Session 16: How Reinsurance Strategy Can Improve your ERM Scorecard

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How Reinsurance Can Improve Your ERM Scorecard

2018 ERM Symposium – Miami, Florida

Lisa G. Chanzit, FCAS, MAAA, ARM

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Learning Objectives

- Reinsurance Decision-Making in an ERM Framework
- How reinsurance increases and decreases risk
- 3 case studies:
  - Retention/structure decision
  - Alternative risk transfer decision
    - Insurance-linked security (ILS)
    - Captive

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Reinsurance Functions

- Expand Capacity to Write New/Additional Business
- Share Large Risks Among Insurers
- Spread the Risk of Potential Catastrophes
- Stabilize Underwriting Results
- Withdraw from a Line of Business
- Reduce Financial Leverage

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SOURCES OF CAPITAL

- Traditional Reinsurance
  - Supported by equity capital, with shareholders and a traditional capital model
  - Recoveries backed by full faith and credit of Reinsurer

- Reinsurance Alternatives
  - 'New Money' - Pensions, Hedge Funds, Mutual Funds
  - Recoveries fully collateralized
  - Focused on Property Catastrophe
  - AKA Insurance-Linked Securities (ILS)

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TRADITIONAL REINSURANCE

Top 10 Global Reinsurance Groups (Life and Non-Life)

Ranked by gross reinsurance premium written in 2016 (USD Millions)

		Reinsurance Premiums Written			
		Life & Non-Life		Non-Life Only	
2017 Ranking	Company Name	Gross	Net	Gross	Net
1	Swiss Re Ltd.	$35,622	$33,570	$21,878	$21,430
2	Munich Reinsurance Company	$33,154	$31,891	$18,784	$17,931
3	Hannover Rück S.E.[4]	$17,232	$15,192	$9,699	$8,414
4	SCOR S.E.	$14,569	$13,238	$5,942	$5,323
5	Berkshire Hathaway Inc.[5]	$12,709	$12,709	$8,037	$8,037
6	Lloyd's[6 7]	$11,576	$8,694	$11,576	$8,694
7	Reinsurance Group of America Inc.	$10,107	$9,249	N/A	N/A
8	China Reinsurance (Group) Corporation	$7,857	$7,517	$3,342	$3,262
9	Great West Lifeco	$6,195	$6,112	N/A	N/A
10	Korean Reinsurance Company	$5,554	$3,903	$4,880	$3,312

Source: AM Best data & research - September 5, 2017 Special Report

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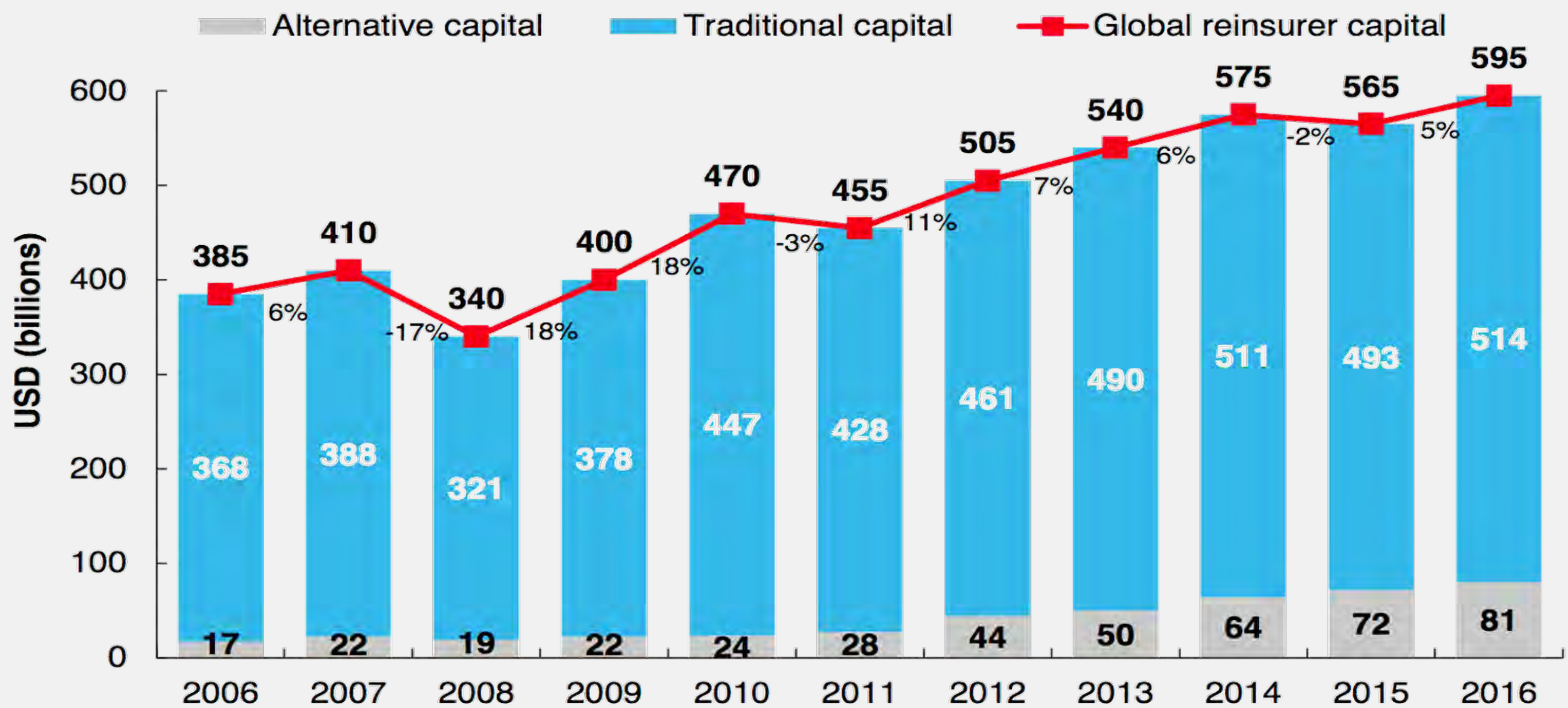
Market Participation

Exhibit 1: Change in Global Reinsurer Capital



Source: Aon Benfield Analytics, individual company records

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Traditional Reinsurance Solutions

- **Quota Share** – e.g. 25% of all premiums and losses
- **Per Risk Excess of Loss** – e.g. losses in excess of $1M
- **Catastrophe Excess of Loss** – e.g. $1B excess of $500M retention for any named storm
- **Aggregate Excess of Loss** – e.g. 25% excess of 90% loss ratio on entire book of business for accident year 2017
- **Loss Portfolio Transfer** – e.g. all reserves related to accident years 2016 and prior

