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Cutting-Edge Reinsurance Developments

Track: Reinsurance

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Panelists: GREGORY M. GOODFLIESH
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Summary: Neil Armstrong might find the terrain facing life reinsurers today daunting. Finding solutions to an array of problems facing their direct-writing clients is the challenge. A panel of industry insiders focuses on the problems as well as some of the solutions being tried today. Topics addressed include: (1) long-term care reinsurance, a promising future with a checkered past; (2) annuity reinsurance, dealing with the shift from variable to fixed; (3) group and special-risk reinsurance—with Unicover, London excess and 9/11, does a reinsurance market still exist?—and (4) financial reinsurance, dealing with an industry-wide capital crunch.

MR. JAMES W. DALLAS: I wish I could say I could take credit for assembling the panel, but the credit can be given to Mel Young. Mel has had knee surgery and cannot travel for a while. That's why he is not here. He did a great job of assembling four people for today's panel.

Our first speaker is Greg Goodfliesh. Greg is vice president and actuary for RGA Financial Markets. Since 1997 he has served as head of the fixed annuity pricing line. Greg is responsible for pricing, structuring, evaluating and monitoring all

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

annuity transactions generated by RGA Financial Markets. He has worked exclusively with investment-driven products during his 10-year career, and has used his knowledge to incorporate asset-liability-modeling concepts and disciplines into pricing annuity reinsurance transactions at RGA. Prior to joining RGA, Greg worked for American Express Financial Advisors, where he was responsible for annuity pricing, cash-flow testing and asset-liability management for a variety of products. Greg is a Fellow of the SOA. As you might have guessed, he's going to be talking about annuity reinsurance.

Pat Hennessy is the U.S. A&H sales and marketing leader for GE Employers Reinsurance Corporation (ERC). He is responsible for managing U.S. sales and marketing activity within the A&H division. His duties include generating new long-term-care reinsurance and third-party administration opportunities. In addition, he is responsible for managing new growth of all A&H product lines. Pat is currently on the LIMRA National Conference Committee for Long-Term Care and on the 2003 SOA long-term care conference team. Prior to working for ERC, Pat was vice president—national sales director for American United Life Long-Term Care Solutions Incorporated, where he was responsible for new client acquisitions for long-term-care reinsurance. He joined Duncanson & Holt in 1990 as an A&H underwriter and was the branch manager in the San Francisco office from 1995 through 1998. You can probably guess what he's going to be talking about.

Our third speaker will be Joseph Kolodney. Joe is managing director of Life Reinsurance Practice Group of Aon Re, Inc. He also serves as global life reinsurance product group leader of Aon Re Global. Joe has 37 years of extensive national and international experience in reinsurance and insurance. He held senior management positions at the General Reinsurance Corporation, the life reinsurance subsidiary of Gen Re Corporation, and served on both the executive committee and the operations committee. His last assignment with Gen Re Corporation was as president and chief operating officer of Fairfield Life Insurance Company, a wholly owned subsidiary. Subsequently Mr. Kolodney joined the Presidential Life Insurance Company of New York as president and chief operating officer. In his current capacity, Joe travels extensively both domestically and internationally to support the growing life and annuity reinsurance activities of Aon Re Global, which operates in 45 countries. He's a charter member of the International Insurance Society and has been a speaker and panelist on international insurance issues and other topical subjects at meetings of the SOA, the English Institute of Actuaries and the Scottish Faculty of Actuaries. Joe's going to speak to us today on the current status of the global life and life reinsurance market.

Our fourth speaker today is Pat Shannon. Pat is a life and health actuary at Towers Perrin Reinsurance. He is responsible for pricing and reinsurance structure analysis for reinsurance placements. He also consults with group life and disability companies. Prior to joining Towers, Pat worked at CIGNA for 16 years. His positions included chief pricing actuary at CIGNA Group Insurance, chief actuary at CIGNA Re Personal Accident Insurance and other roles in reserving and underwriting. Pat is a

fellow of the SOA and a Member of the Academy. Pat is going to be speaking to us about the catastrophe market.

MR. GREGORY M. GOODFLIESH: I'm going to talk about the annuity reinsurance market, dealing with the shift from variable to fixed, and the implications that has both on reinsurers and on the direct company.

Chart 1 shows what that shift has been. This is from LIMRA, and probably a lot of people have seen this. Back when there was a bull equity market you can see that variable sales were 76 percent all the way through 72 percent of total annuity sales. Then into 2001, when the market started tailing off, obviously variable sales dropped off dramatically. So far in 2003, maybe there's a turnaround. It's supposed to be cutting-edge, but I'm not that cutting-edge to know what the third-quarter numbers are going to look like. It looks like there are a bit more variable sales in 2003.

When you see that first graph, it doesn't tell you that a lot of the money going into the variable is actually going in the fixed subaccounts. In Chart 2, I took a quick look at what those fixed subaccounts look like. It's pretty much the same story. You saw a lot going directly into variable subaccounts until 2001, the same kind of trend.

What's caused it? Poor equity performance, given the timing of how this has worked out, is certainly one thing. Perhaps increased volatility within the general market caused policyholders to get nervous. Perhaps there was more focus on retirement income from baby boomers. These are three reasons I came up with. There are probably a number of them.

As for challenges facing direct writers out there, I'm sure many direct writers know a lot more challenges. Certainly there are the low interest rates with things like minimum guarantees. A lot of companies are refiling now. There are defaults in excess of pricing; 2001 and 2002 are some of the worst default years. For a lot of annuity writers, annuity portfolios tend to be more credit-intensive than some other portfolios. There were a lot of defaults throughout the industry in both of those years.

Poor equity performance is a challenge facing direct annuity writers. I'd throw in equity-indexed annuities (EIAs) to fixed annuities. Some products are affected by equity performance with underlying guarantees on EIAs and things. Then there is increased volatility. Again, this is mainly related to EIA performance as well. That drives up the cost of options. That goes in cycles. Since I wrote this, volatility has come down a bit in the EIA market.

Of course, capital is as scarce as ever, especially with the shift from variable to fixed. You have capital requirements of 4 to 6 percent on fixed products versus almost nothing on variable products. That causes a great demand for capital. It

seems to me that analysts are more closely watching annuity writers and trying to really understand the products and the guarantees. There are more calls and rating agency focus on fixed annuity writers, which are obviously a big challenge to all the direct companies out there. The reinsurance market is limited. Obviously that affects capital, our company excepted.

Another challenge is that it's becoming a tough market in which to sell fixed annuities. Because of the low interest rates, one of the effects is that compensation has been reduced. This makes it tougher to sell our products versus banks and other companies. We used to have a much larger compensation advantage when rates were higher and easier to afford. We have the new nonforfeiture law coming into play. I think this is going to make it a little tougher to differentiate your products out there, at least for certain products given how the new nonforfeiture law is worded.

Minimums and current rates are very low. We use to have an advantage versus other sources of distribution, because we had higher guarantees. A lot of products now are being filed at 1.5 percent, which is not quite as easy to sell. The one advantage we still have is the yield curve. The yield curve is still very steep, which helps us obviously versus bank certificates of deposit and such. If that were to level, it would be very, very tough.

Here are the market trends that I've seen based on the amounts of deals and business that we get a chance to look at as a reinsurer. The EIA market is continuing to explode. There's a lot of activity, and a lot of major players in there are selling a lot of business. I've seen more banks willing to take risk. Banks in the past have been happy to take their fee upfront and be done with it. I think that is a pretty good strategy personally, but more banks are actually willing to take risk and they are exploring that. That's one thing that we've seen.

I've seen more rational products that insurers are starting to sell. Obviously most companies aren't afraid to lower the minimums. Because of the credit cycle, people are considering how far to go out on the credit curve. That's led to more rational products, which I think is a good thing for the market. As I've mentioned 50 times now, the 3 percent minimums have disappeared, and that will continue I'm sure as other companies see that their competition has lowered the minimum.

Here are the challenges facing reinsurers who choose to reinsure fixed annuities. One of the most important things that we have to face is that we have to craft structures that give us adequate input into the management of the block. We are on the full risk for these transactions, and we really have to have a lot of input into a lot of the management aspects of that. We have to create treaties that align our interests with those of the direct writers. To the extent that everybody is aligned, things work a lot more smoothly. We go out of our way to try to find anything we can do to align all our interests.

As for accounting volatility, I'm not sure how many people were at the reinsurance breakfast talking about Implementation Issue B36. We are hiring a notional manager for that. Obviously B36 is a great challenge that we're facing.

Here are some other things that we're looking at. How do you set deal-size limits? That's probably something that direct companies face as well. Our deals tend to be a lot bigger because we have only one shot, so we have to really focus on that. How do you calculate economic capital? You have C-1 risk, C-3 risk and lapse risk. We struggle with how to calculate economic capital. We hope that we are doing it right.

