Memorandum

Date: Thursday, February 02, 2006

From: Ian Norris, CIC

To: ALL

Subject: Commercial Coinsurance

The following piece on commercial coinsurance by Chris Boggs does a great job on covering this sometimes-thorny policy matter. We hope that you find this helpful and please contact our offices with any question or concerns.

Commercial Coinsurance

By Chris Boggs

July 20, 2009

Coinsurance provisions found in property policies exist primarily to assure that the insurance carrier receives adequate premium for the risk insured. Without a coinsurance condition, and its applicable penalties, insureds might be willing to purchase an amount of coverage somewhat less than the value of the subject property because of the statistically low probability of a total loss. The purchase of lower limits lowers the collectable premium which ultimately necessitates higher rates.

"Maximum" Losses

Property is subject to two types of loss "maximums" which can lead to the discrepancy between insurable value and the insurance carried as alluded to in the first paragraph: 1) Maximum Possible Loss (MPL); and 2) Probable Maximum Loss (PML). The key terms are "**possible**" and "**probable**."

It is "**possible**" that the entire structure may be destroyed in any one loss; thus the MPL is the entire value of the structure - the Total Insurable Value (TIV). However, a partial loss is statistically more likely than a total loss, thus the amount of the expected loss is considered the structure's "**probable**" loss.

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A structure's PML is based on several factors; its construction, the occupancy and the protections against losses employed in the insured structure. These are three of the four **COPE** factors property underwriters use in making coverage and pricing decisions ("exposure" is the fourth).

For example, a match manufacturing operation within a frame building (construction class 1) with no sprinkler system and located within a public protection class 9 fire district is far more likely to suffer a nearly maximum loss than is a fully sprinklered, modified fire resistive (construction class 5) office building in a public protection class 3 community. The PML of the match manufacturing operation closely approximates and may even equal its MPL; whereas the PML (again, the probable maximum loss) of the office building is likely closer to 40 or 50 percent of the MPL (maximum possible loss). To clarify, the match manufacturer is likely to burn completely to the ground, while the maximum expected fire loss to the described office may be limited to only half of the building.

Insureds with the greatest difference between the PML and MPL, lacking the coinsurance provision, might only purchase enough property protection to cover its probable maximum loss (PML). In the case of the office building, the insured might only purchase 50 percent of the total insurable value (TIV) since that is all they expect to be damaged or destroyed in the worst expected loss. A degree in engineering or fire science is not necessary to judge the potential fire loss or threat posed by other perils, so insureds can arrive at the same conclusions.

The insurance industry realized this potential (some carriers may have even been victimized by such practices) and in the late 1800's to early 1900's created the now-common additional condition coinsurance. Insureds are encouraged to insure a very high percentage of the structure's total insurable value. Such requirement allows property insurers to charge adequate yet not excessive rates.

What All That Has to do With Clients

A majority of clients are probably not interested in MPL's, PML's or statistics, so explaining the computations and risks underlying coinsurance may not be necessary (or even wanted). But having the necessary background information allows the agent to better relate to the client that the coinsurance condition is not, of itself, a penalty; rather it's a claims payment and rating provision allowing insurers to keep property rates lower than they otherwise could if insureds were allowed to purchase whatever amount of coverage they so desired without penalty, regardless of the total insurable value of the structure being protected.

But even this universal coinsurance truth is nebulous to the insured. The insured simply wants to know what is required to avoid the coinsurance penalty and how their coverage and ultimate loss payment is affected by the requirement.

Simply Put

Coinsurance provisions found in property policies require the insured to purchase **and maintain** some percentage of the structures total insurable value (TIV). The most common requirement is 80 percent of the structure's TIV at the time of the loss; this means that if the insured structure's TIV is $100,000 and there is an 80 percent coinsurance requirement, the insured must carry $80,000 of coverage to receive full payment for a partial loss (less any deductible).

The **simplified** final coinsurance calculation is:

- ***Did/Should x Loss - Deductible = Payment***

"Did" (also known as *Amount Carried*) is easy to decipher, that is the amount of coverage the insured actually purchased. "Should," the *Amount of Coverage Required* (ACR), is the product of two factors: 1) the TIV of the property at the time of the loss; and 2) the coinsurance percentage required by the policy.

The "Should" calculation is:

- ***TIV x Coinsurance Percentage = Should***

"Should" for a structure with a TIV of $500,000 and a policy coinsurance requirement of 80 percent is $400,000 (TIV x 80%). Be careful to not misconstrue the term "should;" it does not and cannot be understood to mean the maximum amount of insurance coverage that should be carried, it simply indicates the minimum amount that must be carried to assure full payment of all partial losses (less any deductible).

Applying all applicable factors, the initial coinsurance calculation looks like this:

- ***((Did / (TIV x Coinsurance Percentage)) x Loss) - Deductible = Payment***

Insureds lacking adequate limits of coverage ***at the time of the loss*** are subject to the penalty prescribed by the condition. In effect, the insured becomes a "co-insurer" of the loss because they have chosen to carry less than the contractually-required amount of coverage (thus the term, "coinsurance"). Attached is an example highlighting the application of this calculation.

Notice that to be fully insured for partial losses, the insured in the attached example must carry at least $400,000. Adequate limits assure that the insured will not participate as a co-insurer in any partial loss. However, this is true only of partial losses. Even if the example insured purchases $400,000 in coverage, fully meeting the coinsurance requirements spelled out in the policy, it is still underinsured for a total loss. An insured will not be paid more than the applicable limits of coverage purchased; so if the entire building is destroyed, the maximum the insured in the attached example will receive is $400,000 and is underinsured by $100,000.

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