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Session 146PD
Managing the Annuity Risk With Reinsurance

Track: Reinsurance

Moderator: BOB HOLLIDAY
Panelists: ARI JOSEPH LINDNER
JIM MCARDLE†
SYLVIA OLIVEIRA

Summary: Annuities are presenting ever-greater risks for the direct writers:

- *Variable annuities with guaranteed minimum and enhanced death benefits and income benefits*
- *Fixed annuities with multi-year rate guarantees are capital intensive*
- *In-force structured settlements have asset portfolios with declining investment yields*
- *The impact to the payout annuity market from lengthening life expectancies*

MR. BOB HOLLIDAY: On our panel we have Jim McArdle who will be speaking on fixed annuities onshore, Sylvia Oliveira will be talking about fixed annuities offshore, and Ari Lindner will be talking about each of these. I have 27 years in insurance and about 13 of that in reinsurance. In 1999 I joined KPMG. I'm the appointed actuary for several offshore companies and create financial reinsurance arrangements both onshore and offshore.

Jim McArdle is our non-actuary on the panel. He's vice president of the Structured Solutions Group at Transamerica Re. Jim has 16 years in the financial service industry, first with GE Capital and the last nine with Transamerica. Sylvia Oliveira is with Annuity & Life Re where she's responsible for annuity and life reinsurance. Ari Lindner is with ACE Tempest Life Re, where is he is vice president and life actuary, primarily responsible for reinsurance of GAAP and living benefits associated with variable annuities.

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†Mr. McArdle, not a member of the sponsoring organizations, is vice president of the Structured Solutions Group at Transamerica Reinsurance in Charlotte, NC.

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

MR. JIM MCARDLE: One of the things I want to do today is give more of a review or reminder on some of those risks and how an onshore reinsurer may be able to help you manage those risks or provide some guidance on how to price those risks appropriately. I know that many of you spend a lot of time worrying about the financial returns of your annuity products, and I'm just hoping by the end of my presentation to give you three or four new things to worry about that perhaps you've forgotten.

First, I'm going to go through the five areas in which an onshore reinsurer can help you manage the annuity risk and then I'll finish up with some comments on what I think is appropriate when you have a relationship with a reinsurer, and some of the ideas and considerations in choosing your onshore reinsurer.

The five areas that I want to spend some time on today are the products, distribution, surplus for management (which is really your capital support), risk management, and some administration solutions. Now, I'm sure this doesn't happen in your companies, but I've been told it happens in some places where, in the light of the current marketplace, sales and marketing folks get together and try to come up with some new ideas to significantly increase production of your fixed annuity products. They spend a lot of time figuring out all the details, and once they've got the whole organization excited about some of these new bells and whistles on the products, it usually lands in your lap for one final review just to make sure all the pricing and the risk is okay.

Typically onshore reinsurers have plenty of resources and experience in pricing these different types of products. They can provide you with some background and historical data on how these bells and whistles have performed within the product in the past, or they may be looking at some of these ideas in the marketplace and currently can provide you some of their resources. They also may be willing to help you design the product and take some of the risk on some of these bells and whistles as well.

Another way a reinsurer can help you is in the area of distribution. Obviously you're trying to keep your distribution happy. It's looking for a new product, a new product line that perhaps you don't have expertise in or perhaps you don't have developed yet. I've got a couple examples of some things we've done for people, maybe an equity indexed annuity or direct recognition annuity, which is really a total return type of annuity. Many onshore reinsurers, because of their experiences and backgrounds, have priced these products before and can get you up the learning curve a lot quicker in designing a product that will work in the marketplace and probably will be willing to take a lot of the risk behind it as well.

Now, there are a couple of levels of interaction that you can expect with the onshore reinsurer. The onshore reinsurer can provide services on more of a pure consulting basis, where perhaps you pay your reinsurer a fee, or in some cases their fee is really the expectation of getting a piece of doing insurance on the product. There are also some reinsurers with a lot of experience on some products that may be able to provide you with more of a wholesale program—give you a turnkey product, and so they do more than just take the risk and help you design it, but get involved in the administration and some other things as well. To the extent that you already have a good relationship with some other products on the books already, you may find your reinsurer is just a good source of informal feedback and advice as your clients look at a new product.

Obviously, some of these services are available from consultants as well, but just keep in mind that when a reinsurer is looking at providing you with this kind of support, in the back of its mind either it knows explicitly or it expects that it might be asked to actually take some of the risk behind the product. So I think that usually focuses the reinsurer's analysis a little bit tighter.

It would be unusual for a reinsurer to provide you with access to successful distribution. What I really should say is that it helps you with the likely success of that distribution. Again, many of the onshore reinsurers have large books of business written through various different types of distribution channels, career agencies, brokerages, banks, and marketing organizations. As you know, many of them have different profiles in terms of their persistency rates and the commission expectations and things of that nature. So they can help you understand and set expectations that way.

Market conduct issues—this may be a little bit of a surprise to you, but reinsurers do take a serious look at these issues. I know there's a lot of direct exposure for the direct insurer. But since we, as reinsurers, really don't have the relationship with the distribution, we're a little concerned about the nature of the product. We will tend to look more at the product itself, the target market, and the distribution, and try to determine if there's some inherent conflict there and will probably put less emphasis on any compliance programs or administration and sales routines. You'll probably get more of a pure assessment than you might get from your own group.

The next area in distribution is one that I have to say I was cautioned by some people not to even bring up—distribution links reinsurance programs. As you know, distribution is becoming or has been becoming more and more important and continues to hold more and more power if you will, on determining the success of your sales. Many companies find that their distribution sources want to participate in more and more of the profits of the product beyond just the initial commission. There is certainly some concern about fronting them more of the profits. There are ways of designing reinsurance programs where you can, in a sense, have the distribution source sit on the same side of the table as you and share in the profits as they emerge, as opposed to trying to create a higher profit stream for them up front. That is the reason I was cautioned not to bring this up.