There is expense containment. Everybody knows annuities are a line that has to be managed very carefully. It takes a lot of people. It's a challenge to grow this line from a small amount and still have the proper oversight, so expense containment is something that everybody faces, but reinsurers face it too. Then we have timely and accurate reporting. The historical reinsurer's complaint is getting timely and accurate reporting from the ceding companies.

Lastly, there are challenges facing ceding companies that are reinsuring annuities. The first thing you have to do is find a reinsurer that's interested in fixed annuities. There are not a whole lot of people out there at the moment, given where rates are. One concern that the direct company has to have is counterparty credit. They have to really think through how much they want to put with one reinsurer. Lastly, because the reinsurer wants to have participation in the management of the block, that takes away from the control that the direct ceding company has. On the other side, you have ceding companies that really want to just control the block as they always have, competing with reinsurers that want to have their interests represented. It's a kind of tug of war at the beginning to get that right amount of control to the ceding company while making the reinsurer feel that they have adequate control as well.

MR. PATRICK HENNESSY: I'm a nonactuary and a sales marketing guy, so to make up for my lack of math skills we give away gifts. There is going to be an audience participation portion to my presentation, and Jim is going to be helping me today handing out first-class gifts, which are Walt Disney Pez dispensers, to those who participate.

I'd like to see a show of hands. How many of you have teenagers in the house or have raised teenagers? Look at the majority. How many of you know a teenager? The reason I ask this question is, who can tell me what happens to kids during that phase of adolescence or those teenage years? Who can tell me? It's a global menace or a hormonal menace, which means that teenagers are going through a period of change, and change is not necessarily all bad. As they go through adolescence, we see kids go through that transformation. They get their drivers' licenses, and some of them even get part-time jobs, which is absolutely terrific. But it's a challenging phase, and some of it has to do with what my neighbor would call,

when his kid came home with a tongue piercing and a tattoo, very challenging times. The reason I bring this up is that today we're going to talk about where long-term-care reinsurance is during some very challenging times, which I call adolescence.

Long-term care has been around for about 10 years. What we're finding now in its current phase—which is a comprehensive product including nursing home and home health care—is that we've gone through infancy. We've gone through the young and learning phase, and now we're starting to hit our adolescent years, and we are facing some very challenging times out there. I'm going to talk today about a couple of things. I'm going to take you through the past, the present, which we call adolescence, and into the future, which we hope will bring about adulthood for long-term care and what that means. We hope that our adolescent that's going through some changing times now will evolve into a respectable member of society and become an adult where it's mature and predictable. I'm going to talk about not only the reinsurance side, but also what's been happening on the insurance side.

Let's go back to infancy. Let's talk about insurance for long-term care. What happened? Pricing took a back seat to marketing and market-share considerations. What we mean by that is, with a lot of these companies 10 years ago, it was not inexpensive to get into long-term care. It was very expensive. By the time you put the systems in place, hired the personnel and built it, you hoped they would come. What a lot of companies did was try to put their foot on the accelerator to get scale. You have to get to scale rather quickly to make this worthwhile. That's exactly what we saw in the early years. Based on it being a new product, we had limited underwriting information, and we had limited claims data. Long-term care is a product that you buy in your 60s and don't use until your 80s. There is typically a long duration in between. Reinsurance capital was plentiful at that time, and there was a high interest-rate environment, which made it very attractive. The reinsurance types that were available were quota share, which was a true win-win participation, YRT and excess of loss. We saw that the cumulative annual growth rate of new premium averaged 22 percent, which for most of you in other lines of business is pretty remarkable. Obviously when you're working off a very small denominator, it's not too hard to achieve those kinds of numbers.

Anyway, what we saw in 1999 was 19 percent, and 16 percent growth in the year 2000. Between the years 1997 to 2001, what do you think the growth rate for premium was for long-term care? Was it 14, 16 or 18 percent? Who can tell? Does anybody want to venture a guess?

FROM THE FLOOR: Eighteen.

MR. HENNESSY: Eighteen percent is good. Give this man a gift here. It was 18 percent.

Now let's talk about infancy for the reinsurers. We looked at this product, and we

looked at the growth opportunity. Obviously when you see the baby boomers and that target market environment continuing to grow constantly, this is a very attractive product line. It's very right for long-term care. Also, because we had carriers that were in desperate need of capital relief from the strain that was being incurred, it made it a win-win partnership. If you were a large company, obviously you had less need, so there was a smaller reinsurance relationship. The small to midsized companies really had a significant need for assistance. That's where the reinsurers came into play.

The expertise is obviously the key success factor with long-term care. I would encourage you to really become a partner with your reinsurer, because they can provide you with a lot of resources. Some of them are able to provide the plan design, pricing, experience levels, distribution channels, policy language and regulatory approval. In addition to that, on the operational side, some can provide the sales force training, underwriting, issue, claims, auditing and repricing. With the explosive growth and the opportunity there, everybody felt that this was going to be a very happy partnership.

We hit adolescence. Adolescence came with the insurer's challenges we just talked about. Although the underwriting was improving, which is good, the claims data was slowly getting there, but was still very young. The contract language was getting tighter, which was helpful. However, the policyholder premiums were increasing. That might be good for us on the insurance and reinsurance side, but the policyholders didn't really think so. Let me ask a question. Why do you think the policyholder premiums were increasing?

FROM THE FLOOR: Lower pricing.

MR. HENNESSY: Very good. You can give him a prize right back there. Because the product was so new, there were some assumptions made that were not exactly correct. The lower lapse rates have really hurt us in long-term care on the insurance and reinsurance side, as well as the lower interest rates. Again, we are seeing some challenges; long-term care carriers are exiting, primarily due to the fact that they have low scale and profitability. They cannot hit the returns they're looking at, and the capital that they are putting in is not giving them the returns that make it worthwhile.

From the reinsurance standpoint, when we went through the adolescent period (which, by the way, we are still in) we had to make some changes. We're now focusing on profitability instead of growth, and that's pretty consistent among the reinsurers in long-term care. Capital is being allocated more carefully. A lot of companies are finding that they can put it in other lines of business, and it's really a capital challenge to see how much you can get, which will obviously funnel the growth. The reinsurance types are still involved with quota share and YRT. However, excess of loss is really something of the past. A lot of reinsurers are no longer involved in that, simply because there's not enough premium to really

substantiate the risk.

When we talk about long-term care, excess of loss is either excess of time, which can be excess of two or three years, or it can be excess of amount, which will be excess of, say, $100,000. Again, reinsurers are continuing to provide both the development as well as the operational work.

I want to share with you some information. Since this is an actuarial crowd, I thought I had to throw in a graph at some point. In Chart 3, I showed you a little example of what we're seeing. What you have here is the number of companies that we're involved with and the returns. These are from inception to date. As you can see right around 15 percent, we have roughly half on one end and half on the other end. When you look at this slide, you think that looks pretty good. However, when you look at the premium associated with both sides of the graph, the growth is not exactly what it appears to be when you look at it from a return-on-equity (ROE) standpoint. At least from the number of contracts we have, right around 15 percent is where the average is. I think what happens is that the way to achieve a higher ROE really comes back to fundamentals. Those companies that have the solid data in order to evaluate the pricing—and then put the pricing into a solid underwriting program, followed by a very comprehensive claims program—are going to get high ROEs. It's not magic; it's not rocket science; it's really going back to basics. A lot of companies that are struggling now are missing one or more of those fundamentals.

Recently a report came out from the Conning Research Group. They had some interesting things to say about the long-term-care product line. They said insurers have a cost structure that cannot be supported by the premiums and investment. Basically when you take the premiums and you subtract the reserves and the claims and the expenses, there's really not much left. At least that was their conclusion. The 18 percent growth between 1997 and 2001 was truly remarkable and something to be proud of. However, the margin was not all that impressive. Basically the comprehension spread is causing new business to be written at unprofitable levels, so that looks pretty gloomy. However, it's not too late to turn things around.

The other thing I want to mention is: Why are we seeing such a wide variation of results among companies? Chart 4 gives you an example of one of the things we've seen. You see five companies on this chart. If you take an average group of 1,000 people at 75 years of age and you had $1,000 claim cost per $100 daily benefit, how much premium would you need to cover the morbidity cost associated with that? What's a thousand times a thousand? You would need a million dollars. What we are finding is that range is extremely wide. I know the SOA is working on this, but this really gives you an indicator as to why we're seeing such fluctuations in the pricing of the products that you see on the street. There is a big discrepancy in the mortality tables, and this just gives you an example of what's going on. It's plus or minus 5 to 30 percent from the average pricing, and we're trying to close that gap

as more data is becoming available and more companies are really paying closer attention to this.

From an actual-to-expected standpoint, Chart 5 gives you another example of what we've seen. Obviously the big deviations are primarily coming from the initial pricing. The underwriting hasn't been as tight as it should be, nor has the claims adjudication work.

