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Nontraditional Reinsurance Solutions to Group Issues

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Summary: Instructors present the various nontraditional reinsurance solutions available in the market today that are designed to address group insurance issues. Such solutions include finite reinsurance, stop-loss, and surplus relief. The presenters provide a variety of examples and discuss applications and the advantages and disadvantages of each.

Ms. Monica Hainer: I'd like to take a moment to introduce all of the presenters. Jim Greenwood is with Cologne Life Re, where he's vice president of financial reinsurance. He has been at Cologne Life Re for 16 years in accounting, strategic planning, and the audit group. He has an MBA from the University of Connecticut. He is very well prepared to talk to us about this topic.

The other presenter is Fred Brown. Fred is a senior vice president with John Hewitt & Associates, a consulting and reinsurance firm that works specifically on disability. Fred has a lot of information to share with us. He has been in the business for 25 years, the last six of those with JHA.

I'm president and CEO of London Life Reinsurance Company. I'm an actuary, and I've been involved with reinsurance for more than 18 years.

I wanted to start off with a few comments today. There was a survey done in 1998 by Emphasis which polled insurance company CEOs on questions concerning their

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Note: The charts referred to in the text can be found at the end of the manuscript.

views on their companies and their companies' performance. It was interesting that one-third of the CEOs were dissatisfied with their company results. I guess Jim, Fred, and I feel that maybe some of them should consider reinsurance as a solution to some of these problems.

As you probably are aware, the primary purpose of traditional reinsurance is the transfer of risk. Financial reinsurance or nontraditional reinsurance, on the other hand, has the solution of business issues as its primary purpose. These definitions are not my own. Although I do like them! They come from the Tiller and Tiller classic *Life, Health, and Annuity Reinsurance*. Some of the reasons to consider financial reinsurance are to increase statutory surplus, to resolve risk-based capital (RBC) issues, or to improve internal rates of return (IRR) or return on equity (ROE) calculations. Financial reinsurance is often a part of an acquisition of either an entire company or of a block of business. There is some tax management that's possible with financial reinsurance. Financial reinsurance can sometimes be used to solve cash issues, to smooth earnings, or to help with asset management. Finally, sometimes financial reinsurance can be used to set the minds of the rating agencies at ease.

But why would you use financial reinsurance instead of the other options that are out there? With financial reinsurance, there may be some expertise or consulting services that would be provided. The structure of the reinsurance can provide risk management. That can have a significant advantage for you. As a source of capital, it can be a cost effective and flexible solution that's directed specifically at your company, your needs, and products. It's fairly easy to put into place. The other good news is that the rating agencies do tend to acknowledge the reinsurance, assuming it's properly structured and meeting all the regulations.

One thing we do want to point out is that financial reinsurance can't do everything. It can't take a bad block of business and make it better. If premiums are not sufficient to pay the claims or if the product has been mispriced, financial reinsurance can't make that disappear.

Fred is going to walk us through an example of a financial reinsurance transaction.

Mr. Frederick R. Brown III: My topic is finite reinsurance. It's not just for individual products any more. Finite reinsurance has been a generally accepted and understood tool in individual insurance where people are very aware of the capital strain that individual products can have. I thought that we could also show where an example would work in group insurance for a particularly capital-intensive product, namely group disability.

Here's what I'd like to focus on in my talk. The first is to understand the magnitude of capital commitments related to disability products. I'm focusing on group disability, but we're going to see that all of the drivers of capital related to group disability insurance are there for individual disability insurance. There is even more leverage with an individual product. We want to talk about the magnitude or capital associated with disability products. We want to talk about the drivers of what that capital commitment is. Then I'd like to talk about the ways that finite reinsurance can offer a solution. We'll also discuss the impact that that would have on the profit and loss (P&L) and on the balance sheet. We'll close by discussing the challenges or barriers, the things that you need to understand if you're going to really put something like this in place.

I was listening to an interesting presentation by Bob Wilcox, who is a former insurance commissioner for the State of Utah. He was talking from a regulatory environment about a concept of viability. His definition of viability was: do you have the resources to do what you want to do and to do what you need to do? It struck a responsive chord within me. As managers of insurance companies, we're really caught in trying to balance the considerations of two important constituencies: Regulators in a regulatory environment, on the one hand, and the providers of capital on the other hand. In the past, regulators have defined viability in terms of protecting the long-term interest of policyholders by ensuring long-term solvency. The capital markets, on the other hand, are saying, "I'll give you this capital, but I need to know that I'm going to get a reasonable rate of return for that capital given the risk that I'm taking, and relative to alternative uses of that capital." If we pull that altogether with this concept of viability, do you have the resources to do what you want to do, which is to serve a market need, what it's going to come down to is balancing those two considerations. In a global economic market and a global capital market, we have to figure out how to ensure long-term solvency and protection for our policyholders, while at the same time make sure that we provide attractive returns for the people that are going to provide the capital.

The group long-term disability marketplace, in general, does not yield a 15% overall return on capital. The return is probably somewhere closer to 9–10%. Almost uniformly for the clients that we deal with, the goal is 15% return on capital. Now something is missing here: Either we're going to get to 15%, or somebody's going to be the first person to stand up and say, "You know, I think a 9% return is pretty good." Now I haven't heard anybody do the latter yet. What we're going to talk about today is how can we bring tools that would improve the efficient use of capital, and thereby close the gap between where we are, in our regulatory environment, and what it would take to get to 15% return.