Another area is surplus and management. This is more the traditional way of providing the capital for a new business strain. In the last couple of years, this has been a less active part of most of the onshore reinsurance business, as the real growth has been on the variable side. But as you see, that issue is changing. Fixed annuities do require quite a bit of allocated capital and quite a bit of strain, so we anticipate this becoming more of a need going forward than it perhaps has been in the last couple of years. There are some arbitrage opportunities here where your reinsurer has either a lower cost of capital or perhaps a lower RBC requirement that may help them give you a pretty compelling transaction price. Also, you may find that some of the onshore reinsurers are a little hungrier for the good old fashioned spread type of business, to the extent they've gotten a lot of equity market exposure to the various equity market products over the last few years.

With the competitive environment being so strong, there probably are many smaller companies who find they can't compete on the fixed annuity products any more. They either don't have the distribution or they don't have the resources to be competitive in the marketplace and there may be opportunities to pick up lots of business or in conjunction with that, pick up some distribution of products for customers. Your onshore reinsurer can help you in a couple of ways here. It can help you by providing the capital to do those acquisitions if all you really want is perhaps some of the distribution access, or it can even help you do some of the due diligence and provide a valuation for the block as well.

Risk management is the next area. Given the fact that many of the onshore reinsurers are part of much larger and diverse insurance operations, they have access to a lot of resources in financial, actuarial, legal and investment areas, and there are opportunities for them to share that expertise with you either on a consulting basis, or embed that expertise in reinsurance products. A couple of ideas here on the investments—typically the larger the company is, the more it has access to nontraditional investments in order to help improve your yield, improve your spread. They also generally can have a large enough base of investments to hire some expertise to manage some of these nontraditional investments where a smaller insurance company may not have that same capability. Obviously they take a look at the persistency, but also give you some advice and share experience with you not just on the expectations of persistency in a given product, but on some conservation programs and what's working in the marketplace, what other companies are doing, things of that nature. Of course, there is asset liability management and managing the minimum interest rate risk there as well.

The last area that probably doesn't get as much attention, but is certainly a big determinant in the economics of the fixed annuity, is in administration. As you know, processing and technology costs are very expensive and there's no sign that that's going to lessen. Product innovation must continue. Many reinsurers either have or are beginning to form relationships with third-party administrators to provide this service to customers who are finding they are not willing or able to make the kind of investments in their technology to keep up with competition. Competition today is not necessarily defined as your fixed annuity competitor. In a lot of cases they're dealing with mutual fund companies and large national banks and e-commerce, so their level of customer service and expectations of customer service will be compared to best in class.

I hope I've had a chance here to remind you of some of the other risks in the fixed annuity products. Some of these risks may appear relatively unimportant to you right now compared with some of the financial goals that you're trying to meet, but I think as we've all seen in the last month or two, things can change pretty quickly and it's probably best to be prepared to deal with some of these other risks that perhaps aren't front and center right now by developing some relationships with reinsurance partners who can provide a wide range of services. You never know when you're going to need the benefit of their expertise.

In one sense, I hope I planted some concerns in your head, but I know we have a couple of speakers coming after me that I'm sure will do their best to alleviate your financial concerns, so you'll just have more time to worry about the product list. When I talk about onshore, I've drawn a little bit of a distinction here, probably more than it really is between onshore and offshore. Many of your onshore reinsurers have substantial offshore capabilities and many of your offshore companies have and are currently developing more and more capacity and resources to help you. There's probably more of a continuum between the two than any sort of a distinct species, if you will. I guess the questions you need to ask yourself are: What do you do? How do you go about establishing your reinsurance relationships and your partnerships?

I want to just make some comments on working effectively with reinsurers, whether they're onshore or offshore. The first one sounds obvious: What services are currently available? What are they doing in the marketplace right now? What sort of transactions do they have on their books? You also need to ask where they are going. For example, if one of your initiatives is to grow your business internationally, do you need a reinsurer to be there? If they are international, are they growing their international operations or are they scaling back? These are some of the things you need to know to help you in your future plan. You also need to consider what products or services you need. If you're fortunate enough to work for a large company that has a lot of these resources and you have access to them, then there's really no sense in paying for something that you can provide for yourself. But again, you need to take some inventory of that. Do some due diligence on your reinsurer. This is a great place to do that. Reinsurers are made up of capabilities and people, and it is easy to get feedback on both of them from the marketplace.

Negotiation strategy. Many reinsurers are very focused on specific types of business that they want to do and they're very good at. Others are willing to be much more broad in accommodating a customer's needs. There may be risks that a reinsurer doesn't necessarily like, but if they're packaged with another set of risks that they do like, they may be able to work a transaction. So in developing your relationship with your reinsurer, it would certainly be beneficial for you to find out what type of company it is.

Also, it's important to set some level of expectations on the ongoing relationship. Some companies are very transactional in nature and that's the way they want it.

Others prefer the day-to-day interaction and in getting to understand the company. There is a cultural issue there and you should understand which one you and your company are more comfortable with and factor that into developing your relationship with your reinsurer.

MS. SYLVIA OLIVEIRA: Today I'm going to talk to you about offshore reinsurance and in particular about how offshore reinsurance can help improve the possibility of fixed annuities. I'm going to start out by explaining the source of the offshore reinsurer's advantageand then I'm going to discuss two specific reinsurance programs that allow the offshore reinsurer to share this advantage with annuity writers.

Let's start by talking about the source of the offshore reinsurer's advantage. As you all know, fixed annuities require a large amount of allocated capital. This, combined with a very competitive market, can lead to low profitability on fixed annuity lines or noncompetitive products. I just want to make a note here on my terminology. Allocated capital means without regard to any specific required capital or risk-based capital (RBC) formulas. I tend to avoid using RBC because that specifically refers to NAIC requirements and our programs are geared toward the offshore capital requirements as well.

Chart 1 shows us that holding this large amount of capital is expensive. Here we're looking at an example of a typical fixed annuity where 70 percent of the equity is put up from the allocated capital and 30 percent comes from surplus strain. This is an example where you have five percent allocated capital and a two percent surplus strain. We look at income in two components. One is the investment income coming from that five percent allocated capital and the rest of the income comes from the product spread. We can see here that 70 percent of the equity that's coming from allocated capital contributes only 25 percent of the income. So there's a disproportionate percentage of the equity held in allocated capital with respect to the amount of income that it's contributing.

