



# Group Life and AD&D Reinsurance

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# Overview

- Definition of Reinsurance
- Reasons to Reinsure
- Reinsurance Terminology
- Reinsurance Structures
- Pricing of Reinsurance
- Examples
- What to Look for in a Reinsurer

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# Definition of Reinsurance

- Insurance purchased by an insurance company to cover all or part of certain risks on insurance policies issued by that company
- Each reinsurance transaction includes:
  - Reinsurer, or assuming company, who agrees, in return for a premium, to indemnify the
  - Reinsured, or ceding company, for all or part of certain losses the ceding company may incur during a specified period of time
- Fundamental principle – transfer of risk

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# Reasons to Reinsure

- Risk management – minimize impact of claim fluctuations
- Financial planning – smooth out volatile earnings
- Capital management – free up capital for other uses
- Expand product offerings
- Exit a line of business
- Outsource administrative burden
- Obtain expertise or services
- Allow smaller company to compete on rich benefits

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# Reinsurance Terminology

- Assume – accept risk from issuing carrier
- Cede – transfer risk from issuing carrier to reinsurer
- Retrocede – transfer risk from one reinsurer to another reinsurer, which would be called the retrocessionaire
- Recapture – ceding company takes back a portion of ceded amount
- Retention – maximum amount of insurance coverage per life an insurer keeps without reinsuring
- Capacity – highest amount of insurance coverage that a reinsurer can accept on a given risk

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## Reinsurance Terminology (cont'd)

- Treaty – legal contract defining the reinsurance agreement
- Indemnity Reinsurance – legal liability remains with the direct writer (most common form)
- Assumption Reinsurance – reinsurer permanently assumes all policy holder obligations, steps into the shoes of the original issuing company
- Automatic (Auto) – reinsurer agrees to reinsure all business that meets certain conditions
- Facultative (Fac) – each individual risk or case is sent to the reinsurer for specific underwriting and rating

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# Reinsurance Structures

- Coinsurance – reinsurer participates in all aspects of risk, including mortality, investment, expense, etc.
  - Assets and reserves are transferred to the reinsurer
  - Reinsurer and reinsured share proportionally in premiums, benefits and reserves
- Yearly Renewable Term (YRT) – agreement is for one year at a time
  - Only mortality risk is reinsured
  - Reinsurance premiums can be determined independently of the street premiums

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## Reinsurance Structures (cont'd)

- Quota Share – proportional, reinsurer has a specified percentage of the risk from first dollar
- Excess of Loss – non-proportional, reinsurer pays claims in excess of a specified amount per person
- Combination of Quota Share and Excess
- Aggregate Stop Loss – non-proportional, reinsurer pays claims in excess of attachment point to a specified maximum
- Quota Share with Inner Aggregate
- Catastrophe Coverage

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## Reinsurance Structures (cont'd)

- Traditional – pure risk transfer, with few, if any, services provided by the reinsurer
  - Pricing is based on demographics or experience of entire block
  - Premium based on rate per \$1,000 reinsurance exposure or percentage of street premium
  - Quota share or excess
- Financial – primary purpose is a specific business objective, and risk transfer is secondary
- Private Label (Turn Key) – reinsurer assumes risk and provides full service capabilities, which the ceding company markets as its own
  - Pricing is specific to each employer group, based on demographics or experience of that group, and pre-established underlying rates and expenses
  - Rates for each group either composite or step-rated (age-banded)
  - Typically quota share, but may have high level excess on top of quota share

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## Reinsurance Structures (cont'd)

- Private Label Services Provided by Reinsurer
  - Claim Adjudication
  - Underwriting
  - Actuarial / Pricing
  - Compliance
  - Marketing Support
  - Systems and Other Tools
  - Reporting / Metrics
  - Training
- Division of responsibilities dependent on relative competencies of reinsurer and ceding company
- Parties need mutual understanding of business models and seamless process integration

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## Reinsurance Structures (cont'd)

