Direct Your Learning

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Property Per Risk Excess of Loss Treaties

Educational Objectives

After learning the content of this assignment, you should be able to:

- Describe the operation, functions, and use of property per risk excess of loss treaties.
- Describe the purpose of the following clauses designed or adapted for property per risk excess of loss treaties:
    - Retention and limits clause
    - Loss notices and settlements clause
    - Reinsurance premium clause
    - Net retained lines clause
    - Ultimate net loss clause
    - Pools, associations, and syndicates exclusion clause
    - Total insured value exclusion clause
- Explain how property per risk excess of loss treaties are priced.

Outline

Property Per Risk Excess of Loss Treaties

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OVERVIEW OF PROPERTY PER RISK EXCESS OF LOSS TREATIES

Property per risk excess of loss reinsurance can be used to satisfy the needs of primary insurers insuring large property loss exposures. Primary insurers can purchase property per risk excess of loss reinsurance on a facultative or treaty basis; however, this discussion focuses on property per risk excess of loss treaties.

Property per risk excess of loss treaties cover property loss exposures and apply separately to each loss occurring to each risk. Primary insurers use them to protect against the adverse financial consequences of large losses. Property per risk excess of loss treaties may be incorporated into a primary insurer's reinsurance program alone using a multilayered approach or in conjunction with separate treaties to reinsure the insurer's property loss exposures.

Operation of Property Per Risk Excess of Loss Treaties

Excess of loss reinsurers indemnify primary insurers for losses that exceed the primary insurer's attachment point (or retention) up to a specified amount (the reinsurance limit). For property per risk excess of loss treaties, the attachment point and reinsurance limit apply to each loss exposure (risk) and loss.

For example, a property per risk excess of loss treaty with a $50,000 attachment point and a $1 million reinsurance limit would respond to any loss sustained by any loss exposure that exceeded the $50,000 attachment point. Losses in excess of the $1 million reinsurance limit would be retained by the primary insurer unless liability for these losses is otherwise transferred to another reinsurer. Property per risk excess of loss reinsurance is often purchased in layers so that the primary insurer can obtain needed underwriting capacity.

Pro rata reinsurance usually applies on the same terms and conditions as specified in the underlying insurance policies; however, that is not necessarily the case with excess of loss reinsurance. An excess of loss treaty may cover only one type of insurance and only selected causes of loss. For example, a property per risk excess of loss treaty may specifically apply to fire and lightning losses arising out of commercial property policies.

Additionally, an excess of loss treaty may contain exclusions that do not appear in the underlying insurance policies and that preclude coverage under the treaty. Pro rata reinsurance provides the primary insurer with broader coverage, but excess of loss reinsurance provides reinsurance coverage where it is needed most.

Property per risk excess of loss reinsurance serves many of the same functions as surplus share reinsurance, but primary insurers may prefer property per risk excess of loss reinsurance. Some primary insurers consider the administrative work associated with surplus share treaties onerous because details about each surplus share cession must be reported to the reinsurer. A property per risk excess of loss treaty is easier to administer because a single attachment point applies to all loss exposures subject to the treaty, and the same reinsurance rate applies to the entire policy portfolio.

Also, some primary insurers do not want to cede the often significant amount of written premium as is required under surplus share treaties. Property per risk excess of loss treaties are priced based on the likelihood of loss in the reinsurer's layer, and usually the reinsurance premium is a small percentage of the underlying written premiums.

Functions of Property Per Risk Excess of Loss Treaties

Property per risk excess of loss treaties serve these primary functions:

- Increase large line capacity
- Stabilize loss experience

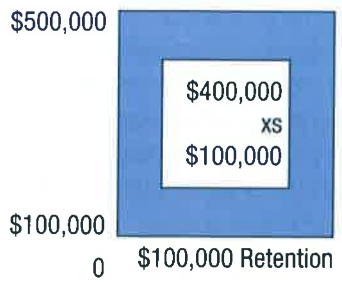
Increase Large Line Capacity

Property per risk excess of loss treaties increase large line capacity because the reinsurer usually assumes the entire exposure to loss above the primary insurer's retention. Therefore, the primary insurer is able to provide a larger policy limit than is possible or acceptable without reinsurance.

For example, a primary insurer may have the financial capacity to assume policy limits of $100,000 on each homeowners policy it insures. However, the primary insurer needs to provide homeowners policies with policy limits of $500,000 to remain competitive. The primary insurer could purchase a $400,000 xs $100,000 property per risk excess of loss treaty so that the primary insurer's largest loss would be $100,000 on the $500,000 policy limits. The reinsurer would provide the remaining $400,000 of needed capacity.

The exhibit shows how property per risk excess of loss reinsurance provides large line capacity. See the exhibit "Example of Property Per Risk Excess of Loss Reinsurance."

Example of Property Per Risk Excess of Loss Reinsurance



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Stabilize Loss Experience

Primary insurers need stable profits if they are to grow and attract capital investment. Profits depend in part on underwriting results. Excessive losses—beyond those anticipated in the insurers' rates—lead to instability in underwriting results. Property per risk excess of loss treaties stabilize underwriting results because a primary insurer's loss is limited to the retention, regardless of the size of the policy limits or loss.

Property per risk excess of loss treaties can provide some protection from catastrophe losses, but they are not substitutes for catastrophe reinsurance treaties. Property per risk excess of loss reinsurance responds to catastrophe losses, but the primary insurer must absorb multiple retentions. Alternatively, although an occurrence might cause minor damage on many loss exposures, a property per risk excess of loss treaty would not be triggered if the individual losses are within the primary insurer's retention. For example, hailstorms can cause significant losses for insurers, but the per risk loss is generally small.

Finally, many property per risk excess of loss treaties contain a per occurrence limit that reduces their usefulness in cases of catastrophic occurrences. Catastrophe reinsurance treaties are designed and priced to respond to an accumulation of losses. Primary insurers usually coordinate their property per risk excess of loss and catastrophe reinsurance agreements.

Property Per Risk Excess of Loss Treaties as Part of a Reinsurance Program

Property per risk excess of loss reinsurance can be used on a facultative basis to reinsure individual loss exposures, as well as on a treaty basis involving the primary insurer's entire portfolio of property loss exposures.

Property per risk excess of loss reinsurance can be incorporated into a primary insurer's reinsurance program in several ways. For example, a primary insurer may use a multilayered reinsurance program of property per risk excess of loss treaties to reinsure all of its property loss exposures. Alternatively, the primary insurer may purchase a pro rata treaty and a property per risk excess of loss treaty with either or both treaties responding to losses, depending on the circumstances of the loss and the structure of the treaties.

Although an effective means of transferring the financial consequences of individual losses, property per risk excess of loss reinsurance is generally not intended to address a primary insurer's catastrophe protection needs. Therefore, the property per risk excess of loss reinsurance treaty's attachment point and reinsurance limits are usually selected in consideration of the primary insurer's catastrophe reinsurance program.

Additionally, the primary insurer can purchase property per risk excess of loss reinsurance to provide needed large line capacity for specific loss exposures that have coverage needs beyond the primary insurer's reinsurance program.

CLAUSES DESIGNED OR ADAPTED FOR PROPERTY PER RISK EXCESS OF LOSS TREATIES

Some clauses are common to all types of excess of loss treaties. Because large property losses typically emerge and are settled relatively quickly, property per risk excess of loss treaties can usually be worded more simply than can casualty excess of loss treaties.

These are among the most commonly used clauses that apply to excess of loss treaties and are designed or adapted for property per risk excess of loss treaties:

- Retention and limits clause
- Loss notices and settlements clause
- Reinsurance premium clause
- Net retained lines clause
- Ultimate net loss clause
- Pools, associations, and syndicates exclusion clause
- Total insured value exclusion clause

These clauses apply to excess of loss treaties in general and to property per risk excess of loss treaties in particular. The sample clauses included in this discussion are for illustrative purposes only and should not be relied on to construct an actual treaty.