Let's talk about going into the future, once this product becomes an adult and matures and becomes more predictable. What needs to happen? The carriers really need to get some better experience-analysis capabilities. A lot of them have the data but it's in a variety of different formats. I think it's very important for them to get their arms around this to really understand what they have. Given the long tail of this business, it could be very damaging if they don't understand what they have now, as the result could continue to worsen as they are sitting on top of it. They should monitor performance to identify early trends and obviously take corrective actions. A lot of companies are reactive instead of proactive. The reason they are reactive is because they don't have the information at their fingertips to evaluate and draw conclusions from.

Carriers also need to adjust product offering to match utilization. Utilization is changing now, and there will be a lot of change in the future. We need to keep track of that. Needed rate increases must be made early. A lot of companies now are concerned that if they start raising rates, even if they need to, they may have distribution issues and other problems. From a competitive standpoint, it really could come back and hurt them. Our advice is, take the medicine now before you end up in the hospital. It's important to monitor your results and take the rate increase actions if they are needed, obviously, to really make sure you can stay on top of it. It benefits the policyholders early on rather than getting hit later.

The market will conceive further consolidations. The reason for that, as we mentioned, is that the capital-intense nature of this product is enormous. A lot of companies are really struggling with that. The profitability is going to be challenging as well, going forward. That's the reason for that.

Who can tell me—will long-term-care experience improve or worsen with medical technology? Are people going to live longer, healthier lives (which means the duration of claims is going to be shorter, and then they will die quickly, so they'll fall off that cliff, which will basically help health insurers and reinsurers)? Or are they going to live longer, unhealthier lives and be in the state of disability for a longer period of time, which will mean a longer claims duration? Does anybody have an idea on that one? We don't know the answer to that either. I think that's really what the question comes down to for long-term care—how medical improvements will either help or hurt will really have an impact on where this business is headed. Obviously administration costs should be streamlined; a lot of companies are wasting a lot of money and could realize a lot more benefit by really

streamlining those costs.

In the future of the industry from a reinsurance standpoint, we're really looking for partners. We're not looking for companies that are being opportunistic, because I think the capital will not warrant that going forward. We want to share data; we want to identify trends; and we're also looking for people who have the opportunity to identify those needed rate increases early. There is the notion of focusing on our profitability versus gaining market share to survive. A lot of reinsurers are now sitting on a decent amount of premium. The results that they are getting are not where their senior management would like them to be. New business is going to have to come in at a higher return to really warrant the capital allocation. Again, the reinsurers are happy to work with the carriers to provide the resources there, because it benefits everybody.

In conclusion, our advice is to stay committed to the long-term-care insurance product or get out. You cannot dabble in this product. This is not a product you can just have on the shelf. This is a product that needs constant attention and rigor, and those who pay attention to it are going to do extremely well, because there aren't many companies really paying the amount of attention that's needed.

The morbidity assumptions that I showed still have quite a bit of a variance. You'll see that gap close in the future. Accurate morbidity is critical for long-term success. We have a handle on distribution and persistency now. The incidence and continuance rates are the wild cards out there for long-term care. Monitor your experience with rigor, as we talked about. Be proactive versus reactive. Policies are still too complex; those are the complaints of the people buying them—the policyholders and the agents. There has to be simplification, and I think companies will then have far greater success. Innovate and grow, and don't compete. Trying to compete on price is the wrong way to go. Find a niche. There's plenty of market growth out there. There's less than 10 percent market penetration currently, so there's plenty of room for growth. If done right, long-term-care insurance has tremendous potential for success. The needed rate increases have already come. The pricing is hardening, and the market has a better handle on the experience you're seeing today. Companies that are getting in now are really getting in at a very nice time in the market history. We hope we'll evolve into adults and be respectable members of society together.

MR. JOSEPH F. KOLODNEY: I don't have a lot of really good news today. Let's talk about the current status of the global life and life reinsurance marketplace, which is not a happy scenario.

There are three things in global reinsurance that we need to look at. First is loss of capital. Capital losses mainly in nonlife are limiting the availability of capital for life reinsurance in the 18 months or more since September 2001. Underwriting World Trade Center asset losses has led to about $200 billion in capital loss. At this time, $30 billion of new capital has been raised. Reserve strengthening for asbestosis and

other long-tail liability classes is predicted to pull another $120 billion out of the market. As you may have observed, property and casualty reinsurers who have options to work with their life insurance affiliate subsidiaries have consistently elected to put more and more capital into the nonlife side, because the returns they are getting now on the hard market are much more dramatic.

There is also concern now over exposure to credit derivatives and the impact on credit ratings. In Chart 6, if you take a look at where the top 150 reinsurers globally were and are, you see a big swing from what used to be AAAs, and there's only one left. This has been a very disturbing factor and has resulted in a tremendous disruption in the capacity and ability of life reinsurers to do the kind of business they have done in the past.

The second theme is consolidation. In the last five years, on a global basis, the life reinsurance marketplace has lost eight life reinsurers. Now with Allianz, it's nine. I don't know how you'd consider Canada Life, which has now been amalgamated into Great West, and whatever capacity they had to bring to the business, which also resulted in reduced availability of retrocessional capacity for other reinsurers. Swiss Re is a stellar example of the acquisition aspect. Swiss Re has acquired Mercantile & General, Life Reassurance, Lincoln National, Unione Italiano, which was the largest Italian professional reinsurer, and merged two affiliate companies, Union Re and Bavarian Re, into the Swiss Re infrastructure. GE Frankona, which is the European operation of ERC, acquired the life reinsurance divisions of Phoenix Mutual, now Phoenix Life, and American United Life. Munich Re acquired the life reinsurance division of CNA, and the hits keep on coming.

Most reinsurers decide to allocate capital between lines of business and on a geographical basis. The current trend is toward nonlife and away from life. The rating cycle hard market looks like it's going to go to 2005, although there are some early signs of softening, so higher returns are expected, increasing supply. Some of you may have seen an article on the Internet, in which KPMG had interviewed Bob Cooney, the CEO of Max Re, who said that they don't expect that they will write any life reinsurance business in 2003 simply because of the poor return on capital compared to what they can get from their nonlife activities.

The rate of volatility in the property and casualty and liability markets is due to higher ceding retentions requiring more risk capital and, therefore, a greater demand. We have concerns over accumulations of risk, the single developments in life and critical illness, which is a big seller in the United Kingdom, South Africa and Canada. This hasn't really taken off in the United States, but diagnostic advances have certainly skewed the risk profile that reinsurers and ceding companies had anticipated when they went into this business.

I threw a couple of slides up here to give you an idea of the diminution of markets. Charts 7, 8 and 9 are thanks to Munich. We've extracted that there were 32 players in the life reinsurance business, either direct or retrocessional, back in 1995. In

1999 there were 26, and in 2002 there were 22. Which way is that number going? Now there are probably about 18. As for implications for life reinsurance purchasers, for those of you who are actively involved in managing the purchase of your life reinsurance, at least without us, placement is more difficult. You have to work now to secure alternatives. Ten years ago you'd pick the phone and call three or four reinsurers, and with soft pricing, you were going to do business. There was good credit quality, and you felt you could put a deal together pretty quickly. Now it requires a lot more effort and a lot more balance sheet look-see, and much more appreciation of diversification and credit quality. You have to be able to enter negotiations knowing what you want in terms of structure and price, and the obligation is still on the ceding company to try to lead in the negotiations.

Credit risk management is more important. You have to understand the reinsurer's financial position. Diversify wherever possible; collateralize where credit exposure is significant. Look at the 2003 life reinsurance landscape. Even with the introduction of new life reinsurance facilities in the last three years, the industry is rapidly bifurcating into service providers and non-service providers. You have a group of companies that have invested heavily in providing support services to ceding companies. You have new crop of reinsurers who have made a decision that they cannot allocate the kind of capital required to build an infrastructure for the future when they have to deal with the reality of capital return today. What you'll get from the latter is support, capacity, pricing and security. What you get from the former are the services that you can discriminate about using, whether underwriting or different specialty programs, etc. The life reinsurance market, as you are all aware, in addition supported by retrocessional reinsurers, and other financial institutions have built capability to support life office clients through reinsurance mechanisms. (A few British-isms keep on creeping in here, because this is a result of a presentation we also did overseas. My associate Kevin O'Regan, over from London, has helped contribute to the authorship of some of this.)

Service providers are the companies that already have a sunk cost in establishing a service facility to a greater or lesser extent to provide assistance in product development, mortality pricing, underwriting training, underwriting manuals, seminars, etc. I have a list of the companies by reinsurer and by S&P ratings. Gerling is no longer rated, but now they are Revios. They have an A minus rating—congratulations for coming back strong.