- Reserve Buyouts of Premium Waiver liabilities allow ceding company to get rid of administrative burden as well as the liabilities
  - Private Label capabilities, in particular, claim management, key to successful reserve buyout
  - Typically 100% quota share
  - Indemnity or assumption reinsurance
  - One lump sum premium paid up front
  - Ceding company can redeploy resources and focus on core competencies

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# Pricing of Reinsurance

- Traditional
  - Information required: census, experience, underwriting guidelines, plan design, policy form, rate history
  - Credibility formula – weight manual rate with experience rate
  - Reinsurer expense charge, risk charge, profit
  - Desired structures
  - Trend / Leverage if excess structure
  - Intermediary commissions
- Private Label
  - Information required: experience, ceding company expenses including commissions, underwriting capability, states where filing required
  - Reinsurer expense charge, risk charge, profit
  - Desired level of services
  - Rate manual/rating system produces street level pricing
  - Policy form, benefit features

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## Example

### Traditional Reinsurance – Quota Share / Excess Combination

- Ceding company retains 80% of first \$250,000 group life per person
- Reinsurer assumes 20% of first \$250,000 plus 100% in excess of \$250,000 up to a maximum of \$500,000
- \$300,000 claim
  - Ceding company share is 80% of \$250,000, or \$200,000
  - Reinsurer share is 20% of \$250,000, or \$50,000, plus (\$300,000 - \$250,000), or \$50,000, for a total reinsured amount of \$100,000
  - Maximum reinsurer liability is \$300,000, unless a facultative exception is made
  - Matching AD&D is reinsured on a 100% quota share basis

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## Example

### Traditional Reinsurance – Stacked Life and AD&D Excess

- Ceding company retains first \$400,000 of combined group life and group AD&D per person
- Reinsurer assumes 100% of amounts in excess of \$400,000 up to a maximum of \$1,000,000
- Employee dies with \$500,000 of group life coverage and \$300,000 of group AD&D coverage
  - Ceding company share is \$400,000, all group life
  - Reinsurer share is \$400,000 = \$100,000 of group life and \$300,000 of group AD&D
- Maximum reinsurer liability is \$600,000, unless a facultative exception is made

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# Example

## Traditional Reinsurance - AD Carve Out with Inner Aggregate

- Ceding company reinsures 100% of accident deaths on its entire book of retained life insurance, after the first \$2.5 million claims per year
- Includes individual and group life policies as well as ADB riders and stand-alone AD&D policies
- Total accidental death claims total \$4.2 million for the year
- Ceding company retains \$2.5 million
- Reinsurer assumes \$1.7 million

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## Example

### Private Label Reinsurance – 60/40 Quota Share to \$1 Million

- Ceding company underwrites and rates all life and AD&D coverages for most groups of up to 500 lives, using reinsurer's rates and rating system, and following mutually agreed upon guidelines
- Reinsurer underwrites or approves all quotes for groups with more than 500 lives and those in riskier industries or with riskier demographics
- Ceding company keeps 20% of every premium dollar for its expenses and profit, and 28% of each premium dollar for its 40% share of claims
- Reinsurer gets 10% of every premium dollar for its expenses and profit, and 42% of each premium for its 60% share of claims, plus a separate premium for exposure above \$1 million
- Ceding company pays 40% of each death claim up to \$1 million and reinsurer pays 60%; and reinsurer pays 100% of amounts over \$1 million

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# Reinsurer Characteristics

- Financial strength
- Authorized – either licensed or accredited
- Capacity
- Reputation
- Service Capabilities
- Underwriting expertise
- Claim management expertise
- Ease of doing business

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# Risk Transfer Testing

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Presenter's Name - Raza Zaidi

Presentation Date - 11/29/07

# Overview

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- Background
  - Attestations and Interrogatories
  - FAS 113
  - SSAP 61
- Features that impact risk transfer
- Assumptions
- Approaches used to evaluate risk transfer
- Performing the Risk Transfer Test