Retention and Limits Clause

The retention and limits clause for a property per risk excess of loss treaty usually specifies that the retention and the reinsurance limit apply to any one risk and for each loss occurrence. Because of the importance of the definitions of risk and occurrence in establishing the reinsurer's liability, the retention and limits clause often defines them. Alternatively, some treaties define these terms in the definitions clause.

Property losses—even large ones—are typically easy to identify. The retention and limits clause usually contains straightforward language specifying how the retention and reinsurance limit operate. In the retention and limits clause that appears in the exhibit, the retention applies to "any one risk, each loss occurrence." The reference to loss occurrence means that a *new* retention and a *new* limit apply to each loss occurrence if a single insured risk experiences losses in two or more loss occurrences. See the exhibit "Sample Retention and Limits Clause."

Sample Retention and Limits Clause

The Company shall retain and be liable for the first $100,000 of ultimate net loss as respects any one risk, each loss occurrence. The Reinsurer shall then be liable for the amount by which such ultimate net loss exceeds the Company's retention, but the liability of the Reinsurer shall not exceed $400,000 as respects any one risk, each loss occurrence.

The liability of the Reinsurer under this Contract in any one loss occurrence shall in no event exceed $1,200,000.

The Company shall be the sole judge of what constitutes one risk, with the following exceptions:

1. In no event shall a building and its contents be considered more than one risk;
2. As respects dwelling properties insured under Homeowners policies, the sum of Section I coverages shall be considered one risk;
3. In no event shall the insured values within four walls be considered more than one risk; and
4. In no event shall the insured values at any one location be considered more than one risk.

[DA05373]

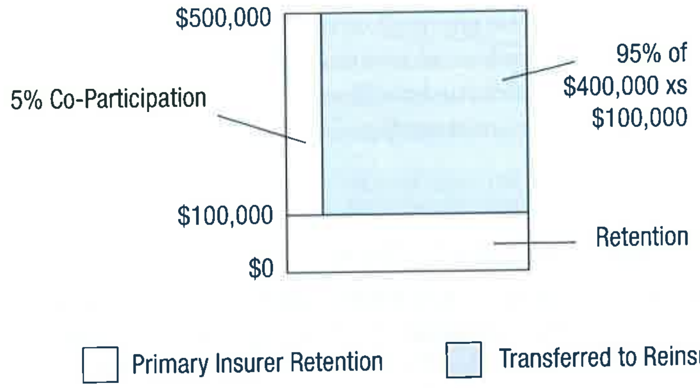
The retention and limits clause can be modified to include these features:

- Co-participation provision
- Per occurrence limit
- Definition of one risk
- Annual aggregate deductible

Co-Participation Provision

A co-participation provision requires the primary insurer to retain part of the loss above its retention. For example, a property per risk excess of loss reinsurer may require the primary insurer to retain 5 percent of all losses above its retention. The exhibit illustrates this co-participation arrangement. See the exhibit "Excess of Loss Reinsurance With Co-Participation."

Excess of Loss Reinsurance With Co-Participation



[DA05374]

Per Occurrence Limit

Reinsurers often seek to limit the amount of loss that can be accumulated in a property per risk excess of loss treaty from a single loss occurrence. A primary insurer may try to transfer much of its catastrophe liability to reinsurers through its property per risk excess of loss treaties rather than through a catastrophe reinsurance agreement. Mindful of this possibility, reinsurers frequently insist on having a per occurrence limit in property per risk excess of loss treaties.

The per occurrence limit is stated either as a dollar amount or as a multiple of the reinsurance limit of the property per risk excess of loss treaty. A per occurrence limit of $1.2 million is included in the "Sample Retention and Limits Clause" exhibit.

Definition of One Risk

The term "one risk" should be defined in a property per risk excess of loss treaty because it is used to establish the primary insurer's retention and reinsurance treaty's limit. Usually, the primary insurer is the sole judge of what constitutes one risk, but the reinsurance treaty may include general guidelines. Nevertheless, the question of what is one risk can lead to disagreements between the primary insurer and the reinsurer. The "Sample Retention and Limits Clause" exhibit includes parameters for the definition of one risk.

Annual Aggregate Deductible

Annual aggregate deductibles are commonly found in property per risk excess of loss treaties. They allow the primary insurer to retain losses until the accumulation of losses during the treaty period becomes so large that the effect of any further losses on the primary insurer's underwriting results is undesirable.

Annual aggregate deductible
A provision in which the primary insurer retains its normal retention on each loss plus an aggregate amount of the total losses during the year, up to the aggregate deductible amount.

For example, assume that a primary insurer's past loss experience indicates that, during a typical year, losses between $100,000 and $500,000 contribute 3 percent to its loss ratio. The primary insurer's underwriting results are acceptable with that amount of aggregate loss each year. The primary insurer may establish a $400,000 xs $100,000 treaty with an annual aggregate deductible equal to 3 percent of earned premiums to limit the effect of losses over $100,000 to 3 percent of its loss ratio during a single year. Each loss over $100,000 is accumulated and retained by the primary insurer until the total amount exceeds the annual aggregate deductible. Then any additional losses are reimbursed by the reinsurer up to the treaty's limit.

Loss Notices and Settlements Clause

The loss notices and settlements clause requires the primary insurer to notify the reinsurer of any loss amount that exceeds or is likely to exceed the primary insurer's retention.

Excess of loss treaties involve relatively few losses, but each loss that potentially exceeds the primary insurer's retention should be reported to the reinsurer. The reinsurer reviews most losses when they are first reported and again before the treaty anniversary because the reinsurer is responsible for all or most (when a co-participation or aggregate deductible provision applies) of the loss amounts above the retention.

Once it is clear that a loss will exceed the retention, whatever the primary insurer does in settling the loss affects the reinsurer. The reinsurer must therefore remain vigilant and satisfied that the primary insurer is settling the loss properly. Therefore, the claim departments of the reinsurer and primary insurer must work together closely. See the exhibit "Sample Loss Notices and Settlements Clause."

Reinsurance Premium Clause

Unlike pro rata reinsurers, excess of loss reinsurers do not share the primary insurer's premium. Therefore, excess of loss treaties contain a reinsurance premium clause that establishes exactly what the premium will be for the coverage provided. See the exhibit "Sample Reinsurance Premium Clause."

Sample Loss Notices and Settlements Clause

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LOSS NOTICE

The Company shall advise the Reinsurer promptly of all losses which, in the opinion of the Company, may result in a claim hereunder and of all subsequent developments thereto which, in the opinion of the Company, may materially affect the position of the Reinsurer.

Inadvertent omission or oversight in dispatching such advices shall in no way affect the liability of the Reinsurer. However, the Company shall notify the Reinsurer of such omission or oversight promptly upon its discovery.

Brokers & Reinsurance Markets Association (BRMA), www.brma.org/frommembers/contractword/Loss%20Notice%20BRMA%2026A-C.doc (accessed November 19, 2012). [DA 05375]

Sample Reinsurance Premium Clause

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REINSURANCE PREMIUM

As premium for the reinsurance provided hereunder, the Company shall pay the Reinsurer
____ % of its net earned premium. Within _______ days after the end of each ________ , the Company shall report its net earned premium for the ________. The premium due the Reinsurer, at the rate shown in the first paragraph, shall be paid by the Company with its report.

"Net earned premium" as used herein is defined as gross earned premium of the Company for the classes of business reinsured hereunder, less the earned portion of premiums ceded by the Company for reinsurance which inures to the benefit of this Contract. For purposes of calculating net earned premium, __(recite extraction calculation)__ shall be considered subject premium.