Reinsurance can help alleviate the situation (Table 1). The logic works because some offshore reinsurers can absorb capital more efficiently than U.S. companies. Here, by offshore reinsurer, we're specially referring to a non-U.S. tax paying offshore entity. This does not work if the reinsurer is a subsidiary of a U.S. company. If you have a non-taxable book, it cannot be controlled by any U.S. tax paying companies. I have to point out that the allocated capital here is not dumped in the ocean. The offshore reinsurer is holding the allocated capital and if it were dumped in the ocean, then it would not likely qualify for regulatory acceptance requirements.

Table 1

Source of Off-Shore Advantage

	U.S. Company	Off-Shore Domicile	Off-Shore Advantage
Annuity Assets	$100,000,000	$100,000,000	
Allocated Capital @ 5%	$5,000,000	$5,000,000	
ROE Target	12%	12%	
After-Tax Earnings to Meet ROE	$600,000	$600,000	
Pre-Tax Earnings to Meet ROE	$923,000	$600,000	$323,000
Components of Income:			
Pre-Tax Earnings to Meet ROE	$923,000	$600,000	
Investment Income on Capital @ 6.5%	-$325,000	-$325,000	
Pre-Tax Income Required from Product	$598,000	$275,000	
Product Spread Required to Produce Desired ROE on Allocated Capital	**60 bp**	**28 bp**	**32 bp**

Above is an example of how this works. We're comparing a U.S. company with an offshore reinsurer. We're assuming that both companies are holding the same amount of annuity assets at $100 million and those companies are holding the allocated capital at five percent and both companies have the same ROE target of 12 percent. The two ROE targets are 12 percent on five percent capital. Both companies have to earn $600,000 on an after-tax basis. Here's where the magic happens. On a pretax basis, the U.S. company has to earn $923,000, where the U.S. offshore reinsurer only has to earn $600,000. Again, if you look at the two components, there's one coming from the investment income on capital and the rest coming from the product. So if you subtract out the investment income on capital of $375,000 at 6.5 percent for both companies, that leaves us with the pretax income required from the actual product itself. You can see it's about 60 basis points for the U.S. company and 28 basis points for the offshore reinsurer. It leaves the offshore reinsurer with a 32 basis point advantage.

Now, I'm going to talk about some specific reinsurance programs. The first one is a traditional approach (Table 2). It's a traditional quota share program. Here, the reinsurer is essentially purchasing a quota share of the business and so it's paying its share of expenses and taking a share of the profits. Here, we use a modified co-insurance structure. Under this structure, the assets under management stay with the ceding company and the ceding company acts like an investment manager on that portion of the business. The ceding company pays all of the investment income to the reinsurer, but it does retain the investment fees. Also with acceptance as allocated capital credit by the NAIC and rating agencies as of December 1999, we find that our clients tend to prefer the modified coinsurance structure and its particular form of capital transfer.

Table 2

Traditional Reinsurance Program Example

- Current sales of $100 million before reinsurance produce:
  After-Tax Statutory Strain of $3.4 million
  13% Statutory IRR
- Utilize reinsurance on a 50% quota share basis
- Off-shore reinsurer pays a recurring allowance of 40 bp per year, in addition to product costs, on the reinsured portion
- Reinsurer funds surplus strain on the reinsured portion
- Reinsurer's 40 bp additional allowance improves profitability of the retained portion

Above is an example of how this works. We're seeing a current scale of $100 million and with an after-tax statutory strain of $3.4 million, 13 percent statutory internal rate of return (IRR) and a 50 percent quota share. In this situation the offshore reinsurer can pay the current annual amount of 40 basis points to the ceding company in addition to the product costs on the uninsured portion. Now the direct writer can take these 40 basis points and use them to cut its spread charged to the policyholder to increase competition or it can use this to increase broker commission, but more likely improve its own profitability. Also, the reinsurer tends to fund surplus strain on the reinsured portion of the business. Before reinsurance, as I said, we had $3.4 million in after-tax statutory strain, and now after the reinsurance, the strain is cut in half, the amount is $1.7 million and statutory IRR is up to 16.4 percent.

Next, I'll discuss the second program. Annuity & Life Re came up with a capital relief program where 100 percent of the allocated capital goes to a reinsurer, but none of the acquisition costs. This program recognizes that there is nothing in paying these acquisition costs that gives the insurer an inherent advantage. We also use the modified coinsurance structure, which again is given credit from the NAIC and rating agencies and the ceding company retains the assets and the investment fees on those assets. The reinsurer is only picking up a small portion of the interest spread from the capital part. The remaining spread is credited back to the ceding company through an experience refund structure.

Next, we'll take a look at an example of this program (Chart 2). Again, we look at our typical fixed annuities, with allocated capital at five percent and acquisition strain of two percent for a total equity of seven percent and then we look again at the key components of income. We've got your product spread of 63 basis points and the after-tax reduction on income and capital of 21 basis points, for a total income of 84 basis points. Eighty-four basis points on seven percent equity before reinsurance gives an ROE of 12 percent. And we can see that the five percent equity is, and how it is disproportionately large compared to the annual income it contributes.

Next we'll look at what happens when you add reinsurance. Here the reinsurer is going to be paid 50 basis points of the interest spread as a charge for holding the allocated capital and the ceding company receives the remaining portion of the spread, where 200 basis points is a typical fixed annuity spread, 150 basis points would be refunded back to the ceding company. This 50 basis point spread is reduced to a 30 basis point cost on an after tax basis.

Chart 3 shows the impact on ROE. If we look at the equity, now the allocated capital is zero percent because that's shifted to the reinsurer. The company still keeps the acquisition strain, so the total equity is now two percent. If we look at the income performance, we're still earning the product spread, the 63 basis points, but the 21 basis points that were coming from interest on allocated capital is now gone and instead we've got an after-tax cost of the reinsurance program of 32 basis points. So this leaves a net income of 31 basis points on two percent equity with a 16 percent ROE after the reinsurance costs.