As Monica was saying, all reinsurance would fall within a range of risk transfer. I think that we'd all be pretty comfortable with a traditional reinsurance—quota share or some kind of excess—that would transfer large amounts of risk. Finite reinsurance, taken to an extreme, would involve no transfer of risk. What we're going to do is design a product that falls somewhere in between. It's important to understand that there are lots of different flavors and lots of different twists and turns that can put us on different parts of the continuum of risk transfer.

Here's the business situation that we're going to talk about. We have a group long-term-disability (LTD) product. The product is growing at a moderate pace, 10% year-over-year growth. There's no deferred acquisition cost (DAC) at all. Some group writers defer their acquisition expenses and amortize that over a period of time, but I would say the majority of group writers don't. There are no active life reserves in a group LTD product. This product has been priced to yield a 15% return on what I call capital flow. Statutory capital is at the 200% RBC level, and GAAP reserves are 90% of statutory reserves. These are the assumptions that we're using here.

What are the drivers of capital for this product? Chart 1 shows the progression of premium reserves over time. Premium is growing moderately at 10% a year, but because of the long tail aspect of group disability, the reserves accumulate and accumulate. Over 15 years, premiums have accumulated from \$100,000 to about \$300,000, but reserves have accumulated to about \$1 million. In other words, reserves are about three to four times the level of annual premium after 15 years. At the 200% capital level, your statutory RBC, which is 50% of premium plus 10% of reserves, is approximately 90% of premium. The trend will continue on and on.

What you see in Chart 2 is the accumulated amount of cash backing reserves. The bottom curve is the accumulated assets backing GAAP reserves—the expected present value best estimate of incurred liability. The wedge between the two bottom curves is the difference between GAAP and statutory reserves because you have to hold something extra to meet your statutory requirements. Finally, the wedge between the two top curves is the statutory RBC, which is a function of the reserves and premium as we've discussed. The combination of these two wedges is the amount of capital requirement. You can see that they'll be about 100% of premium as this business matures over a 15-year period.

Most profit is going to be a function of premium volume, which is chugging along and growing at 10% a year. But the capital is a function of premium plus accumulated liabilities. The profitability is sort of just chugging along a little bit, but the total amount of capital is growing quite fast. The return on capital that's being reported to your constituency, your stockholders, or whomever, is going to decline

over time. This is going to be a struggle for any company that's trying to say, "Hey, we're in this business, and we're going to generate a 15% return on capital (ROC)."

Finite reinsurance can allow us to actually push those reported results up and generate an ROC above the 15% trigger point. That is the attention-getter for companies that are trying to deal with these issues.

Here's a fundamental overview of the arrangement. First of all, it's a nonproportionate risk reinsurance arrangement; we can't do this on a proportionate or a quota share basis. This arrangement reinsures out 50% of the risk. Also, assets backing the reinsured liabilities are moved off to the reinsurer. This takes the C-1 capital requirement away from the insurer and moves it onto the reinsurer. Finally, as you'll see, an integral part of this is a long-term risk-sharing arrangement with the reinsurer. As Monica was talking about earlier, this is not a product where, if there are losses in this business, you're going to move them on to somebody else. That's not what we're doing here. This is a long-term risk-sharing arrangement, in which we all have the same objective. An integral part of this is that there is going to be some robustness to this arrangement that makes the reinsurer feel that the amount of risk that it is taking falls within acceptable bounds.

Table 1 is an income statement for the first year. From the direct side, we see that they collect \$100 of premium, earn \$6.90 of investment income, and pay out only \$4 in claims. GAAP reserves are \$65, and expenses are \$25, leaving an after-tax gain of \$8.60 per \$100. Now with this reinsurance arrangement, the reinsurer is going to take \$50 in premium, and they're going to give back \$10 as an expense allowance. After the reinsurance, the insurer is left with an after-tax gain of \$5.80.

TABLE 1
FINITE RE IMPACT ON GAAP OPERATING STATEMENT

	Direct	Ceded	Retained
Premium	\$100.0	\$50.0	50.0
Experience Refund		4.8	4.8
Inv. Inc.	6.9		3.4
Operating Income	106.9		58.2
Pd. Clms.	4.0	2.0	2.0
Chng Reserves	65.0	32.5	32.5
Incurred Claims	69.0	34.5	34.5
Expenses	25.0	10.0	15.0
Pre-Tax Gain	12.9		8.7
Taxes	4.3		2.9
Post-Tax Gain	8.6		5.8

There are two points to be observed here. The first is that this finite reinsurance has an impact on the GAAP earnings. The GAAP earnings went down because the business volume went down. On the other hand, 50% of the risk was ceded, but not 50% of the profitability. What has happened here is that the reinsurer is able to access and use its capital more efficiently and return that efficiency back to the insurer through the vehicle of an expense refund. This allows the insurer then to enjoy the improved efficiency of that capital.

Let's look at the insurer's balance sheet in Table 2. There are assets of \$114.80. The GAAP reserves that we had before were \$65, and there was a total GAAP capital of \$49.80. There's an important point here. Where did that \$49.80 come from? Only \$73 comes from operating cash flow; we had to set up GAAP reserves at \$65, and we have a gain of \$8 from operating cash flow to fund capital. Therefore, I have to go and ask for another \$41 from the corporation. That's the capital infusion. That's a huge amount of money. In other words, for every \$100 of premium written, I have to ask for \$40 of cash infusion from the corporation. With the reinsurance agreement, this amount is split between the insurer and the reinsurer 50/50 because the risk is split 50/50. So the insurer ends up with \$24.90 of GAAP capital and the reinsurer ends up with the other \$24.90.