Brokers & Reinsurance Markets Association (BRMA), www.brma.org/frommembers/contractword/Reinsurance%20Premium%20Excess%20of%20Loss%20BRMA%2043A-R.doc (accessed November 19, 2012). [DA05376]

Reinsurance premium clauses vary depending on these conditions:

- Whether the treaty is provided for a specified term or is continuous until canceled
- Whether the subject premium base is net written premiums or net earned premiums
- Whether the treaty is written on a cut-off or run-off basis
- Whether the treaty has a flat rate, a provisional premium based on losses, or minimum and deposit premiums
- Whether any minimum and deposit premiums are equal to one another or are different amounts

The reinsurer expects to receive a minimum reinsurance premium for providing the primary insurer with large line capacity, regardless of whether the primary insurer incurs any losses covered by the per risk excess of loss treaty. The treaty often makes the minimum premium equal to the **deposit premium**. The reinsurer must work with subject premium estimates provided by the primary insurer to determine the deposit premium.

Deposit premium
The amount the primary insurer pays the reinsurer pending the determination of the actual reinsurance premium owed.

For example, a primary insurer may estimate that its treaty's underlying policies will generate $10 million in subject premium. Based on this estimate, as well as on the attachment point and reinsurance limit, the reinsurer develops a reinsurance rate. If the rate were 5.5 percent, the expected reinsurance premium would be $550,000 ($10,000,000 × 0.055). Assume that the reinsurer requires a minimum premium of 80 percent of the estimated reinsurance premium and that the minimum premium equals the deposit premium. In that case, the minimum premium and deposit premium would be $440,000 ($550,000 × 0.8).

Net Retained Lines Clause

The net retained lines clause specifies that the reinsurance coverage applies only to the primary insurer's net retention. For the reinsurer to establish a reinsurance rate for the coverage being provided, the assumed liability must be properly defined. In particular, the reinsurer will want to ensure that it is not liable for amounts that should have been paid by other reinsurers. The net retained lines clause provides this protection by defining the primary insurer's liability. See the exhibit "Sample Net Retained Lines Clause."

Sample Net Retained Lines Clause

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NET RETAINED LINES

This Contract applies only to that portion of any policy which the Company retains net for its own account, and in calculating the amount of any loss hereunder and also in computing the amount or amounts in excess of which this Contract attaches, only loss or losses in respect of that portion of any policy which the Company retains net for its own account shall be included.

The amount of the Reinsurer's liability hereunder in respect of any loss or losses shall not be increased by reason of the inability of the Company to collect from any other reinsurer(s), whether specific or general, any amounts which may have become due from such reinsurer(s), whether such inability arises from the insolvency of such other reinsurer(s) or otherwise.

Brokers & Reinsurance Markets Association (BRMA), www.brma.org/frommembers/contractword/Net%20Retained%20Lines%20BRMA%2032A-E.doc (accessed November 19, 2012). [DA05377]

Ultimate Net Loss Clause

The ultimate net loss clause specifies the loss amount against which the retention and reinsurance limit apply. See the exhibit "Sample Ultimate Net Loss Clause."

> **Sample Ultimate Net Loss Clause**
>
> 54 A
>
> ULTIMATE NET LOSS
>
> The term "Ultimate Net Loss" means the actual loss, including loss adjustment expense, paid or to be paid by the Company on its net retained liability after making deductions for all recoveries, salvages, subrogations and all claims on inuring reinsurance, whether collectible or not; provided, however, that in the event of the insolvency of the Company, payment by the Reinsurer shall be made in accordance with the provisions of the Insolvency Article. Nothing herein shall be construed to mean that losses under this Contract are not recoverable until the Company's ultimate net loss has been ascertained.

Brokers & Reinsurance Markets Association (BRMA), www.brma.org/frommembers/contractword/Ultimate%20Net%20Loss%20BRMA%2054A-L.doc (accessed November 19, 2012). [DA05378]

The clause shown in the exhibit defines ultimate net loss in terms of these components:

- Loss
- Loss adjustment expenses
- Recoveries

Loss

The loss specified in the "Sample Ultimate Net Loss Clause" exhibit is the primary insurer's actual loss after deducting recoveries from other reinsurance (called inuring reinsurance). In other words, if the primary insurer has purchased other reinsurance, the amounts recoverable under that other reinsurance must be deducted to determine the net loss subject to the excess of loss treaty.

Reinsurance programs are often designed so that underlying reinsurance is recognized by reinsurers offering high layers of reinsurance coverage. When this is desired, the definition of ultimate net loss is modified. For example, the ultimate net loss clause may specify, "The amounts recoverable from the Company's quota share and first excess of loss treaties shall be ignored for the purposes of determining the ultimate net loss hereunder."

The ultimate net loss clause usually specifies that unrecoverable losses from other reinsurers do not affect this reinsurer's obligation to the primary insurer. For example, the "Sample Ultimate Net Loss Clause" exhibit refers to "recoveries," which refers to sums due, collectible or not, from other reinsurers.

Loss Adjustment Expenses

Loss adjustment expenses can be significant. The ultimate net loss clause specifies whether loss adjustment expenses are prorated between the primary insurer and the reinsurer(s) based on their respective shares of the loss or whether the loss adjustment expenses are included in the loss amount.

With the first method, if the loss is $400,000 and the retention is $100,000, the reinsurer is responsible for $300,000, or 75 percent, of the loss, and the primary insurer retains $100,000, or 25 percent, of the loss. The loss adjustment expense is prorated on the same basis. Therefore, the reinsurer is responsible for 75 percent of the loss adjustment expense, and the primary insurer is responsible for 25 percent. Usually, the loss adjustment expense is not subject to the treaty limit when it is calculated on a pro rata basis. If the loss amount does not exceed the net retention, the reinsurer is not responsible for any of the loss adjustment expense.

With the second method, the resulting amount is subject to the net retention and the treaty limit. As a result, the reinsurer may have to pay for a loss in which the actual loss amount does not exceed the net retention. When loss adjustment expenses are added to the loss, the primary insurer must carefully assess the loss adjustment expense potential in the types of insurance covered and purchase sufficient reinsurance limits.

Recoveries

Salvage, subrogation, and reversals and reductions of judgments all reduce the ultimate net loss. The primary insurer has a fiduciary responsibility to the reinsurer to pursue all avenues of possible recovery and must apply any recoveries to reduce the amount of the loss recoverable from excess of loss reinsurers. If the recovery is large enough to reimburse the reinsurer totally, the primary insurer can retain any remaining balance. If the primary insurer incurs expenses in the pursuit of recoveries, those expenses can be deducted from the recoveries before the primary insurer reimburses the reinsurer.

Pools, Associations, and Syndicates Exclusion Clause

The pools, associations, and syndicates exclusion clause excludes from coverage any liability emanating from the primary insurer's participation, directly or indirectly, through pools, associations, and syndicates. These may include voluntary pools, associations, and syndicates that purchase their own reinsurance or involuntary pools, such as Fair Access to Insurance Requirements (FAIR) plans, and coastal/windstorm pools.

This clause is generally used in property per risk excess of loss and property catastrophe treaties. Reinsurers already participate either as members or as reinsurers in many of the pools, and therefore this exclusion is necessary to control their accumulation of pool liabilities. Losses from involuntary pools are excluded from property per risk excess of loss treaties because these losses are a primary insurer's cost of doing business in the states involved and should not be passed on to excess of loss reinsurers.