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Example – Catastrophe Risk

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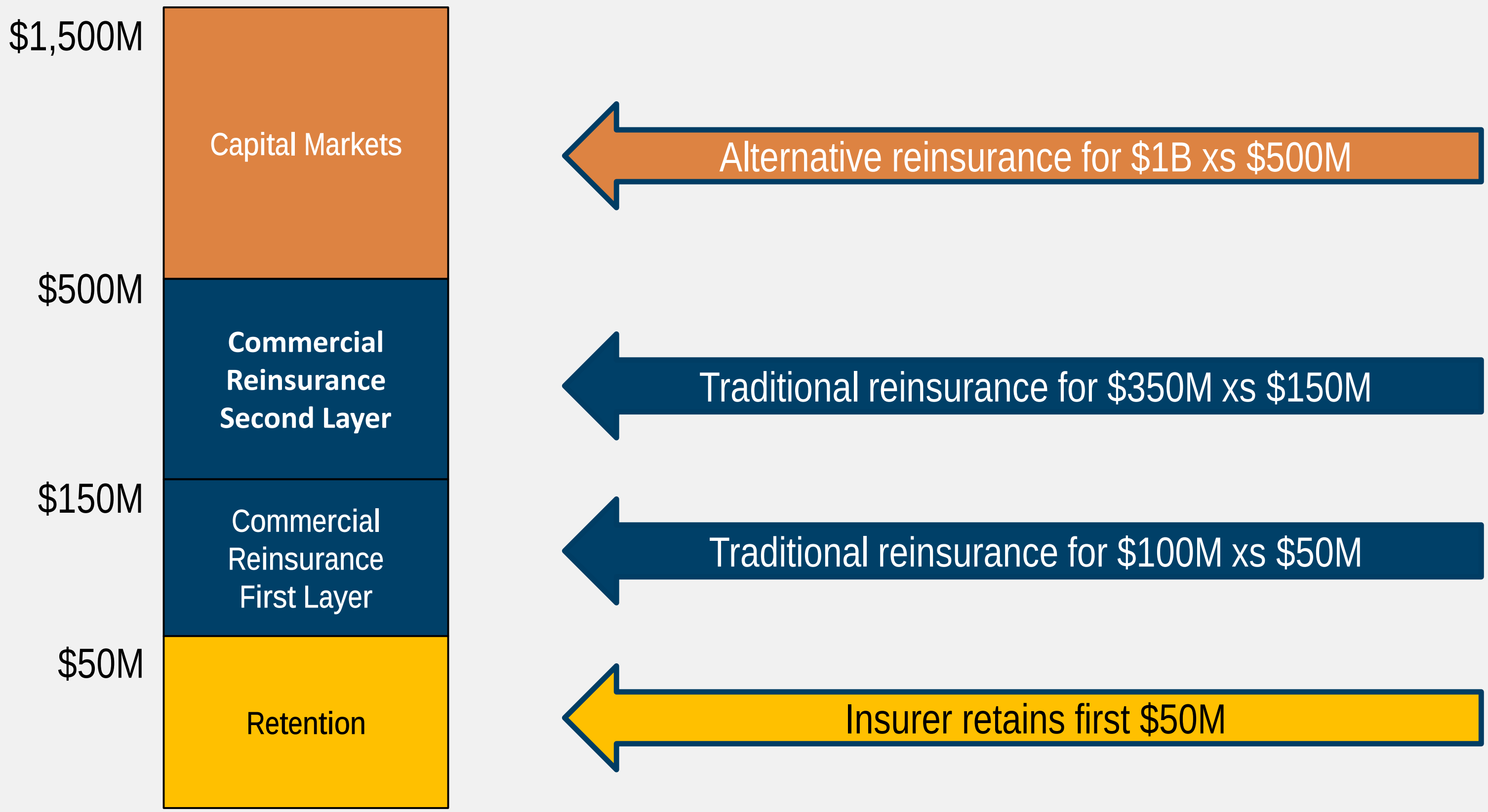
CAT REINSURANCE PROGRAM EXAMPLE



Note: Not drawn to scale

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PREMISE

- Any reinsurance decision can increase or decrease risk (or both)
- Framework: NAIC branded risk categories
- Caveat: “own” in ORSA means each insurer uses their own risk categorization

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NAIC Branded Risk Categories

Operational

Pricing /Under writing

Reputational

Credit

Market

Legal

Liquidity

Reserving

Strategic

Other

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How Does Reinsurance Affect Risk?

- Credit
- Legal
- Liquidity
- Market
- Operational

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How Does Reinsurance Affect Risk? (continued)

- Pricing/Underwriting
- Reputational
- Reserving
- Strategic
- Other

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CASE STUDY #1

Decision-making among retention/structure options

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Cost-Benefit Analysis in Reinsurance Decision-Making

- What is cost-benefit analysis?
- How it can help
- Complicating/qualitative factors
- Primary insurer evaluation vs. reinsurer evaluation
- Data & info needed
- Methodology
- Expected scenario vs. potential variation
- Example

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What is Cost-Benefit Analysis?

In this context, comparing, for each coverage structure/option:

- Reinsurance cost, with
- Losses/loss adjustment expenses transferred to reinsurer
  - Expected scenario
  - Stressed or higher confidence level scenarios
- In light of qualitative considerations

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How cost-benefit analysis can help

- Makes both quantitative and qualitative considerations and tradeoffs more explicit
- Highlights differences in expected outcome vs. different scenarios
- Rationalizes decision-making
- Provides input to long-term planning process
- Increases management/Board comfort with process and outcome

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How Cedant Considerations Compare to Reinsurer Pricing

Primary Insurer

- Qualitative considerations may play greater role
- Expenses allocated to retained layer?
- Surplus can be used to assume greater risk
- Tend to place greater reliance on own loss development and trend
- Sparse size-of-loss (SOL) data
- Conformance to insureds'/agents' coverage needs

Reinsurer

- Heavier reliance on quantitative considerations
- Expense loads at least 10%
- Availability of capital, but need to price to corporate ROE standard
- Tend to rely on industry loss development and trend
- Access to large volume of SOL data
- May exclude coverages or impose other terms to compete on price
- For small volume deals, may impose minimum premium

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Complicating/Qualitative Considerations

- Historical structure of reinsurance program
- Comfort with change and risk-taking
- Surplus level
- Exclusions and other coverage terms
- Historical broker/reinsurer relationships
- Degree of control over risk financing destiny

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Data & Info Needed for Analysis

- Policy terms & conditions
- Existing & proposed reinsurance contracts and pricing for various options
- Most recent actuarial reports – reserves & pricing
- Cedant financials
- Recent claims listing by coverage & year – ground up & uncapped
- Total exposures by year + upcoming year forecast
- Changes in exposures, coverage, underwriting, claims process, etc.
- Sample insured application/proposal

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METHODOLOGY

EXPERIENCE RATING

- Uses cedant's own excess experience
- Individual losses adjusted for loss development & trend
- Adjusted losses layered as in proposed options
- Relate to annual exposures & select loss cost per exposure for layer

EXPOSURE RATING

- Uses cedant's ground up loss experience to some limit and then uses size-of-loss (SOL) distribution to estimate excess layer losses
- Often uses actuarial projection of loss cost at retained limit
- SOL distribution based on industry adjusted for tort caps, cedant experience