TABLE 2
THE INSURER'S GAAP BALANCE SHEET

	Insurer
Assets:	\$114.8
GAAP Reserves	65.0
GAAP Capital:	
GAAP/Stat Reserve Difference @ 15%	6.5
Risk Capital @ 15%	43.3
Total GAAP Capital	49.8

The key here is that the reinsurer's \$24.90 of risk capital is more efficient than the insurer's \$24.90 of risk capital—it's only going to cost the reinsurer 6% rather than 15%. You might wonder, "Okay, fine. How is that?"

The model we've described so far is like traditional risk insurance. An insurer goes to an A+ reinsurer, and that A+ reinsurer has to establish risk reserve and risk capital. The reinsurer is in a regulatory environment, and the regulators want some margin to make sure that the company is going to be around. The capital markets may also want the reinsurer to have extra capital to keep the A+ rating? In both cases, we're essentially talking about regulatory capital over and above what somebody might consider as necessary to make sure that you can tolerate the risk within bounds so that you don't have risk of ruin.

Let's take that same structure and begin to modify it a little bit. Here's the finite reinsurance structure beginning to take shape (Chart 3). That A+ reinsurer now works with a secondary reinsurer. The secondary reinsurer holds risk reserves, but instead of holding capital to make sure that it's not going to exceed a 100% loss ratio, it writes an aggregate stop-loss arrangement with another insurance company. We still have the regulatory capital. This is exactly the same model as the one that we had before except that I've added a secondary reinsurer and I also have aggregate stop-loss protection as opposed to capital. But it's essentially the same thing.

Now I'm going to add an arrangement between the insurer and the A+ reinsurer that says, over time, if we have a loss, you're going to pay us back. We're going to have a running account of profitability. It could be set up so that if you're in a deficit position, you can't leave us for five years or something like that. There is some period of time to allow us to work together as a team. There could also be some kind of aggregate annual deductibles. There are any number of ways of creating a risk participation and spreading that over a period of time between the insurer and the reinsurer. I'm trying to spread that risk, and as I spread that risk then there's less risk that moves downstream. I've added the aggregate stop-loss insurer and this experience sharing. I'm trying to minimize the risk charges that have to be sent downstream.

What has happened here is the A+ reinsurer has minimized risk. It's as good as any A+ company that wants to borrow capital from the market. This isn't insurance risk capital, this is financial capital now. The capital market says, "Fine, I'll do that. I'll provide you with regulatory capital, guarantees, a letter of credit, or whatever." A letter of credit is even less expensive. The amount of capital it needs to hold is only costing 6%, and it's able to provide that lower cost benefit back to the insurer. Now what that enables the insurer to do is take the premium level of \$100 and reduce it to \$95.80, so there is a more than a 4% reduction in premium. Now let me say that 4% of premium is just about where the aggregate level of profitability in the group disability marketplace is today. We're talking about a huge percentage of profitability.

There are some other things that this design can do. One is RBC relief for the block as a whole instead of just striking a deal from the start. If an entire block of in-force business came, the insurer had to front a lot of money to fund its RBC. The reinsurer can apply all these efficiencies not only to the new business, but also to the existing capital that's backing reserves today. This applies to both the capital associated with new business and the capital associated with accumulated reserve. By virtue of just doing this kind of transfer of risk, the amount of GAAP liabilities

held by the insurer are gone. Therefore, the amount of capital that's required to back all of that liability is gone as well. It is freed up for other uses.

I would hope that by virtue of having this conversation that people would be saying, "This is really something. This is something that we ought to look into and pay attention to." But it's not that easy. Here are some of the barriers that we've run into and I think that it would be important to have our eyes open. I really want to pursue this because this is going to be the key to survival over the long term. We are competing in a capital market for capital. If others can access and use this capital cheaper and more efficiently, they're going to win and we're going to lose.

Product management tends to say, "This is what I want. This is a good idea. This can help us as a corporation and that can help me, from a pricing perspective, meet all my goals." It's initiated by product management, but it's really a corporate financial decision. You have two different players, and they're not always exactly aligned. From the corporate financial perspective, this is more work. It's reinsurance that they might or might not really understand. Also, if they free up all this extra capital, they've got to do something with it. It's not always warmly received at first. You've got to sort of grow the idea.

Remember I said that I had moved assets to the reinsurer to move up some of that C-1 capital requirement. When you do that, you either have to have the assets in trust, and that has some administrative implications or you have to have asset transfer on other things. That's another consideration that begins to involve people in the investment division. So you start to introduce other players.

Remember that we talked about the GAAP statement. In this model you start off with GAAP earnings of \$8. After reinsurance, the percentage of premium increased, and the ROC increased, but the absolute dollars earnings decreased. If somebody was saying, "Well, I want to show net of reinsurance high premium growth or something," then this is not going to help your premium growth numbers. Of course, on a gross basis, it has no impact.

Lastly, there are a lot of details—a lot of t's you have to cross and i's you have to dot regarding compliance.