Primary insurers subject to assessment by involuntary pools may request that this exclusion be amended to grant coverage under their catastrophe reinsurance agreements. For example, a primary insurer selling property insurance in one of the states with a windstorm pool is subject to an accumulation of losses from the insurance it sells and an assessment from the windstorm pool for losses that exceed the pool's financial resources. The additional clause to reinstate involuntary pool coverage for catastrophe reinsurance agreements is included in the pools, associations, and syndicates exclusion clause shown in the exhibit. See the exhibit "Sample Pools, Associations, and Syndicates Exclusion Clause."

Total Insured Value Exclusion Clause

The total insured value exclusion clause excludes very large loss exposures from automatic coverage. Large loss exposures are defined as those needing amounts of insurance that exceed a specified amount, such as all loss exposures for which the total amount of insurance exceeds $250 million. Loss exposures needing significant amounts of insurance are sometimes insured in reinsurance transactions involving several primary insurers. For example, underwriters from several primary insurers may collaborate in the insuring of a large warehouse complex.

Property per risk excess of loss reinsurers have insisted on using a total insured value exclusion clause to control their accumulation of liability on a single loss exposure. If the clause were not included, the reinsurer could assume liability on the same loss exposure from several different primary insurers, leaving total liability at an unacceptable level.

Exceptions to the total insured value exclusion clause in the exhibit are loss exposures from offices, hotels, apartments, hospitals, educational establishments, public utilities, and builders risks. Generally, reinsurers consider these excepted categories of loss exposures to be desirable. Reinsurers also make exceptions for a loss exposure insured in its entirety by the primary insurer. This latter exception makes sense because the reinsurer cannot have an unanticipated accumulation of liability if the primary insurer insures the entire loss exposure. See the exhibit "Sample Total Insured Value Exclusion Clause."

Sample Pools, Associations, and Syndicates Exclusion Clause

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POOLS, ASSOCIATIONS, AND SYNDICATES EXCLUSION CLAUSE

Section A:

Excluding:

(a) All business derived directly or indirectly from any Pool, Association or Syndicate which maintains its own reinsurance facilities.

(b) Any Pool or Scheme (whether voluntary or mandatory) formed after March 1, 1968 for the purpose of insuring property whether on a country-wide basis or in respect of designated areas. This exclusion shall not apply to so-called Automobile Insurance Plans or other Pools formed to provide coverage for Automobile Physical Damage.

Section B:

It is agreed that business written by the Company for the same perils, which is known at the time to be insured by, or in excess of underlying amounts placed in the following Pools, Associations, or Syndicates, whether by way of insurance or reinsurance, is excluded hereunder:

Industrial Risk Insurers,

Associated Factory Mutuals,

Improved Risk Mutuals,

Any Pool, Association or Syndicate formed for the purpose of writing Oil, Gas or Petro-Chemical Plants and/or Oil or Gas Drilling Rigs,

United States Aircraft Insurance Group, Canadian Aircraft Insurance Group, Associated Aviation Underwriters, American Aviation Underwriters.

Section B does not apply:

(a) Where the Total Insured Value over all interests of the risk in question is less than $250,000,000.

(b) To interests traditionally underwritten as Inland Marine or stock and/or contents written on a blanket basis.

(c) To Contingent Business Interruption, except when the Company is aware that the key location is known at the time to be insured in any Pool, Association, or Syndicate named above, other than as provided for under Section B(a).

(d) To risks as follows:

Offices, Hotels, Apartments, Hospitals, Educational Establishments, Public Utilities (other than railroad schedules) and builder's risks on the classes of risks specified in this subsection (d) only.

Where this clause attaches to Catastrophe Excesses, the following Section C is added:

Section C:

Nevertheless the Reinsurer specifically agrees that liability accruing to the Company from its participation in:

(1) The following so-called "Coastal Pools":

Alabama Insurance Underwriting Association
Florida Windstorm Underwriting Association
Louisiana Insurance Underwriting Association
Mississippi Windstorm Underwriting Association
North Carolina Insurance Underwriting Association
South Carolina Windstorm and Hail Underwriting Association
Texas Catastrophe Property Insurance Association

AND

(2) All "Fair Plan" and "Rural Risk Plan" business for all perils otherwise protected hereunder shall not be excluded, except, however, that this reinsurance does not include any increase in such liability resulting from:

(i) The inability of any other participant in such "Coastal Pool" and/or "Fair Plan" and/or "Rural Risk Plan" to meet its liability.

(ii) Any claim against such "Coastal Pool" and/or "Fair Plan" and/or "Rural Risk Plan" or any participant therein, including the Company, whether by way of subrogation or otherwise, brought by or on behalf of any insolvency fund (as defined in the Insolvency Fund Exclusion Clause incorporated in this Contract).

Brokers & Reinsurance Markets Association (BRMA), www.brma.org/frommembers/contractword/Pools,%20Assoc%20and%20Synd%20Exclusion%20BRMA%2040A-B.doc (accessed November 19, 2012). [DA05379]

Sample Total Insured Value Exclusion Clause

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TOTAL INSURED VALUE EXCLUSION CLAUSE

It is the mutual intention of the parties to exclude risks, other than Offices, Hotels, Apartments, Hospitals, Educational Establishments and Public Utilities (except Railroad Schedules), and Builders Risks on the above classes, where at the time of cession, the Total Insured Value over all interests exceeds $250,000,000. However, the Company shall be protected hereunder, subject to the other terms and conditions of this Contract, if subsequent to cession being made, the Company becomes acquainted with the true facts of the case and discovers that the mutual intention has been inadvertently breached; on condition that the Company shall at the first opportunity, and certainly by next anniversary of the original policy, exclude the risk in question.

It is agreed that this mutual intention does not apply to Contingent Business Interruption or to interests traditionally underwritten as Inland Marine or to Stock and/or Contents written on a blanket basis except where the Company is aware that the Total Insured Value of $250,000,000 is already exceeded for buildings, machinery, equipment and direct use and occupancy at the key location.

It is understood and agreed that this Clause shall not apply hereunder where the Company writes 100% of the risk.

Brokers & Reinsurance Markets Association (BRMA), www.brma.org/frommembers/contractword/Total%20Insured%20Value%20Exclusion%20BRMA%2053A-B.doc (accessed November 19, 2012). [DA05380]

PROPERTY PER RISK EXCESS OF LOSS TREATY PRICING

Property per risk excess of loss treaty pricing can be approached in two general ways: through exposure rating and experience rating. Reinsurers often use both approaches and select the reinsurance rate that makes the most sense for the treaty being priced.

Exposure rating
An approach to reinsurance treaty pricing that considers the amount of liability inherent in the type of business covered by the treaty being priced.

Experience rating
A rating plan that adjusts the premium for the current policy period to recognize the loss experience of the insured organization during past policy periods.

Both **exposure rating** and **experience rating** result in a reinsurance rate that is multiplied by the amount of subject premium to yield the reinsurance premium. Before the reinsurer determines the exposure rating or experience rating, the primary insurer and reinsurer need to set retentions and reinsurance limits.

Setting Retentions

Primary insurers usually set retentions after analyzing past losses. Loss analysis typically starts with categorizing losses by size and then identifying a level of losses that occur with sufficient frequency to make them predictable. Losses above this identified level are too unpredictable to safely retain. In setting retentions, primary insurers and reinsurers usually evaluate the last five or more years of loss experience, if available. To meaningfully compare different years of loss data, trend and loss development factors must be applied to adjust the dollar amount of losses to reflect prior-year to current economic conditions.

When setting retentions, the reinsurer and primary insurer should also consider the cost of reinsurance and the primary insurer's financial strength, size, and attitude toward accepting fluctuations in underwriting results. Additionally, the property per risk excess of loss treaty should be considered in the context of the primary insurer's overall reinsurance program. For example, the treaty may be the only reinsurance purchased, or it may be excess above a pro rata treaty. The context of the property per risk excess of loss treaty affects the extent to which it will be required to respond to losses.