I want to emphasize some final points on this program. It's not a financial reinsurance program. The offshore reinsurer is holding the capital so that it meets GAAP and statutory risk transfer requirements and is recognized by the NAIC and rating agencies.

In conclusion, I've shown you how offshore reinsurance has an inherent advantage in pricing products within a high allocated capital requirement such as fixed annuities. We've gone through two ways in which the offshore reinsurer can share this advantage. The first is the traditional quota share program in which the offshore reinsurer is essentially buying part of the block, and the second is the capital release program where the offshore reinsurer holds the allocated capital at a more tax-free rate. This economically turns this fixed annuity into a variable annuity, with very little required capital and a set fee income. This advantage can be applied to new business, as well as in-force business. It works for fixed segments of variable annuities in the past and it also works for GICs and funding agreements.

MR. ARI JOSEPH LINDNER: I've been asked to speak about the variable annuity side and about being offshore. I have no way of knowing how many of you are here because you're interested in fixed annuities and how many of you are here because you're interested in variable annuities.

A subtitle of my presentation is, "Wait, You Mean The Stock Market Can Go Down?" which up until 18 months ago was really the response we got from a lot of people.

Reinsurance variable annuity risks. What are they? What are we talking about when we say variable annuity risk? We're talking about what reinsurance can do and similarly what it can't do, because we want to make that clear. What type of things you need to do before you pick up the phone to call your reinsurer? Where you need to be and what you need to know about your risk, about your book and about what you want to accomplish? For those of you who may be saying yes, but what about my in force, we'll talk a little bit about that and what you can do about your in force now that it's in a little bit of trouble given the market performance of the last 18 months.

We're going to talk about what you need to do and what we do after the reinsurance agreement is signed. Then we'll talk a little bit about what it's like being offshore for me, what it means to you, and some conclusions.

What is your exposure when the stock market falls? "I don't know" is a very popular answer. A little, a lot, or even "Where's my resume?" are some answers. It depends which stock market you're talking about, how far it falls, how long does it take to recover, what's the benefit, what are the underlying funds. All these questions have to be answered before you can answer the initial one. Now, that's a question you may get from the people in your organization, from management and it's very important that it be clarified. What do you mean when you are talking about the risks of the stock market falling? It's very different to go down 30 percent and up 30 percent again the next year, than to be dropping five percent a year for 10 years. It depends on the benefit and on all of these different issues.

I'm not going to go into this in any great deal. These are the usual subsets, death benefit, earnings enhancement benefit (EEB) and the new tax riders, the guaranteed minimum income benefit (GMIB), the gurarantеed minimum accumulation benefit (GMAB), what we used to call an immediate 1094, which I guess now they're known as the guaranteed pattern and floor (GPAF), and some of the other cessions had guaranteed minimum withdrawal benefits, which we've also seen. Essentially these are all some combination of market and insurance risks and investment and insurance risks. So what are the risks?

As you might imagine, all of these products have some form of investment risks in them, whether it's the market going up, the market going down, volatility, long-term under performance, whatever that is. Many of them will have mortality.

For some of these, mortality is the option exercise cost, which is a pretty big cost for death benefits for the EEB. For others, mortality simply functions to get rid of some of your population before they can get to the end of their waiting period, the living benefit, so it fits in nicely with lapses, which again is important for both of these.

From a reinsurance perspective, in almost all cases, lapses are beneficial. If somebody lapses, we don't have to pay the benefits, so I know it affects your mortality and expenses (M&Es) and all these other things, but when you try to think of it in terms of the risk from a reinsurance perspective, lapses are good. From your perspective, they may not be so good. There are different attitudes toward that.

Now, here some of the lesser talked about items. One is asset transfer. People can move their money from equities to bonds, money markets, tax. They may not pick the kind that you have, and you may be at risk for that. Annuitization, obviously the GMIB election. You have some expense risks. People are seeing this a lot lately as the M&Es fall, because the market in general has fallen. We don't usually talk about this with respect to reinsurance. Reinsurance can't really help you too much with this. This is typically dealt with through securitization, in which reinsurers can play a part typically through reinsuring the death of the living benefits, but also can help out with the securitization in other ways.

You've got modeling risks. As you have modeled this benefit to a certain price or to act a certain way and it doesn't, or you've made an error in your model, you may find that you're in bigger trouble later down the road than you thought you might be, and you've got credit risks. Obviously with the reinsurance, wherever you send this or from whomever you purchase any of your hedges or whatever you do to pass off some of the risk, you have some credit risk there. There are some others I left off of this. Somebody mentioned legal risks yesterday in a session. I don't know about other reinsurers, but I'm not real happy about taking that on, so that's not really going to help you out that much. You have a pretty big product design risk, but *reinsurance cannot fix problems that were created by poor product design*. and If you've got anti-selective features in your design and you'd like the reinsurer to take those features off your hands because you suddenly realize that they may create problems, you are going to be in some trouble, and it's not an easy thing to do and it's not an easy thing to deal with. So it's very important that all the issues in your product be considered before it goes to market, because afterward it's a little late.

This takes me lastly into what reinsurance can and cannot do. I want to talk about a few things. Reinsurance can reduce your potential claims and your earnings volatility and it can reduce your reserves and capital. Well, those are all good things. Reinsurance cannot eliminate any of those things. There is no reinsurer that will take all of your claims or will eliminate all of your reserves and all of your capital—not in today's market anyway. I haven't seen any for a long time and probably never will. So bear that in mind when you're setting some of your goals for reinsurance. We can help you with product development. We can help you roll out new features, because we've taken some of the risk off of your hands. Most companies find that to be pretty helpful. Again, we cannot fix design problems and the underlying products, and no, I can't tell you how your competitor sells that product at that price, I just can't, I can't help you. I'll do whatever I can, but they're probably taking on more risk than you're willing to take on or their models are different from those of others.