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Other Considerations

- Analysis of specific or per occurrence cover vs. aggregate excess cover
- Treatment of allocated loss adjustment expense (ALAE)
- Guaranteed cost vs. loss-sensitive
- Corridor deductibles
- Adjusting for changes in:
  - Book of business
  - Coverage
  - Claims administration/case reserving

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Expected Results vs. Potential Variation

- Modeling expected losses/ALAE may suggest one decision, but
- Relatively minor changes in assumptions may suggest another decision
- Alternative scenarios may be generated by:
  - Higher confidence level results from statistical simulation analysis
  - Historically worst excess loss year
  - More conservative assumptions
  - Alternative methods

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Example

- Insurer of educational institutions with $50 million annual premium, $35 million in surplus, 1,000,000 students
- General liability reinsurance currently $1.5 million x/s $500,000 for $7,500,000 annual premium (Option 1)
- Ceding insurer considering $1,000,000 x/s $1,000,000 reinsurance structure (Option 2) for $3,000,000 annual premium

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Example, continued

Analysis Results (per student):

Layer	Experience Rating	Exposure Rating	Selected
$500 K x/s $500 K	$5.00	$2.00	$4.00
$1.0 M x/s $1.0 M	$1.00	$3.00	$2.50
TOTAL: $1.5 M x/s $500 K	$6.00	$5.00	$6.50

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EXAMPLE, CONTINUED

	Option 1	Option 2
Reinsurance cost	$7,500,000	$3,000,000
Expected loss/LAE retained by ceding insurer	$30,000,000	$34,000,000
Total expected cost excluding cedant expenses	$37,500,000	$37,000,000
90% confidence level loss/LAE retained by cedant	$37,500,000	$44,200,000
Total 90% confidence level cost	$45,000,000	$47,200,000
Other considerations	Role of current broker/carrier Long-term financial strategy Good higher layer experience Full SIR loss: 2.9% of surplus	

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Case Studies #2 and #3: Alternative Risk Transfer

What is Alternative Risk Transfer?

Transfer of risk using methods other than traditional commercial reinsurance

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ALTERNATIVE RISK TRANSFER

- Alternatives to traditional reinsurance
  - Many insurers and reinsurers are now using the capital markets as an alternative to traditional reinsurance.
  - Some insurers and reinsurers are using the capital markets to gain access to the capital of institutional investors.
  - Securitization of Risk: means that an insurable risk is transferred to the capital markets through the creation of a financial instrument, such as a catastrophe bond, futures contract, options contract, or other financial instrument.

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Case Study #2: Insurance Linked Securities

- Financial Instruments sold to investors with valuation affected by insured loss events
- The following are the primary types of ILS
  - CAT Bonds
  - Collateralized Reinsurance
  - Industry Loss Warranty (ILW)
  - Sidecars

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INSURANCE-LINKED SECURITIES

Catastrophe Bond (CAT Bond)

- Catastrophe reinsurance capacity shrank in mid-90’s
- Insurers transfer risk exposures to capital markets
- Concentrated around property risks with exposures to hurricanes, windstorms, earthquakes
- Similar structure to traditional bond investments
- Big Difference - Loss of principal or interest upon Triggering Event

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INSURANCE-LINKED SECURITIES

- Catastrophe bonds are an excellent example of the securitization of risk
- Catastrophe bonds are corporate bonds that permit the issuer of the bond to skip or reduce scheduled interest payments if a catastrophic loss occurs
- The bonds are complex financial instruments issued by insurers and reinsurers and are designed to provide funds for catastrophic natural disaster losses
- Catastrophe bonds are typically purchased by institutional investors seeking higher-yielding, fixed-income securities

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INSURANCE-LINKED SECURITIES

Collateralized Reinsurance

- Reinsurance contract or program that is fully collateralized by capital providers
- Collateral is posted to a trust account equal to reinsurance contract limit
- Allows capital providers to underwrite insurance risk without a financial strength rating
- Highly Customizable = Potentially Highly Complex

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INSURANCE-LINKED SECURITIES

Industry Loss Warranty (ILW)

- Reinsurance coverage triggered by industry losses, rather than the insureds actual losses from a catastrophe event
- ILW advantage is low transactions costs - Index-based trigger creates loss transparency and limited underwriting
- Typically fully collateralized and issued by Reinsurers and capital market investors
- May have a 2nd indemnity-based trigger, requiring the cedant to also have a specified amount of actual losses

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Insurance-Linked Securities

Reinsurance Sidecar

- Typically issued by Reinsurers for a specific risk, loss portfolio, or book of business
- Typically provides property catastrophe quota share reinsurance
- Separate from Reinsurers traditional capital structure
- Like CAT Bonds, fully collateralized with a limited lifetime

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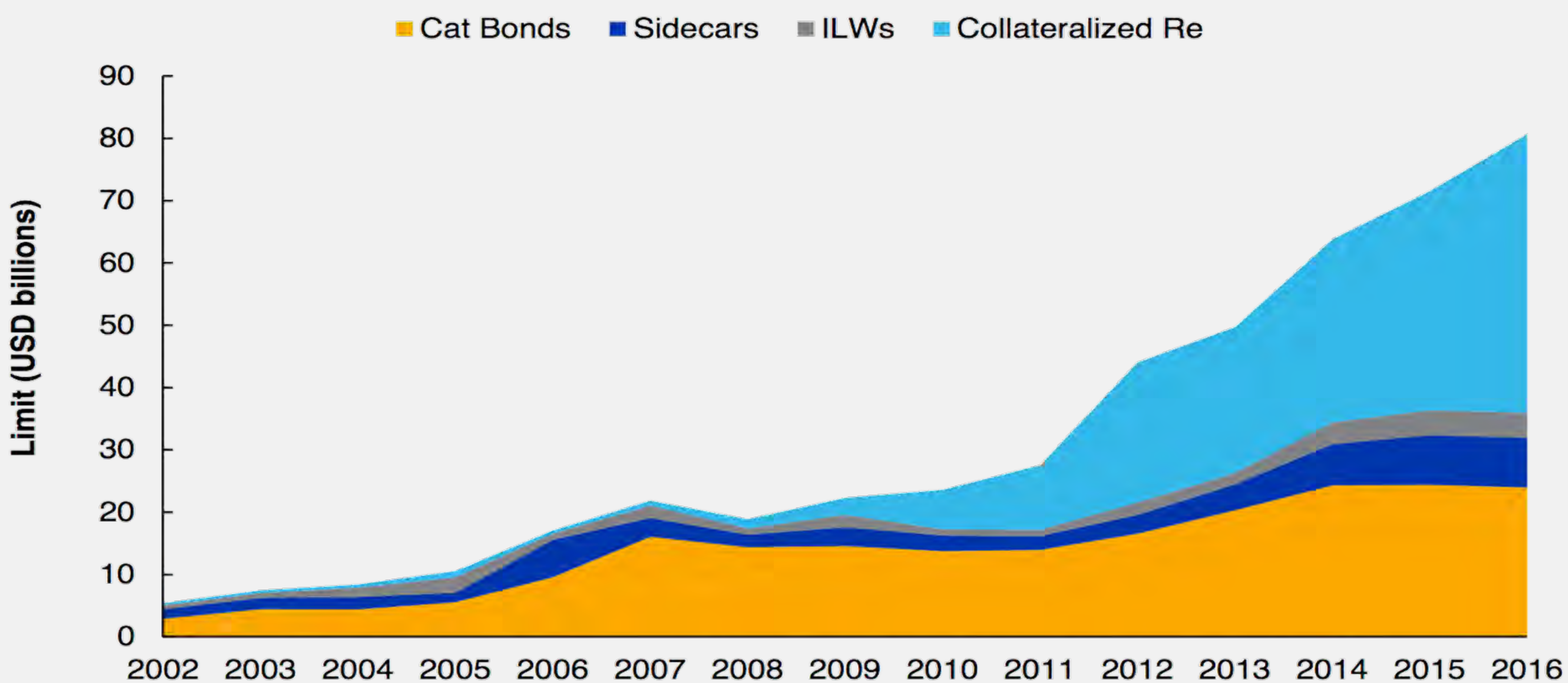
ILS Market Participation