This arrangement frees up required capital, which allows faster growth and improves actual-to-required capital ratios for the corporation. It increases the return on required capital. It frees up statutory surplus. These are huge, huge benefits. It is worth it to pursue it and try to understand it. It's worth it because, in the end, it's going to increase the value to your policyholders and to the providers of your capital through the efficient use of capital.

Ms. Hainer: You'll notice that Fred's example did not take a losing block and make it profitable. It really didn't. What it did was front end the future profit for the ceding company. The real difference from traditional reinsurance is that by leaving a larger corridor for the risk variation, the financial reinsurance is cost effective for the ceding company.

Basically financial reinsurance has the same forms as traditional reinsurance. There's indemnity financial reinsurance, and there's assumption reinsurance. Assumption reinsurance is the less common form. It means that the reinsurer is taking the place of the issuing carrier. Specific, complex laws cover assumption reinsurance. Indemnity is the form most people think of when they say reinsurance. Under that arrangement, the issuing company maintains the client relationships, the relationship with the underlying policyholder, and the reinsurer establishes the relationship with the issuing company.

The type of agreements can vary depending on the financial reinsurance structure. Fred talked about one example, a non-proportional structure. Coinsurance, modified coinsurance (modco), and combined coinsurance/modified coinsurance (co-modco) are examples of other possible structures. I'll briefly define each of those for you. In the coinsurance structure, the reinsurer's position really mirrors the ceding company. There may be a few provisions that result in some difference in the risk-sharing components and the profit components between the reinsurer and the ceding company. Basically, the two companies mirror each other. This form would be fairly commonly used in an acquisition situation. It can be structured on a cash basis or on a funds-withheld basis. There's a lot of flexibility in this option.

Modco is a variation of coinsurance. Statutory reserves now stay with the ceding company, and the assets to support the reserves stay with the ceding company also. It's the ceding commission that is used to generate the surplus. Again, the transaction can be done on a cash basis or on a funds-withheld basis. In many instances, when moving the assets becomes an issue for the ceding company, modco becomes a form worthy of consideration. When you want to get a little more interesting, you go to a co-modco, where the reserves are split. Maybe 90% is done on a modco basis, so that 90% of the reserves and assets are deposited back with the ceding company, while the other 10% is done on a coinsurance basis, where the reserves actually are held on the reinsurance company statements. This structure is often used to reduce cash transfers. It can provide quite a bit of flexibility in the structure of your reinsurance transaction.

Then, of course, there's nonproportional agreements. Nonproportional can take on a lot of forms. Yearly renewable term (YRT) is actually a nonproportional form of

reinsurance. Stop-loss would be a nonproportional form. Catastrophe reinsurance protection on an entire book of business would also be a nonproportional cover.

Now just in case you're thinking all of this is sounding pretty easy, we're going to have Jim Greenwood talk about some of the regulatory and tax issues.

Mr. James Greenwood: To start with I'd like to talk about the statutory risk transfer regulations. The NAIC passed a model law in 1992, the Life and Health Reinsurance Model Regulation. Basically this governs the risk transfer requirements for reinsurance in the life and health industry. Most states either have adopted the model regulation or a similar version. New York has its own regulation that essentially mirrors the model regulation but imposes an additional requirement in order for the reinsurer to participate in dividends.

The basic regulation identifies various requirements that need to be met for the insurance company to take reserve credit for the reinsurance, which is a key driver of the reinsurance. The regulation identifies six risks in an insurance product: mortality, morbidity, lapse, credit quality, asset quality, and finally interest rate risk, by which they mean specifically disintermediation and reinvestment risks. It contains a matrix of all the different life and health products that lists which risks for each specific life and health product need to be passed to the reinsurer to meet the model regulation. As long as you transfer the significant risks that they have identified, you will fulfill the initial test of the risk transfer regulations.

In addition, although the model regulation also states that risk transfer is not based on a probability of loss, there are a number of accounting requirements that need to be satisfied to assure the transaction is in compliance with the risk transfer regulations. The significant requirements that need to be met are as follows. The reinsurer cannot charge more premium than the insurance company collects. The reinsurer must reimburse maintenance expense renewal allowances equivalent to the allocable expenses assumed by the insurance company. Reinsurance losses must be paid in cash; the ceding company cannot establish an asset or a recoverable from a reinsurer. The settlement needs to be made at least quarterly. The insurer cannot be deprived of surplus at the reinsurer's option. The reinsurer cannot terminate the contract on its sole authority; the only termination provisions in the contract are at the option of the insurance company or for noncompliance of treaty terms. The reinsurer cannot force recapture of this business. Finally, if there is significant investment risk in the contract, the assets need to be segregated.

There was a paper prepared in 1995 by Diane Wallace, a consulting actuary for the SOA, which deals with the risk transfer regulations and the purpose and drivers of them. It's a very good summary of the model regulation.

In a traditional reinsurance arrangement, the reinsurer is going to be at the right-hand end of the risk transfer spectrum. The cost of the reinsurance is going to be relatively high and the amount of risk transfer is going to be relatively high. Basically what we're trying to do in the financial reinsurance transaction is to be at the left end, to get the cost as minimal as possible. This means we have to reduce or minimize the risk as much as possible, but we still need to comply with the model regulation and meet the rules that are required, so that the insurance company can receive reserve credit.

There's also a model law for credit for reinsurance. The insurance company can take reserve credit for the reinsurance if the reinsurer is licensed in the state of domicile. What that means is that they either must be licensed to sell insurance or reinsurance in that state or they must be an accredited reinsurer.

