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Current Issues in Product Pricing

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Summary: Pricing products in today's environment often involves reinsurance in order for the direct writing company to "play" in the marketplace. In this session, panelists explore the impact of pricing products from the perspective of the direct writing company and their reinsurer based on the following practical experience:

- *Product pricing performed separately by the ceding company and reinsurer*
- *Product pricing performed as a "turnkey" package of services provided by the reinsurer*
- *Pricing of Term to 100 in Canada and its application to level term products in the U.S.*

Mr. A. Micheal McMahon: I am second vice president and actuary at Principal Life. I have responsibility for managing the life product line at Principal, and I'll be moderating the session. As you know, we have a reinsurance bent to the session. I'm not an expert in reinsurance, but reinsurance is becoming a more and more useful tool in our product development efforts. Luckily, we do have a couple of experts in the reinsurance area. The panel includes Dave Pelletier. Dave is executive vice president of RGA Life Reinsurance Company in Canada. Dave's international experience includes product development, pricing, marketing, mergers and acquisitions (M&A), and financial reporting. At RGA, Dave leads the marketing, pricing, and special products areas. Our third panelist is Mark Mahoney. Mark is currently marketing actuary at Transamerica Reinsurance. Mark is responsible for life insurance products and manages the reinsurance contracts and pricing team.

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

Our session today explores the growing impact on product pricing and product development that reinsurance plays in the current marketplace. We will look at various reinsurance options companies have from the direct writer's perspective as well as the reinsurer's. We will look at the longer duration term products and their similarities to the term-to-100 products in Canada.

Mr. Mark F. Mahoney: This part of my presentation is a bit of a refresher on uses of reinsurance in the life insurance business today. The simplest form is just basic mortality risk transfer. Also, becoming a little more common in the marketplace today, particularly with M&A activity, is reinsurance on in-force blocks of business. Something else that I'll speak about, probably just at a really high level, are some of product development services available from several reinsurers today. I suspect many more are being developed for the future. Another development concept is the packaging of different goods and services that reinsurers have gained expertise in over the years through their association with life insurance companies and the management of their own life insurance businesses. I'll also touch on some future developments that may be coming in the reinsurance world.

Excess of retention on YRT, as the name implies, assumes that a direct writing company has some risk tolerance level, and they would seek to place amounts in excess of that in a YRT pool with the reinsurer. YRT, as the name implies, is yearly renewable term insurance. It's a very simple way to transfer mortality risk. Some people refer to this as mortality risk reinsurance because that's truly the intent. In this type of arrangement, the direct writing company would transfer some portion of the mortality risk to a reinsurer or reinsurance pool that might consist of multiple companies. Companies have different risk tolerances for different products or they may have a corporate retention level that will dictate how and when they will use reinsurance. I think some of the benefits of doing this are somewhat obvious: It removes the effect of large claims on earnings and can have, under YRT, a slight reserve impact. Under a coinsurance arrangement, they may have an even larger impact. Something worth mentioning that's in practice today is zero first-year reinsurance, which indicates that there is no premium the first year of a reinsurance arrangement paid to the reinsurer. The benefit of doing that is that the company retains full first year premium for expense coverage.

First Dollar quota share reinsurance is something that's becoming more popular in our business today. Quota share indicates that a portion of each risk is transferred. That could be on an excess basis, or it could be on a YRT or coinsurance basis. In theory, the reinsurer is passing along the benefits of the mechanism of pooling a risk through possibly better mortality than a single direct company can recognize. There are five benefits of this type of transaction: first dollar quota share gives better spread of risk and makes product more competitive, reduces surplus strain, is useful for companies entering new markets, reinsures persistency risk, and reduces underlying premium rates. The first and fifth are tied together by transferring or by receiving the benefit of pooled mortality risk. You can, in theory, create a more competitive product and transfer better premium rates to policyholders. One thing that's probably understated in our business is the transferal of persistency risk. That's something we'll talk a bit about later.

Inforce block reinsurance is exciting to me because it keeps me quite busy today. There are a lot of existing blocks of business that are under consideration for large amounts of risk transfer reinsurance. This is occurring on both the first dollar quota share basis and on an excess basis. I think it's more common now than ever, mainly because of M&A activity. Often reinsurance transactions are part of the purchase transaction either when a company's buying another company or a block of business. Also, companies are taking advantage of what they view as favorable reinsurance terms in the marketplace today. Some of the benefits of this type of transaction are obvious: reduced surplus and capital strain; improved forecasted earnings, including the unlocking of GAAP profit on Universal Life (UL) products; and stabilized earnings, which can become an important factor for companies that are considering becoming publicly traded or coming under the scrutiny of financial analysts. I will expound on a few of these a little bit later.

Mr. McMahon: A growth market for reinsurers in the past several years has been the development of products for direct writing companies. Reinsurers have developed an expertise in a particular product line or product lines, and have marketed that expertise to companies that lack a competitive version of the product in their portfolio. Direct writing companies might consider this approach if the product line is not a core or lead product but is necessary from a marketing standpoint. Term products might be a good example of this.

While there are a core of competitive term companies that use reinsurance in a different fashion, there are a number of very competitive term products developed by companies that rely on the expertise of the reinsurer.