Exhibit 3: Alternative Capital Deployment



Source: Aon Securities, Inc.

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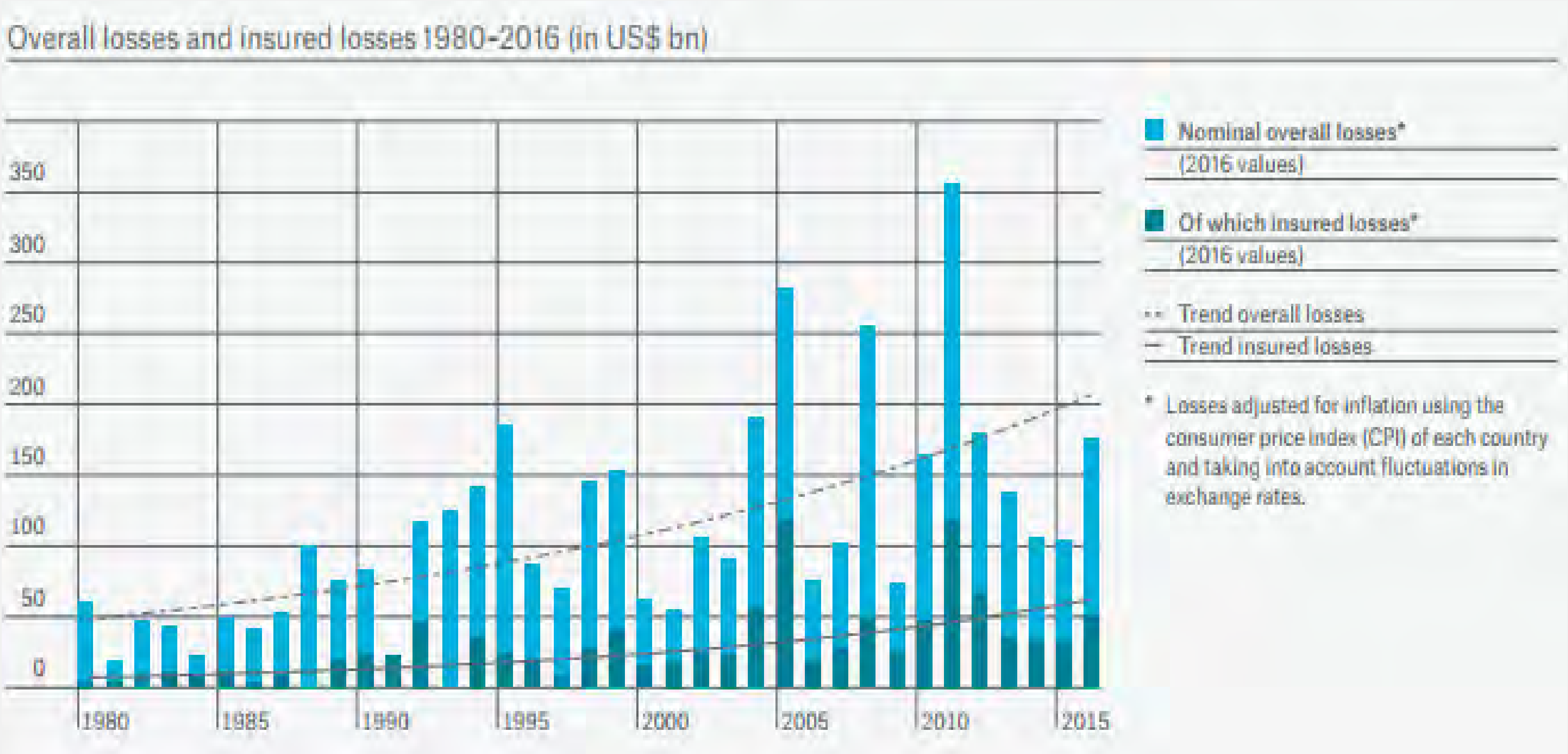
SUPPLY & DEMAND CONSIDERATIONS



Source: Munich Re NatCatSERVICE

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SUPPLY & DEMAND CONSIDERATIONS

Insurance-Linked Securities - Supply & Demand Factors

- Depressed Interest Rates
- Low Correlation with Financial Markets
- Rating of ILS Issuances
- Collateralization

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CASE STUDY #3: CAPTIVES

Captive Insurers

- A licensed insurance company wholly-owned and controlled by its insureds
  - Self Insurance
- Captives evaluate risk, charge and collect premiums, invest reserves for future claims
- Subject to regulatory financial reporting and capital requirements

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Alternative Risk Transfer: Captives

Captive Insurers

- Started in 1920s and 1930s
- Real growth started in early 1950s in offshore captives
  - Bermuda and Cayman Islands
- Phenomenal growth last 20 to 30 years
- Over 4,400 captives worldwide
  - Writing more than $20B in premium
  - Capital and surplus estimated at over $50B

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Alternative Risk Transfer: Captives

Captive Insurers

- Stimulated by expense or lack of availability of certain types of insurance cover in the commercial market
  - Workers' Compensation
  - Commercial General Liability
  - Professional Liability, especially Medical
  - Automobile Liability/Physical Damage
- Become important in the minds of risk managers & finance directors

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Alternative Risk Transfer: Captives

Captive Insurers

- Limited purpose insurance company
- Objective of financing risks from their parent group
- Insures all or part of the risks of its parent group
- Administration is usually outsourced to a specialized captive manager
- Also known as an in-house self-insurance vehicle