The credit for reinsurance rules also provide alternatives for non-accredited, non-approved reinsurers. There are basically three: 1) The insurance company can withhold funds. They keep the funds on their balance sheet. 2) The insurance company can transfer funds to the reinsurance company, and put the funds in a trust. There are many rules that need to be met for the trust, but basically it should be in an NAIC-approved bank and the assets need to be either cash, or assets that are approved by the SVO as being admitted assets. 3) The insurance company can take credit based on a letter of credit. If you receive a letter of credit from the reinsurer and you are assigned as beneficiary, the letter of credit needs to be unconditional, irrevocable, clean and evergreen. There are also NAIC-approved banks for letters of credit.

I'd like to talk a little bit about statutory accounting. Codification was adopted by the NAIC in 1999. Each state now needs to approve it. Codification Statutory Accounting Principle (SSAP) 74 deals with accounting for reinsurance transactions. Basically it's a detailed presentation that applies to all life and health reinsurance transactions.

There are some significant differences between statutory and GAAP accounting for reinsurance. Some of the particulars are that statutory reserve credits are netted against reserves, whereas under GAAP, reinsurance increases both the asset and liability sides. Ceding commissions are recognized as income, and the initial gain on in-force business (the initial ceding allowance) is not recognized through the income statement under statutory accounting. It's recognized directly into surplus, which is quite different than GAAP accounting.

I have some accounting examples. They get a little busy, but I think it hammers the point home. In Table 3, we're using the co-modco structure that Monica discussed.

The coinsurance portion is \$10 million and the modified coinsurance portion is \$32 million. Total reserves on the block of business that are being reinsured are \$40 million. The surplus relief provided in the transaction is \$10 million. There's a 2% charge for the surplus relief and a tax rate of 35% on the block.

TABLE 3
CO/MODCO STATUTORY ACCOUNTING
Initial transfer by ceding company

Income Statement	
Reinsurance Premium	(42,000)
Reinsurance Allowance	10,000
Change in Aggregate Reserves	10,000
Change in Modco Reserves	32,000
Expense & Risk Fee	(200)
Pre-Tax Gain (Loss)	9,800

Basically, the impact of that transaction to the insurance company is the following. They pay reinsurance premiums of \$42 million; they get paid reinsurance allowances of \$10 million, which is equivalent to the surplus relief. The reserves drop \$10 million for the coinsurance reserve they transferred. They pay modco reserves of \$32 million, which are deposited back to the company. Their net liabilities have dropped \$10 million. The expense in risk fees is \$200,000 that is paid to the reinsurance company, and the net gain to the company is \$9.8 million.

There are also taxes paid on that gain of \$3.4 million. The after-tax gain is \$6.4 million. The statutory accounting rules state that the gain needs to be eliminated from income and reclassified into surplus. This reduces the reinsurance allowance by the net after-tax gain, so that the after-tax statutory gain to the company is zero dollars. This is for an in-force reinsurance transaction. If it's new business, you don't have to reclassify the income.

The primary purpose of the co-modco structure is to reduce the amount of cash that's being transferred. The only cash that's transferred is the risk fee that's being paid to the reinsurer—the \$200,000. The ceding company can reduce reserves by \$10 million. They set up a federal income tax that is payable of \$3.4 million, and the surplus goes up by \$6.4 million also. In addition to the increase in surplus, the other capital impact is a reduction to RBC. Their required capital has now fallen because of the reinsurance transaction. There's a double benefit. One thing to note in this transaction is there are federal income taxes that need to be paid. Depending on the relationship of statutory to tax reserves, you can structure transactions that either eliminate or at least minimize the tax effects of a transaction.

I'll touch briefly on GAAP accounting. Primarily, most of the financial reinsurance business done over the last 20 years has focused on statutory accounting treatment. For the past five years or so, there has been an increased desire to have GAAP income and balance sheet impacts. The regulation that applies for GAAP accounting is *Financial Accounting Standard (FAS) 113*, which states that unless there is a reasonable possibility of a substantial loss (which is undefined), deposit accounting must be utilized, i.e., you need to account for it as if it's a loan. If it does meet risk transfer and the reasonable possibility of substantial loss, it is treated as reinsurance.

I said earlier that the risk transfer criterion, the definition of the possibility of substantial loss is not defined. But the auditors and public accountants have basically settled on the 10/10 rule: There needs to be a 10% probability that the reinsurer will lose at least 10% of reinsurance premium. Although they have settled on this rule, each accounting firm looks at it a little differently. They're not just looking at the amount of the loss, but also the timing of when those losses are paid. This was really driven by the property and casualty world, and the attempts to adapt the time factor to the life and health world have been met with difficulty; however, this definition is definitely the governing regulation for GAAP. Also, as for GAAP accounting, if you sell a block of business you cannot record the income that you gain for selling that block in the initial year of the sale unless you use assumption reinsurance. If it's a coinsurance structure or modco or co-funds withheld or any other indemnity type of structure, you cannot take that income in the year of the sale; you need to capitalize it and run it off over a number of years.

Before I start on a couple of tax issues, let me just point out that, while sometimes I pretend to be, I am not by any stretch of the imagination a tax expert. You should always get your tax consultants involved in these transactions. There are complicated rules with the tax concerns on these deals and you need to make sure you're comfortable and understand them.