As for non-service providers, it's very interesting that the AAA company as a non–service provider is a government-owned French company called Caisse Central de Reassurance. Don't call them up looking for quotes because they wouldn't know what to do with it, and they don't have an interest in doing anything outside of the French market.

Retrocessional markets include those companies which generally do not accept direct life reinsurance. The big four are: ManuLife, Sun Life, London Life and AXA Equitable Life. Their specialty is being a financial institution using a reinsurance

vehicle for financial structures. We talked a little bit during the meeting about the securitization of XXX reserves. In addition to Goldman Sachs, Lehman Brothers, J.P. Morgan and Morgan Stanley, there are several others trying to find bank solutions to help insurance companies deal with the capital strength required by these new reserving standards.

Investment banks structure corporate finance insurers as reinsurance to gain equity treatment for debt financing. There haven't been a lot of really big securitization deals in the United States. I think the Prudential is one, and a British company called National Provident Indemnity was another. They had to raise their solvency margin and did it in two tranches some years ago, by securitizing business on a note that one layer ran about 12 years, and the other one ran 22. It's like financial reinsurance with a longer tail.

The bankers who get involved in this aren't really interested in carrying mortality risks, so they'll figure out a way to pass that aspect on to the real reinsurers whose interest is in the mortality solutions. Reinsurance availability depends on reinsurer commitment to a local country. The bigger and more economically stable the marketplace, the more proactive reinsurers will be, such as the United States, United Kingdom and Europe. There is finite allocation of capital to invest in reinsurance, taking into consideration currency, interest rates, nature of the product, letter-of-credit availability and cost. This, as we've been discussing over the last couple of days, is a very serious emerging issue. Then you have the issue of regulatory restrictions on where reserves are constituted, e.g., true coinsurance where a reinsurer will hold its proportionate share of reserves or deposit back with the cedent, where investment income opportunities are limited and investments themselves are severely restricted. We have found generally sufficient life risk capacity per se. Every once in a while we'll get a call from some offshore company that has one of these wrapped variable products, needing $200 million on this individual. Good luck.

In conclusion, we have a contracting marketplace, more acute bifurcations between service and non–service providers, more significant potential counterparty risk, diminishing diversification options and more challenging line-of-credit availability. This counterparty credit risk is very important, and I think that everyone who is a reinsurance buyer has to really start looking at the security of their markets, and make sure that they're appropriately diversified.

As a closing point, the financial services authority in the United Kingdom has made a pronouncement, which it is probably going to follow with some kind of a regulatory basis, that says in the nonlife sector it is not comfortable with any of its regulated companies having more than 20 percent of the reinsurance with any one reinsurer. I think regulators will pay a lot of attention to overreliance on the capacity of any one reinsurer to provide the majority of the reinsurance solution.

MR. PATRICK J. SHANNON: I will address the personal accident reinsurance

market. Let's start with pre-9/11. What's going on? What sort of reaction is there? Here are some solutions that are out there. Catastrophic modeling is becoming more important on the life side. Then there is group life reinsurance and the impact of what's going on there.

Pricing pre-9/11 was underpriced and irrational. There was no rhyme or reason to do that. Paybacks could be one in 250 years; they could be one in 4,000 years, depending upon the risk. Pricing was pretty much asking what the current rate was and giving 10 percent off. It just happened like that. No one was really concerned that there would be any claims whatsoever. There hadn't been any real serious claims. There were a couple of airplane crashes and things like that, but nothing of any real magnitude. The general feeling in the market was that it was easy money. Everybody sold at the lowest rate they could get, because they weren't paying claims anyway. The players—the managing general underwriters (MGUs)—sometimes were supported by one company. Sometimes they were supported by a pool—the professional reinsurers and retrocessionaires. Retrocessionaires were very key at this time, because companies were keeping $1 million. A lot of reinsurers were keeping $50,000 per occurrence; some were keeping $100,000; and some were keeping $1 million. They were hardly keeping anything in the grand scheme of things. They could be putting out a line of $100 million, and their net was $1 million, and it was all just being pushed further down the line. The special pooled risk administrators (SPRA) pool existed at that time but wasn't that popular, but some people chose that as an option.

As for the capacity, there was $1 billion per occurrence worldwide. There were quite a few reinsurers that had $100 million per occurrence, and everybody would just put it out. The way things were structured, the insurance company would keep $1 million. You'd buy nine excess of one; 10 excess of 10; 30 excess of 20; 50 excess of 50; and people would keep going up. It got to a point where you'd sit there and say, "For $75,000 I can get 500 excess of 500, so why not do it?" The reinsurers at that time were just saying, "Anywhere you can put me just put me there. Now here's my $100 million, use it any way you want." That's what happened. It was very cheap pricing, and it got to a point where you would just buy it. When I was a reinsurance buyer during this time, what was $75,000 to do that? It didn't mean that much.

Under terms and conditions, there were high limits, low retentions, free and unlimited reinstatement so every occurrence was covered and it didn't cost any more money. Terrorism was covered implicitly, because no one was really thinking too much about it or the dramatic impact that it could have.

As for loss experience, other than a few airplane crashes, there really weren't any significant losses. There were a couple of minor things, where a $10 million loss was high. There were several million dollar losses, or a $3 million loss, but there wasn't anything to any extent.

People were concerned with exposure data at that time. They would look at the state level where you got your premium, but not for where exposures were accumulating for real. People did track California exposures, and people did track things in Japan for the earthquake implications.

What's going on now? Two things happened. You had 9/11 happen, but you also had Unicover happen. This really changed the way a lot of companies thought about pools and supporting businesses they really didn't understand. At that time the retrocessionary market went away totally. Now you get irrational overpricing. The pendulum didn't start swinging back; it went all the way to the top and to the other side. Paybacks went right to one in 20 years. And at that point in time, they excluded terrorism. The one incident that did happen wasn't covered, and now they're going to assume for every company that it was going to happen every 20 years. In total to the marketplace, they were assuming that we would have, I think at one time, 3,300+ airplanes going down a year. I think three have gone down in the last 30 years. Now it's starting to swing back toward where the paybacks are getting one in 15 or one in 30 years, so it's getting better, it's improving, and now it's starting to include nuclear, biological and radiation (NBR).

Among the players, MGUs really have disappeared, and professional reinsurers are the ones doing the business. Some have pulled out and others have pulled back. Retrocessionary capacity is greatly diminished. You used to be able to always go to London in Europe and eventually it would get taken care of, and now people are struggling with that. So a lot of reinsurers are keeping the risk. Then with SPRA, there's a minimal change to what's going on. The one big thing with SPRA is that people are looking to see how their programs fit in with that.

Capacity is greatly diminished. Right now you could get $250 million, and there's a lot in capacity in Bermuda, but that's very opportunistic. The rates-on-line are very high. It has been said earlier the property catastrophic companies can get a higher return, and that the incidence for earthquakes, windstorms, etc., is quite frequent. Therefore, it's easier to model, and you can have a better expected frequency of what's going to happen.

As for terms and conditions, there are lower limits, so 50 excess of 50 is common to buy. Not many people have more than $100 million of reinsurance in general, due to pricing and availability. Reinstatements are limited to one and fully paid, and terrorism is generally accepted. Now the market is evolving to include the NBR risk.

As for loss experience, now we have one significant loss and people are using that to price.

So what are insurers doing? They are gathering data. One of the things that happened after 9/11 was senior management of insurance companies asking: How much did that cost us? Most companies didn't know. There were project teams put together at all companies to start figuring out or estimating what their losses could

have been. It really didn't matter at that time what your accumulations were until that incident happened. Now most insurers are doing a much better job of gathering data, not only to track the data but also to buy reinsurance.

Insurers are retaining more risk. What they've retained has gone up between 1,000 and 5,000 percent. People use to keep $100,000; now they could be keeping 1 million, 5 million, 10 million or everything.

Higher life warranty follows along. Life warranty is how many lives it's going to take to trigger a recovery. You used to see all sorts of catastrophic programs that were two or three life warranties. Now you're seeing some that are 50 or 100, so they include major accidents.

As I said, some insurers are retaining all the risk. The reason is that they are looking at it, and the price of reinsurance isn't worth it to them. Insurers are retaining the increased cost of catastrophic protection. One of the things going on is that the group life market is very competitive, and with these extreme changes in catastrophic reinsurance—whether you're buying the catastrophic or you're just retaining the risk, which is higher now just because people are aware of it—the cost isn't being passed on to your customers at all. The group life market is probably just as competitive now as it was pre-9/11. I would think it's more so.