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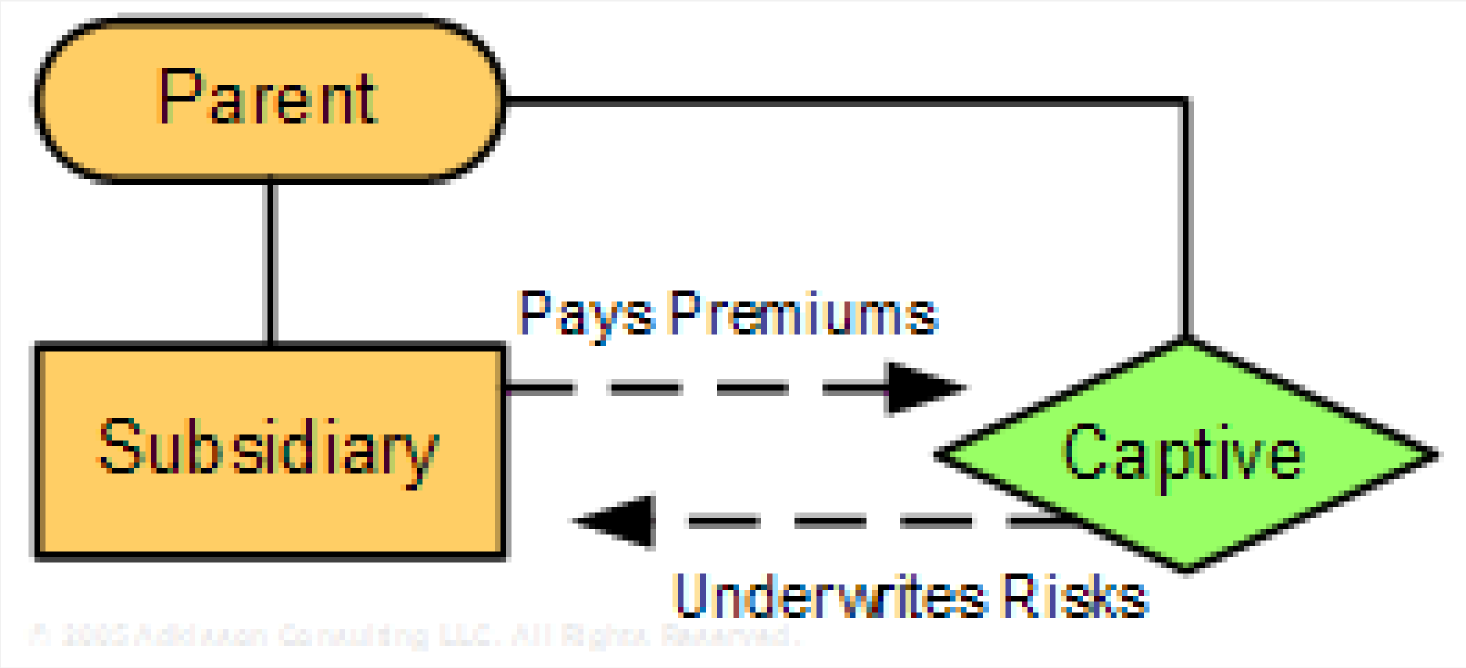
ALTERNATIVE RISK TRANSFER: CAPTIVES



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Alternative Risk Transfer: Captives

Different Types of Captives

- Single Parent -'Pure Captives' are owned and controlled by a single parent organization as a subsidiary. Insures risks within that organization.
- Risk Retention Group - Owned by its insureds who are typically in the same industry. Only insure commercial casualty risks from within the group, excludes workers compensation, must be domiciled onshore.

Alternative Risk Transfer: Captives

Different Types of Captives

- Rent-a-Captive
  - 3rd party insurance company provides captive structure
  - Allows insureds to avoid owning and capitalizing an insurance company
  - Requires insured to provide collateral so captive avoids underwriting losses

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CAPTIVES BY THE NUMBERS

CAPTIVE GROWTH, 2007-2016

SOURCE: BUSINESS INSURANCE (WWW.BUSINESSINSURANCE.COM)

Year	Number of Captives
2007	5,119
2008	5,211
2009	5,525
2010	5,587
2011	5,831
2012	6,125
2013	6,412
2014	6,839
2015	6,939
2016	7,006

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Alternative Risk Transfer: Captives

Captive Advantages

- Premium payments to Captive are tax-deductible
- May be less expensive than traditional reinsurance
- More tailored to group needs than traditional reinsurance
- Underwriting profits remain within the group
- More efficient and timely claims management
- Tax advantages
- Ability to direct investment options

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Alternative Risk Transfer: Captives

Captive Advantages

- Reduce Overall Costs
  - Contributions are based on the company's expected losses
  - Premiums are likely to be more stable from year to year
  - Members have the ability to retain investment earnings and underwriting profit
  - Fixed costs are controllable and can be reduced

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Alternative Risk Transfer: Captives

Captive Advantages

- Improved Insurance Program
  - Enhanced coverage, marketability, and cost control
  - Forum for exchange of ideas, learn from fellow members' experiences
  - No surprises in the renewal process, no bidding upheaval

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Alternative Risk Transfer: Captives

Captive Disadvantages

- Increased Administration Burden: Captive owners will be ultimately responsible for such items as claim administration, loss control and underwriting which adds cost.
- Delegation: Where a captive management company is engaged, a high degree of delegation and partnership is required, which could be a significant management time commitment.

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Alternative Risk Transfer: Captives

Captive Disadvantages

- **Acquisition of Expertise:** A parent company must acquire relevant expertise for all the insurance related disciplines, which could be done through a captive manager. Although it would be prudent to have a least some expertise residing in the parent company.
- **Merger or Acquisition:** A captive's existence may complicate merger or acquisition activity.

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Alternative Risk Transfer: Captives

Captive Disadvantages

- **Volatility of Reinsurance Market:** Since the reinsurance market tends to be experience rated (premiums closely reflect the loss history of the insured) a reinsured risk of a captive might face premium increases sooner than a commercially insured risk.

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ALTERNATIVE RISK TRANSFER: CAPTIVES

Captive Disadvantages

- **Capital Commitment:** At least during the initial stages of a captive formation there will be a burden on the parent's financial resources to fund the initial set-up costs and the capitalization required by the domicile's regulatory body.
- **Run-Off:** A change in the parent company’s business plan or a merger might result in the captive being placed in a run-off mode. Expenses of a run-off produce no current economic benefit.

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PRESENTER: Brian O’Neill
DATE: April 18, 2018
COMPANY: Knighthead Annuity & Life Assurance Company

HOW REINSURANCE CAN IMPROVE YOUR ERM SCORECARD

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I. Introduction and Bio

Presenter Bio

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Brian O'Neill| Chief Actuary, CFA, CERA, FSA, MAAA
Thirteen years of experience in a management consulting capacity at both Deloitte and Towers Watson as well as 5 years of experience as a Vice President in the Actuarial Group at Assured Guaranty. Brian is a CFA Charterholder, a Certified Enterprise Risk Analyst, a Fellow in the Society of Actuaries and a Member of the American Academy of Actuaries. Brian earned a BS in Math from Georgetown University.

II. Why Reinsurance?

Why Reinsurance?