A couple of quick points on taxes and reinsurance. Deferred acquisition cost (DAC) tax, for reinsurance only, needs to be paid on the cash transferred. In the example we showed before, there was \$42 million of reinsurance premium but the DAC tax only needs to be paid on the \$200,000 risk fee, since that was the only amount of cash exchanged.

For tax purposes, when assumption reinsurance is used, the ceding commissions are capitalized. There's a difference between the GAAP and tax treatment of this income. You can take the income into your income statement for GAAP purposes, but it gets capitalized for tax purposes. There are some real benefits there. You might want to look at that if you're ever selling or buying a block.

Also, Section 845 in the tax code allows the IRS to disallow a transaction if the primary purpose of the transaction was tax avoidance. This is significant. There have been a number of cases over the years that have gone to tax court. Some have won, and some have lost. You need to be sure any transaction you enter into has a business purpose. As long as it has a business purpose and you're not doing it solely to avoid taxes, things should be all right.

In the example we showed earlier, surplus relief can create taxable federal income. You may be able to minimize or eliminate it, but there's also a good possibility you will need to pay income tax on the income earned through the transaction.

What does all this mean? These transactions used to be done on December 31. You would call up your friendly reinsurer and say, "Boy, have I got a deal for you." You would get things done. Three months later you would put a treaty together, and all the accounting would take place on December 31. Now, things are a lot more time consuming. The reinsurer needs to be comfortable with the business intimately familiar with the business, and needs to understand the risk he's taking. The goal of these transactions must be translated into a financial objective. The reinsurer wants to make sure he can get it to a price that is cost efficient, but he must also make sure he meets the model regulation that requires a significant risk transfer. The reinsurer must understand the business to get that comfortable with it. It's not a matter of just calling someone up on December 31 and putting it in place.

Things are much more complex than they ever were before and evolving at a much quicker pace. All the accounting rules and the regulations and tax issues are elements that you must address and understand. You have to work together with the reinsurer to put something in place. Another thing we always demand in any transactions we do is that the company obtain state insurance department approval for any transaction they do. It protects us and it also protects you from problems that may develop in the future.

Numerous items impact capital for the insurance company: the products they write, the lines they write, the mix of those products, what the results are, and how volatile those products are. The assets that are supporting the products impact capital. What type of assets are they investing in? What type of returns are they getting, and how volatile are those? Taxes and regulations have significant impacts on the capital of an insurance company. There are very few tools as efficient as reinsurance at managing the capital and financial objectives of an insurance company and helping the company manage its capital needs. Reinsurance is probably the most effective, flexible, and easiest to put into place when you compare it to any capital management alternative.

Mr. Frederick S. Busch: Fred, in the example you identified a secondary reinsurer with an aggregate stop-loss arrangement. Why couldn't the A+ reinsurer take out that aggregate stop-loss arrangement? I guess I didn't quite understand what the purpose of the secondary reinsurer was.

Mr. Brown: The secondary reinsurer in my model would be an off-shore reinsurer, but there are on-shore reinsurers who are able to do this as well and do this efficiently and competitively with off-shore insurers. Your point is correct; it's not necessary to involve a secondary reinsurer.

Mr. Busch: In a lot of the transactions that Cologne gets into, that secondary reinsurer would be a parent company.

Mr. Brown: Yes.

Mr. Busch: Do you run into reserve credit problems on nonproportional types of insurance as opposed to proportional types?

Mr. Brown: The reason that I made that example nonproportional is that in proportional reinsurance, the reinsurer cannot charge more than the insurer charges their client. In nonproportional reinsurance you don't have that same constraint. There are just too many things that are moving around. You would never know. The fact that I made it nonproportional reinsurance allowed a little more flexibility in terms of using the experience or the experience refund as a tool for allowing the insurer to participate in the efficient use of capital.

Mr. Greenwood: The other point about nonproportional reinsurance is that if the amount of reserves you're holding on this nonproportional basis are reasonable and your auditors and accountants buy off on that, state regulators will typically allow the reserve credit. You shouldn't have any problems with it.

Mr. Paul C. Barone: In your example, the primary company gains. It was going from a 17% ROC to a 23% ROC. But the reinsurer seems to have a very low return if you look at it. They were taking in \$50 income initially but were left with very little at the end because they gave such a large experience credit. It would seem that that wouldn't be in their best interests.

Mr. Brown: If I understand your question, the insurer or the ceding company got the benefit of this transaction, in terms of their ROC going up. But the assuming company, the reinsurer, would have the flip side of that. That's true. Their cost of capital is lower. In the model that I've built or the assumptions that I'm making, they get some more profitability early on. They're able to invest that in their own

businesses and generate 15% on that in the interim. It's a timing thing. The reinsurer, the assuming company, gets more profitability up front and uses that to its advantage. And that's part of what it is able to return to the ceding company.

From the Floor: It looked to me like somehow we fooled the capital markets into thinking that this stuff you passed on through to that secondary reinsurer was sort of risk free. The fact that they could borrow at 6% or get their capital at 6% was the big key to this whole leveraging process.