# Background

## Attestations and Interrogatories

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- NAIC requires disclosures and management attestations with year-end financial statements
  - Additional General Interrogatories
    - Quota share with limiting features
    - Large contract with longer term, cancellation provisions, unilateral commutation, aggregate stop loss, delay in reimbursement
    - Inter-company reinsurance
    - Different treatment under GAAP versus Statutory
  - Summary Supplement to Interrogatories
  - Supplement for Reinsurance Attestations (CEO/CFO)

# Background

## FAS 113

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FAS 113 was issued in 1992 for fiscal years beginning after 12/15/92 (Calendar Year 1993)

- Defines risk transfer for Reinsurance of Short Duration as well as Long Duration Contracts
- Reinsurance contracts are typically short duration contracts
  - Check FAS 60 to ensure if short duration or long duration

# Background

## FAS 113

- FAS 113 defines reinsurance of short-duration contract as one that *“indemnifies a ceding enterprise against loss or liability relating to insurance risk, such that both of these requirements are met:*
  - *The reinsurer assumes **significant insurance risk** by entering into the contract*
  - *It is **reasonably possible** that the reinsurer may realize a **significant loss** from the contract”*
- FAS 113 defines insurance risk as *“the risk arising from uncertainties about both*
  - *the ultimate amount of net cash flows from premiums, commissions, claims, and claim settlement expenses paid under a contract (often referred to as underwriting risk), and*
  - *the timing of the receipt and payment of those cash flows (often referred to as timing risk).”*

# Background

## FAS 113

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- *“A reinsurer has not assumed significant risk if the variation in either the amount or timing of the cash flows is remote.”*
- *“Economic Loss is based on the NPV of net cash flows (actual or deemed) to the reinsurer, computed at a fixed interest rate.”*
- *Significance is based on the magnitude of the economic loss in relationship to the NPV of the premium paid (or deemed paid) to the reinsurer”*

### What Does FAS 113 Define?

- Defines:
  - cash flows evaluated must be those between reinsurer and reinsured, therefore exclude:
    - Reinsurance brokerage fees
    - Internal expenses of reinsurer
- Not defines:
  - Significant insurance risk
  - Reasonably possible, significant loss
  - Remote
  - Substantially all

# Background

## SSAP 61

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- Reinsurance agreements must transfer risk from the ceding entity to the reinsurer in order to receive the reinsurance accounting treatment. Any contractual feature that delays timely reimbursement violates the conditions of reinsurance accounting.
- Non-proportional (stop loss and catastrophe) agreements, contracts terms shall be evaluated to assess whether they transfer significant risk to the reinsurer. Contractual features that delay timely reimbursement or protect the reinsurer from incurring a loss prevent this condition from being met.

# Background

## SSAP 61

YRT agreements that transfer a proportionate share of mortality or morbidity risk inherent in the business being insured and do not contain any of the conditions described in Appendix A-791 as shown below;

- To receive reinsurance accounting treatment the following conditions **should not** be present in the YRT agreement.
- 2b. The ceding insurer can be deprived of surplus or assets at the reinsurer's option or automatically upon the occurrence of some event, such as the insolvency of the ceding insurer, except that termination of the reinsurance agreement by the reinsurer for nonpayment of reinsurance premiums or other amounts due, such as modified coinsurance reserve adjustments, interest and adjustments on funds withheld, and tax reimbursements, shall not be considered to be such a deprivation of surplus or assets.
- 2c. The ceding insurer is required to reimburse the reinsurer for negative experience under the reinsurance agreement, except that neither offsetting experience refunds against current and prior years' losses under the agreement nor payment by the ceding insurer of an amount equal to the current and prior years' losses under the agreement upon voluntary termination of in force reinsurance by the ceding insurer shall be considered such a reimbursement to the reinsurer for negative experience. Voluntary termination does not include situations where termination occurs because of unreasonable provisions which allow the reinsurer to reduce its risk under the agreement;
- 2d. The ceding insurer must, at specific points in time schedule in the agreement, terminate or automatically recapture all or part of the reinsurance ceded.
- 2h. Settlements are made less frequently than quarterly or payments due from the reinsurer are not made in cash within ninety (90) days of the settlement date.
- 2i. The ceding insurer is required to make representations or warranties not reasonably related to the business being reinsured.
- 2j. The ceding insurer is required to make representations or warranties about future performance of the business being reinsured.
- 2k. The reinsurance agreement is entered into for the principal purpose of producing significant surplus aid for the ceding insurer, typically on a temporary basis, while not transferring all of the significant risks inherent in the business reinsured and, in substance or effect, the expected potential liability to the ceding insurer remains basically unchanged.