A company might be looking at entering a new line of business or developing a new product that they hope will become a major player for them in the future. A reinsurer can help with this process. Also, since the risk is new, using the reinsurer gives some assurance to the direct writing company that there won't be a great volatility to the bottom line brought on by lack of critical mass or just the risk of insuring a new risk. Equity-indexed products, long-term care, or critical illness products might be examples of this use. Resources to get everything done are always an issue, and time to the marketplace always needs to be as fast as possible. Though there are many fine consultants out there who can help with resources and provide the services that I've mentioned above, the reinsurer can also help with risk management. And, of course, to be fair, consultants can also help provide reinsurance shopping services for companies. The direct writer has to assess the cost and benefits of these options. The cost of the reinsurer is a little hard to assess because usually the cost of the reinsurance services is built into the reinsurance allowances and is spread out. Direct writers, of course, keep or share the risk through a coinsurance arrangement, usually 10–50%, and a proportionate share of the profit.

There are several reinsurers who offer a broad array of services. A company can decide whether they just need pricing and design help or help with policy drafting and filing, basic policy administration, reinsurance administration, and many other services. Help with these through a reinsurer can be assessed against the cost and time for internal development and the cost for outside vendors. A ceding company choosing the reinsurer as a partner needs to be able to get comfortable with the new partner. What is the basis for the source of expertise in this product line? What is the commitment to the marketplace (this is very important if the ceding company does not plan to develop their own internal expertise) and ratings (how secure is the direct writer that the reinsurer will be able to live up to the commitments that they're making for the long term?)? Of course, the direct writer is responsible in the end for the liability. Then, there are the intangibles. Does the ceding company feel comfortable with the people they're now working with as long-term partners?

Once a ceding company has chosen a partner, it needs to decide on what the portfolio is going to look like. If it's term products, how many are going to develop? If it's long-term care, what's common in the marketplace? You might be looking for the reinsurer to help you with that positioning. From the ceding company's perspective, the pricing and product development process follows the normal procedures, except, now you have a partner involved. Both partners need to be secure that each of their goals will be met: volume of business, competitive positioning, profitability, and so forth. Though the ceding company's actuaries may not have the expertise, they need to be able to assess for themselves and their management that various corporate goals are being met and that various actuarial standards of practices are being adhered to. Pricing obviously requires key assumptions such as mortality and morbidity, lapse, and conversion. If the direct writing company is a “babe in the woods,” they're going to need some help and guidance with this. Of course, since a lot of business is reinsured, that can give them a little more security in their assumptions. The ceding company can see how things develop and assess how the partner is at predicting and helping them with their experience assumptions.

A new item for these arrangements is accounting for coinsurance allowances in the pricing process. The incidence by duration and pricing cell needs to be studied, and both partners need to come to some sort of agreement as to whether they like the results across all cells.

How do the ceding company and the reinsurer handle movement of in-force policies, if there is such a thing, into the new product? Is new underwriting required? If not, what reinsurance allowances are used? Here's a related issue for term policies: What happens to conversions? Does the ceding company cede part of the risk on the conversions, or do they recapture the conversions? If the ceding company has not used coinsurance before, reinsurance administration can be a significant effort. The system needs to integrate and be part of the normal policy issue and administration process. The system needs to issue reports that help administer the line of business, meet financial reporting requirements, and report claims, new business, reinsurance allowances, and of course premiums and reserves to be ceded.

After introduction, both companies need to stay in touch. You can't just assume business as usual. These products need to be managed just as you would manage any other product. Is the product meeting the expectations and sales results in the targeted markets? What's the competition doing? How about those financial goals? Depending on the ceding company's interest in resources, the reinsurer may provide these services. At any rate, periodic meetings are always a good idea to go over what's going on and decide what the next steps are.

Mr. Mahoney: Outsourcing all services is the logical next step. Mike painted a very good picture for how we got to this step. Almost all aspects of product management are touched upon in some way, shape, or form. Because of that, the reinsurers have gained a lot of expertise in doing a number of things that are not traditionally reinsurance oriented. I can tell you that in some aspects these kinds of arrangements are currently happening in the marketplace. I'm not sure of any arrangement at this moment where all the services have been outsourced from a direct writer to a reinsurer, but I can assure you that many have been outsourced. They include the gamut of product pricing, the filing process, and administration. Administration is interesting because the reinsurers are pretty good at reinsurance administration but, by association, they're starting to gain quite a bit of expertise in actual policy administration.

Several reinsurers actually own TPAs or have strategic alliances with them. That's something that's available whether the service is offered directly or indirectly through TPAs. Underwriting expertise is a great strength of a reinsurer because of the large number of complicated medical and financial cases that they review daily.

They're very good at the underwriting process part of the business as well. By association, almost all the reinsurers also have a pretty good eye on what's happening in the marketplace because they see so many products each year. That leads to the next thing, which is providing marketing services. That's a nebulous term, but I think it goes hand-in-hand with marketing surveillance. It goes one step further and strategically aligns reinsurers with potential producing companies.

As you know, product life cycles today, especially in the term marketplace, are very short. I think a couple of keys to remember here is that because reinsurers perform a lot of different services for themselves, they've developed expertise in a lot of areas. Second, they're becoming more adept at doing things quickly.

Mr. A. David Pelletier: I'm the third member of our tag team. I'll talk about the most significant example of the product development process with a reinsurer from a Canadian perspective. That's the critical illness market. That's probably the single most outstanding example of reinsurers bringing a product to market and having it picked up by a lot of direct writers. In Canada for the last three years there has been a lot of activity by a number of client companies. It has been spearheaded by one reinsurer principally, which was the old M&G, now Swiss Re. My company is one of those other firms playing catch-up.