Reinsurance can help optimize risk management. These things have a lot of different moving parts and a lot of different risks and some of them you're going to want to keep. Some of the pieces you might feel cost more than the reinsurer feels. Those are the ones you ought to get rid of, and the others, you think the other way, you think they cost less, you think the reinsurer has a different opinion based on its modeling and assumptions and there are a lot of differences of opinion and you want to keep those, but it helps you to get rid of the risks that you don't want.

We, however, cannot make all of the risks magically disappear. Again, there's nobody that is going to take all the risk off of your books. Reinsurance can help answer questions from management, rating agencies, and insurance departments. Questions include: What are you doing with your risks? How are you doing it? What's going on? How are you managing that risk or that exposure? To some degree, that helps you sleep at night, because you know that pieces of the risks that you didn't like are not there any more. Reinsurance can't, however, be the only answer. You have to have other things to talk about, because we don't take it all, and even if we did, there would be credit risk anyway. There are other things, other issues that have to be considered and other things that go into this answer, and you can't fall asleep on the job. After the reinsurance agreement comes to fruition, it has to be monitored and managed on an ongoing basis and you have to continually manage the risk and monitor the exposure that you're keeping, the exposure that the reinsurer has, maybe what you'd like to see down the road. So before you pick up the phone, here are some of the things that we want answers to before we can start talking about pricing products or discussing what the reinsurance design is going to look like.

We need your prospectus or product specs if you haven't sent the prospectus out yet. We want some idea of what your anticipated volume might be. Issue-age distribution is also very important—more important for some features than others. Obviously the death related ones, the death benefit and the EEB, but still important for the others. Some companies have very different issue-age distributions than others. They sell product design or what their marketing force is targeting, and that can be a key factor in terms of the cost. The average size of the policy, again for companies that have fixed expenses that are charged to the policy, is a $30 annual fee if it's smaller than X dollars. This is going to be important because that fee is a drag on the fund return, which means we expect more claims. The male/female mix, the qualified percentage, all these things are important, and if you have any joint lives, especially if they pay death benefits on first death, we want to know about it.

So how do we design the reinsurance? Well, we've got deductibles. There can be annual deductibles, there can be overall treaty deductibles and then there will be limits, annual limits, treaty limits, single life limits. In today's market you will see new business limits at a fixed period in time or dollar amount. So we will cover you for two years or $5 billion, whichever comes first.

There are a lot of different ways we can charge you reinsurance premium.

Obviously account value charges near to what you're charging. That doesn't necessarily give you the best deal, because you can have it at the guaranteed value or the greater of the two and this way you're using a different way of retaining some of the risks. As the market goes up, everything's fine, but as it falls on a basis point of account value basis, if you're paying off the guaranteed value, the amount of basis points of account value you're paying is increasing as the market falls. But it's a way for you to retain some of the risk and it will come up with a lower number at the end of the day. It can be fixed, it can be floating over time, it can vary by issue age or by attained age, it can be anything. We're very flexible, but you have to have an idea what you want. There are surrender charge risks that can be reinsured. You don't get the surrender charge back on people that die during the surrender charge period and occasionally you look to build that in, bundle that in with the death benefit and the living benefit reinsurance risks.

I wanted to say a little bit about mortality. Please, please, do not call me and tell me your mortality is better than everybody else's in the industry. Everybody says that and I need proof. I can't just take your word for it. If you have some good mortality studies, I'd be happy to take that into account and adjust our assumptions accordingly.

I'm going to talk a little bit about influence. It's A. out of the money. That seems unlikely. B, in the money. C. Deep in the money. This speaks for itself. I think most people are between C and D (OUCH!) at this point and the ever popular E. "Where's my resume?" You can reinsure your in force, however, it will not be cheap, it will not be pretty, and it will not be fun. I am not happy that the stock market went down either. I don't jump up and down and say boy, I get to charge more on people's in-force annuity bonds. It doesn't make me happy, however, when you call the reinsurer with a building that's essentially already on fire, you have to pay for the fact that it already is, and it needs to be discussed with your management first, because the cost is going to be a lot more than the new business costs. If in force is 30 percent in the money, it costs a lot more. So you have to be prepared to pay the freight, you have to talk about whether you've reached a sort of pain threshold, or rather you'd want to sit on it for a while and cross your fingers and hope the market goes back up.

We need a little bit more data to do in-force pricing. We will need an aggregate sort of total guarantee and account value to get a feel for where your book stands and to give us a little bit to talk about. If your account value is $300 million and your guaranteed value totals $400 million, then you have a pretty good idea where you stand. On $100 million net amount at risk, you've got benefits. Expect to pay somewhere in the neighborhood of $1 million over the next year. You know that's coming out of your pocket either in the form of paying us for it or in the form of some kind of deductible.

We need data; we look for guaranteed value and account value on every policyholder. We're going to split those up, divide those into categories. We can't just take an average of all the policyholders, because you miss out on a lot of important data that way. I'd like that to include issue age, attained age, gender, past qualified status, the type of things that we look for as assumptions on new business. We now look for tax qualified status on your in force, and how long they've been around. A person who is near the end of his or her waiting period or surrender charge period is going to have a much different risk profile and lapse profile than somebody who bought the policy a year ago. So those are the types of things that we would look for, and then obviously we would have to know what the benefit design is, otherwise it makes it a little bit difficult to price. Some of these are very old benefit designs and have features that people don't use any more. So you have to take care and be careful in defining that.

There are essentially four levers that go into designing the in-force reinsurance. There will be again the deductible and there will be some percentage of the ongoing premium that you're going to pass on. If you're charging 25 basis points, you can pay me 20 a year, I don't care, because I'm going to take care of it in the single premium. There will be some kind of up-front check that you're going to have to write to cover this, and all these can be manipulated, but all four have to come out in balance at the end, and typically I'll ask you to tell me what your goals are for reinsurance. I hope they are claim reduction, reserve reduction, and capital reduction. You tell me what deductible you feel comfortable with and what window is high enough to achieve those goals, and you tell me how much the ongoing premium you feel comfortable paying, whether it's 90 percent of what you're getting in, 100, or 200, and then will tell you what the single premium is going to have to, and then we-negotiate from there.

