Assurances

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Earthquake capacity

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Reinsurance Dialogue

between

Christopher J. Robey*

and

David E. Wilmot**

February 16, 1996

Dear Mr. Wilmot,

Earthquake capacity

In your letter, you touch on two separate but related topics, the cost of earthquake capacity and the source of new capacity. First let me comment on the cost.

You develop an excellent argument to justify a minimum rate on line for catastrophe reinsurance of 2%. However, despite its logic, it is difficult to justify to an insurance company that it should give its reinsurer a 50 year rate on its 500 year protection. Certainly a substantial margin is justified because it is impossible to guarantee that the loss will come at the end of the 500 years, not the beginning, but a 200% mark-up would seem to be enough for that.

Of course the reinsurer's shareholders are entitled to a reasonable return on their equity. You quote a rate of 7% on a cautious investment, which I shall also use as my starting point. You then suggest a pre-tax return of 20% in all, making for a risk premium of 13%. You go on to calculate the equity at risk as the limit of catastrophe cover less the premium. On this basis, the

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risk to the equity in a 200 year to 500 year earthquake cover is minimal. It does not seem right that the same risk premium apply to all the business a reinsurer writes and earthquake protection should surely fall into the lower range. I am not suggesting that the rate on line for a 200 year exposure should be 0.5%, but 1%, for example, the rate at which it was written for many years, does not seem unreasonable. At the last renewal season, the rate did slip below 2% — whether because the reinsurers were willing to live with a lower return, had bowed to commercial pressure or just did not know what they were doing I cannot judge, but given the stature of many of them, I presume it was a willingness to live with a lower return. Ultimately the rate will settle each year at a level which takes into account a combination of the rate of return sought, alternative possible uses of the capital and the need to compete in a commercial marketplace. It is unlikely we shall see 1% rates on line in the next few years, but I suspect that we shall find 2% at the high end of what will certainly be a fluctuating norm.

I was glad you found some merit in my proposal for the creation of a new class of approved reinsurer specializing in catastrophe business. I agree that, ideally, they should be restricted to earthquake protection, but I do not think this is practical, since most reinsurers seek a spread throughout a catastrophe program to produce an average rate on line higher than 2%. You stress the need for international reinsurers at the top end of a catastrophe program and I agree that this is essential. However the "Canadian reinsurer" to which you frequently refer is almost always an international reinsurer capable of a geographic spread of risk and therefore able to participate at all levels of a catastrophe program. It seems only fair to offer the same possibility to the reinsurer which offers its capital to the Canadian market to alleviate the shortage you describe.

Although the insurance and reinsurance industry appears to supply the capacity demands for earthquake, you are right in saying that they are unable to meet the true requirements and new sources of capacity are needed. In the United States and Europe, there is much talk of tapping into the capital markets to augment the capacity available from traditional sources. Other initiatives, such as the trading of options on the Chicago Board of Trade are not available to the Canadian market for lack of a reliable index against which a catastrophe loss can be measured. Given the limited demand, it is unlikely that anyone will be willing to fund the research needed to create similar options trading here.

You suggest that a key to generating the full capacity needed is to charge a true price for the coverage given in earthquake prone areas. This is an ideal approach, but may not prove too practical. Part of the problem lies in your earlier discussion of the minimum price for earthquake reinsurance, which must be raised from insurance premiums. Insurers will not be able to afford a 50 year price for a 500 year event if they can only charge a "true" 500 year price to their insureds. On the other hand, charging enough to be able to afford a 50 year reinsurance cost may put too great a strain on the local economy.

It seems to me inevitable that other parts of Canada must subsidize the earthquake prone areas to avoid the economic disruption which could result from making them carry the full load. This is already done to some extent by insurance rating practices, though much of it may not be intentional. It would also result from the federal government support which would certainly flow into the area following an earthquake. However, it is probably preferable to continue to do it quietly rather than make it public policy, since an official public policy initiative of that type is unlikely to be well received elsewhere — rather like the "let them freeze in the dark" attitude of some southern Americans to their northern compatriots during the energy crisis.

A major insurance industry response to the potential lack of capacity has been to seek more government involvement in British Columbia and a similar response seems likely in Quebec. Certainly some form of government involvement may be necessary to carry us through to a point where the economy can fend for itself, and perhaps we may never reach that stage. My inclination is to involve the government as little as possible in our activities, partly to avoid any more control on them than necessary and also because it may prove difficult in the future to convince them that they should only do the parts we cannot or do not want to handle ourselves.

Both government and the insurance industry in any case can do no more than redistribute money obtained from Canadians, and they do not always do it too efficiently, so a plan which left some of the money in the hands of Canadians to begin with could have more of an impact.

Most Canadians are familiar with the advantages of registered retirement savings plans and a similar plan could be developed to enable them to finance their earthquake deductible, in time permitting them to carry a higher deductible than at the moment. This would itself provide additional capacity, as well as making the individuals more aware of the risks they are taking and therefore more ready to take precautionary measures. It also has the advantage that the money is already in the hands of the people who need it and thus can be put to work immediately to generate the economic activity which will be vital for the area to recover. The more the immediate needs of the population can be met, the more the government can concentrate on those things for which it has direct responsibility, such as roads, sewers and other basics of infrastructure.

Given the potential damage from an earthquake in Vancouver or the Montreal Quebec City corridor, it is only by marshaling all the sources of available capacity that we can cope — government, the insurance industry, capital markets and individual Canadians themselves. How this is done will go a long way to determining the speed of economic recovery and the viability of the insurance industry after the event.