Probably many of you saw the article by Linda Coco in the September 7 issue of *The National Underwriter*. In fact, her article was very much about what this session is about—reinsurers working with direct writers in product development. It's interesting that this particular product exemplifies in a number of ways some of the points that she mentioned, both good and bad. On the good side, it's certainly been an outstanding example of bringing to a particular market the benefits of experience and product knowledge that has taken place elsewhere in the world. Critical Illness, which began in South Africa, has come on strong in a big way for years now, moved from South Africa to the U.K., Australia, and the rest of the Far East. M&G was able to leverage that experience elsewhere in the world and bring it effectively into Canada.

Another example that Linda cited in her article was the fact that when you bring along a new product like this, typically the new product ends up being initially a very simple product with very limited features as companies get experienced with it. Whereas when you make use of the experience elsewhere in the world that a reinsurer brings in, you're able to start off with a more advanced product design. That's essentially what happened in Canada. As was pointed out in her article, that can be a good and a bad thing. It isn't necessarily that easy for a brand new product to start off as a fairly complicated type of product. In fact, that's what has happened in Canada. Many years ago, the numbers of illnesses being covered by this kind of product might have been limited to a very small number. Coming into Canada right from the start, we had a fairly large number of illnesses being covered right from the beginning. It tended to make the product a little more complicated than otherwise.

It's interesting as well that the level of sales are somewhat behind plan. There's been a lot of excitement over this product in the last few years, but the sales simply aren't coming through at the initially anticipated level. There are a variety of reasons for that. There was one article in *Marketing Options*, a Canadian publication, a few months ago by another reinsurer, pointing out that maybe the product started off more complicated than necessary, which hurt sales a little bit. Also, a lot of product development tends to originate with many companies in the field. When that happens, you're going to have a product that usually ends up being more consumer friendly, meeting needs that are recognized by people in the field. When, instead, you have product ideas coming from the other extreme, such as reinsurers who are even further removed from the field, you're less likely to have an end result that meets the direct needs of the customers and of the agents who are selling to those customers. That’s something to keep in mind as reinsurers work with direct writers on products. Field input is very important from the outset.

A few weeks ago, in another Canadian publication, *The Journal of Insurance*, there was a remarkable headline, "Swiss Re Chastises Clients." It went on to say that Swiss Re was concerned that the companies in Canada weren't really marketing this product properly. But, in a more positive light, it went on to say that Swiss Re has now hired someone to work with its client companies in the marketing of this particular product.

One other aspect that’s interesting is the question of “exclusives.” Initially, they were successful in locking up a lot of exclusives. Over time the rest of us trying to get our nose in there have been able to argue away the exclusives. We feel that client companies are better served where they have more than one reinsurer on a given product. For example, just for facultative shopping, you're much better off if you have other people on the product. Moreover, you keep the reinsurer honest. So, in general, our philosophy, not just in this product but all products, is that even if a reinsurer is working with a client company up front on a given product, it makes sense to bring on other reinsurers for some share of it. Speaking as a person who has played catch-up, you'd probably expect to have that kind of reaction from me.

A second example just now coming into Canada is preferred term. A year and a half ago, it virtually wasn't in Canada, but it's coming on strongly now. Initially, it was CAN, the direct writer, that brought this product into Canada. There was slow acceptance initially, but it now has become the rage. One after the other, the big companies are falling into place and bringing in preferred term. There's been a lot of reinsurance involvement with the direct companies. Again, this is another excellent example of reinsurance companies with experience elsewhere in the world, the U.S. in this case, that have been able to draw on the experience in the U.S. and bring that into Canada in terms of the design of the product, the setting of the criteria, the assumptions that go along with the different criteria, and so on.

The third set of issues and examples in Canada would be guaranteed or simplified issue products that reinsurers have helped direct companies with, not always with terrific experience. Another example may be where the reinsurer is a bit further away from the market then the direct writer. In one instance, a guaranteed issue product, where the reinsurer had understood certain things about how the marketing was to take place, was discovered being marketed in AIDS hospices and similar places. That product had to be withdrawn pretty quickly. There has been some direct marketing of products as well. In fact, one critical illness product was direct marketed. A reinsurer was heavily involved in the development of that product. In fact, the reinsurer shared in the up-front mailing expense of the rollout. Also, some unusual substandard product designs brought together a reinsurer and a direct writer.

Why work with reinsurers versus consultants? From the point of view of the direct writer, clearly an advantage of working with the reinsurer is that you're not paying these exorbitant hourly rates right at the outset for high-priced consultants to do a lot of good work, send you a big bill, go away, and never care if the thing is a success or not. I used to be a consultant, by the way, so don't take that personally. On the other hand, there are some advantages in that approach, too. When a company is paying dollars up front, they tend to make more sure that it will be a success. They tend to put more effort into it. They know they're investing a lot of money up front. One disadvantage for the reinsurer is that the reinsurer can spend an awful lot of time and effort up front and not see much come of it later. It's always a question on our part, as reinsurers, where we draw the line on doing a whole bunch of work for free on a contingent basis. How do we choose the people with a reasonable probability of success? Then the basic issue is just getting paid for the work we do. Clearly we're not in the business of fee for service. We are in the business of providing reinsurance. So, again, achieving the right balance is always somewhat of a struggle.