Setting Reinsurance Limits

The reinsurance limit is strongly influenced by the treaty's role in the primary insurer's reinsurance program. For example, if the primary insurer's catastrophe reinsurance attaches at $10 million, the primary insurer may choose property per risk excess of loss reinsurance limits of $10 million.

Reinsurance limits can be set to reflect reinsurance costs. A primary insurer may not be willing to pay for reinsurance limits as high as it would like, but because property per risk excess of loss treaties are often layered, it can choose different reinsurance limits for each layer to reduce costs. For example, if a primary insurer wants total underwriting capacity of $10 million, it may choose to purchase three treaty layers rather than one treaty to lower the total reinsurance cost. The primary insurer could purchase these layers:

$2,000,000 xs $1,000,000

$3,000,000 xs $3,000,000

$4,000,000 xs $6,000,000

The total cost for the three treaties presented may be less than the cost of one $9,000,000 xs $1,000,000 property per risk excess of loss treaty.

Exposure Rating

Reinsurers use exposure rating to identify the portion of the underlying premium that is available to fund losses in excess of the retention. Exposure rating assumes that more of the premium is needed to pay for small losses because they are more frequent than large losses.

The two exposure rating methods used to allocate underlying premiums to reinsurance layers are first loss scale and price per million.

First Loss Scale

The first method of loss exposure rating for per risk excess of loss treaties is the first loss scale method. Several first loss scales are in general use. Some of these scales apply actuarial approaches, and some apply nonactuarial approaches.

Nonactuarial approaches may incorporate several hazard characteristics and individual loss exposure characteristics, such as construction, private and public fire protection, occupancy, amount of insurance, amount subject to a single loss, cause of loss, and type of coverage provided (such as building and personal property or business income). Many first loss scales incorporate these characteristics into tables to provide reinsurance underwriters with an appropriate price for the liability assumed.

The exhibit is a simplified first loss scale based on hypothetical data that could be used to price a single loss exposure reinsured on a facultative basis. This exhibit is just one table from a multitable first loss scale, and it assumes that the primary insurer has a $100,000 retention. See the exhibit "Simplified First Loss Scale."

Column (1) of the "Simplified First Loss Scale" exhibit lists amounts of insurance that the primary insurer may provide. Column (2) lists the expected average loss for each amount of insurance shown in column (1). Column (3) lists the percentage of each loss exposure retained for each amount of insurance (Retention ÷ Amount of insurance). Column (4) lists the expected retained loss ($22,084 for the $100,000 retention) as a percentage of expected average loss (22,084 ÷ Expected average loss). Column (5) is the complement of column (4), calculated by subtracting column (4) from 100 percent.

A reinsurer uses a first loss scale to determine the percentage of premium the primary insurer must pay the reinsurer for the liability it transfers. The percentage of premium ceded is the same as the percentage of expected average loss ceded. For example, the primary insurer would pay the reinsurer 3.1 percent of the policy premium for a policy with an amount of insurance of $200,000.

Before a price is quoted, the reinsurer must determine whether the underlying insurance rate is adequate and whether the quality of underwriting applied to the underlying loss exposure is satisfactory. If they are not, the reinsurer can apply the first loss scale and then adjust the reinsurance premium to offset the inadequate underlying insurance rate.

The exhibit shows the application of a simplified first loss scale to a property per risk excess of loss treaty. The first loss scale method illustrated for a single loss exposure must be modified for a reinsurance treaty because the treaty applies to many loss exposures with various amounts of insurance. Rather than calculate a premium for each loss exposure, the data are summarized and average amounts are used for each amount of insurance. For example, the average amount of insurance for policies with amounts of insurance between $100,001 and $125,000 is $112,500. The average percentage retained (shown in column (5)) is the retention amount ($100,000) divided by the average amount of insurance. See the exhibit "Sisterdale Insurance Company."

Simplified First Loss Scale

Retention = $100,000

(1) Amount of Insurance	(2) Expected Average Loss	(3) Percentage Retained	(4) Percentage of Expected Average Loss Retained	(5) Percentage of Expected Average Loss Ceded
$100,000	$22,084	100.0%	100.0%	0.0%
112,500	22,150	88.9	99.7	0.3
125,000	22,217	80.0	99.4	0.6
137,500	22,284	72.7	99.1	0.9
150,000	22,364	66.7	98.7	1.3
162,500	22,443	61.5	98.4	1.6
175,000	22,558	57.1	97.9	2.1
187,500	22,673	53.3	97.4	2.6
200,000	22,791	50.0	96.9	3.1
212,500	22,908	47.1	96.4	3.6
225,000	23,041	44.4	95.8	4.2
237,500	23,173	42.1	95.3	4.7
250,000	23,321	40.0	94.7	5.3
262,500	23,468	38.1	94.1	5.9
275,000	23,594	36.4	93.6	6.4
287,500	23,720	34.8	93.1	6.9
300,000	23,875	33.3	92.5	7.5
312,500	24,030	32.0	91.9	8.1
325,000	24,162	30.8	91.4	8.6
337,500	24,295	29.6	90.9	9.1
350,000	24,430	28.6	90.4	9.6
362,500	24,565	27.6	89.9	10.1
375,000	24,717	26.7	89.3	10.7
387,500	24,869	25.8	88.8	11.2
400,000	25,000	25.0	88.3	11.7

[DA05382]

Sisterdale Insurance Company

Calculation of Excess Premium Based on Policy Limit Profile

Amounts of Insurance Range Interval	(1) Policy Count	(2) Subject Premium	(3) Average Premium	(4) Average Amount of Insurance	(5) Average Percent Retained	(6) Retention Factor	(7) Excess Premium Percentage	(8) Excess Premium
$100,001–$125,000	980	$848,313	$865.63	$112,500	88.9%	99.7%	0.3%	$2,545
$125,001–$150,000	900	997,200	1,108.00	137,500	72.7	99.1	0.9	8,975
$150,001–$175,000	920	1,225,517	1,332.08	162,500	61.5	98.4	1.6	19,608
$175,001–$200,000	980	1,514,351	1,545.26	187,500	53.3	97.4	2.6	39,373
$200,001–$225,000	700	1,226,167	1,751.67	212,500	47.1	96.4	3.6	44,142
$225,001–$250,000	540	1,052,550	1,949.17	237,500	42.1	95.3	4.7	49,470
$250,001–$275,000	400	849,896	2,124.74	262,500	38.1	94.1	5.9	50,144
$275,001–$300,000	420	962,200	2,290.95	287,500	34.8	93.1	6.9	66,392
$300,001–$325,000	200	489,092	2,445.46	312,500	32.0	91.9	8.1	39,616
$325,001–$350,000	150	385,979	2,573.19	337,500	29.6	90.9	9.1	35,124
$350,001–$375,000	100	268,208	2,682.08	362,500	27.6	89.9	10.1	27,089
$375,001–$400,000	60	166,200	2,770.00	387,500	25.8	88.8	11.2	18,614
Totals	6,350	$9,985,673						$401,092

[DA05383]

In the example shown in the "Sisterdale Insurance Company" exhibit, the primary insurer wants a property per risk excess of loss treaty on commercial property policies insuring retail and wholesale occupancies and service businesses. The proposed treaty has a limit of $300,000 xs $100,000 for each risk and each loss occurrence. The reinsurance underwriter obtains a listing of the primary insurer's subject premium applicable to each of the amounts of insurance ranges. If the primary insurer is unable to provide that information, underlying premiums can be estimated from a list of policy counts by amounts of insurance. Because such estimates are based on many assumptions, the exposure rate developed is less precise than if actual subject premium figures were available.