If I'm buying catastrophic and rate-on-line, for $10 million I'm paying 10 rate-on-line. That's going to cost $1 million to buy. If I'm a $30 million player, that $1 million is 3 percent. If I'm a $100 million player—and we're talking premium here—that's 1 percent, and for $500 million it's 0.2 percent. For the big carriers, it really doesn't matter to them. They are losing that million dollars of profit for that $10 million of coverage, but for the small player it's really squeezing the profits. I mean taking $1 million out of a $30 million life thing sucks away all their profits. If you look to federal government's consideration of the Terrorism Risk Insurance Act (TRIA), when they were looking at having the life companies follow the property and casualty legislation and be in the federal program, one of the things that the life companies had to come back and answer first was: Is it really hurting the companies? Yes. The second question was: Is it hurting consumers? The answer to that was no. This hasn't hurt the consumers one bit.

Now there's a search for alternative solutions. One of the things that people are still buying is traditional catastrophic. Some people are looking at taking out some of their larger risk facultatively. It could be by state, by company or by city. Then they are just paying an exorbitant price on a smaller segment. With quota share reinsurance, the accidental death carve-out was the first thing that really covered terrorism with NBR. You combine all your life and accident business, and it's a quota share on any claim that's an accident. The capacity for that is anywhere from $20 to $50 million per occurrence. It's unlimited and free because it's a treaty. That's an alternative that people are doing right now. For the bigger players, that's not going to give them enough capacity, because it's a quota share. As a big player

you'll be giving away too much of your excess profits on your accidental death business to get the limited amount. For smaller companies, that's a legitimate option.

As for pooling of risk, there's an SPRA pool, which people are doing. People in doing that are now evaluating how they fit with SPRA. Some companies are looking at whether they have large enough cases. Do they have northeast or California exposure and will SPRA be a good deal for them? Will other companies pay more of their claims than they will pay of the other companies' claims? I've talked to some companies where there's even been discussion about putting all their business into a New York company and just having their New York company be a member of SPRA. SPRA is really open, so you can join. There are limits about when you can exit once you join and when you can start joining, but there's not any underwriting at inception.

There is pooled exposure. One of the problems with that is people are scared to death of pools as a result of Unicover. One time we were able to get 10 people individually. They showed interest. We put everybody on a phone call, and they said, "Yeah, it makes sense." A simple example would be everybody's home office. Everybody's home office got into this pool; everybody took a piece of everybody's home office, let's say in excess of $10 million. You're really doing true insurance and everybody would be saying, "Well, the chance of my office building in Iowa going down has the same likelihood of your office building in North Carolina going down." It's really just trading the exposure. When everybody thought about that, they thought that was a good idea. Then, when they thought they'd have to sell to management just the idea of being in a pool, it started falling apart. Now one of the things that people are starting to look at is a buying cooperative. That would be merging two or more companies together to buy reinsurance. Right now the purchase of reinsurance is really a capacity charge. I've talked to a couple of reinsurers and they've said, "This idea could work." You're looking for companies that say they need $100 million of total reinsurance, and the reason they need that is because there are three specific states or three locations where their exposures are. You can find other companies that really need $100 million of insurance, and they have three different states or locations where they need it. The thing there is to manage the risk and to make sure that in the other 47 states, or in all of them, you don't need significantly more than $100 million.

There are people who are starting to do that. If you're paying five rate-on-line by yourself, if two companies did it, you're not going to pay 10 rate-on-line. You'll pay more than five just because reinsurers are going to do that. Let's say you pay seven, not 10, so now you're paying three and a half instead of five. As long as you can manage the aggregate exposures between two or more companies, you can do that. Right now the jumbo clients are paying the same reinsurance dollars that a small company is, because it's all based on rate-on-line. If you're a top-10 player and your first $10 million is going to cost you $1 million, and if you're the smallest

carrier out there, your first $10 million will cost you $1 million as well. It's not apples to apples, but it's nonmaterial, and they're different.

The fourth alternative right now is no catastrophic protection. Other things people have looked at would be finite reinsurance, aggregate covers and things like that. Finite reinsurance would be a smoothing cover just to pay the risk yourself and spread it out, but because of the accounting concerns recently people are concerned about doing that.

Now catastrophic modeling has come more into play, but you can't model loss experience. There's one incident, and anybody can sit there and say, "Well, we can do that, and we can project claims and things like that, but really, whatever your assumptions are, that's going to be your output." The property and casualty people have been doing this for a while, and the reason they can do it, as I said earlier, is they have had more frequency. It's a good idea to model exposure just to see where your concentrations are, but right now I don't think loss experience is going to tell you anything. You can model exposure by street address, ZIP code, county or state. There are all sorts of programs out there so that, if you have the data, you can map it. I'll show you a couple of examples shortly. When you do this with the data, you can manage your gross, your plan and your mergers and acquisitions and decide what would be a good company to buy when you're looking at the catastrophic risk.

The property catastrophic models do the modeling scenarios. Property and casualty brokers and modeling firms do it, but it's all based on their assumptions, and a lot of these assumptions are based on the Delphi method. They're going to terrorist experts, and they are saying, "Well, what do you think is going to be the next target?" Everybody guessed how big it's going to be. With life coverage you have to ask things like: "Is it going to happen at 9:00 in the morning when everybody is there? Is it going to happen at 11:30?" With property and casualty coverage the building doesn't go away. If there's a loss there's going to be a loss regardless of the time.

As for national exposure mapping by county, for any national player the map is going to be very similar. There are concentrations in California, the northeast, Florida, Chicago, and the northwest. There are also concentrations around most of the capitols in all the different states. Most companies are going to look like that if they are national, and local companies are going to fit in the mix. The models will also highlight a target and then draw out and figure out how many people you have in the different areas. All of this is interactive so you could just say, "Here's the zip code. I want a three-mile radius or a 10-mile radius." It will do it instantly, but the key is getting the data in there.

In summation, rates remain high, but they are gradually coming down a little. There have been a couple of new players in the last few months that are getting into this, so that should help a little. Insurers are still going to continue to retain a

lot of risk, because no one sees that it's a good economic buy, and until it is there are going to be carriers just sitting on the side. For the small players, it comes to the point that if they have to buy reinsurance, they can't be competitive. They still want to be in the group life market, so they stay there. Insurers are going to continue to gather and maintain exposure data, which will be beneficial to reinsurance buyers, but also be beneficial to managing the business. Modeling will continue to develop, and it is going to be used, but I don't know if anybody is going to feel comfortable putting an expected value of claims on that in smaller companies.

Group life reinsurance has been impacted by this. The market is extremely hard right now, following an extremely soft market. Some players have dropped out. They are starting to track exposures as well. One of the problems is that now that they get this data, some of the life reinsurers are using manual rating on a reinsurance block of business. They are not underwriting that block of business. If you look at group life, they are writing at 80 percent of manual, and I don't think that would be unreasonable. What happens is they do it case by case, they have experience, and so they are underwriting the case. Then all of a sudden you're giving your group life catastrophic reinsurer your exposure, and they are calculating the manual rate. I couldn't tell you how many times the manual rate just isn't close to the experience and it shouldn't be, because the reinsurer isn't underwriting the business; he's just running a manual rate calculation. I think there needs to be evolvement of that process, because now people are getting data, and they're just not doing the right things with it. Experience is no longer credible. Two years ago, with a small case or a big case, you gave it to them, and they'd look at your experience and put out a rate. Now you have some major players that aren't getting experience-rated group life reinsurance or it's a struggle to convince them to do that.

The struggle with the group life reinsurance is that they have the data. They want to get your experience, and they really aren't doing anything with it other than running it through the manual rates. Then the data from one company to another could be the same, or it could be different. I looked at two similar companies recently with similar claim experience, but one company had 65 percent of the data, and the other company had 80 percent of the data. Two things happened. One is the company with 80 percent of the data had a higher rate, because they ran it through the manual rate and there were more manual claims. The second thing that happened, and this happened over the course of the year, is the person who had 80 percent had 60 percent the prior year. They came out with a manual rate, they paid it, and when they went to true-up at the end of the year, they got 80 percent of the data. They're just comparing apples and oranges. If I have 80 percent of my exposure, let's say I have 100 lives, and I have eight claims. That's going to say I had eight claims over 120 lives. They're not thinking about it as eight divided over 120; they're thinking of eight over 100, and they are saying it's $8.00 for every 100 lives. Then a year later when they are truing up you have 120, and all of a sudden you're paying $9.00 instead of $8.00. If they would look only at the

claims that are associated with that 100, it was probably seven claims not eight claims. There's confusion in how they are transferring going from 100 percent credible to some kind of combination of manual and experience.

MR. REGYNALD HEURTELOU: This question is for Mr. Shannon. There was talk about two years ago, on some kind of federal coverage or federal support for catastrophe. What's happening with that? I didn't hear you mention anything to that end.

MR. SHANNON: That's what I was referring to when I talked about TRIA. That is pretty much dying.

FROM THE FLOOR: This is a question for the gentlemen from ERC. You mentioned that the directive should be to innovate to grow the long-term care market. What sort of innovations have to take place to get back on track with 20 percent growth?

