggregate results that I've presented are just that; they are aggregate results. Some individual companies in this aggregate have not done so badly, while others have had experience that's much worse than that aggregate.

Now that we've gone over these results, and we can see how direct writers and reinsurers have fared, let me talk about the current problems facing DI writers and what reinsurance can do to help them.

## CURRENT DIRECT WRITER PROBLEMS

As we have seen, direct writers have had serious financial problems and the reasons for those problems are varied. Those reasons and the potential solutions have been discussed at length in meetings like this and at other meetings over the course of the past two or three years, and many actions have been taken to address those problems. Actually, Tom's list of actions was very comprehensive and included many things that we would consider to be very important. There is little that I could add to the discussion that has not been said already.

Nevertheless, let me cite four broad areas related to DI products in order to give some focus to my remarks here. I believe that the efforts of DI reinsurers in working with their direct writers, have been concerned with focusing on these areas. The four that I would cite are probably all on Tom's list.

First, a number of features of the products of the 1980s were, I believe, essentially experimental coverage features. They weren't priced properly, and I think it's still

pretty hard to get a price on some of them because of lack of data. Second, the assumed interest rates that were used on products for a long time during the 1980s were not realized. Third, there were liberal benefit designs that encouraged disability, when in fact we need today to discourage it in the products that we write. That's something that I think we are only now or recently beginning to focus on. Fourth, there was a lengthy period of lax underwriting.

Direct writers have, in fact, done a great deal, particularly in the past year or two, to correct these problems. Reinsurers have tried to encourage positive changes, (by that I mean changes that will result in a product that is directed at the needs of the consumer, but that does not encourage disability) which will result in the disability insurance industry—both the direct writers and the reinsurers--earning a fair return on their investments.

Such a return on investment is necessary if we are to be able to draw capital into our industry. The movement towards products that do not encourage disability is necessary for that reason. What can reinsurers do to help?

## REINSURER REACTIONS TO RECENT RESULTS

Let me begin to describe the reactions by reinsurers by reading something that will sound like a vision statement or maybe just a collection of cliches, but which I believe describes very well, in conceptual terms, the forces and views that are driving the actions of the DI reinsurers and the DI industry, in general.

Certainly there is still a substantial individual disability insurance market out there that we all want to go after. There is a need for disability insurance that's waiting there to be filled. Who is going to fill it and with what sort of products is the question. The market needs sound product design. It needs direct writers and it needs reinsurers.

We, as reinsurers, want to provide reinsurance of products that are financially sound. More than ever before I believe that reinsurers are compelled to emphasize that. We believe that those direct writing companies that still remain in the disability insurance business also want to write business that's financially sound. We'd expect that today, more than ever before, this view is in the forefront of the thinking and the planning of those direct writing companies.

We, in turn, as reinsurers, want our reinsurance agreements to be financially sound. They should contain adequate and appropriate terminology and there should be sufficient spread of risk and adequate pricing.

We now need a greater focus on insuring needs and on benefits structures that actually encourage returning to work. We believe that failing to do this will lead to a repetition and a continuation of the bad experience of the past. That's the basic point of view from which we're trying to work.

## ENCOURAGING SOUND RISK STRUCTURES

The direct writers, as I've mentioned, have been making many changes in the direction of needs-based products, and we see these changes as positive, or as attempts to create products with risk structures that we are comfortable reinsuring.

Our evaluation of each potential reinsurance situation reflects that view in an overall perspective. I can't emphasize that too much in terms of what we're trying to do. Too often there will be talk of problems with one feature or another, but basically we are trying to look at the overall package of features that a company will offer. We prefer needs-based products. We are concerned with the overall impact of the product features (not simply individual items) and with the broader risk evaluation and management activity of the company that's seeking reinsurance.

I have prepared a list of important changes that direct writers have made and that we feel tend to create needs-based products that we are comfortable reinsuring. This is by no means a comprehensive list, and everything that's on the list has been done by some company already. These are the actions we encourage. We didn't have to go out there, obviously, and tell companies to do them. Most of these things here were initiated by direct writers. They've reduced replacement ratios and expanded medical and financial underwriting requirements. They are dealing more adequately with problems in specific problem states in terms of both pricing and underwriting actions and policy provisions. Claims administration has become increasingly sophisticated including early intervention and other processes.