Price of security

Just as there are different sources of capacity, the level of security each offers is not the same. Different basic types can demand different prices. The coverage provided by a reinsurer does not have to be priced identically to that provided by the capital markets, indeed it would be difficult to compare the pricing exactly because of the different nature of the coverage provided. Within the capital markets, the price for capacity through equity investment is not comparable to that through the use of derivatives. Since the capital markets are involved in the Canadian market only through equity participation at the moment, and that usually through foreign filters, often several layers thick, I shall limit my comments to the level of security offered by different reinsurers.

We discussed in these pages, back in October 1990 and January 1991, the well-known but never seen "most favoured reinsurer clause" and my subject this time touches on it again, albeit in a narrow context.

It is established that a ceding company must offer all reinsurers on a specific contract the same terms and conditions. On a catastrophe contract, this would mean the same rate, the same coverage, the same definitions and the like. Since the contract contains the rights and obligations of both parties, reinsurers provide identical terms and conditions to the ceding company. There is one important difference, however. The reinsurers get only one ceding company, but the ceding company gets many reinsurers — we have as many as sixty on one catastrophe program. The main purchase of the ceding company is the ability of the reinsurer to pay a loss when it happens, but reinsurers do not all offer the same ability to do so. Why then should they all receive the same consideration for a promise they have differing abilities to keep?

Several outside agencies issue ratings for reinsurers. The best known in North America is probably Best's in the United States, which has long been accepted by insureds as a measure of the security offered by their insurers. Indeed, American insurers are generally much more conservative reinsurance buyers than their Canadian counterparts and the main reason seems to be protection of their Best's rating. In Canada we have the T.R.A.C. Report and internationally there are such analysts as Standard & Poor's and Moody's, which offer ratings on North American companies as well.

Reinsurers do, of course, use the level of security they offer to attract business, however this approach is rather like curb appeal in a house for sale — it may speed up the sale, but not increase the price. On the other hand, we frequently read in the newspapers about a possible lowering of this or that municipality's or province's credit rating and how many millions of dollars extra it will mean in interest payments on their bonds.

This idea of risk/return is certainly not foreign to the insurance business, since it is the basis of rating both insurance and reinsurance. Reinsurers charge more for lower layers of a catastrophe program than for the higher ones. But this is a one way arrangement. The ceding company only has the choice of rejecting a reinsurer it does not feel offers the level of security it wants. In many cases this is a viable option, since reinsurers offering the highest level of security can fill out most contracts at the risk level, other than for a few types of risk which many shun. The reinsurer with a lower security rating must compete on price or other conditions to compensate for the lesser security it offers and the ceding company must then measure the trade off it is being offered. Frequently the difference in security level is not great and the time frame in which performance on the contract is expected is sufficiently short that the ceding company will not see a difference in security sufficient to justify an increased cost. The more secure reinsurer will thus have to forgo any advantage its security would otherwise give it.

In catastrophe business and some very long term casualty lines, however, small differences in the relative level of security have greater importance. In the longer term casualty lines, the ceding company wants to be sure that the reinsurer will still be in business when it comes time to pay the claim and the higher level of security, while offering no guarantee, does increase the probability.

For catastrophe business, the considerations are different. Time is not a factor, since the bulk of losses are paid quickly. However, the ceding company is looking for a reinsurer which can resist the impact of a huge catastrophe. And it cannot limit its concern to the top layers of protection — the lower layers will have to pay out on the largest loss as well.

For smaller programs, where only a limited number of reinsurers are needed, the ceding company can pick and choose its reinsurers in the same way as on a risk level contract, but for the ceding company with a large program, it may have to settle for some reinsurers which offer a lesser level of security that it might accept on other parts of its reinsurance program. It seems to be a principle of insurance and reinsurance that bad security is better than none at all, which is the basis of many of the scams which abound in our business. It is unlikely that a Canadian ceding company would need so much capacity that it would have to choose between otherwise completely unacceptable security or none at all, although that could also change as the demands for more and more earthquake cover grow.

Nonetheless, a larger catastrophe program will certainly have on it reinsurers offering a variety of levels of security, but all receiving the same consideration for the different product they are providing. In other financial services, there would be different prices for the different levels of security offered, so why not in reinsurance?

There would be many details to be worked out, for example the difference in price for each level of security, whether the premium would be adjusted if the security rating changed during the term of the contract, or whether the ceding company could even remove a reinsurer from the program if its security rating dropped below a certain level, a modification of the sudden death clause we did not discuss when we exchanged views on that subject. However we have a vibrant negotiating system in our industry in Canada and I would certainly trust it to work out those sort of details.

More difficult would be deciding on the rating agency, or agencies, which would be used. T.R.A.C. and Best's have the advantage of covering almost all the companies in their market, but the disadvantage of being limited to one country. Standard & Poor's, on the other hand, covers all markets, but there are more gaps and it uses a different system for the United States than for the rest of the world — and two different systems within the United States. I am not familiar with Moody's ratings for the insurance industry. Agencies writing for several companies present particular difficulties, involving not just the ability of the member reinsurers to pay but also possible administrative difficulties if the agency itself does not survive. And then there is Lloyd's.

For the sake of fairness, a common system across all markets would be necessary, or at least a generally accepted system of equivalencies across different rating systems. I have no doubt such a system could be worked out and, if this approach were adopted internationally, the rating agencies would quickly adapt to it. It is unlikely, though, that they would do so just for the Canadian market.

Such an approach of price based on more than just the cover given could be extended to include other considerations, the most obvious being a differential for being licensed. To some extent there is already a differential in the requirement for the unlicensed reinsurer to deposit outstanding loss reserves with the ceding company. However, this need not be a major differential and is of course non-existent in a contract without a loss, which is true of most catastrophe contracts in most years. On the other hand, given the need of the Canadian market for all the capacity it can muster for its earthquake exposure, perhaps it would be best to limit the differential pricing to the level of security the reinsurer offers.

Yours sincerely

Christopher J. Robey