Mr. Brown: No, I wouldn't characterize it that way. What has happened is there were two players. The risk that was moved downstream was minimized. I think that Jim was talking earlier about this sort of settling on a 10% chance of a 10% loss of premium kind of thing. That's essentially a 1% cost of reinsurance if you were to convert it that way. What I tried to do is to design something that got that down as far as possible on the risk-minimizing side of the reinsurance continuum. I said, "I want to get this risk transfer down to just 1%. Then I'll have an aggregate stop-loss insurer provide that." It's very small. Now how did I do that? With something like annuity products or life insurance products—which are the traditional products we think of in infinite reinsurance—there's so much margin in the statutory reserves that you can design things that are risk-free. Disability is so volatile that that situation would be not possible. What I've done is minimize the risk, moving downstream. I've kept it in bounds, and then I need to create that participation agreement up front. This is not an understanding, but an actual contractual arrangement between the insurer and its reinsurer. This is a volatile business. If one particular year goes sour I'm not going to leave you. We'll stick with you. Getting back to your point, there is risk there and maybe that might be in terms of off-balance sheet items. I won't leave you if I run a deficit in one year. I'll stick with you over the longer term. So in a sense, maybe that is part of the capital. But because it's there in one place or another, then the capital market is able to come in and say, I'm not bearing any risk and the cost of capital is low.

Mr. R. Allan Ireland: I wondered if you had worked it out with a modco approach where the assets weren't transferred to the reinsurer. Second, I just wondered if you had looked at the utility of these types of arrangements in Canada.

Mr. Brown: The arrangement that I described had a basic coinsurance structure, in terms of moving the assets. It can be done with modco. I just chose to avoid adding in some discussion about the particulars of modco. But it can be done. With modco, you lose some of the power of this, but only the transfer of C-1 risk; it's not that significant. It certainly can be done with modco.

We've done other things where we've played with different non-proportional reinsurance arrangements. There is excess of time, excess of amount, and excess of cost, but only on some parts of business. It's very interesting how the patterns of pay back and cost sharing between the two players change. Those are areas in which you get much more response from the structure, as opposed to altering the treatment of the assets.

As for your second question, I wouldn't know about how the Canada regulatory environment would work with that sort of model.

Ms. Hainer: I haven't seen a lot of this in Canada at all.

Mr. Narayan S. Shankar: Can you give us an idea about the relative proportion of the required risk capital and the statutory redundant regulatory capital? How much are they relative to each other?

Mr. Brown: That is a point that I have tried to stay very, very far away from. Because if I had said, "You know, the regulatory environment just wants too much capital," that would be a value judgement on my part. You could probably divide the room. Actually with a room of 50 actuaries you'd have 75 strongly held opinions. It's very difficult for me to say that the statutory is this much more than a reasonable amount because I don't know what a reasonable amount is. I think it really depends on the nature of the business written, and the management controls that exist for a company, even within the scope of long-term disability. For example, you may have different capital needs if your insureds are doctors as opposed to some kind of blue-collar risk. But the order of magnitude of group long-term disability capital is about 100% of premium, and the order of magnitude of individual disability is probably about 250% of premium. It's very significant. There's a huge payback for recognizing the capital commitment that's associated with these lines, and then dealing with that as part of the cost of doing business, just as you deal with investment strategy and with investing in your benefits operation to make sure that they're paying the right claims.

Mr. Shankar: How does a company determine how much risk capital it needs?

Mr. Brown: Even today, a company establishes its GAAP capital, but they still want to know how much more does it need to retain its S&P rating, its AAA rating, its Moody's rating, or its Best rating. There is a qualitative overlay over that. There is certainly an amount of capital that every company determines it needs. Some of that component would be the excess over what it truly thinks is risk capital as opposed to what it needs to maintain its ratings. I would say that that difference is generally what would be available to try to negotiate a risk-free cost of capital.

Mr. Greenwood: There's also a simple rule of thumb that we use when looking at a block of business. There's anywhere between a 0% and 10% reserve amount for which we can provide surplus relief. That is looking at it from a different perspective, but it's getting back to the same point. Zero percent means that all we can provide is RBC relief, not surplus relief.

Mr. R. Dennis Corrigan: A reinsurance company I worked for about a decade ago wrote a deal very similar to what Fred described. It was an enormous transaction; it took a long time to do. The actuary put together a thought process to engineer the product. I always like to emphasize that the key was to come up with a refunding formula that was very smooth. It shouldn't have discontinuities. He looked at it over a five-ten year timeframe to make it work properly. The refund percentage would vary with the duration and also with the cumulative loss ratio. He used some graphic techniques to come up with something that made it work. That's something to consider. Second, this company spent a lot of time designing this product. It had one major sale, and it found it very difficult to replicate that sale. It just generates an awful lot of skepticism just like you're getting to a certain extent. It caused a lot of need for explanation. So this was done in the environment before a lot of these regulations that you talked about, Jim. But it was an interesting experience. Any comments?

Ms. Hainer: I think your comment is right. I think the regulations are fixed now. That has helped people. You can structure a deal that fits the regulations, which makes it a bit easier than in the period where we didn't have the regulations. People were concerned about what would be put into place. You're still right, it's a complicated deal. It's not something on the surface that is obvious to most of us. It needs to be thought through; numbers have to be looked at, and people have to take it back and come back and forth with it. Again, this is a good reason not to start it in December.

Mr. Brown: In my years of actually selling group long-term disability to employers, I've found that group long-term disability is almost sleep insurance for a large employer who would have otherwise been self-funded. The employer doesn't have to worry about what will happen five years from now, about whether or not it was adequately reserved. There's a finality to that sale. What we're dealing with, as far as this concept, is almost exactly the opposite. You're talking about a long-term relationship and what might happen. It's very open-ended, and it's also a relatively complex product. I live and breathe this stuff everyday so I tend to understand a fair majority of all of this stuff. But other insurers and their financial people may need it explained to them more than once." People are not skeptical; they sense that there's some value, and they'd enter into it if they thought that they could really understand it.