One of the problems we have encountered is that when a large part of the industry moves to a certain position, for example, with respect to amounts that will be issued to physicians. Some companies have a tendency to linger in an exposed position. That is, they remain out there with an offering, including both product and amounts of coverage available, that leaves their reinsurer even more exposed, because the reinsurer is very often writing excess risk coverage. So in situations like that, if we want to reinsure that business, we really have to take a position that does not leave the direct writers and the reinsurers so exposed. Reinsurers want to be able to make long-term commitments to the individual DI writers, and we want companies that have a long-term commitment. We can't afford to do business with companies that will be out of the business in a few years or will be managing that line as an unimportant operation. Reinsurers have had to implement price increases in connection with their experience.

In terms of the discussions we've had with individual companies, we see that our results as a reinsurer vary tremendously from one direct writer to another. Within that block there are companies that we insure on a YRT basis, or a co-insurance basis, all operating in the same industry. Some have quite positive results and some have quite negative results. And that, obviously, influences the way that we encourage or discourage activity by the client companies.

## DI REINSURANCE MARKET OF THE FUTURE

What does all this mean for the reinsurance market of the future, and what will that market look like? One of the reasons that DI direct writers have historically sought reinsurance—and Tom actually covered that very nicely--has to do with what reinsurers provide. Are those factors still important today, and will they be important in the future? Reinsurance companies, such as Swiss Re Life Company America, provide important risk-taking mechanisms and new business financing and services related to the product and the operation of the business. In a reinsurance operation such as Swiss Re, we regard the services as a very important aspect of what we provide. These services are in the area of underwriting, underwriting audits, and underwriting seminars. The same thing is true on the claim side. Also, reinsurers provide support in pricing and a number of other areas. We consider service, especially to medium or small-sized clients, to be an important part of what we offer. We will continue to offer those services. Risk-taking will continue in a variety of modes in the reinsurance market of the future. In many ways I think it will look like the market that we've seen traditionally.

## SUMMARY AND CONCLUSIONS

In summary, I'd say, first, the recent history of severe losses has forced the industry to re-examine its products and pricing. The industry has done so and has made many changes and will continue to do so. Second, it needs to continue working on sound products and improved profitability. Reinsurers will continue to be a vital part of that process, but they must also structure their reinsurance arrangements in ways that are more sound and profitable. Third, and finally, the answer to the question as to which entities will provide reinsurance services in the future is an answer that will be determined in a competitive, free-market system, where industries have to be responsive to their clients and their needs. They have to be increasingly responsive to the needs of their investors and responsive to the needs of the professionals who create and service the products. Who provides the greatest value to the client? Who provides their services most efficiently, competitively, and responsibly?

These are the basic economic questions, and in the long term, the structure of the industry will derive from how these questions are answered.

In this reinsurance market of the future, I believe that traditional reinsurers and traditional reinsurance arrangements will continue to play a significant role and that established reinsurer client relationships will continue to be important, even though changes in reinsurance structures will likely occur.

**Mr. Charles M. Waldron:** I'm going to talk to you today about possibly another way to provide reinsurance to the DI carriers. We heard from the direct writers. Tom gave you a list of things that he looked for in reinsurance. He talked about risk transfer, volatility, and surplus planning. Trying to plan your surplus when you've got a volatile block of business is very difficult. The reserves are certainly bouncing up and down, and the concentration of risk can be significant, causing wild swings in results.

Tom also mentioned stop-loss. His company actually has stop-loss reinsurance with its parent company on an aggregate basis, which is almost unheard of in the marketplace.

That's a nice deal. John talked about the reinsurers needing a spread of risk. I think reinsurers probably could use a reinsurer or somehow pool their business together to get a chance of spreading their own risks among themselves. As you can probably gather, I'm going to talk about a possible pooling arrangement that could be used either in conjunction with traditional reinsurance or as possibly a replacement for it. Whether it compliments or replaces existing reinsurance depends on the individual companies who want to join the pool and what their risk tolerance is.

This presentation comes out of some work that I've been doing for a client. They allowed me to talk about it, though I won't do a sales pitch and tell you who they are. Before I plunge into a description of how it works, I thought I ought to talk about the risks that it covers and doesn't cover. Again, Tom gave you a list of some of the things that are transpiring in the marketplace such as the moral hazard. The pooling concept really works against the random fluctuation, but not the moral hazards or incorrect pricing. In traditional reinsurance, where they offered you noncancellable coverage in a quota share arrangement, if you priced your product wrong, they suffered along with you.