A reinsurer would also consider whether the primary insurer's policies insure multiple locations or if the policy limit is subject to a total loss from a single event, as well as the loss exposure by cause of loss. For example, fire as a cause of loss may be considered to have greater loss potential than wind because of its frequency and severity patterns.

These considerations form the basis of the retention factor shown in column (6). Column (7), the complement of column (6), shows the percentage of average premium needed by the reinsurer to pay losses that exceed the retention. Column (8) shows the excess premium available to fund losses in excess of one retention (Excess premium percentage × Subject premium).

Modifications to the $401,092 total excess premium in the "Sisterdale Insurance Company" exhibit may result from these factors:

- Adequacy of underlying premiums—A fundamental assumption of the first loss scale is that underlying premiums charged by the primary insurer are sufficient to cover losses. Reinsurers should assess the adequacy of the primary insurer's rates when applying the first loss scale method.
- Composition of policies subject to the treaty and their deductibles—When applying the first loss scale method, the reinsurance underwriter must consider the composition of policies subject to the treaty and their deductibles. For example, the reinsurance premium calculated from this method may be inadequate for highly protected loss exposures, which are charged a relatively small underlying premium because of superior construction and extensive public and private loss protection systems. Because small losses on highly protected loss exposures are less likely than large losses, policyholders usually purchase underlying property policies with large deductibles. The underlying premiums for these policies are designed to cover unexpected but severe losses. Therefore, the first loss scale rates must be increased for the property per risk excess of loss coverage to make the rate commensurate with the liability assumed by the reinsurer. First loss scales have also been developed to reflect loss characteristics of other types of loss exposures.
- Quality of the primary insurer's underwriting—If the primary insurer's underwriter does not adequately investigate each loss exposure, loss frequency may increase, and the loss ratio may rise above expected levels. As with highly protected loss exposures, the reinsurer should increase the first loss scale rates to reflect poor quality underwriting and decrease the first loss scale rates to reflect high quality underwriting.
- Loading for the reinsurer's expenses, profit, and other considerations—The reinsurer increases the first loss scale rate to provide for a load to cover the reinsurer's operating expenses, a load for profit and contingencies, an additional surcharge if loss adjustment expenses are covered, or a catastrophe surcharge if the treaty covers multiple individual losses from one loss occurrence.

Price Per Million

The second method of loss exposure rating for per risk excess of loss treaties is the price per million method. This method can be used when the underlying premium developed from policies that exceed the attachment point is so small that the first loss scale method does not work well.

Under the price per million method, a reinsurer charges a set rate per every million dollars of reinsurance limit purchased. The price per million rating method is used primarily for property facultative reinsurance when the attachment point of the treaty layer exceeds the largest loss that is likely to occur. This method can also be used to price property per risk excess of loss treaties when the probability of a reinsurance loss is remote.

Experience Rating

In addition to exposure rating, reinsurers use experience rating for property per risk excess of loss treaties. Experience rating provides an objective method of modifying the premium to reflect the quality of the primary insurer's underwriting, loss prevention, and claim handling capability. Experience rating uses the primary insurer's actual loss experience to develop the reinsurance rate. However, experience rating is appropriate only for those treaty layers that have enough losses to develop a credible rate.

Experience rating involves these four steps:

1. Collect required data
2. Trend losses
3. Develop the experience rate
4. Price the unused portion of the layer

Collect Required Data

The first step in experience rating is to collect required data. For the reinsurance underwriter to accurately project future losses, the primary insurer must have enough losses in the treaty layer to provide credible data. If the primary insurer has little or no loss history in the treaty layer being priced, the reinsurer will need to rely on exposure rating.

Reinsurers need five to ten years of loss data from the primary insurer to use experience rating. Those loss data ideally will include all losses, not just those that exceeded the primary insurer's retention.

The exhibit shows a loss experience profile for Calloway Insurance Company. The reinsurer must analyze the data to identify trends or loss experience irregularities. See the exhibit "Loss Experience Profile for Calloway Insurance Company."

▶▶

Loss Experience Profile for Calloway Insurance Company

Policy No.	Claim No.	Date of Loss	Paid	Outstanding Reserve	Total Incurred Losses
		1/1/X0 to 12/31/X0			
F10056	CF2035	2/13/X0	$136,250	$ 0	$136,250
F10123	CF2173	4/21/X0	172,400	0	172,400
H13285	PF1929	8/3/X0	167,123	0	167,123
F10255	CF2102	11/30/X0	385,250	0	385,250
		1/1/X1 to 12/31/X1			
F10325	CF2211	1/21/X1	$183,500	$ 0	$183,500
F10681	CF2444	5/12/X1	127,850	0	127,850
F12320	CF2589	8/22/X1	386,750	0	386,750
H23450	PF2759	12/18/X1	261,340	0	261,340
		1/1/X2 to 12/31/X2			
H23451	PF2825	3/2/X2	$398,450	$ 0	$398,450
H24545	PF3021	8/21/X2	141,250	0	141,250
F14451	CF3121	9/21/X2	321,300	100,000	421,300
H25876	PF3124	10/12/X2	276,250	0	276,250
F15135	CF3232	12/27/X2	319,917	0	319,917
		1/1/X3 to 12/31/X3			
H25897	PF3135	5/23/X3	$286,520	$ 0	$286,520
F14876	CF3357	7/21/X3	312,750	0	312,750
H25914	PF3137	9/16/X3	357,850	0	357,850
F16253	CF3257	11/13/X3	414,250	0	414,250
H30034	PF3286	12/23/X3	137,430	0	137,430
		1/1/X4 to 12/31/X4			
H33335	PF3456	2/16/X4	$191,250	$ 0	$191,250
F16758	CF3373	3/11/X4	345,112	5,000	350,112
F18182	CF3456	4/21/X4	432,325	75,000	507,325
F19287	CF3578	6/7/X4	278,750	0	278,750
H35768	PF3566	8/24/X4	298,345	0	298,345
H37379	PF3634	9/27/X4	231,890	3,500	235,390
F24345	CF3819	10/2/X4	0	135,000	135,000

	Subject Earned Premium	Total Incurred Losses	Unadjusted Loss Cost
20X0	$35,214,587	$861,023	2.45%
20X1	36,459,781	959,440	2.63%
20X2	38,588,396	1,557,167	4.04%
20X3	40,721,340	1,508,800	3.71%
20X4	43,938,000	1,996,172	4.54%
Total	$194,922,104	$6,882,602	3.53%

[DA05384]

Based on this data, the reinsurer may reach these conclusions:

- Premium growth appears perhaps too strong for a competitive insurance market. However, this growth may be due to an increase in policies sold at an inadequate price.
- Large losses are increasing, which may reflect lower underwriting standards, a change in the line guide, catastrophic losses, changes in territories, an increase in amounts of insurance, marketing changes, or a change in the distribution of loss exposures by protection class (insuring more unprotected or lightly protected loss exposures). The increase in large loss frequency is unlikely simply to be bad luck.
- Some claims have outstanding reserves. For example, the September 21, 20X2, loss still has an outstanding reserve of $100,000. The reinsurer should investigate to determine (1) the probability of the loss settling within the reserve amount, (2) the quality of the claim adjusting, and (3) the possibility of legal actions that may result in extra-contractual obligations (ECO) or excess of policy limits (XPL) losses.

Trend Losses

The second step in experience rating is to trend the losses. Trending adjusts losses to what they would have been during the proposed treaty period and recognizes the effects of inflation on the costs to repair or replace damaged properties.

Trend factors should reflect the construction costs for the types of structures being reinsured. For losses on dwellings, a construction cost index may be used. For losses on commercial structures, the index should measure construction costs of commercial buildings. An example of such an index is shown in the exhibit. See the exhibit "Construction Costs Trends Index for Commercial Buildings."