Mr. Mahoney: Actually, the term “near future reinsurance” might be a little bit of a misnomer. I think some of the items are currently happening, but in the next 6–18 months, there are going to be more of these types of partnerships. Both Mike and Dave have mentioned a number of times that “partnership” is the key. The reason for a partnership might be to round out a portfolio in an area that a direct writer does not have expertise. A marketing organization may approach the direct writer with a need for a product on which the company doesn't want to spend the resources, but the reinsurer is more than happy to take a chance.

In a more distant future, several things are currently under development. For asset management, I think a fair bit is happening with equity-indexed products and variable annuities, where the reinsurer is actually providing some service or is acting as a conduit for that type of service. Our company has not thought a great deal about doing actuarial modeling, but I think eventually we will. Basically, it involves providing financial capabilities to assist in analysis. There is also administration, not from the reinsurance administration side, but actual policy administration. I know some companies are expert in that now and others will be entering the market soon. Marketing via need actually needs clarification. That means a customized approach to either market surveillance or market intelligence, and the possibility of selling.

Now I'm going to talk about a case study on a little more detailed level. The topic is longer duration term products. When I finish this, Dave is going to talk about the Canadian experience. I think he will drive some points home that I will make initially. One point is that in the U.S., long duration term products mean 20-, 25-, 30-, and 40-year level premium term products. They're in their early stages. Certainly from an experience point of view, we don't have a lot. They are certainly with us to stay. We did a survey of 16 companies, all of which had a 30-year product. These are fairly new products, although the first quarter of 1997 in the term world is not that new anymore. These 16 companies represented all types of distribution channels, including direct response. A result of the survey is that the 30-year term is far more popular than the 25-year product. There may be some sense to that. It ties in with family mortgages quite well. It also is focused more on market—people who are thinking about income replacement to retirement age at 65, although not exclusively.

Chart 1 has a survey point that points out the average maximum issue ages that we see. The third column shows 50/45, and the bullet says that that segment had a maximum issue age of 50 for nonsmokers and 45 for smokers. Some of the reasons for selecting these relatively low maximum issue ages are cash-value and reserve related, but also market-need related—income replacement for that length of time and probably the premium cost. Companies probably think it's just basically not attractive to offer a term plan over age 50.

Chart 2 has another survey point that addresses the types of statutory reserving methods used. It is interesting to note that four companies were fairly conservative in their approach and used a GAAP-type reserve, actually holding reserves higher than unitary reserves.

I don't think there are any unique pricing issues, but I think it's a nice segue into the things that we would normally pay attention to when we're pricing a long duration term product. Later I'm going to make a point about one item in particular that I think is worth a lot of attention. Certainly in the term world mortality is very important. There's no way around that. Nevertheless, here's the key that we found in this case study. Persistency deserves a whole lot more attention than it's getting. The question is, what is good persistency? We really should ask, what is accurate persistency from a pricing perspective? Are high ultimate lapse rates good? It depends. It translates into better profits. We looked at something that's a reasonable set of lapse rates, and we compared that to the extreme case where you have no lapsation. The reasonable set of lapse rates vary by issue age, of course, but they're in the 12–15% duration 1 range and grade to an ultimate of 5–8%, depending on issue ages. I think Dave's going to tell us that 5–6% ultimate lapse rates are a little on the high side. Table 1 really tells the story.

TABLE 1
30-YEAR TERM PROFIT PROJECTION

	Present Value		
	5%	**8%**	**11%**
Net Revenues			
Pricing Lapse	912	872	681
0% Lapse	2244	1947	1521
Net Benefits			
Pricing Lapse	(1036)	(769)	(574)
0% Lapse	(4026)	(2889)	(2040)
Stat Net Income			
Pricing Lapse	(125)	103	107
0% Lapse	(1782)	(942)	(520)

The two numbers to look at are the statutory net income items under the 8% column. With these nice pricing lapse rates, which I didn't think were unreasonable when I first started this, you generate $103,000 of present value of profits, while with no lapses you lose almost $1 million.

Everything is going to vary by company, the target market, the client base, and even the sales techniques used, whether it's direct response, multilevel marketing approach, or professional agency approach. We came to the conclusion that we need to look at some real experience, which we just have to look a little north to Canada to find. The exposure to persistency risk is real. Some products in the survey were fully guaranteed; some were not. The pattern of earnings is important to track as well. It's the ultimate extreme of feast and famine—make some good stat income in the early few years and then hang on to your seat. Hopefully, you made enough to cover losses thereafter. We're paying attention to what's happening with Regulation 147 and its non-New York Regulation XXX counterpart. I would highly recommend that in pricing this type of a product, you do a lot of sensitivity testing.

Mr. Pelletier: In Canada, we've had what we call the T-100 product. The term 100 product has been around for 10–15 years. I'll take you through the environment in Canada: what allowed these products to develop, how experience has developed over time with the products, a bit about the products themselves, what kinds of assumptions were made initially when these products were introduced, what the actual experience has been like, what impact it's had on the companies and on the market, and what lessons can be learned from the experience.