You've now signed your agreement. You're very happy about that. I'm very happy about that. You've passed on some risks that you didn't like, but you still need to monitor your residual risk exposures. Again, deductibles and limits. You may some day have to pay something despite reinsurance. So what would your exposure be if the market fell again, if it stayed down for a long time? How could additional market exposure be created for you, additional risk exposures? Your aggregate business profile should be monitored, because you have to watch out for those new business limits. If you suddenly write three times as much business as you thought you were going to, our other insurance agreement could close for new business before you thought. Watch those deductibles and claim limits. Keep an eye on how much is coming out of your pocket and if claims get really bad, when are you back on the hook, when have we tapped out the claim. Monitor the total risk exposure.

Now, this sort of speaks to bigger issues. Do you have any credit risk issues? As this thing starts to get deeper and deeper in the money, are you with one reinsurer? Where does that stand and how is that reinsurer holding up credit wise? Very important. Periodically calculate the statutory reserves, before and after reinsurance. You want to know if you're achieving your goals. If one of your goals was to lower or eliminate most of the statutory reserves, is it being done or should the form of the reinsurance be changed to accomplish that in a better way? The capital—same story.

Data—I can't speak enough about data. Primary and accurate data is very important for you and for us. It is impossible to manage the risks if you don't know what they are. You have to have a good handle on all the things we talked about before when we talked about the in-force data. A list of policyholders with accurate death benefits and account values and other statistics is one of them. You'd be surprised that this is often readily available information, but it can take companies weeks to come up with it. For me this is shocking, but maybe not for so many other people. Communication is very important with your reinsurer and amongst yourselves and with your management and with everybody in general, but talk about how the reinsurance program is going and how you'd like to see it going down the road.

Again, asking these questions that I've been hitting on the whole time is how the reinsurers help us to achieve the goals that you want to see. As your goals change, here's a question you should be asking. Is your population profile close to what you expected? If you thought your average age was going to be 60 and it's 50, then next time the reinsurance should cost less. If you thought it was going to be 60 and now it's 70, your reinsurer may be charging you more next time. Be prepared. And what changes would you like to make to the agreement when it gets renewed? Again, we have these new business limits. After a year or two this is going to cut off and you will be renegotiating an agreement in a different market environment, possibly with different goals and changes would you like to make.

I'll now talk a little bit about being offshore and what that means and what it doesn't mean. We, as an offshore company hold GAAP reserves. We do not hold statutory reserves. We're not required to hold new assets for reserving, but however, you the ceding company, are paying statutory reserve credit, because as an unlicensed reinsurer, we put that in a trust or a letter of credit to your benefit. That's essentially a blank check to you from Chase Manhattan Bank for the amount of money for statutory reserves. You can't get much safer than that. Although there's no RBC requirement, we still have to satisfy the rating agencies. If we can't satisfy AM Best, not holding the right amount of capital to support the business, our rating will suffer and then you'll see that. So although we don't have the RBC requirements, we still have to hold a substantial amount of capital to support this business. As Sylvia said before, the money doesn't disappear into the ocean when you send it to us. Again, although there is no corporate income tax, there is federal excise tax on premiums. Now, where does this come in? There's a one percent excise tax on your premium, so depending on how much of the premium is actually profit at the end of the day, we may be better or even worse off than a U.S. company that may pay 30 percent of its income in taxes. On a very high–premium, low-margin product with a $100 premium coming in and only $5 of profit, we're paying $1 from the $100. On the $5, this is a 20 percent effective cost rate. In addition, we pay this whether we make money or not. So we don't just pay on profit. If we lose money, we still have to pay the one percent excise tax. So it's going to have some different effects.

There are several substantial insurance and reinsurance companies offshore. There are several that are not that substantial, but you're not going to be hearing from too many of those. Please don't underestimate the importance of the due diligence on your reinsurer. We invite you to come to Bermuda, pack your bags, bring your clubs, check us out. We are not a door with secretaries answering. We have hundreds of employees. We have 8,000 employees all over the world and these are big companies here. You want to make sure that it's not just a PO Box.

In conclusion, I hope you have learned that variable annuity risks are numerous, complex and inter-related. You can't look at any of these things in a vacuum, because they all affect each other. Reinsurance can be a key part of your risk management plan—not the only part, but it's important to think about. Certain basic information will be critical to the reinsurer in order to price it and additional data will be necessary too if you want to talk about in-force business. Before you call the reinsurer, you should have a good feel for your risk appetite, your risk attitude and know what your goal is, whether it's a reduction in claims, reserves, capital, earnings volatility or whether it's simply to play one of Bermuda's beautiful golf courses, you should know that before you start. Once a reinsurance agreement is in effect, the exposure has to be monitored. Timely and accurate data is going to be critical~~.~~ Communicate with the reinsurer.

I hope that after this session you now know more about variable annuity risks, more about what reinsurance can and can't do, issues to consider before picking up the phone, issues to consider after reinsuring and hopefully what you don't know you should probably find out now.

MR. HOLLIDAY: That concludes phase one of our program today. I know you all came here with some purpose in mind, and although the panel may have hit on most of your topics, I'm sure they have something that they still need to answer for you.

MR. FRANKLIN CLAPPER Jr.: I have a comment or an idea and then a totally unrelated question. The comment has to do with reinsuring in-force business. It could be simplified and made cheaper by setting up some kind of deductible that implicitly covers the money miss at this point in time, either explicitly or implicitly somehow. So it can be constructed if you want it that way. The comment has to do with what you mentioned on the security requirements for reserves. The question we have is on security requirements for capital. First of all, what do the regulators think of a company that's not subject to RBC? Secondly, no matter what the amount of the required capital is, whether it's from rating agencies or RBC or whatever, there's really no explicit security requirement for that. I wonder how the regulators are going to look at that down the road. It sets up an additional credit risk, that's the point.