Construction Costs Trends Index for Commercial Buildings

Year	Rate Index
20X0	1.132
20X1	1.076
20X2	1.035
20X3	1.017
20X4	1.000

[DA05385]

The exhibit shows the losses calculated by applying the construction cost trends index with the total incurred losses reported in the "Loss Experience Profile for Calloway Insurance Company" exhibit and capping losses at the treaty reinsurance limit. The trended losses in the exhibit reflect 20X4 construction costs, so further adjustment would be needed to reflect construction costs in a future proposed treaty term. See the exhibit "Loss Experience Profile Trending for Calloway Insurance Co.."

To calculate the ultimate treaty loss cost, a reinsurer divides losses by premiums. If losses are trended, premiums must also be trended to adjust for changes in the primary insurer's rate level and for increases in loss exposure resulting from the effects of inflation on the value of property and amount of coverage needed. A rate change index reflects the primary insurer's effective rate changes over the treaty's term.

The trended rate level reflects the rate that would currently be charged for loss exposures insured during the experience period, just as trended losses represent the amounts of individual losses if they were currently incurred. To develop the rate change index, a reinsurer must receive effective rate change information from the primary insurer. See the exhibit "Calloway Insurance Company Rate Change Index."

Calloway Insurance Company Rate Change Index

Year	Rate Index
20X0	0.951
20X1	0.801
20X2	0.762
20X3	0.841
20X4	1.000

[DA05387]

The exhibit displays the trended earned premium for Calloway Insurance Company. The subject earned premium from the "Loss Experience Profile for Calloway Insurance Company" exhibit is multiplied by the rate change index in the "Calloway Insurance Company Rate Change Index" exhibit to determine the trended premium. See the exhibit "Calloway Insurance Company Trended Earned Premium."

In some policies, the premium automatically increases with inflation because the value of an exposure unit increases with inflation. However, a trend factor is still necessary if losses are increasing faster than premiums.

Loss Experience Profile Trending for Calloway Insurance Co.

Claim No.	Total Incurred Losses	Index	Indexed Losses	Trended Losses $300,000 xs $100,000
		1/1/X0 to 12/31/X0		
CF2035	$136,250	1.132	$154,235	$54,235
CF2173	172,400	1.132	195,157	95,157
PF1929	167,123	1.132	189,183	89,183
CF2102	385,250	1.132	436,103	300,000
Total Excess Losses				$ 538,575
		1/1/X1 to 12/31/X1		
CF2211	$183,500	1.076	$197,446	$97,446
CF2444	127,850	1.076	137,567	37,567
CF2589	386,750	1.076	416,143	300,000
PF2759	261,340	1.076	281,202	181,202
Total Excess Losses				$ 616,215
		1/1/X2 to 12/31/X2		
PF2825	$398,450	1.035	$412,396	$ 300,000
PF3021	141,250	1.035	146,194	46,194
CF3121	421,300	1.035	436,046	300,000
PF3124	276,250	1.035	285,919	185,919
CF3232	319,917	1.035	331,114	231,114
Total Excess Losses				$1,063,277
		1/1/X3 to 12/31/X3		
PF3135	$286,520	1.017	$291,391	$91,391
CF3357	312,750	1.017	318,067	218,067
PF3137	357,850	1.017	363,933	263,933
CF3257	414,250	1.017	421,292	300,000
PF3286	137,430	1.017	139,766	39,776
Total Excess Losses				$1,013,167
		1/1/X4 to 12/31/X4		
PF3456	$191,250	1.000	$191,250	$91,250
CF3373	350,112	1.000	350,112	250,112
CF3456	507,325	1.000	507,325	300,000
CF3578	278,750	1.000	278,750	178,750
PF3566	298,345	1.000	298,345	198,345
PF3634	235,390	1.000	235,390	135,390
CF3819	135,000	1.000	135,000	35,000
Total Excess Losses				$1,188,847

[DA05386]

Calloway Insurance Company Trended Earned Premium

Year	Subject Earned Premium	Rate Index	Trended Premium
20X0	$35,214,587	0.951	$33,489,072
20X1	36,459,781	0.801	29,204,285
20X2	38,588,396	0.762	29,404,358
20X3	40,721,340	0.841	34,246,647
20X4	43,938,000	1.000	43,938,000

[DA05388]

Trended premiums indicate the premiums in current dollars to allow a better comparison between years. In the "Calloway Insurance Company Trended Earned Premium" exhibit, Calloway's trended premium reflects more dramatic growth in 20X3 and 20X4 than the nontrended premiums suggest, which highlights the advantage of trending.

Develop the Experience Rate

The third step in experience rating is to develop the experience rate. The number of years of experience used in the experience rate formula may be subject to negotiation. However, five to ten years is typical. If the policies subject to the treaty suffer catastrophic loss, the rating period may be extended to as many as fifteen years.

The experience rate is calculated as:

$$\text{Experience rate} = \text{Trended losses} \div \text{Trended premium}$$

The exhibit shows the experience rate calculation using information developed in the "Loss Experience Profile for Calloway Insurance Company," "Construction Costs Trends Index for Commercial Buildings," "Loss Experience Profile Trending for Calloway Insurance Company," "Calloway Insurance Company Rate Change Index," and "Calloway Insurance Company Trended Earned Premium" exhibits. See the exhibit "Calloway Insurance Company Experience Rating Work Sheet."

The most recent three-year experience rate (3.035 percent) is higher than the five-year average (2.596 percent). The difference may indicate that the primary insurer is sacrificing its underwriting and pricing standards in pursuit of premium growth. Based on that calculation, the reinsurer may anticipate an experience rate for the coming year of 2.5 percent to 3.5 percent, unless the primary insurer tightens underwriting and pricing requirements for the coming year. The reinsurer would not offer a lower reinsurance rate unless either the treaty had generated profits in prior years or the reinsurer believed that a hard market would allow the primary insurer to increase insurance rates.

Calloway Insurance Company Experience Rating Work Sheet

Year	(1) Trended Losses*	(2) Trended Premium**	(3) Experience Rate***
20X0	$ 538,575	$ 33,489,072	1.608%
20X1	616,215	29,204,285	2.110%
20X2	1,063,227	29,404,358	3.616%
20X3	1,013,167	34,246,647	2.958%
20X4	1,188,847	43,938,000	2.706%
Total	$4,420,031	$170,282,362	2.596%
20X2-20X4 Total	$3,265,241	$107,589,005	3.035%

Notes:

* From Loss Experience Profile Trending for Calloway Insurance Company exhibit

** From Calloway Insurance Company Trended Earned Premium exhibit

*** Column (1) ÷ Column (2)

[DA05390]

In the example presented, the reinsurance underwriter would probably select an experience rate based on the most recent three years of experience (3.035 percent).

Price the Unused Portion of the Layer

The fourth step in experience rating is to price the unused portion of the layer. Commonly, recent loss experience does not involve the entire treaty layer. For example, if the maximum loss recently experienced is $335,000 and the layer to be priced is $250,000 xs $250,000, the treaty limit between $335,000 and $500,000 would be referred to as the "unused limit."

If the reinsurer used only experience rating and did not add a premium for the unused limit, that portion of the limit would be provided without charge to the primary insurer. Therefore, the reinsurer frequently adds a charge for the unused limit using exposure rating. If underlying policies with limits within the layer to be priced are being analyzed, that charge can be determined by a first loss scale method. If the primary insurer sells no policies with limits within the layer, the reinsurer may use the price per million method.