There is a lot of difference between Canada and the U.S. It's important to go over these briefly so you understand where we're coming from. First of all, there aren't any product or rate approvals required in Canada for any kind of product. Once you're licensed to start operating and you're doing everything right in terms of how you license your field, at the product level there are no product filings or rate filings. We're able to operate in a very sensible fashion. Also, there are no nonforfeiture requirements. Again, it's a very big part of your environment in the U.S. We don't have to worry about that. That provides a lot more in the way of creativity and flexibility as we put together products. Our customers do love guarantees. You have very little in Canada in the way of adjustable features. Even in UL, the cost of mortality charges are usually fully guaranteed as long as the customer continues to hang on to it. Our financial reporting environment is pretty different as well. We don't have this U.S./GAAP stat dichotomy. We have one financial reporting basis. Our Canadian GAAP is the same thing as Canadian stat. It's not quite like any of your bases in the U.S. It's essentially a first principles gross premium valuation. We use the real premium in doing our valuations. Reserves are based on present value of future benefits and expenses, including surrender benefit, death benefit, and any other kind of benefits less the present value of future gross premiums. The assumptions are reviewed every year. The kind of thing that you saw there with forecasting losses in future years can't happen in the Canadian environment because as soon as you see a loss coming, up go your reserves so you're not deferring losses into the future. It's a very different financial reporting environment.

There are two basic types of lapse-supported products. One is the term to 100. Essentially, fully guaranteed level premiums are payable until death. Originally no nonforfeiture values whatsoever were offered. This was just like a good old-fashioned nonpar insurance, but with no cash values. Later on some of the product versions did bring in some minimal values, but they were still far below any kind of natural reserve level. Some other products brought on some paid-up values or extended term benefits, but no cash values. Another variation that came along later was a version of UL. Instead of having the typical YRT cost of insurance charges, these charges were levelized.

You still have a separate UL account and fund, but the mortality charges applying year by year are levelized for life instead of on a YRT scale. It is a T-100 product embedded within the UL. There's no nonforfeiture value associated with those cost of insurance rates.

Clearly, when you have no cash values, you have a tremendous profit that falls back into the insurance company. Over time, if it's a permanent product, we all know more people die later than die initially. The company is building up a big reserve. The client lapses the policy and that reserve is no longer needed, so it's released and becomes a big profit. What companies were doing to get a competitive advantage was taking into account these higher projected future lapses to essentially discount the premiums to arrive at a much more competitive premium initially because of all the profits that would occur later when people lapsed. What kinds of assumptions were made? They were developed initially by brokerage companies that brought the products into Canada. Essentially, companies were more experienced with term policies than permanent policies. Originally, they were often using ultimate lapse rates in the very early versions around the 6–7% level. The CIA mandated early on that you couldn't use for valuation purposes a rate higher than 3% unless you could find some way to justify it. For pricing purposes, you might have seen rates initially along the lines of 6% or 7%. An increasing order of concern about lapses arose even in the early years. Lapses started to come through a bit smaller than expected, so you have ultimate rates being used at 4% or 5%, then maybe down to the order of 3%, and now even lower.

Table 2 breaks out the experience essentially by face amounts. You can see the lapse rates if you go across a given year. For example, year 8 yields 2.4% for the small policies, 2.6% for the $100,000 policies, and 2.0% for the policies in excess of $100,000. You'll recall those 5–7% assumptions that I showed you that people made in the early versions, but here they're coming through already by duration eight at 2.4%. These policies are possibly going to go to age 100. These are clearly well below anything that was assumed. What's interesting, as well, is that these rates are getting lower and lower—2.4%, 1.8%, 1.7%, 2.0%, 1.7%, 1.4%, and 1.1%. The tendency is clearly down. You're also getting antiselection by amount. The data become more limited as you get toward the later durations, but you can see the trend is down and is antiselective by amount.

TABLE 2
TERM TO 100 LAPSE RATES

(In %, by number)				
Policy Year	**Under $100,000**	**Exactly $100,000**	**Over $100,000**	**Composite**
1	10.8	10.0	6.9	9.8
2	8.4	8.4	6.7	8.1
3	7.9	8.1	6.5	7.7
4	6.1	6.7	5.2	6.1
5	4.6	5.0	4.1	4.6
6	3.6	3.6	3.2	3.5
7	2.8	2.9	2.4	2.8
8	2.4	2.6	2.0	2.4
9	1.8	1.9	1.5	1.8
10	1.7	2.0		1.8
11	2.0	2.0		2.0
12	1.7			1.7
13	1.4			1.4
14	1.1			1.1

Source: CIA's Committee on Expected Experience

Table 3 features lapse rates by issue age and duration. The four columns are for younger issue ages, middle ages, the oldest ages, and a composite. You can see here as well a trend of lapse rates getting lower and lower as you move toward the older issue ages. That's bad news because those people who are buying policies at younger issue ages will tend to become older. Therefore, it's quite likely that as those clients get older and older, you're going to be seeing lapse rates that are on the order of what you see at older ages today. These are far below the original assumptions that were made. A lesson here is that if companies are assuming lapse rates of 6% or 7%, that assumption should be reconsidered.