- **The statutory accounting principles established by SSAP61 may differ substantially from GAAP (reflecting much more detailed guidance)**
  - *A reinsurance treaty covering contracts that have insignificant mortality or morbidity risk that does not transfer the mortality or morbidity risk, but does transfer all of the significant risk inherent in the business being reinsured (e.g. lapse, credit quality, reinvestment or disintermediation risk) qualifies for reinsurance accounting for statutory reporting purposes, but would not qualify for reinsurance accounting treatment for GAAP purposes.*

# Steps to Evaluating Risk Transfer

- Decide - GAAP or Statutory Treatment
- General evaluation — Does contract transfer “substantially all insurance risk?”
  - Is literally all of the risk transferred?
  - No caps on reinsurers downside risk
  - Limited corridors, sliding scale commissions
  - Timely reimbursements
- If so, then no need to test risk transfer since it is assumed to exist
- If not, then must test risk transfer

**The test evaluates financial impact on the reinsurer not the ceding company!!**

# What Types of Risks are Considered

- Underwriting
  - Underlying uncertainty of insurance liabilities
- Timing
  - Uncertainty of when claims will occur and need to be paid
- Parameter (model) risk
  - Uncertainty associated with picking the wrong parameters in the model
- **Interest rate risk – NOT CONSIDERED**

# Features that Affect Risk Transfer

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- Contractual features
- Other items

# Contractual Features

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- Sliding scale commissions
- Loss ratio caps
- Loss corridors
- Retrospectively rated
- Experience refunds
- Cancellation provisions
- Deductibles

# Other Items

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- Side agreements (verbal or contractual)
- Verbal assurances of profit for reinsurer
- Primary purpose is to manipulate financial statements

# The Model

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- Generally, stochastic model used for generating claim scenarios for the inforce exposure
- Need exposure data (may be developed using the claim data)
- Mortality Table – company's group life table, industry experience table
- Replicate the financial terms of the reinsurance contract based on the claim scenarios

# Assumptions and Variability Estimates

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- Loss Amount
- Parameter Risk
- Loss Payment Pattern
- Premium payment
- Discount Rate
- Catastrophic Risks – Pandemic, Single Location Risk, etc.

# Modeling The Treaty

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- Model all cash flows between ceding and assuming company
  - Premiums
  - Losses
  - Commissions
  - Maintenance fees
  - Experience refunds
  - Funds withheld