MR. LINDNER: I can't tell you what the regulators might think of the requirements. I can tell you that again, we have to keep them happy with what it is. It's true, we do have more flexibility in how we invest the funds from~~, in~~ the reserves and the capital than an onshore company has. That's one of the keys to the in-force reinsurance costs with the up-front pricing. Any money we receive day one in the door, we're assuming a somewhat more aggressive investment approach than an onshore company would be able to, and we can reflect that in the pricing. That being said, I think it's safe to say that we still primarily have the vast majority of the money in high quality fixed-income securities like anybody else.

MR. DAVID RAINS: Being the one who calculates the capital required, I can say at least we hold the capital and calculate it exactly the same way that we calculated it onshore, so if we happen to be holding all of our capital in e-toys stock, we're going to have a pretty large charge. But besides that, we are holding capital exactly like we would hold it if we were onshore and I think that should give an onshore company a little bit of comfort in that. Like it has been said a couple of times, we're not just dumping the capital in the ocean and hoping it washes away.

MR. LINDNER: Again, the way this presentation was structured, we really distinguish more clearly than is practical between onshore and offshore. Our experience is it always sounds great if you can make the RBC disappear. But when you get past the first initial conversations with the company, it's very clear that perhaps there are other people in the organization who are more focused on this and so we have to work really hard on designing solutions that aren't viewed as somewhat of a sham In a sense, one of the advantages that an onshore reinsurer may have is to basically take the problem onto itself, as it can take some of the reinsurance through its onshore entity and then worry internally about getting into an offshore environment that provides a lot of the arbitrage in accounting. Some of the customers seem to prefer that. There are up-sides and down-sides to that, but that's something we always end up talking about with our customers.

MR. RAINS: I understand, and I wasn't questioning the quality of the capital offshore. I was really getting at whether me might be faced with the technical requirement. By the way, this problem also occurs with European parents as well as offshore companies. So if you take on business and then try to retrocede it somewhere besides the U.S., I was wondering if that creates some kind of problem for us.

MR: LINDNER: I think you have to understand the rules. There are certainly different ways of calculating the capital depending on where you are and you need to understand what those rules are. I agree with you, there are certainly a lot of conversations and issues being discussed now about what to do about the RBC and collateralizing the credit for the RBC. That one appears more near term, I think, and some of our legal and regulatory people follow that. It may not be this year, but it may in fact be a 2002 issue.

MR. KIN GEE: I'm not sure I understand the issue of the question, because this is not an issue of offshore versus onshore. Implicitly are the rights for taking reserve credit. It's the fact that the NAIC, the regulators, accept trusts and letters of credit. This is a big issue for property and casualty for my company, so it is implicit that there's acceptance of offshore. If you have the right collateral and all the required trust documents, that is a credit. The whole issue of collateralizing for RBC or capital simply applies to both U.S. and offshore companies. You could be dealing with onshore companies that have thinly capitalized and have aggressive investment strategies and you could be dealing with strong offshore companies with credits. So I'm not sure I understand the issue, because right now as far as I know, the regulators allow credit for RBC that doesn't change with letters of credit and things like that. Some of the presenters up there talked about the details of the reinsurer in offshore, or onshore. There are a number of onshore companies that have gotten into financial difficulties and certainly with the European insurers, there have been a big number of them that had to reinsure onshore and take a very significant portion of that. Offshore happened to be Europe, but that's offshore as well, and they're not subject to regulators, so I'm not sure I understand the issue here.

MR. LINDNER I agree with you. From an economic point of view, there's a little different issue than there is from a compliance point of view, and maybe what we really need to do is take another look at who is authorized and who isn't, whether it's onshore or offshore, because the capital requirement and the reserve requirement are theoretically covered by the definition of who is authorized, and it's only if you're not authorized that you have to set up additional collateral. So that should be covered by denial of authorization to under capitalized companies whether they're onshore or offshore. That's really the issue I'm getting at. In other words, this is being considered in the federal chartering move as well, that there be a broader issue of who can be authorized and who can't, whether it's offshore or onshore. This would create opportunities for offshore companies and also it might take the capitalized onshore companies out of the market.

MR. STEVE P. COOPERSTEIN: If you have a new business limit, how do you assure a company that it will be able to deal with a situation if you're not going to cover it on renewals, if the rate's too high or whatever. It has given up some control and hasn't been dealing with its risks and now it's in a position where if the rates are too high, the company to do something. Once a number of reinsurers have gone out of business, how do you help them be in a position where they'll be comfortable on an ongoing basis?

MR. LINDNER: I think that's an interesting question, because, as you said, some of the larger players have left the market with some companies holding the bag and in the dark as to what to do about it. That's why, in my presentation, I said this is not an excuse to go to sleep on the job. You still have to understand your risks and you still have to understand your exposure and two years from now when it comes time to renegotiate, there may be ten reinsurers in the market, there may be one, there may be none. You have to be prepared to deal with that. Coming from a reinsurance standpoint, we try to design these products and price them and hope to be in the market forever and support all our clients and do all those good things. That being said, I can't guarantee that you're going to like the price that you get, even if we are writing business whenever this happens, five, ten, twenty years from now. The only way for you to know if you like the price is to have a good handle on the risk exposure and what it means to you. So again, this is not something that you reinsure and then forget about. Companies have to continue to monitor these things so that when the time comes for renewal they are prepared to intelligently discuss any changes they'd like to make to their reinsurance program and what their new goals might be from. Companies change their deductibles and change their reinsurance all the time, and you have to be comfortable with that and be prepared for that.

MR. LAWRENCE CARSON: I have a question I'd like to propose to Sylvia. Noting that offshore and non-U.S. taxpayer are not synonymous, I'm curious that there was no mention of the federal excise tax in your illustrative examples, and I was wondering how that would affect your calculation both in the offshore advantage and of the cost to your capital relief program to the ceding company.

MS. OLIVEIRA: Thank you, that's a good question. The federal excise tax is something that we do have to pay and it has been included in both examples within the price that I quoted. For instance, on the capital relief program, the 50 basis points charge that we would require does include a cost for this federal excise tax.

MR. CARSON: Just to clarify. The federal excise tax is the responsibility of the ceding company, not the reinsurer, is that correct?