TABLE 3
TERM TO 100 LAPSE RATES

(In %, by number)					
Policy Year	Issue ages 25-34	Issue ages 35-44	Issue ages 45-54	Issue ages 55-64	Composite
1	11.7	8.9	7.3	5.2	9.8
2	9.9	7.6	5.9	3.9	8.1
3	9.6	7.3	5.2	3.6	7.7
4	7.8	5.5	4.3	2.7	6.1
5	5.6	4.3	3.0	2.1	4.6
6	4.2	3.4	2.5	1.7	3.5
7	3.5	2.6	2.0	1.4	2.8
8	3.2	2.2	1.4	1.0	2.4
9	2.4	1.7	1.1	0.9	1.8
10	2.1	1.7	1.3	1.0	1.8
11	3.1	2.2	1.4	1.2	2.0
12	1.9		2.1	0.9	1.7
13				0.8	1.4
14					1.1

Source: CIA's Committee on Expected Experience

Another impact of our results in Canada is the rate of interest assumed. Back in the mid-1980s, rates of interest were much higher than they are today. At the time, rates were in the order of 12%, yet the pricing actuary would be assuming some degree of slow grading down of these rates in the future. Keep in mind, these premiums are guaranteed. Eventually, for pricing purposes, rates moved down to 10% and then 8%. They are now a good deal lower than that. Rates have dropped like a stone over the years. Companies that were pricing at rates like 12% or 13% in the mid-1980s now are investing these premiums at 6% interest.

What kind of impact do these two things have? First of all, on the interest side, it's interesting that these products have an incredibly long duration. The duration can be literally over 50. Companies have the reinvestment risk of the future premium coming in at rates in the future at unknown levels. If reserves are calculated at a certain interest rate and the interest rate changes by 1%, reserves can be as much as 50% higher across the whole portfolio.

As a result, you have incredibly long durations. Nonetheless, assets that long don't exist. This has been a boom for the issuers of government bonds in Canada. Every insurance company that has products like this have been buying up these 30-, 35-, and 40-year bonds and stripping them as much as possible to get to the ultimate maturities. There has been huge reserve strengthening on our Canadian GAAP/stat basis because of both the interest factor and the lapse factor. As the lapses and the interest rates came down, huge increases in reserves year by year were required, resulting in losses in some companies' financial results and new tightened capital requirements. We have our Minimum Continuing Capital and Surplus Requirements (MCCSRs), which is kind of like the U.S. Risk-Based Capital (RBC). We introduced into the MCCSR a lapse component basically because of this kind of product. What companies have to do is recalculate reserves based on a tighter lapse assumption. The difference between that new calculation and existing reserves has to be set up as a capital requirement.

A lot of companies writing these products were subsidiaries of foreign companies, both European and American. A lot of capital came into Canada in order to maintain the solvency level of the companies. A lot of companies have left Canada over the last few years. There has been a lot of discussion about why that has happened. Certainly part of it has been the lousy financial results over the last several years. Companies liked to coinsure some of this risk initially, but they thought they were going to make a lot of these lapse profits. Some of the reinsurers were smart enough not to take on much of this business on a coinsurance basis. But over the last few years, some companies suddenly have become interested in coinsuring this business to pass out the lapse and investment risk to the reinsurer. Typically we'd find that the reinsurers were a little more conservative than the direct writers when it came to lapse and interest assumptions. As a result, companies just weren't able to find competitive bids that made it attractive for them to coinsure.

What lessons can we draw from this experience? These customers were smart. They've hung on to these policies. The brokers did an excellent job for their clients. As the UL variation came along with this embedded levelized cost of insurance, the actuaries tended to fall into the same trap again, thinking UL would have higher lapses. The broker soon figured out that they could buy T-100 through UL rather than buying the old T-100 when T-100 prices started to rise. The prices didn't move up as fast on the UL version. As a result, brokers would eventually sell a UL product but with minimum funding to essentially reproduce what the T-100 result would be.

Long-term guarantees are great for the customer. The question is whether the Canadian industry should have been selling this kind of product because of those long interest guarantees. Again, a product has a duration of 50 or more. Companies can't match that. They can't do any kind of asset/liability management (ALM) effectively. We should have thought our way through that a little better at the outset or at least recognized that ALM really matters. A lot of companies didn't understand early enough how long a duration these products have. Somehow the notion of a duration of 50 just seemed incomprehensible. As a result, assets were kept far too short. As interest rates dropped, the liability started to skyrocket relative to the movement on assets.

Finally, innovation in product design is to be encouraged. It has been a very good thing for the consumer. Not having nonforfeiture values and other requirements prevalent in the states can be a good thing. We have to be sure as reinsurers and direct writers that we properly evaluate the risks and price for them appropriately.

Mr. McMahon: Thanks for those lessons. It's always hard for us as intellectual people to have these humbling experiences in our professional life. We'll see here in the U.S. whether we've learned anything from those lessons in a coming trend called secondary guarantees. This is a close cousin to the T-100 products that have been in Canada for years. Secondary guarantees started out mildly as five-year, no-lapse guarantees on UL products. They appeared again in a more aggressive version as guaranteed minimum death benefit provisions in variable UL policies. Then they moved on, having learned some of the lessons in Canada. We have very competitive, cheap term-like guarantees today that provide coverage for 20 to 40 years and now, similar to Canada, 50-year and lifetime guarantees. There are restrictions on the products. A UL chassis is being used, but the customer has to pay a minimum cumulative premium. The newer versions are appearing with some catch-up provisions and grace periods that give the customer some flexibility but create some extra risk for companies from an investment, lapse, and mortality standpoint.