MR. HENNESSY: That's a very good question. With the experience we have based on the companies, the small regional companies that have catastrophic distribution are the ones that we are finding have a much higher ROE. Those companies that are finding niches in marketplaces, such as credit unions or other areas where there is a fraternal or some other type of relationship established, are really doing extremely well. Where you have the nationwide brokerage arms, where you're paying a very excessive compensation, it's very difficult, and I don't know if you can ever expect to receive a 20 percent return on long-term care to begin with.

I do think you can become more profitable. As the experience improves, I think the pricing is going to go up, simply because the interest-rate assumptions were missed, so those are going to be priced back in. The lapse assumptions which were around 6 percent are now between 0.5 and maybe 2 percent, so those are going to also factor into higher pricing. You're going to see the pricing come up, and you're going to see the returns go up. On the flip side of that, as pricing goes up, what happens to sales for long-term care? In long-term care, they're having concerns that the product is too expensive already. I think there's going to be a delicate balancing act that's going to have to take place going forward.

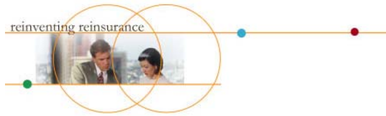
Product innovation is going to take place. I think as carriers figure out a way to make it simpler to appeal to the broader audience, to focus on home care versus the nursing home, to get back to how they can help these people in their current environment, that's going to be the answer. I don't know if it's going to be possible to achieve a 20 percent ROE on long-term care, even if you did pull all the levers.

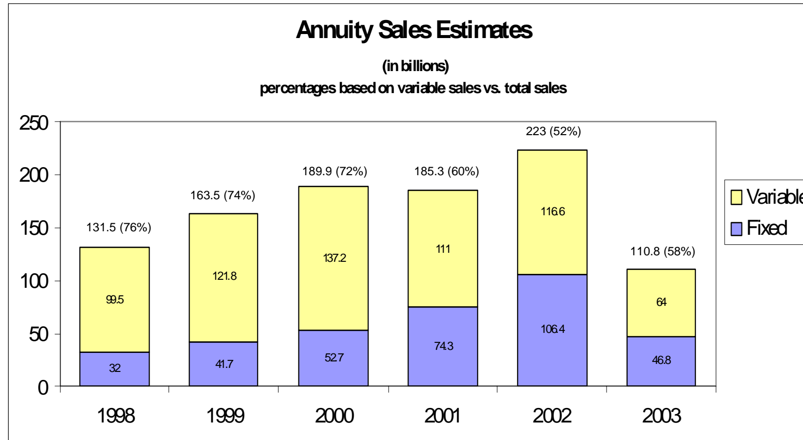
FROM THE FLOOR: I'd like to follow up on that. I think there was some discussion of putting long-term care into some kind of nonforfeiture law. What's the progress on that? Assuring that there are cash values would increase the price, so I'm just wondering what your comment is.

MR. HENNESSY: That's part of a lot of the offerings currently. It used to be an add-on rider, but the product has such a low lapse rate anyway, that a lot of people are just holding on to it.

MR. DALLAS: Just to clarify, if your question was whether there is anything going from a regulatory perspective that you have to offer cash-value nonforfeiture options, apparently there's not.

Chart 1





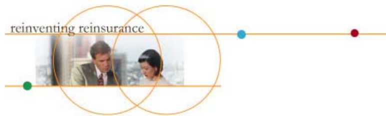
Resource: LIMRA Online

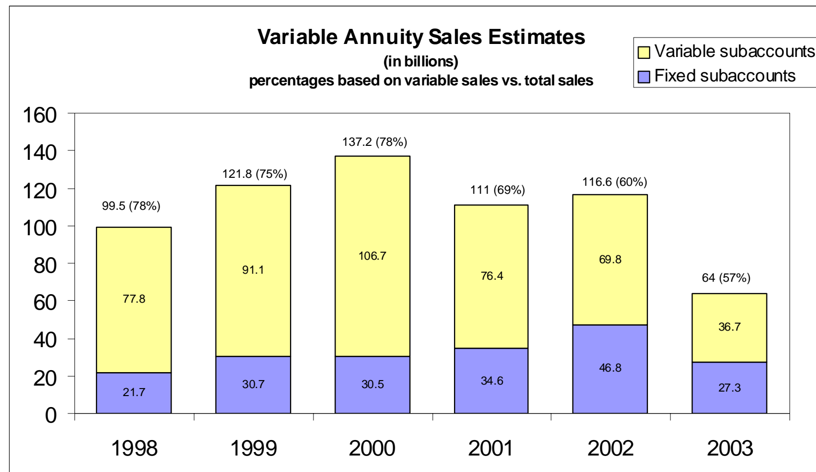
The 2001 Individual Annuity Market (2002), Author Dan Beatrice (data from 1998 – 2001)

U.S. Individual Annuities (2003, 2nd quarter), Author Dan Beatrice (data for 2002 and Jan-Jun 2003)

2

Chart 2





Resource: LIMRA Online

The 2001 Individual Annuity Market (2002), Author Dan Beatrice (data from 1998 – 2001)

U.S. Individual Annuities (2003, 2nd quarter), Author Dan Beatrice (data for 2002 and Jan-Jun 2003)

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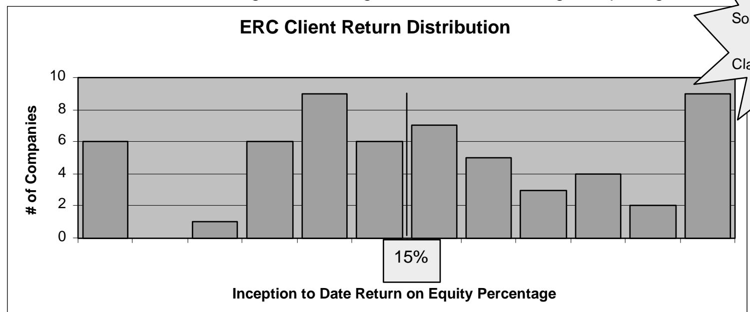
Chart 3

e *ERC* ***PRESENT - Reinsurer view***

- **Reinsurers seeking profitability vs.... Growth**
- **Capital is carefully allocated**
- **Reinsurance types: Quota Share, YRT, XOL**
- **Reinsurance partner as a source of information during development**
  - Plan design, pricing, expense levels, distribution channels, policy language, & regulatory approval.
- **Reinsurance partner as a source of operational information**
  - Sales force training, underwriting, issue, claims, auditing, & repricing.

Solid Data+ Pricing
Underwriting+
Claims= Solid ROE



Reinsurers are risk & knowledge partners

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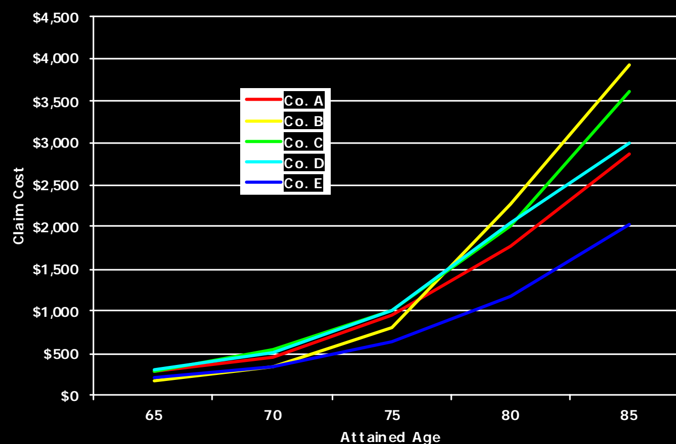
Chart 4

e *ERC* ***PRESENT - Reinsurance view***

Industry Leader Morbidity Tables



Carriers +/- 5% to 30% from Average Pricing

ERC internal data

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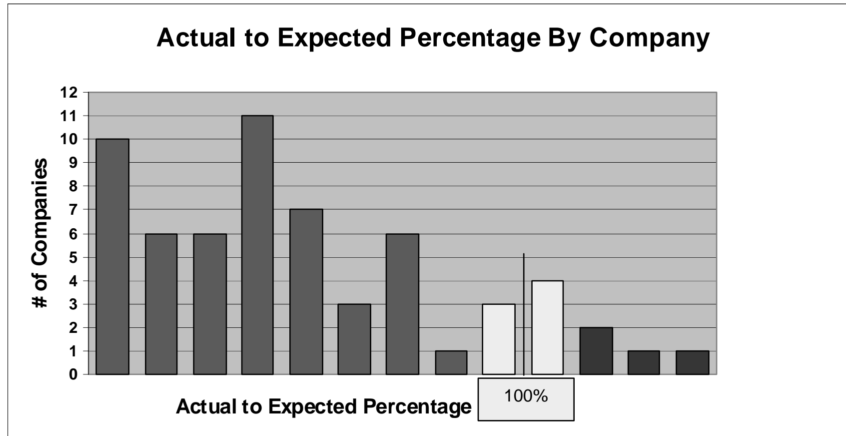
Chart 5