# Traditional Approaches used for Evaluating Risk Transfer

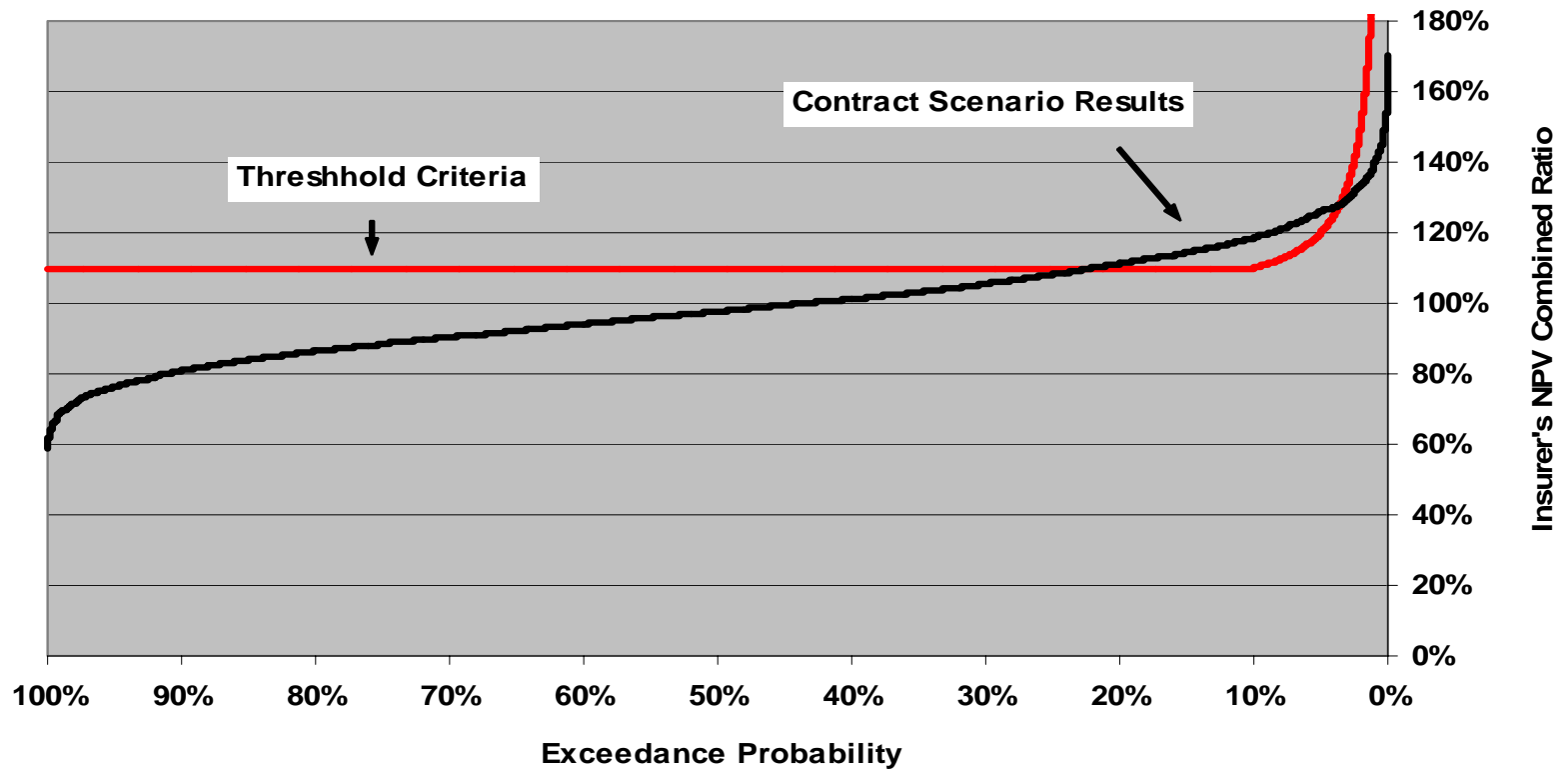
## ■ 10-10 Threshold Test and Its Generalization

- 10% chance of a loss to the reinsurer of at least 10% of the present value (PV) of premium
  - Fails low frequency/high severity contracts (e.g., catastrophe covers)
  - Fails some high frequency/low severity contracts (e.g., medical claims)
- Improved Test - Comparison at continuum of loss probabilities
  - aka Generalization of 10 – 10 Threshold Test
- Does reinsurer's loss exceed these thresholds at any point?

Probability	Reinsurer Loss
10.0%	-10.0%
7.0%	- 14.3%
5.0%	- 20.0%
3.0%	- 33.3%
2.0%	- 50.0%
1.0%	- 100.0%

# Traditional Approaches used for Evaluating Risk Transfer

## 10-10 Threshold Test and Its Generalization



# Traditional Approaches used for Evaluating Risk Transfer

- Expected Reinsurer Deficit (ERD)
  - Suggested by CAS Risk Transfer Working Party paper written in 2005
  - $ERD = \text{Frequency} \times \text{Average Severity} \geq \text{Threshold}$
  - Frequency = probability of economic loss
  - Average severity = average level of economic loss
  - P/C industry is using 2.5% threshold.
- Why is ERD preferred?
  - Reflects all negative outcomes in severity definition
  - Replaces separate Frequency and Severity requirements into single integrated measure