The current version started out in the survivorship marketplace, but it quickly spread to the single life products. The feature takes advantage of the lower reserve provisions in the UL model valuation regulations. I'm not going to go into that aspect because that's not the scope of what we want to talk about. Several states won't approve this provision. Of course, there has always been change on the horizon in our industry. The new *XXX* proposal, if it's adopted in its current form, will likely shorten the guarantee periods or significantly raise the guarantee premiums if companies stick with a long guarantee. Also, 1999 could well be another 'fire sale' year, as these products are introduced to take advantage of the window before the new regulation goes into effect. There could be a replacement sale too, unless the new NAIC replacement model regulation can go into effect pretty rapidly. I think there will be a lot of turmoil in the industry next year. We talk about *XXX* being something that will reduce the amount of chaos. The new version of *XXX* will reduce the chaos in the marketplace once it's in place.

As companies all rapidly consider what they're going to do with secondary guarantees, there is a role for reinsurers in the marketplace. I think that the mortality risk is something that many companies will be looking at with the mortality at older ages being an issue. Using the database, research, and resources of a reinsurer can be very helpful in making an assumption. Premiums being as competitive as they are in this marketplace, if the company isn't using a reinsurer, there may be a need for extra excess risk reinsurance because premiums are so low that people may get more insurance then they would have under other circumstances. Finally, I think there's going to be research in the financial reinsurance arena. I'm sure companies are probably looking at that already. Companies will be looking for creative ways to use financial reinsurance to help bring more competitive products to the marketplace.

Mr. Gayle E. Emmert: I have two questions. For a U.S. company to sell term to 100 in Canada, can you sell that without a cash value requirement in your own company, or do you need to sell it in a subsidiary company?

Mr. Pelletier: If you have a subsidiary in Canada, then you're not subject in that subsidiary to any American law whatsoever. If you have a branch in Canada, that would be a U.S. question. I don't think you would be because you're selling to Canadian consumers.

Mr. Emmert: Will I still have U.S. reserve requirements?

Mr. Pelletier: Yes, you will. You can get killed on the U.S. stat basis.

Mr. Emmert: I wasn't sure about the cash value requirement on U.S.

Mr. Pellietier: You wouldn't even want to think about doing it in a branch because your U.S. stat requirement for deficiency reserves would just go through the roof.

Mr. Emmert: What are companies doing to avoid cash values if they sell a 30-year term duration above age 45?

Mr. Mahoney: That's one of the limitations for relatively low issue ages.

Mr. Howard M. Auerbach: With all the services reinsurers want to provide besides the field force, what do you need the direct company for?

Mr. Mahoney: That's why we call it wholesaling.

Mr. McMahon: That sounds more like a comment then a question. One thing a direct writing company needs to consider is whether they are really just fronting for the reinsurer. You have to be sure you're providing value for your company and field force and that the arrangement also makes sense from a regulatory standpoint.

Mr. Auerbach: On the term to 100, it does look like lapse rates have something to do with the product not being offered anymore. Do you have any idea what happens in a more normal environment when there's competition?

Mr. Pelletier: You're right. The fall in interest rates and lapse rates means that newer products have been priced at higher premium levels. After all, these are level premium products. If someone buys at age 30, they have that level premium locked in at age 30 rates. So even if prices haven't moved, you wouldn't have had that much lapsing going on anyway.

Mr. Paul Margus: Regarding the first dollar quota share, my impression is that it's popular because the reinsurance companies have "mad dog" pricing. Everything is ridiculously cheap. Reinsurers are not subject to the illustration regulation constraint. Rates can have buried in them the improvement of mortality and the lapse support. It can serve largely as an assumption laundering mechanism. At some point, are we going to be left high and dry when you raise your rates?

Mr. Mahoney: There are some very aggressive quotations out there. It's a competitive marketplace and that's part of what's driving that. There is also some optimism about medical advances and how that can affect our business.

Mr. Pelletier: In the Canadian environment, the issue is different based on Canadian statutory financial reporting. Even YRT can really help eliminate surplus strain. That combined with the reduction of the mortality component in our version of your RBC can produce a far better ROE for the customer. That's been a big part of a driver in Canada, rather than the illustration issues.

Mr. Michael Palace: I would be curious to know whether there is any evidence of the low lapse rates in Canada leading to any improvements in mortality over what was originally expected. Second, in light of the new *XXX* proposal achieving widespread industry acceptance, both by companies and regulators, would you elaborate a little bit on how you feel the products will be configured under the proposed *XXX*?

Mr. Pelletier: I'll just deal with your question about the Canadian mortality. Mortality in Canada has continued to improve a lot. Part of it may be due to this, but it's improving also on regular term products. We haven't really been able to break out of this particular product. It hasn't done that much better than anything else. If anything, you'd expect worse mortality on term since you have antiselective lapse taking place and much better mortality on T-100. It hasn't really been that far apart.

Mr. McMahon: The easy answer to the *XXX* question is that prices will go up and guaranteed periods will come down. I would think the 30-year term products would lose some of their sizzle. The 20-year term rates may go up slightly, but it still will be an attractive product. Secondary guarantees most likely will have shorter periods, down to 20 years.

Mr. Michael L. Barsky: Regarding reserve methods, you reported that 10 out of 16 companies are using unitary reserves. I would just like the panel to comment on the appropriateness of that, even for companies that are only operating outside of New York.

Mr. Mahoney: Companies are always going to apply a 0.5 Cx floor, which seems to give a reasonable reserve level. Speaking as a reinsurer, our approach is to look for our profits over the level period of the product. It doesn't help you a whole lot because the reserve pattern tends to run out for the life of the business.