A pool is not real good at giving you surplus relief, if that's what you're looking for. Ultimately in a pooling mechanism, you're paying for your own experience, but you're getting help over the short run from the other members of the pool. You could design an aggregate stop loss to protect the pool members from significant losses. Also, the aggregate stop loss could help you predict your earnings within a certain range and feel very comfortable that the pool will stay viable.

I want to digress just a little bit and talk about the risk that we are reinsuring. Most of you have probably done pricing. You set your assumptions and predict an expected level of claims. Then you set the prices at 100% of my expected value and claim that's how the claims emerge. One then tacks on expenses, assumes investment income and projects profits. Then maybe you do some variance tests to show what happens if experience changes.

If you had a portfolio of business that consisted of just one person, at the end of the year there would be either no claim or you'd have results well above the "expected" because the person would either go on claim or not go on claim. If he doesn't go on claim, you pay $0. There is about a 99% probability you're not going to have somebody on claim. There is roughly a 1% probability the person will go on claim, creating a spike well above the "expected." Of course, if the client goes on claim for a long period of time, it costs a lot of money, and the 1% spike would be even farther out on the "curve."

As you start to grow your block of business with more people, the two spikes begin to blend, because now you have a bunch of different possibilities. What you're going to see is a curve illustrating the possible financial results that actually looks something like a two-humped camel with the peaks below and well above the expected. When you think about where you've priced, the likelihood on a small block of business that you're going to hit your price is actually one of the smaller probabilities. This analysis hasn't even taken into account pricing or moral hazards or any of those nonrandom items. However, the volatility risk is apparent. If you could get a larger block of business, you'll be better off because hopefully you will be closer to the pricing.

For a company with 5,000–10,000 policyholders, the curve begins to look more normal, but it's a very wide curve. You still have a large probability that financial results could be very negative or very positive, but at least it's starting to look like a normal curve. A small company would be interested in growing because if you grow the block of business and get to be a medium-sized company, then you see that the probability curve starts to narrow, becoming more bell shaped.

What would be the ideal curve you'd like to have around your pricing targets? You'd probably want it to be a fairly narrow bell curve, and a really nice idea would be to have the long tail associated with the large chopped off losses so that you could never have severely poor experience. With this curve, there is a high probability that you will come close to your pricing. When you do that then you don't have to spend all your time in the president's office once again why you didn't hit your pricing, which probably happens now with great regularity.

What I'm going to do is show you how a pool can do that for you. The objectives in designing that pool would be to try to get smoother more predictable earnings, to have a narrow bell-shaped curve and to cap the losses. It also shouldn't cost you too much.

We saw earlier a list of things that the reinsurers would like you to do to proactively change your business. I don't know how many of you might feel that your reinsurer is telling you how to run your business. You might actually feel that you're doing okay in a marketplace that others are doing poorly in and want to linger there, but you're being told by the reinsurer, "Don't linger too long or you'll be on the full risk." Believe it or not, if you came to me, I'd probably advise you to do those things John listed. My point is, if you have only a few reinsurers in the business, you get uniformity in the industry. And if you get uniformity in the industry, then you may not have a spread of risk. Assume you think you've got a solution to lifetime benefits. Do you think you'll get it reinsured today? I'm not so sure. In a pool, if done right and you're treated equitably, you could do it. The other pool members reinsure it, because they know, ultimately, you're paying for it. Equity in a pool is probably the key item. That is, make sure that you've treated everybody equitably.

We heard from Tom. He's looking for a full range of reinsurance services. Wouldn't it be nice to be able to throw that on your pool. I'm not sure you can do that effectively, but you might be able to. Sell it as an á la carté process. If you're a small company, the pool is mainly designed to try to give you experience that's as stable as a large company, and if you're a large company, it wants to give you results that are as stable as they can get.

Let's talk a little bit about pool operations. It might be able to help the company lower costs. One of the key design elements that you'd probably want to work with is expected claims. That becomes an issue. How can you figure out your estimated or expected claims? Each member would need to have them on the same basis. In a pool arrangement, you're really just reinsuring the claims among members, and you're not working from a premium. There's no reinsurance premium, per se, to pay. What you're going to end up doing is ceding the claims that you actually incur, and you are going to assume back your portion of the whole pool. That's how you take a small company's experience and make it look like a large company's experience.