- There are a wide variety of business needs, incentives and constraints, which reinsurance transactions can help companies address

Mortality/Morbidity/Longevity Risk Transfer: Ceding Company only retains risk up to a certain limit (called retention limit) or as a percentage (called quota share)

Lapse/Surrender Risk Transfer: Mainly used for products with large first year commissions

Investment Risk Transfer: Utilize benefits of reinsurer's investment facilities or to shift part of risk to reinsurer

New Business Financing: Utilize reinsurance as a financing source for acquisition

Mergers and Acquisitions: Increase capital through transferring risk of an inforce block

Underwriting Assistance: Reinsurers can assist with complicated cases and provide facultative reinsurance

Entering New Markets: Utilize Reinsurer's expertise

Divesting a Product Line: Reinsure inforce business to exit and effectively "sell" certain business lines without transferring corporate ownership

Why Reinsurance? (cont'd)

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Increase Profitability of Product: Differences in cost structures between cedant and reinsurer could cause the product to be more profitable when reinsured

Financial Planning/Capital Management: May need to increase capital levels through reinsurance

Reduce Volatility of Returns: Reinsurance can reduce the cedant's exposure to large claims

Tax Planning: Done to maintain Life/non-Life status or utilize an expiring tax loss carry-forward

Enterprise Risk Management: Reduce concentration of risk or utilize a reinsurer's lower cost of capital

Release Reserves for other Corporate Purposes: Shifting the risk/liabilities to a third party permits ceding company to release capital/reserves otherwise held against the business, which may then be used to improve balance sheet for rating agency, RBC or for other purposes

III. Types of Reinsurance

Coinsurance

- Ceded reinsurance coverage is in the "same form" as that of the policies issued to policyholders
  - ***"Same form"*** (or sometimes called "original terms") means that the cedant and reinsurer are exposed to the same risks, essentially ***sharing the responsibility*** of insuring the policies
- Cedant typically continues to perform policy administration
  - Reinsurer typically pays the cedant an ***expense allowance*** to reimburse a portion of the administration costs
- The reinsurer also typically pays the cedant a ***ceding allowance*** to cover a portion of the agent commissions, upfront underwriting expenses and profit associated with the business
- The reinsurer often also ***posts collateral*** to provide the cedant with an additional level of security if the reinsurer breaches or is otherwise unable to meet obligations
- The percentage of the business reinsured is called the ***quota share***

Coinsurance

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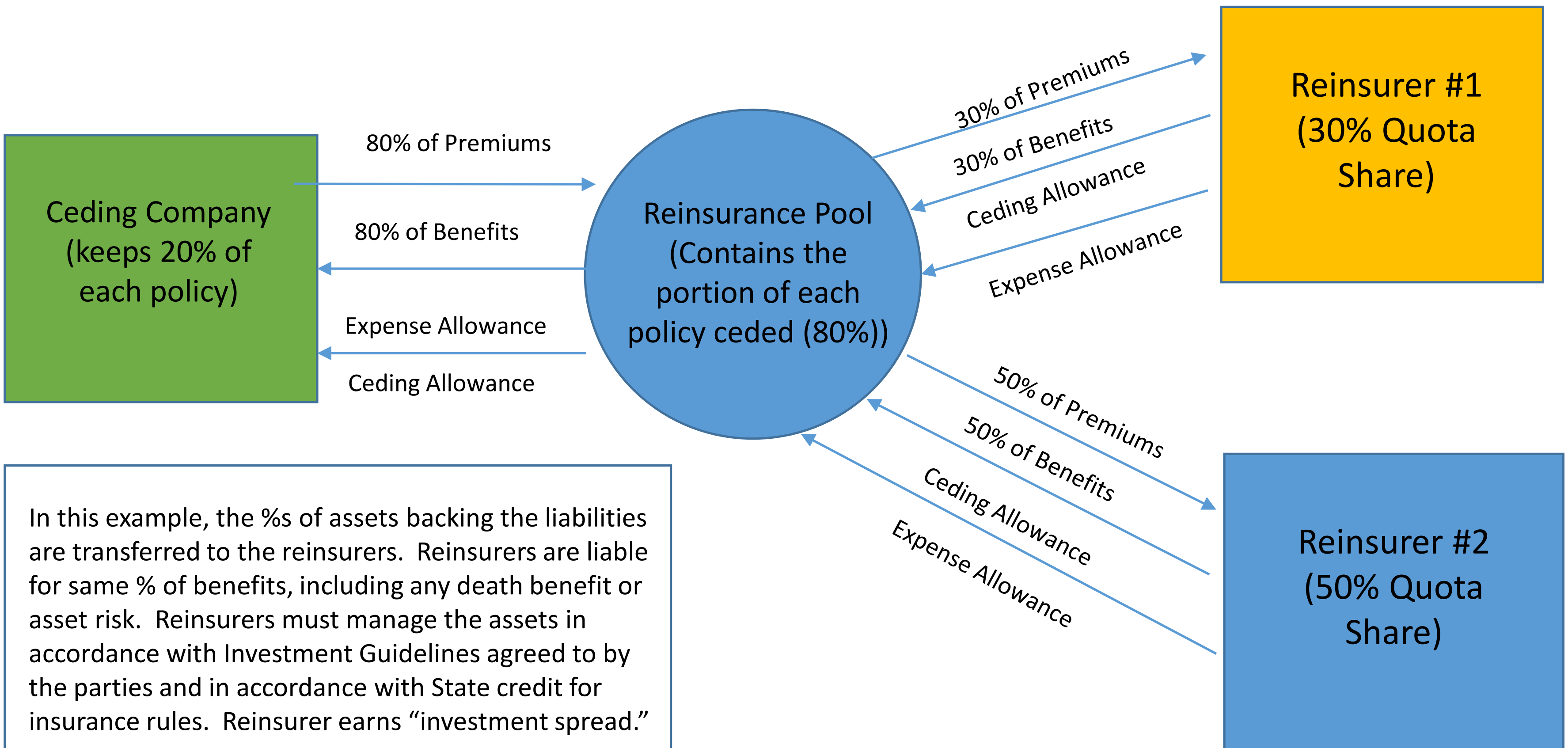
Typical arrangements are for fixed annuity insurance where the cedant retains a percentage of each policy and sends the rest of the policy to several other reinsurers through the use of a "pool"



In this example, the %s of assets backing the liabilities are transferred to the reinsurers. Reinsurers are liable for same % of benefits, including any death benefit or asset risk. Reinsurers must manage the assets in accordance with Investment Guidelines agreed to by the parties and in accordance with State credit for insurance rules. Reinsurer earns "investment spread."