e *ERC* ***PRESENT - Reinsurance view***

Morbidity Incidence Rate Review: By Client Company



Wide Variance of Results Depending on Company Practices

ERC internal data

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Chart 6

Current Status of Life Reinsurance Market

Chart 1

Change in Distribution of Ratings for Top 150 Reinsurers Globally

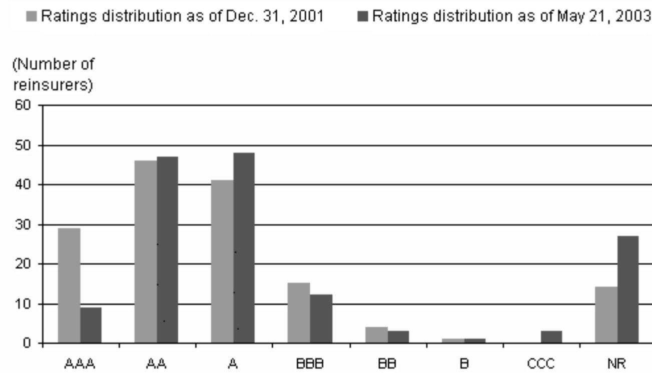

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Chart 7

1995

U.S. ORDINARY REINSURANCE ASSUMED MARKET SHARE PERCENTAGES FOR 1994 AND 1995 (AMOUNTS IN $U.S. MILLIONS)

	Ordinary Reinsurance Assumed 1994				Ordinary Reinsurance Assumed 1995				Percentage	Market Share Percentages 1994				Market Share Percentages 1995			
Company	Recur.	Port.	Retro.	Total	Recur.	Port.	Retro.	Total	Increase	Recur.	Port.	Retro.	Total	Recur.	Port.	Retro.	Total
Allianz	5,500	87	24	5,611	6,848	0	336	7,184	28	2.58	0.44	0.09	2.16	2.56	0	1.02	1.95
American United Life	11,790	171	40	12,001	12,406	0	49	12,455	3.8	5.53	0.86	0.15	4.62	4.64	0	0.15	3.39
Business Men's	7,558	0	0	7,558	15,730	0	0	15,730	108.1	3.54	0	0	2.91	5.88	0	0	4.28
CIGNA Re	2,464	0	224	2,688	8,778	0	230	9,008	235.1	1.15	0	0.83	1.03	3.28	0	0.7	2.45
CNA	3,161	0	1,007	4,168	3,244	0	2,058	5,302	27.2	1.48	0	3.75	1.6	1.21	0	6.27	1.44
Cologne Life Re	8,662	1,074	0	9,736	11,112	851	0	11,963	22.9	4.06	5.42	0	3.74	4.15	1.26	0	3.25
Crown Life	966	4,591	0	5,557	968	0	0	968	-82.6	0.45	23.19	0	2.14	0.36	0	0	0.26
Employers Re/ERC Life Re	8,238	1,423	69	9,730	7,055	9,911	6,154	23,120	137.6	3.86	7.19	0.26	3.74	2.64	14.72	18.76	6.29
Equitable Life	0	0	7,250	7,250	0	0	3,714	3,714	-48.8	0	0	27	2.79	0	0	11.32	1.01
Gerling Global Life	7,795	0	344	8,139	12,020	0	157	12,177	49.6	3.65	0	1.28	3.13	4.49	0	0.48	3.31
Guardian Life	0	5,275	40	5,315	0	5,550	26	5,576	4.9	0	26.64	0.15	2.04	0	8.24	0.08	1.52
Harbourton Re (NRG)	0	0	0	0	0	0	0	0	#N/A	0	0	0	0	0	0	0	0
ITT Hartford Companies	8,165	0	0	8,165	7,515	0	0	7,515	-8	3.83	0	0	3.14	2.81	0	0	2.04
Life Reassurance Corp	10,482	0	0	10,482	17,082	0	0	17,082	63	4.91	0	0	4.03	6.39	0	0	4.65
Lincoln National Life *	28,376	0	0	28,376	33,961	0	0	33,961	19.7	13.3	0	0	10.91	12.69	0	0	9.24
Manufacturers Life	0	0	7,513	7,513	0	1	11,703	11,704	55.8	0	0	27.98	2.89	0	0	35.68	3.18
Mercantile & General	12,514	0	0	12,514	15,989	0	0	15,989	27.8	5.86	0	0	4.81	5.98	0	0	4.35
Munich American Re	4,703	0	28	4,731	7,595	0	24	7,619	61	2.2	0	0.1	1.82	2.84	0	0.07	2.07
Mutual Group	0	0	1,034	1,034	0	0	1,144	1,144	10.6	0	0	3.85	0.4	0	0	3.49	0.31
North American Life	0	0	3,147	3,147	DNR	DNR	DNR	0	-100	0	0	11.72	1.21	0	0	0	0
Optimum Re	764	0	0	764	1,110	0	0	1,110	45.3	0.36	0	0	0.29	0.41	0	0	0.3
Phoenix Home Life	6,313	0	84	6,397	9,148	142	88	9,378	46.6	2.96	0	0.31	2.46	3.42	0.21	0.27	2.55
Reassurance Co. of Hannover	1,467	4,370	0	5,837	978	376	0	1,354	-76.8	0.69	22.07	0	2.24	0.37	0.56	0	0.37
RGA Reinsurance	23,187	2,615	36	25,838	24,371	39,472	45	63,888	147.3	10.87	13.21	0.13	9.94	9.11	58.63	0.14	17.38
Security Life	14,726	0	957	15,683	21,003	0	236	21,239	35.4	6.9	0	3.56	6.03	7.85	0	0.72	5.78
St. Lawrence Re	17	0	3	20	23	0	6	29	45	0.01	0	0.01	0.01	0.01	0	0.02	0.01
Sun Life of Canada	0	0	5,053	5,053	0	0	6,698	6,698	32.6	0	0	18.82	1.94	0	0	20.42	1.82
Swiss Re America (North Am.)	10,021	136	0	10,157	9,254	0	0	9,254	-8.9	4.7	0.69	0	3.91	3.46	0	0	2.52
Swiss Re Canada (Canadian Re)	244	0	0	244	40	0	0	40	-83.6	0.11	0	0	0.09	0.01	0	0	0.01
Transamerica Re	35,798	0	0	35,798	40,634	9,700	0	50,334	40.6	16.78	0	0	13.77	15.19	14.41	0	13.69
Winterthur/Republic Vanguard	0	0	0	0	307	1,320	132	1,759	#N/A	0	0	0	0	0.11	1.96	0.4	0.48
World-Wide Re	469	55	0	524	359	0	0	359	-31.5	0.22	0.28	0	0.2	0.13	0	0	0.1
TOTALS	**213,379**	**19,797**	**26,853**	**260,029**	**267,530**	**67,323**	**32,800**	**367,654**	**41.4**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

* includes accepted business from all LNRC Cos. (reporting and non-reporting entities)
DNR = did not report

Chart 8

1999

U.S. ORDINARY REINSURANCE ASSUMED MARKET SHARE PERCENTAGES FOR 1998 AND 1999 (AMOUNTS IN $U.S. MILLIONS)