You don't have to pay the pool any kind of premium. You cede your claims and a portion comes back. To do that you have to determine the pool share you get. To do that, you have to know what the expected claims are for the block being submitted to the pool. For example, if one company sells nothing but lifetime,

own-occupation cost-of-living adjustments (COLAs) to doctors at $15,000 a month, and you have another company who's selling a decent spread of risk, you want to equitably determine the relative levels of risk each company has in the pool. You have to get both companies on a consistent basis. The first company is going to have substantially more claims than the second company. Even though the first one is ceding the same number of policies as the second one into the pool, the claim ratio is going to be higher for the first one than the second one.

What the pool operations have to be able to do is have some independent party looking at each of those companies and trying to make an equitable estimate of their expected claims. I used *equitable* as opposed to *accurate* because then you could build in some kind of experience-rated mechanism so that if you were not accurate, but equitable, you move everybody to get it to accurate.

We talked about wanting a stop-loss reinsurance agreement for the most severe experience. If the pool is large enough, you could probably find somebody to take an aggregate stop-loss on the pool. Individual companies, in particular, small and medium-sized companies, may not find aggregate stop-loss at any price. The pool operates to make a company their own reinsurer. A participating company cedes actual experience and gets back the pool's share of experience. The pool administrator allocates the appropriate experience among the members. You may have issues about what your company will receive from the pool-paid claims and claim reserves. You'll probably get both, but the cash transactions are minimal because they represent unpaid claims. Since you don't pay any premium, you don't have to transfer assets equal to reserves. The only cash changing hands in this kind of operation would be, if you ceded paid claims and you assumed more paid claims back than you ceded; then you would write a check to the pool to cover the difference.

Let's look at the financials a little closer. I have three examples of how this might work. In the first one, I used four steps. I broke up step one into three sets. Since we want to try and get things equitable, and we're trying to estimate an expected claim, you might want to use an industry expected number. We're going to measure everybody against the 1985 Commissioners Individual Disability Table A (CIDA). We're going to calculate their expected claims. We have three companies in this pool illustration. We calculate, using that industry expected claim table, that there is $574 million from that pool of policies that have been ceded to the pool. The morbidity multiplier is the vehicle that gives you the equity among the players. The independent people that are administering the pool for these members have determined, with input from the company, that company A relative to this industry table, will have claims equal to 1.1 times the table. Company B is going to be 1.2, and company C, the big one, will be 0.95 relative to the industry table.

The total pool is expected, in this first year, to do $600 million of claims. This is all done at a point in time where you don't know what the actual results are, but you've done your best to set them all up. By the way, the pool members probably have some input into this number, because they probably know each other. They shouldn't know what the multiplier of each of their competitors is, but they'll know their own and maybe where they are in some range. Now we've got a basis on which we can determine pool shares. It can be based on the expected values for each company.

Perhaps company C, having expected annual claims of $300 million out of the $600 million total in the pool, is going to get 50% of the experience when it actually comes in.

How does the stop-loss affect it? Stop-loss is going to cap everybody's experience at 125% of their expected claims. If actual experience is less than the 125% for the pool, then that's fine. Each company knows what its cap is going to be. In this particular case, the stop-loss attachment point is $750 million, 25% above the $600 million for the pool.

At the end of the period, you know what actually happens. The companies tell the administrator, "We've handled our own business, so here's what we did." We incurred a total of $100 million in claims in this company, $260 million here and $260 million here. The total is $620 million—not quite what was expected, but close. It did not exceed the 125% of expected, so therefore there's no stop-loss that's going to affect it. All of the members are going to share in the total cost. The total amount of $620 million times the pool share is what you get back on an incurred plan basis. So company A did exactly as expected, but since the pool overall did poorly, company A had become the reinsurer of the other members by $3 million. Company B did very well. Because it did so poorly with its experience, the other two companies reinsured them during that period of time. If that was to occur every single year, the pool would fall apart because these two companies are going to get real upset if one company is always getting the break.

What you want to do is introduce a mechanism that corrects the multiplier. You can use a credibility formula. Maybe the 1.2 factor for company B was wrong; maybe it should be 1.21 or 1.25. You assign some kind of credibility to their experience and start to adjust the relative values for the companies, so ultimately they all get to their own experience.