Modified Coinsurance (Modco) Arrangements

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- Same as coinsurance, except ceding company ***retains the assets*** with respect to all the policies reinsured
  - Cedant establishes and retains the ***total policy reserves***
- Reinsurer is paid the ***gross investment income*** on the assets retained by the ceding company
- ***Periodic settlements*** between the two companies occur as premiums are collected, death benefits are paid, surrenders occur, etc.
- Reinsurer is charged by the ceding company for its ***proportionate part of the increase in reserves*** on the reinsured policies
- This removes one of the major disadvantages of strict coinsurance in that the original insurer’s assets are not diminished
- Asset management may be done by the cedent, reinsurer or a third party, as agreed to by the parties and pursuant to agreed upon Investment Guidelines

Funds Withheld Arrangements

- A provision in a reinsurance treaty under which some or all of the premium due to the reinsurer (typically an unauthorized/offshore reinsurer) ***is not paid***, but, rather, is withheld by the ceding company
- The assets remain in the ceding company's name, but reinsurer has the economic risk
- This enables the ceding company to reduce it's counterparty exposure to ***unauthorized reinsurers*** and still receive reserve credit
- The reinsurer's asset, in lieu of cash, is funds held by or deposited with reinsured companies
- Though the Funds Withheld (FW) assets are ***physically held by the cedant***, investment management for such assets is typically the responsibility of the reinsurer or a third party selected by the reinsurer but technically appointed by the cedent

Yearly Renewable Term (YRT)

- YRT arrangements are typically thought of as ***mortality only covers***
- Coverage where the premium rates are not directly related to the insured policy premiums
  - Premiums typically set as a ***percentage of an industry mortality table*** multiplied by the ***net amount at risk (NAAR)***
  - ***NAAR*** is equal to the total prospective ***policy death benefits*** less ***policy reserves***
- Generally ***no expense allowance***
- Can be used for ***any type*** of life contract
- Reinsurer has the right to increase rates each year
- One type of YRT structure is a ***zero first year (ZFY) premium*** structure, where no premium is paid in year 1 to help recoup first-year acquisition costs (sales commissions)

Other Notable Types and Features

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New Business vs. Inforce: Some transactions involve the reinsurer participating in new business written by the cedant ("flow" transactions), others only address inforce business ("block" transactions), while others cover both existing business and new business.

Cat Cover or Multi-Life Warrantees: Reinsurance against one big event causing multiple death claims (e.g., flood, plane crash)

Clash Cover: Excess of loss reinsurance agreement with cedant purchasing protection in case one death results in multiple death claims (e.g., if one person has policies with several different cedants)

Bulk Reinsurance: Very large block transactions typically need additional special regulatory approval

"Fronting": If all (100%) of the business or all of a certain product line of a company is being ceded, certain jurisdictions impose limitations and or requirements around the reporting and nature of such transactions.

Stop Loss: Reinsure risk above a certain threshold, losses above $X annually

IV. Reinsurance Market Trends

Reinsurance Market Trends

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- In a ***low interest rate environment***, insurers have large amount of in-force annuities with high crediting rates and an inability to invest assets to earn spread due to rating, regulatory or other requirements
  - ***Alternative asset managers*** bring expertise and risk appetite to acquire business, which may result in negative ceding commission from or improved ROE for ceding company
- There has been ***significant consolidation*** in the life reinsurance space (the top 5 companies had an 88.6% market share in 2016 – SCOR Global Life, Swiss Re, RGA Re, Munich Re (US), and Hannover Life Re)
  - Consolidation has contributed to ***significant price hardening***
- ***Regulatory uncertainty*** is easing, which might be expected to cause continued increases in reinsurance use
  - This might be expected to lead to increased use of ***unauthorized (offshore) reinsurance or non-traditional asset management strategies***
- ***Tax reform*** changes are causing companies to revisit their business models and perhaps challenging organizations to rethink their use of affiliated (internal) reinsurance
- ***Unprecedented financial market conditions*** are causing organizations to need to address capacity constraints with reinsurance
- Organizations have shown a tendency to shy away from ***policyholder behavior risk***, opting instead for ***mortality only covers***, such as ***YRT*** types of structures

V. Offshore Reinsurance Introduction

Offshore Reinsurance

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Definition: Reinsurance ceded to a reinsurer not licensed in any US state, generally one domiciled in a jurisdiction having a different regulatory and/or tax regime (e.g., Bermuda, Cayman Islands, Barbados, Ireland)

Advantages for the Reinsurer:

- Ease of setting up
- Flexible capital requirements based on business plan rather than rigid rules
- Accounting under US GAAP in many cases
- Potential for lower overall tax burden

	Domestic	Offshore
Set-up time	6 Months	Weeks
Capital Requirements	Rigid (NAIC RBC)	Flexible (based on business plan)
Accounting	NAIC Statutory	Generally IAS, US GAAP, Canadian GAAP, or some other recognized system
Local Tax Burden	Corporate tax rate	Little or no local burden

Offshore Reinsurance

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Advantages for the Ceding Insurer:

- Possibility for better pricing
  - Capital efficiencies
  - Tax efficiencies
  - Global investment strategies
- Transactions are generally collateralized
  - Offshore reinsurers generally have to post collateral for ceding insurer to take reserve credit
  - Letters of Credit, Trust Accounts or Funds Withheld structures

Operational Issues:

- Payment of Federal Excise Tax (1% of reserves ceded, if applicable)
- Monitoring the collateral
  - Amounts
  - Timing of true-ups
- Travel to negotiate deal terms

Offshore Reinsurance- "New" Market Participants

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The offshore reinsurance market has experienced steady growth, which appears to be sustainable, though not all market participants have survived the test of time

P&C Re	US/Bermuda Annuity	Cayman Fixed Annuity
Greenlight Reinsurance Ltd. • Formed in 2004 • David Einhorn • $3 billion in assets, $831 capital	**Athene** • Formed in 2008 • Apollo Global Management, LLC • Multiple acquisitions, Aviva US • $100 billion in assets	**Knighthead Annuity & Life Assurance Co.** • Formed in 2014 • Knighthead Capital Management, LLC • Class B(iii) • $560 million in assets, $260 of equity
Third Point Reinsurance Ltd. • Formed in 2011 • Danel Loeb • $4.37 billion in assets	**Guggenheim Partners** • Purchased Security Benefit Life in 2010 • Multiple acquisitions, Sun Life US • $98 billion in assets	**Alesia Re** • Formed in 2016 • Class D
Watford Re Ltd. • Formed in 2013 • Arch Insurance & Highbridge Principal Strategies, LLC • $2.38 billion in assets • JPM investment manager	**Global Atlantic** • Formed in 2004 • Goldman Sachs, no independent • Multiple acquisitions, Forethought • $50 billion in assets	**Aureum Re** • Formed in 2016 • Guggenheim Partners • Class D • $100 million of equity
Hamilton Re Ltd. • Acquired in 2013, formerly S.A.C Re, Ltd. • Brian Duprreault, Cap ZX, Blackstone, Two Sigma Investments • $1.80 billion in assets	**Nassau Re** • Formed in 2015 • Golden Gate Capital • Bought old Phoenix business	
ABR Reinsurance Ltd. • Formed in 2015 • ACE Limited and Blackrock • $800 million in assets	**Longitude Re** • Formed in 2015 • Mass Mutual and Willis Towers Watson **Numerous thinly capitalized "start-ups"**	

Offshore Reinsurance-
Alternative Investment Strategies

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It's quite common across industry to see Offshore Reinsurers deploy creative Alternative Investment strategies to avow themselves of the less stringent capital requirements