I absolutely believe that the basis for true value is there. But it's going to take a long time to get to the point where sophisticated people are able to process the whole thing, and say, "Yeah, I'm ready to try to make this thing work." That's the gap between the power of this kind of finite reinsurance and the actual implementation. There are a lot of players, and all of them need to achieve that level of confidence. I think it's worth it.

CHART 1
DISABILITY EARNED PREMIUM AND RESERVES

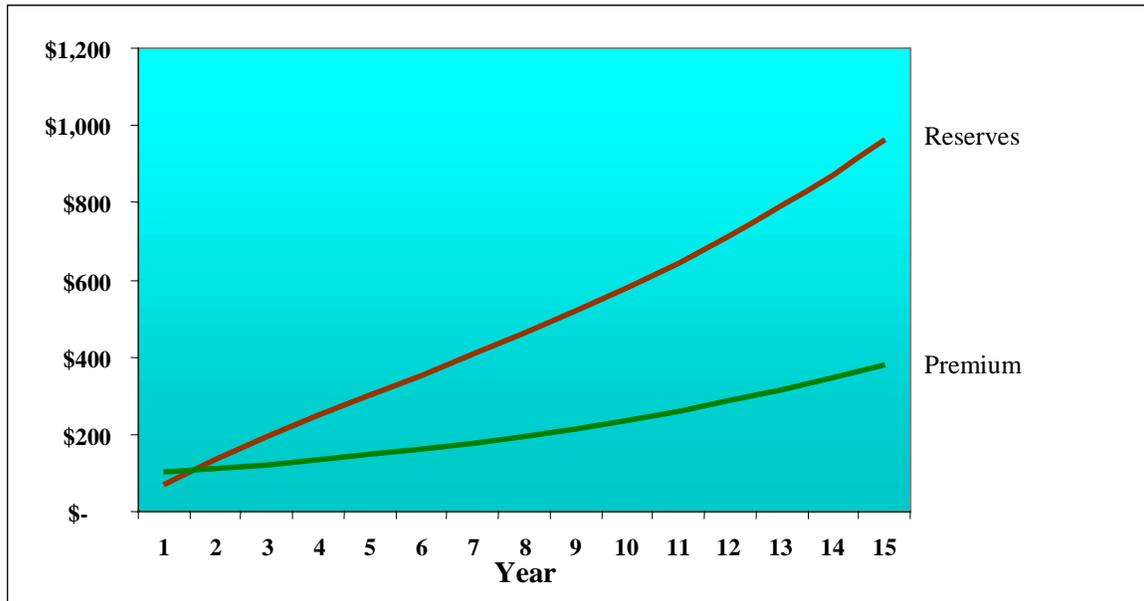


CHART 2
REQUIRED GAAP CAPITAL
AS % DIRECT PREMIUM VOLUME

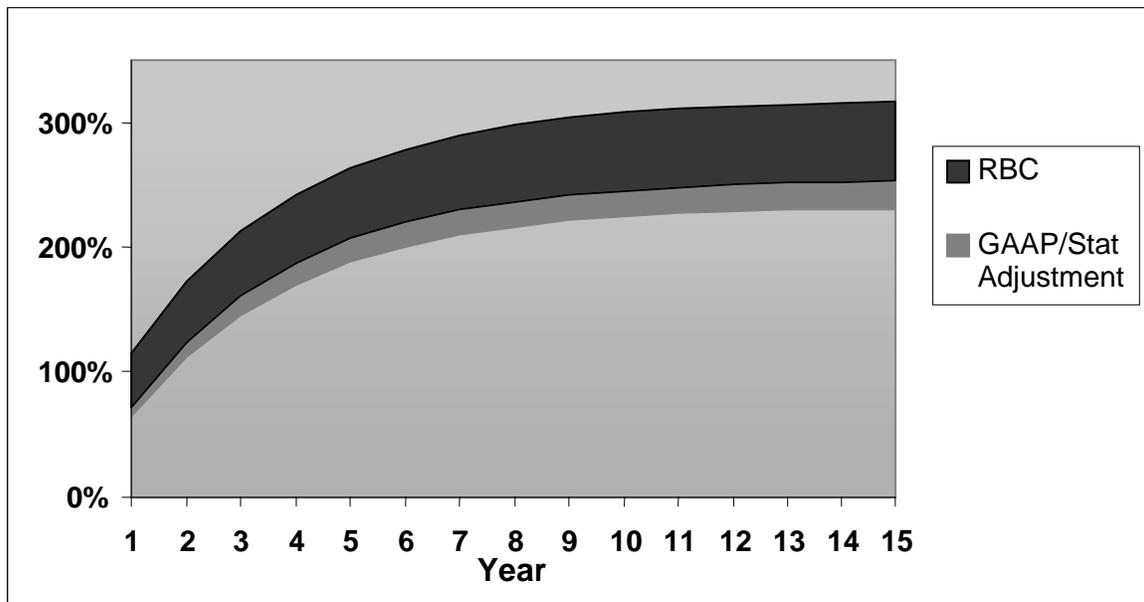


CHART 3
SAMPLE FINITE REINSURANCE STRUCTURE