MS. OLIVEIRA: That's right, and we would reimburse you for it.

MR. CARSON: It's the ceding company's responsibility to pay the excise tax if the reinsurer is taking an aggressive tax stance in terms of what we will be reimbursed. Would the ceding company not be retaining that risk?

MS. OLIVEIRA: Yes, that's another good point. In that case, if the ceding company feels that it has a more conservative view on federal excise tax or if it has a tax department and feels like it can pay tax in a more efficient way, then we can keep a lesser charge than the 50 basis points and leave that responsibility with the ceding company.

MR. LINDNER: I guess I was confused by the last question. I'm not a tax expert, but I thought the federal excise tax was just one percent of premium. So I guess I must be talking about defining what premium—it should be pretty clear, there aren't a lot of deductibles and rules, no cash reserves and things that you would deal with on other products, it's a pretty straightforward calculation.

MR. GEE: To clarify, the federal excise tax is only a definition of insurance that is being transferred, specifically as it applies to a micro transaction where there is some definition of what exactly the insurance premium is in how aggressive or non-aggressive you are. It depends on the treaty and how that is negotiated with your reinsurer or a lot of times the reinsurer will reimburse the actual FET liabilities, in which case the issue of how aggressive of a stance you take is retained by the reinsurer, not the ceding company. However, the ceding company and reinsurer can agree to what position it takes with respect to what the premium basis is. It can be annuities, and for other than a micro structure, the offshore reinsurer does pay the one percent and there are generally no issues there.

MR. MICHAEL P. HARWOOD: I'd like to switch the subject to payout annuities. I was wondering if the panel could give an update on new product design ideas or reinsurance answers especially for mortality, longevity risks on payout annuities.

PANELIST: Fixed, variable or both?

MR. HARWOOD: Both.

PANELIST: The payout annuity floor for variable annuities is just as reinsurable as any of the other variable annuity ancillary benefits. I can't really speak to new product innovations any more than saying I'm sure they're coming as this was going to be—as the baby boomers start to hit retirement. I think that's going to be an important product. It's something to spend time now positioning your company to take advantage of that. That's on the fixed side.

PANELIST: I'd echo those comments from the presentation earlier this week on the demographics. You see that appears to have all the earmarks for being a much bigger marketplace than shown in the growth numbers already. In the recent past, we really haven't seen enough of a demand for that, compared with some of the other opportunities, but I'll tell you that is changing. Some of the reinsurers may be seeing a lot more of this type of reinsurance out of the UK right now. There's a big initiative over there to reinsure out some of their longevity risks, and I think in the past the European reinsurers have provided a lot of the capital, and it's certainly our understanding from what we see, that the U.S.-based reinsurers are getting more and more involved with that as well, and I think that provides us with some good experience and insights on how to design and price those products, and make it more of a near-term market gear in the U.S. to provide that kind of capital or longevity solution. Up until now it's something we've talked a lot about, but there haven't really been big numbers that have been put in front of us as far as transactions to get it much past the talking stage.

MS. OLIVEIRA: I'm just glad you asked that question, because that is a market that my company does target and we do reinsurance with payout annuities. You can use the capital relief program, but you mentioned longevity with the mortality and that is something that we do reinsure.

PANELIST: I'll add one thing about the fixed annuities to longevity risks, which is that like Annuity and Life Re, we are also looking at those risks and we've designed some programs to help to cover the longevity risks in some imaginative ways that hopefully you know, don't necessarily meet everyone's needs, but those are things that as an offshore company, sometimes we have, as I said, a little more investment flexibility and so when you look at things—at payments 20 or 30 years down the road, sometimes we can have a little bit more of an advantageous view on it.

FROM THE FLOOR: Direct writers and annuity sellers have been adding liquidity to their payout annuities. How is that effecting the reinsurance side of things?

PANELIST: To be honest, the reinsurance payout annuity floor is still in its infancy. I don't receive a tremendous amount of requests for that. Most companies are in the initial stages of positioning themselves to take advantage of this market. I have not spent a tremendous amount of time thinking about all the features and I don't see a lot of the new products crossing my desk, although maybe after today I will and I'd be happy to take a look at them. I can't really speak to what impact that might have, other than to say that if it's a product feature or a design that is a problem from an anti-selection point of view, the reinsurer is not going to be able to help you out too much with this typically.

PANELIST: I would agree that this is an area that's going to be a lot more focused from the reinsurers than it has been. Again, we've been asked to take some longevity risks and we've really looked at the mortality issue there and maybe some investment plays as well, but there haven't been a lot of serious transactions. -- The main point of the reinsurance is some of the bells and whistles that you see on some of the other products being applied to the payout annuities and I think maybe it's just early right now.

Chart 1

Capital is Expensive!

<u>Equity</u>

70% from Allocated Capital

30% from Acquisition Expenses

<u>Income</u>

25% from investment income on Allocated Capital

75% from Product Spreads

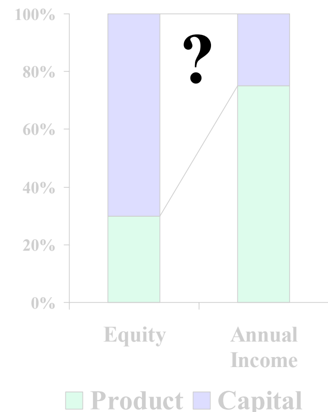

Chart 2

Capital Relief – Before Reinsurance

<u>Equity</u>

Allocated Capital = 5%

Acquisition Strain = 2%

Total Equity = 7%

<u>After-tax Income</u>

Fixed Annuity Product = 63 bp

Inv. Income on Capital = 21 bp

Total Income = 84 bp

ROE = 12% Before Reinsurance

Chart 3

Capital Relief – Before Reinsurance

<u>Equity</u>

Allocated Capital = 5%
Acquisition Strain = 2%
Total Equity = 7%

<u>After-tax Income</u>

Fixed Annuity Product = 63 bp
Inv. Income on Capital = 21 bp
Total Income = 84 bp

ROE = 12% Before Reinsurance