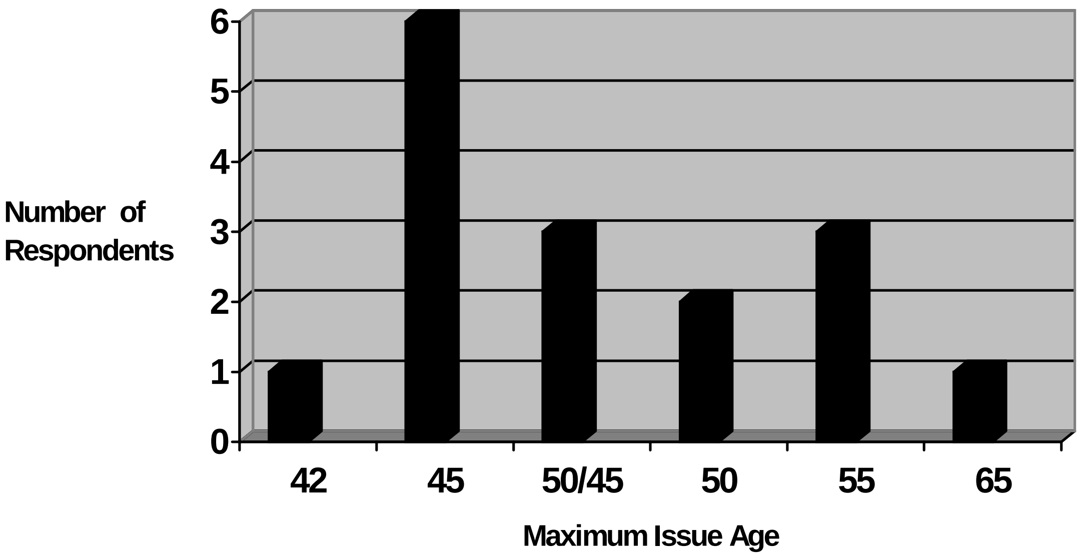
Mr. McMahon: We aren't using unitary reserves, so I'll just speculate what other companies might be considering. I think one possible scenario would be that a company might use unitary reserves on a term product because they have surplus reserves on other product lines. That would mean an overall adequacy test can be met.

Mr. Stephen A. Hardacre: Typically, insurance rates in Canada are guaranteed for the length of the contract, so it's not as much a concern as it might be in the states where the reinsurers might have the right to raise rates. Dave, would you like to comment on joint last-to-die lapse rates on T-100?

Mr. Pelletier: That's a good clarification Steve made. I should have mentioned that, just like at the consumer level, all reinsurance rates to the direct writers are fully guaranteed. All of our rates are guaranteed so that surplus strain comes way down as a company uses reinsurance. To the extent that reinsurance YRT rates are lower than the company's valuation mortality rates, it releases a lot of reserve strain.

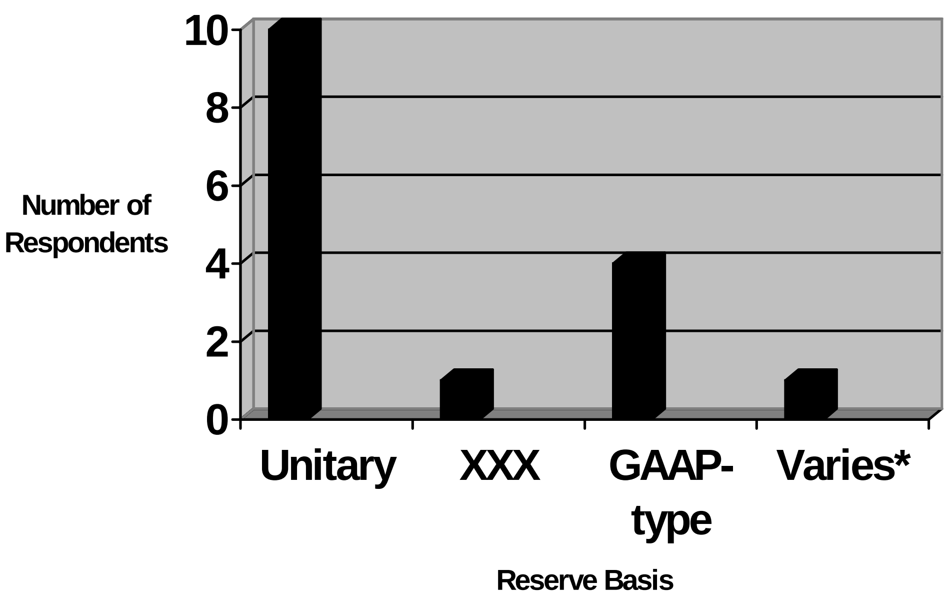
The joint last-to-die lapse rates are a concern. Those lapse rates tend to be lower than single policy rates and use of equivalent ages tends to result in a younger age. You can end up having a double whammy. First of all, the single age you're using is younger; therefore, you're using higher lapse rates than it would be at the age of these people. Second, the joint last-to-die lapse rates are lower anyway. It's been a concern of some of the companies and some of the reinsurers.

CHART 1
SURVEY RESULTS—MAXIMUM ISSUE AGE



*Age 50 Nonsmoker, 45 Smoker

CHART 2
SURVEY RESULTS—RESERVE METHOD



*Varies by state, using rider approach