	Ordinary Reinsurance Assumed 1998				Ordinary Reinsurance Assumed 1999				Percentage	Market Share Percentages 1998				Market Share Percentages 1999			
Company	Recur.	Port.	Retro.	Total	Recur.	Port.	Retro.	Total	Increase	Recur.	Port.	Retro.	Total	Recur.	Port.	Retro.	Total
Allianz	33,027	4,934	26	37,987	35,850	5,964	38	41,852	10.17%	4.86%	2.43%	0.05%	4.06%	4.55%	7.34%	0.05%	4.41%
Annuity and Life Re	21,352	0	1,969	23,321	15,934	0	7,018	22,952	-1.58%	3.14%	0.00%	3.66%	2.49%	2.02%	0.00%	8.67%	2.42%
AUL	34,296	0	24	34,320	42,126	0	17	42,143	22.79%	5.05%	0.00%	0.04%	3.66%	5.35%	0.00%	0.02%	4.44%
BMA	21,920	0	0	21,920	25,217	0	0	25,217	15.04%	3.23%	0.00%	0.00%	2.34%	3.20%	0.00%	0.00%	2.66%
Canada Life (Crown)	7,134	0	0	7,134	15,269	0	0	15,269	114.03%	1.05%	0.00%	0.00%	0.76%	1.94%	0.00%	0.00%	1.61%
CIGNA Re	814	0	127	941	632	0	99	731	-22.32%	0.12%	0.00%	0.24%	0.10%	0.08%	0.00%	0.12%	0.08%
Clarica LIC (Mutual Group)	0	0	4,586	4,586	0	0	4,340	4,340	-5.36%	0.00%	0.00%	8.52%	0.49%	0.00%	0.00%	5.36%	0.46%
CNA	23,269	0	6,968	30,237	33,565	437	5,589	39,591	30.94%	3.42%	0.00%	12.94%	3.23%	4.26%	0.54%	6.90%	4.17%
Cologne	17,575	9,101	0	26,676	20,680	0	635	21,315	-20.10%	2.59%	4.48%	0.00%	2.85%	2.63%	0.00%	0.78%	2.24%
Employers/ERC	87,468	10,594	402	98,464	90,248	8,932	0	99,180	0.73%	12.87%	5.22%	0.75%	10.51%	11.46%	11.00%	0.00%	10.45%
Equitable	0	0	7,462	7,462	0	0	7,007	7,007	-6.10%	0.00%	0.00%	13.86%	0.80%	0.00%	0.00%	8.66%	0.74%
Gerling Global	17,662	8,243	259	26,164	26,320	3,295	338	29,953	14.48%	2.60%	4.06%	0.48%	2.79%	3.34%	4.06%	0.42%	3.15%
Guardian	0	54,248	778	55,026	0	23	858	881	-98.40%	0.00%	26.71%	1.45%	5.88%	0.00%	0.03%	1.06%	0.09%
ING Re	55,925	22,739	35	78,699	55,733	0	76	55,809	-29.09%	8.23%	11.20%	0.07%	8.40%	7.08%	0.00%	0.09%	5.88%
Lincoln Re	79,952	15,064	0	95,016	114,792	13,649	0	128,441	35.18%	11.76%	7.42%	0.00%	10.14%	14.58%	16.81%	0.00%	13.53%
Manufacturers Life	0	0	20,153	20,153	0	417	25,039	25,456	26.31%	0.00%	0.00%	37.44%	2.15%	0.00%	0.51%	30.93%	2.68%
Munich American Re	25,337	1,602	0	26,939	39,318	8,892	3,676	51,886	92.61%	3.73%	0.79%	0.00%	2.88%	4.99%	10.95%	4.54%	5.46%
Optimum Re (CAN)	0	0	0	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Optimum Re (US)	1,551	0	63	1,614	1,083	1,338	988	3,409	111.21%	0.23%	0.00%	0.12%	0.17%	0.14%	1.65%	1.22%	0.36%
Partner Re (Winterthur)	513	452	0	965	583	928	0	1,511	56.58%	0.08%	0.22%	0.00%	0.10%	0.07%	1.14%	0.00%	0.16%
Reassurance Co. of Hannover	3,638	538	0	4,176	3,990	903	0	4,893	17.17%	0.54%	0.26%	0.00%	0.45%	0.51%	1.11%	0.00%	0.52%
RGA	62,704	34,601	1,390	98,695	72,840	26,626	14,593	114,059	15.57%	9.23%	17.04%	2.58%	10.54%	9.25%	32.79%	18.03%	12.01%
Sun Life	0	0	9,450	9,450	0	0	10,588	10,588	12.04%	0.00%	0.00%	17.56%	1.01%	0.00%	0.00%	13.08%	1.12%
Swiss Re	111,817	28,980	0	140,797	118,071	9,797	0	127,868	-9.18%	16.45%	14.27%	0.00%	15.03%	15.00%	12.07%	0.00%	13.47%
Transamerica Re	73,636	11,999	0	85,635	74,986	0	0	74,986	-12.44%	10.83%	5.91%	0.00%	9.14%	9.52%	0.00%	0.00%	7.90%
World-Wide Re	89	0	138	227	123	0	58	181	-20.26%	0.01%	0.00%	0.26%	0.02%	0.02%	0.00%	0.07%	0.02%
TOTALS	**679,679**	**203,095**	**53,830**	**936,604**	**787,360**	**81,201**	**80,957**	**949,518**	**1.38%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Canadian Exchange Rate Used: 1998 = .6510 and 1999 = .6904

Chart 9

2002

U.S. ORDINARY REINSURANCE ASSUMED MARKET SHARE PERCENTAGES FOR 2001 AND 2002 (AMOUNTS IN $U.S. MILLIONS)

	Ordinary Reinsurance Assumed									Market Share Percentages							
	2001				2002				Percentage	2001				2002			
Company	Recur.	Port.	Retro.	Total	Recur.	Port.	Retro.	Total	Increase	Recur.	Port.	Retro.	Total	Recur.	Port.	Retro.	Total
Allianz	43,711	0	2	43,713	54,749	0	7	54,756	25.26%	4.61%	0.00%	0.01%	2.84%	5.08%	0.00%	0.03%	4.19%
Annuity and Life Re	55,764	0	0	55,764	56,662	0	0	56,662	1.61%	5.89%	0.00%	0.00%	3.62%	5.25%	0.00%	0.00%	4.34%
AUL	21,750	0	49	21,799	Acquired by Employers/ERC				0.00%	2.30%	0.00%	0.19%	1.41%	0.00%	0.00%	0.00%	0.00%
BMA	39,003	985	0	39,988	74,255	0	0	74,255	85.69%	4.12%	0.17%	0.00%	2.59%	6.89%	0.00%	0.00%	5.68%
Canada Life	19,010	0	0	19,010	29,360	0	0	29,360	54.45%	2.01%	0.00%	0.00%	1.23%	2.72%	0.00%	0.00%	2.25%
Employers/ERC	50,448	29,359	0	79,807	58,483	141,568	0	200,051	150.67%	5.33%	5.16%	0.00%	5.18%	5.42%	69.23%	0.00%	15.31%
Equitable	0	0	3,457	3,457	0	0	4,374	4,374	26.53%	0.00%	0.00%	13.75%	0.22%	0.00%	0.00%	18.23%	0.33%
General & Cologne	16,231	0	0	16,231	14,615	0	0	14,615	-9.96%	1.71%	0.00%	0.00%	1.05%	1.36%	0.00%	0.00%	1.12%
Gerling Global	25,691	5,133	92	30,916	24,790	0	104	24,894	-19.48%	2.71%	0.90%	0.37%	2.01%	2.30%	0.00%	0.43%	1.91%
Guardian	0	168	950	1,118	0	0	988	988	-11.63%	0.00%	0.03%	3.78%	0.07%	0.00%	0.00%	4.12%	0.08%
Hannover Life Re	3,155	12,924	0	16,079	5,810	3,087	0	8,897	-44.67%	0.33%	2.27%	0.00%	1.04%	0.54%	1.51%	0.00%	0.68%
ING Re	93,584	0	4	93,588	129,340	14,858	7	144,205	54.08%	9.88%	0.00%	0.02%	6.07%	12.00%	7.27%	0.03%	11.04%
Manufacturers Life	0	39	11,472	11,511	0	253	9,293	9,546	-17.07%	0.00%	0.01%	45.63%	0.75%	0.00%	0.12%	38.74%	0.73%
Munich American Re	103,679	6,122	680	110,481	80,076	10,398	176	90,650	-17.95%	10.95%	1.08%	2.70%	7.17%	7.43%	5.08%	0.73%	6.94%
Optimum Re (CAN)	0	0	0	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Optimum Re (US)	1,301	0	173	1,474	1,694	0	155	1,849	25.44%	0.14%	0.00%	0.69%	0.10%	0.16%	0.00%	0.65%	0.14%
RGA	112,746	20,682	0	133,428	116,491	21,852	0	138,343	3.68%	11.90%	3.63%	0.00%	8.65%	10.80%	10.69%	0.00%	10.59%
SCOR Life Re	2,923	292	0	3,215	21,888	292	0	22,180	589.89%	0.31%	0.05%	0.00%	0.21%	2.03%	0.14%	0.00%	1.70%
Scottish Re (US)	26,045	319	0	26,364	34,339	2,962	0	37,301	41.48%	2.75%	0.06%	0.00%	1.71%	3.18%	1.45%	0.00%	2.85%
Sun Life (Clarica)	0	0	8,262	8,262	0	0	8,885	8,885	7.54%	0.00%	0.00%	32.86%	0.54%	0.00%	0.00%	37.04%	0.68%
Swiss Re	246,466	493,335	0	739,801	265,491	9,225	0	274,716	-62.87%	26.02%	86.65%	0.00%	47.99%	24.62%	4.51%	0.00%	21.02%
Transamerica Re	85,662	0	0	85,662	110,219	0	0	110,219	28.67%	9.04%	0.00%	0.00%	5.56%	10.22%	0.00%	0.00%	8.43%
TOTALS	**947,169**	**569,358**	**25,141**	**1,541,668**	**1,078,262**	**204,495**	**23,989**	**1,306,746**	**-15.24%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Canadian Exchange Rate Used: 2001 = .6221 and 2002 = .6344