- Alternative asset management is becoming more common across all sectors of insurance in general
- New entrants to the offshore reinsurance market tend to be better capitalized than traditional peers, providing substantial policyholder protection
- The ability to earn higher investment returns results in a stronger insurer, who can offer more value to policyholders
- Following are some of the typical features of a top-tier offshore reinsurer:
    - Diversified (e.g., both a direct writer an a reinsurer) business model
    - Stable shareholder base
    - "Arms-length" Investment Management Agreement
    - Significant capital to liability ratio
    - Assets have sufficient liquidity to meet liabilities
    - Rating
    - Led by industry experts

Cayman/Bermuda Considerations

Factor	Bermuda	Cayman
Jurisdiction Financial Rating	Moody's Rating of A2 (6th of 21)	Moody's Rating of Aa3 (4th of 21)
Regulator	Bermuda Monetary Authority	Cayman Monetary Authority
Financial Regime	Solvency II equivalent	Flexible
Workforce	Limitations on home ownership (generally, $3M+ house available after 8% acquisition license, plus stamp duty of up to 7%)	No limitations, but stamp duty of 7.5%
Payroll Tax	Payroll tax and fees – may increase due to $2.4B budget deficit (top tax 10.25% for $1M payroll+ and 8.75% for employees over $235k)	No employer or employee payroll tax – budget surplus
Policyholder protections	Segregated Accounts Companies Act 2000: "Separate Account", requires certain standards and disclosures	Insurance Law 2010: Absolute protection from claims against company, policyholder or beneficiary
Common Reporting Standard	Tax transparent	Tax transparent
Companies	1200 Insurance Companies $11B Premium $84B in Assets under management	711 Insurance Companies $14B Premium $59B in Assets under management
*Global Financial Centers Ranking**	#5 in Latin America & Caribbean	**#1 in Latin America & Caribbean**

* http://www.longfinance.net/global-financial-centre-index-19/984-latin-america-and-the-caribbean.html

VI. Other Important Strategic, Legal and Regulatory Considerations

Reinsurance Strategy Execution

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A Disciplined, Coordinated, Risk-Aware Approach to Reinsurance Strategy

Reinsurance Market Assessment	Reinsurance Capital and Risk Modeling	Reinsurance Treaty Execution and Monitoring
Express ↔ Assess	Develop ↔ Choose	Detail ↔ Act
Understand reinsurance market evolution and identify opportunities	**Determine financial impact of reinsurance and solidify goals**	**Implement strategy and execute profitably**

1. Understanding the Market

- We've seen an uptick in Flow Reinsurance where the ongoing cedant/reinsurer partnership is important
- Use of offshore reinsurance in the life and annuity space is nascent and growing
- Tax reform is threatening the profitability and value of affiliated unauthorized reinsurance transactions
- Life Reinsurance industry has consolidated – 5 major plyers account for approximately 85% of the business written
- Regulatory uncertainty is waning in the U.S. – this should cause an uptick in excess reserve funding transactions
- Reinsurers have mixed appetites for policyholder behavior risk – disciplined underwriting is essential

2. Articulating Prospective Economic Value and Financial Goals

- Understanding which economic capital metrics are the most significant to the business
- Weighing maximizing profitability vs. minimizing earnings volatility

3. Proof of Concept (POC) Modeling

- Identify blocks of business prospectively reinsured and create deal models for prospective transactions
- Build out algorithms in these models which satisfy articulated financial goals

4. Execute Strategy and Evaluate Preliminary Success

- Deploy deal models on live transactions, and report financial impacts from both an earnings/profitability perspective as well as a capital relief perspective

5. Monitor Transactions and Mine Data

- Study transaction performance on an ongoing basis
- Housecleaning in a data warehouse and realization of economic benefit

Reverse Credit Security

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What risk does reinsurance introduce?

- Insurance companies hold reserves to ensure it can meet policyholder liabilities; these reserves are ceded to the reinsurer when a reinsurance arrangement is entered
- The cedant remains 100% liable to the policyholder, even in the case of reinsurer insolvency
- Cedants seek "credit for reinsurance", whereby it can offset the full quota share amount of the reinsured reserve / transferred liability on its balance sheet
- For example, if the company's reserve for a certain block of reinsured business is $1,000, and it enters into a 80% quota share reinsurance arrangement covering that block, its balance sheet will show a net reserve of $1,000 X (1 – 80%), or $200
  - $800 is the "Reserve Credit" in this example
- In order to get reserve credit, the transaction must transfer a significant amount of the of underlying risk and be with an authorized reinsurer or have a permitted structure
- **Authorized ("onshore")** reinsurers are those that are either licensed or accredited in the ceding company's state of domicile or a state with substantially similar laws
- **Unauthorized ("offshore")** reinsurers are neither licensed or accredited in the ceding company's state of domicile
  - State regulators naturally have less control over the financial conditions of these companies
  - Thus, in order for the ceding company to get full Reserve Credit, more security is required via Assets in Trust, Escrow Accounts, Letters of Credit or Funds Withheld

Reinsurance Treaty Provisions

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Reinsurance deal-making has evolved over time to become much more of a robust, formalized, and comprehensive process than it used to be

- 20-30 years ago, lawyers used to be more peripheral to the reinsurance process; they have now become much more integral
- The structure, content, and language of reinsurance agreements have grown to become much more formal
- The market is exercising greater discipline, and generally a better production process
  - No more treaties pending for years
  - Typically robust standards, controls, and communication processes exist
  - RFP process is quite common
  - Improved record-keeping and access
  - Robust supporting documentation
  - Tighter internal and external regulations
  - No more treaties written on bar napkins!

Reinsurance Treaty Provisions

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Some "standard" provisions:

- Contract Administration: Ceding company shall administer Reinsured Contracts and client servicing in accordance with law and same standard as non-reinsured contracts
- Errors & Omissions: If an unintended error or oversight occurs, both parties will be restored as if it did not occur
- Set-Off: All settlements are on a net basis and each has a right to offset undisputed amounts due
- Reporting: Ceding company shall send monthly/quarterly reports to reinsurer and reinsurer shall then fund account per the reports or contest
- Termination: May always terminate for new business, but in-force business must be "recaptured", which is a mutual negotiation process and not typically automatic
- Dispute Resolution: Typically arbitration under AIDA Reinsurance & Insurance Administration Society US process
- Claims: Reinsurer has no obligation for punitive awards, may join in claim contests and have pro rata liability for fees and awards, but may opt out and pay claims
- Reserve Credit Provided: The essence of the transaction and regulatory rules apply
- Investment Guidelines: Agreed to by the parties but must be "admitted assets" under the ceding company's domicile state regulator

Reinsurance Administration

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Administration of reinsurance treaties is often under-appreciated, but is vital to their long-term health and effectiveness for both parties

All of the following have been sources of reinsurance administrative issues:

- Acquisitions
- Over/Under paying premiums
- Missing Policies
- Inaccurate Reserving
- Quarterly Volatility
- Claims oversights
- Strained relationships
- Underwriting Errors
- Retention/Capacity issues
- Enacting E&O frequently

Reinsurance Administration Keys to Success

- Communication, Documentation, and Transparency
- Engaging stakeholders early
- Obtaining adequate level of detailed policy data
- Timelines, controls
- Right to audit!