What happens if the pool overall does very bad? The pool still expects $600 million and each company is still getting the same share as the previous case. The stop-loss point is the same, but now the actual experience was $800 million, which

is way over the target. The stop-loss kicked in. The stop-loss carrier picks up $50 million and there is $750 million left to spread among the member companies. You will note that everybody gets back 125% of their expected, even though they ceded away their actual incurred claims.

**Mr. Lenser:** But it's outside of the pool.

**Mr. Waldron:** It goes right outside the pool. The pool probably has fees that cover the stop-loss cost. The pool fees would have to cover the administration of this process, plus the risk charge for the stop loss.

So what else did we need from the pool? If you remember, we were looking for reinsurance services. Since an independent company is used to administer the pool, that company could have the services that members elect on an á la carte basis. If you want claims advice, call them up; they're like claims consultants, and they'll be happy to help you. If you want actuarial support, the pool has to set reserves; it has to do a lot of things, so the pool's going to have an actuary. You want to look at experience studies, but you're too small so your block is not very useful; you might be able to go to the pool and ask how the pool is doing overall and get information concerning experience studies that way. The information you probably have to give to the pool is the same as what you would give in traditional reinsurance. Each member has to calculate reserves.

So those are services that could be provided by the pool to try and meet needs that companies list they would like from reinsurance. The question is, did we design something that would give you the experience you wanted? If you remember, you're looking to get a higher probability of coming closer to your expected claims. You wanted to narrow your experience, and stop-loss certainly helps because it caps your experience at 125%. You've pooled your resources so now your block of business, if you remember, is going to act more like a larger block of business than a smaller block of business. It should be more stable. Remember it doesn't cover the moral hazard, the mispricing, or the poor underwriting.

If you give up on your underwriting or your product design, the pool members will probably pick up the tab for that for a short period of time, but there is a mechanism in place that will adjust the pool shares. So if your experience gets poorer relative to everybody else's, your pool share is going to grow, and your company will get a bigger piece of the pool.

**Mr. Beal:** Let me just ask one question of John and Chuck. I think that some companies respond to the reinsurers that request nonguaranteed reinsurance rates, usually in the YRT form. Since they are on the hook for noncancellable guaranteed

rates, the reinsurer should also take that responsibility as well. I was just curious as to what your response is to that.

**Mr. Lenser:** We do business on the YRT basis, which normally means relatively short rate guarantees, and we do much more insurance on a co-insurance basis. The direct writer can choose either option. Obviously, the risk charge associated with a premium that has more guarantees to it is a greater risk charge. I think, realistically though, that the use of YRT premiums with short guarantees, or co-insurance on noncancellable premiums with a bigger guarantee, are determined pretty much in the competitiveness of the marketplace. I think there was a long period of a very highly competitive market. I think it's less at the moment, but it may be heating up. I think that will determine in the long run what's available and at what price.

**Mr. Bell:** I don't have a question, Bob, but I would have a comment after seeing Chuck's presentation for the first time. First, I tried to describe to the audience conceptually what we're looking for when we seek a reinsurance client, and there are a lot of platitudes defined in conceptual terms of what we think the product should be like and what sort of risk we want to take. I think it's very similar to what many direct writers want to do in terms of products and other aspects. But taking that concept and translating it into a working relationship with a client and discussing features that have a lot of friction in it, generally, is difficult in practice. If I were an actuary in a medium-sized or small company, and looked at the concept that Chuck is presenting, that could help me in realizing my expected result over the long term, I would find that attractive. I think the friction comes in when you look at what costs are involved, particularly, when the independent party has to come in and evaluate my expected claims versus someone else's. So, I think it's a concept that will be useful to people, but I don't envy the people who have to implement it. I think it will be hard work.

**From the Floor:** I was just curious to know a little more about what kind of services reinsurers provide on the claims administration side, and how well the claimants take to that service?

**Mr. Lenser:** We have several claims people who deal with clients, and all of them have two basic types of functions. One, we will audit claims procedures at our client companies, just to see that practices seem to be reasonable. We will also provide services in the sense that if they want consultation on particular claims, or particular problems, our claims people can do that. We have medical people, just as direct writers would. They are useful for consultation on particular claims. We don't, in our company, at the present time, have an independent consulting claim service that is sold to client or nonclient companies.