Establishing the Reinsurance Rate

The experience and exposure rating methods develop a rate that reflects only the costs associated with losses expected during the rating period, the loss cost rate. The loss cost rate must be increased to reflect these factors:

- Internal expenses—The reinsurer's internal expenses as a percentage of its written premiums typically range from about 1.7 percent to more than 6 percent. If a reinsurance intermediary is involved, the cost of brokerage must be added. Because reinsurers with lower internal expenses have a competitive advantage, internal expenses used in establishing the reinsurance rate should reflect only those expenses incurred in reinsuring loss exposures similar to those being rated. For example, the expense of providing facultative reinsurance should not be included. If coverage is provided for a high layer of insurance with no losses expected, reinsurer loss adjustment expenses are not appropriate, nor are underwriting audit expenses. On the other hand, if the reinsurer expects multiple losses that involve the claim department and claim and underwriting audits, the reinsurer should load the reinsurance rate for such expenses.
- Retrocessional expenses—Most reinsurers do not purchase property per risk excess of loss retrocessional coverage. However, when retrocessional coverage is purchased, the retrocessionaire's rate is applied to the premium charged for the treaty being rated. These expenses must be added to the loss cost rate of the treaty being rated.
- Profit and contingencies—A loading must be added for the reinsurer's profit and for any contingencies. Management should establish a loading of a predetermined percentage. The loading is generally in the 5 percent to 10 percent range and varies according to reinsurance market conditions.
- Loss adjustment expenses—If loss adjustment expenses are included, an appropriate charge is added to reflect the reinsurer's expenses above the loss cost.
- Catastrophe charge—Commonly, the catastrophe loss exposure in a property per risk excess of loss treaty is limited by incorporating a per loss occurrence limit. Usually, that limit is not greater than two or three times the per risk limit. An accumulation of losses from one loss occurrence should be reinsured under a catastrophe treaty. However, if the property per risk excess of loss treaty is exposed to catastrophes, the reinsurance underwriter should evaluate the adequacy of the experience rate and add a charge suitable for the loss exposure.

The exhibit illustrates the calculation of a final reinsurance rate.

Estimated Subject Premium	$10,000,000
Loss Cost Rate	0.035
Unused Limits Charge	0.007
Loadings (as a % of Reinsurance Premium):	
Internal Expense	0.037
Brokerage	0.050
Retrocessional Expense	0.073
Profit and Contingencies	0.050
Loss Adjustment Expenses	if applicable
Catastrophe Charge	if applicable

Total loss cost = Estimated subject premium × (loss cost rate + unused limits charge)
= $10,000,000 × (0.035 + 0.007)
= $420,000

Reinsurance premium = Total loss cost ÷ (1 – the sum of the loadings)
= $420,000 ÷ [1 – (0.037 + 0.050 + 0.073 + 0.050)]
= $420,000 ÷ 0.79
= $531,646

In this illustration, the reinsurer would charge a reinsurance premium of $531,646 based on the estimated subject premium of $10 million, and the premium would be stated as a percentage of the subject premium, 5.3 percent.

Selecting earned or written premiums as the subject premium base is negotiable. Generally, if coverage is on a losses occurring basis, the reinsurance rate is based on earned premiums because the reinsurer assumes liability for losses occurring under any policies in force as of the treaty's effective date and time. If coverage is on a risks attaching basis, the reinsurance rate is based on written premiums because the reinsurer assumes liability for losses occurring under policies issued or renewed on or after the treaty's effective date. The premium base could also be written premiums plus the unearned premium reserve at the beginning of the treaty period. The premium base ultimately selected is the one that parties to the treaty agree best reflects the loss exposures covered.

Flat-Rated Covers

Flat rate

A fixed rate that is not adjusted for losses occurring under the reinsurance treaty and that is applied to the primary insurer's prospective premiums.

Once the reinsurance rate is determined, it can be expressed as a **flat rate** (or prospective rate). Property per risk excess of loss treaties that have a fixed rate applying for the treaty term are often referred to as flat-rated covers.

The reinsurance rate is expressed as a percentage of subject premium. Because the subject premium is unknown, the primary insurer reports the actual subject premium at the end of the treaty period or at defined intervals. The amount of the reinsurance premium ultimately paid to the reinsurer(s) is determined once the primary insurer's final actual subject premium becomes known. The treaty usually requires a deposit premium and a minimum premium.

Loss-Rated Covers

An alternative to a flat rate is a **loss rate.** A loss-rated cover usually has three rates: a provisional rate, a minimum rate, and a maximum rate.

Loss rate
A rate that is determined from the actual losses sustained under a reinsurance treaty.

The provisional rate is generally set close to the reinsurance rate for the latest treaty term, or the loss cost rate after the loadings. That provisional rate is adjusted retrospectively based on the loss experience actually realized during the treaty term. The retrospective rate adjustment includes a provision for the reinsurer's profit, expenses, and contingencies, subject to the maximum and minimum rates.

Minimum and maximum rates are selected based on the characteristics of the layer being rated, such as size of the layer, expected volatility of the loss experience, indicated exposure rate, and administrative costs. For example, the minimum rate may be set at 50 percent of the provisional rate, and the maximum rate may be set at two to three times the provisional rate. The larger the layer, the wider the spread required between the minimum and maximum rates because a large loss during the treaty term will significantly affect the reinsurance rates charged.

The minimum rate includes an insurance charge that compensates the reinsurer for the possibility that losses may exceed the losses expected in the maximum rate less a credit for the possibility that actual losses may be less than the losses expected in the minimum rate. Commonly, the minimum rate is a percentage of the exposure rate. For example, the minimum rate may be 40 percent of the exposure rate. Therefore, the primary insurer could potentially benefit from a 60 percent reduction in the exposure rate as a reward for high quality underwriting and the adequacy of underlying premiums.

The maximum rate should also relate to the exposure rate. If the exposure rate is credible, the maximum rate should not be less than it. When setting a maximum rate, the reinsurance underwriter must consider adequacy of the exposure rate and volatility of the loss experience. The maximum rate should help the reinsurer collect adequate premium in an adverse loss year. Therefore, the reinsurance underwriter may set the maximum rate at 125 percent to 150 percent of the exposure rate, or higher, particularly if the treaty provides a large reinsurance limit and the resulting loss experience is expected to be volatile.

SUMMARY

Property per risk excess of loss treaties cover property loss exposures and apply separately to each loss occurring to each risk. Primary insurers are indemnified for losses that exceed the property per risk excess of loss treaty's attachment point up to the treaty's reinsurance limit. Property per risk excess of loss treaties serve these primary functions: to increase large line capacity and stabilize loss experience. They can be used alone or in conjunction with pro rata reinsurance, catastrophe excess of loss reinsurance, or property per risk excess of loss on a facultative basis.

Some clauses are common to all types of excess of loss treaties. These clauses are among the most commonly used that apply to excess of loss treaties in general and to property per risk excess of loss treaties in particular: retention and limits clause; loss notices and settlements clause; reinsurance premium clause; net retained lines clause; ultimate net loss clause; pools, associations, and syndicates exclusion clause; and the total insured value exclusion clause. Each clause provides additional details or clarification regarding the responsibilities of the primary insurer and the reinsurer.

Property per risk excess of loss treaties are priced using two approaches: exposure rating and experience rating. Exposure rating considers the amount of liability inherent in the type of business covered by the treaty being priced. Experience rating considers the primary insurer's loss experience in the business covered by the treaty being priced. Reinsurers use both approaches and select the reinsurance rate that can best be justified.

Regardless of the approach used, the reinsurance rate must be adjusted to reflect operating expenses, retrocessional expenses, profits and contingencies, loss adjustment expenses, and catastrophe charges. Reinsurers often use the reinsurance rate as a flat rate and apply it to the subject premium through the course of the treaty term (flat-rated covers). Alternatively, they may use a provisional rate, which is subsequently adjusted to reflect the actual loss experience under the treaty (loss-rated covers).