



TRADITIONAL REINSURANCE & ALTERNATIVES

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LEARNING OBJECTIVES

- Why Insurers Purchase Reinsurance
- Risk Transfer Overview
- Traditional Reinsurance Solutions
- Alternative Reinsurance Solutions
- Reinsurance Marketplace Supply & Demand

WHY INSURERS PURCHASE REINSURANCE

- Achieve Strategic Business Objectives
 - Expand capacity to write new/additional business
 - Improve financial results
 - Improve/stabilize underwriting results
 - Withdraw from a line of business
 - Reduce financial leverage

WHY INSURERS PURCHASE REINSURANCE

- Achieve Strategic Business Objectives (Cont.)
 - Risk Mitigation Strategy (genuine transfer of risk)
 - Managing and/or spreading risk over time
 - Share catastrophes/large risks among insurers
 - Limiting large or catastrophic claims
 - Limiting total claims

RISK TRANSFER

Transfer of Risk is the most essential element of a reinsurance contract

Statutory Accounting Guidance

- SSAP 61R - Life, Deposit-Type and Accident and Health Reinsurance
- SSAP 62R– Property and Casualty Reinsurance

RISK TRANSFER - LIFE AND A&H

SSAP 61R - Life, Deposit-Type and Accident and Health Reinsurance

- rrc Proportional
 - Transfers significant risk to reinsurer
 - No feature(s) which delays timely reimbursements

- rrc Yearly Renewable Term
 - Transfer a proportionate share of mortality or morbidity risk
 - Do not meet any conditions in Appendix A-791, paragraphs 2.b,c, d, h, i, j, k

RISK TRANSFER - LIFE AND A&H

SSAP 61R - Life, Deposit-Type and Accident and Health Reinsurance (Cont.)

- Non-proportional (e.g., stop loss and catastrophe)
 - Transfers significant risk to reinsurer
 - Evaluate contractual terms to assess whether they transfer significant risk
 - No provisions/features that:
 - Protect the reinsurer from incurring a loss
 - Delay the timely reimbursement of claims
 - prepayment schedules
 - accumulating retentions from multiple years

RISK TRANSFER – P&C

SSAP 62R – Property and Casualty Reinsurance

- Reinsurer indemnifies the ceding entity against loss or liability relating to “Insurance risk”
- Insurance risk = Underwriting risk + Timing risk
 - Must have both
 - Underwriting risk
 - Ultimate amount of net cash flows from premiums, commissions, claims and claim settlement expenses
 - Timing risk
 - Timing of receipt and payment of underwriting cash flows

RISK TRANSFER – P&C

SSAP 62R – Property and Casualty Reinsurance (Cont.)

- Indemnification relating to insurance risk requires **both**:
 - The reinsurer assumes significant insurance risk under the agreements; **and**
 - It is reasonably possible that the reinsurer may realize a significant loss
 - An outcome is reasonably possible if its probability **is more than remote**

RISK TRANSFER – P&C

SSAP 62R – Property and Casualty Reinsurance (Cont.)

- rrc Must determine whether the agreement provides indemnification
- rrc Requires:
 - A complete understanding of that agreement and other agreements
 - Evaluation of all contractual features that:
 - a) Limit amount of Insurance risk to the reinsurer
 - experience refunds
 - cancellation provisions
 - adjustable features
 - additions of profitable lines of business to the reinsurance contract

RISK TRANSFER – P&C

SSAP 62R – Property and Casualty Reinsurance (Cont.)

- Evaluation of all contractual features that (Cont.):
 - b) Delay the timely reimbursement of claims by the reinsurer
 - payment schedules
 - accumulating retentions from multiple years

RISK TRANSFER

What happens if the agreement does not meet the risk transfer requirement?

RISK TRANSFER

What happens if the agreement does not meet the risk transfer requirement?

Answer:

- Agreement is subject to deposit accounting
 - P&C accounting
 - SSAP 62R – Para. 35
 - Life and A&H accounting
 - SSAP 61R – Para. 28
 - SSAP No. 52: Deposit-Type Contracts

RISK TRANSFER – RED FLAGS

- rrc Unusually high premium for value of reinsurance coverage provided
- rrc Existence of contingent or sliding scale commission, profit commissions and / or retrospectively rated premiums
- rrc Accumulating retentions over multiple years
- rrc Commutation and termination provisions allowing reinsurer to lock in payment pattern
- rrc Termination provisions limiting ability to cancel
- rrc Contracts that don't make business sense (fair & equitable)
- rrc Undefined terms
- rrc Unacceptable insolvency clauses

RISK TRANSFER - EMERGING RISKS

- Use of reinsurance to prop up surplus without transferring the real risk of the business, or
- Taking a disproportionate amount of credit, even though risk is transferred

Source: National Association of Insurance Commissioners-Solvency Monitoring Risk Alert - Spring 2018

RISK TRANSFER - EMERGING RISKS

- Potential to mask:
 - True financial performance and position of the insurer
 - Reinsurance agreements, done through funds withheld transactions
 - Merely move the “liability” from the reserve line to the funds withheld line
 - No RBC charge
 - True risks to which the insurer is exposed

Source: National Association of Insurance Commissioners-Solvency Monitoring Risk Alert - Spring 2018

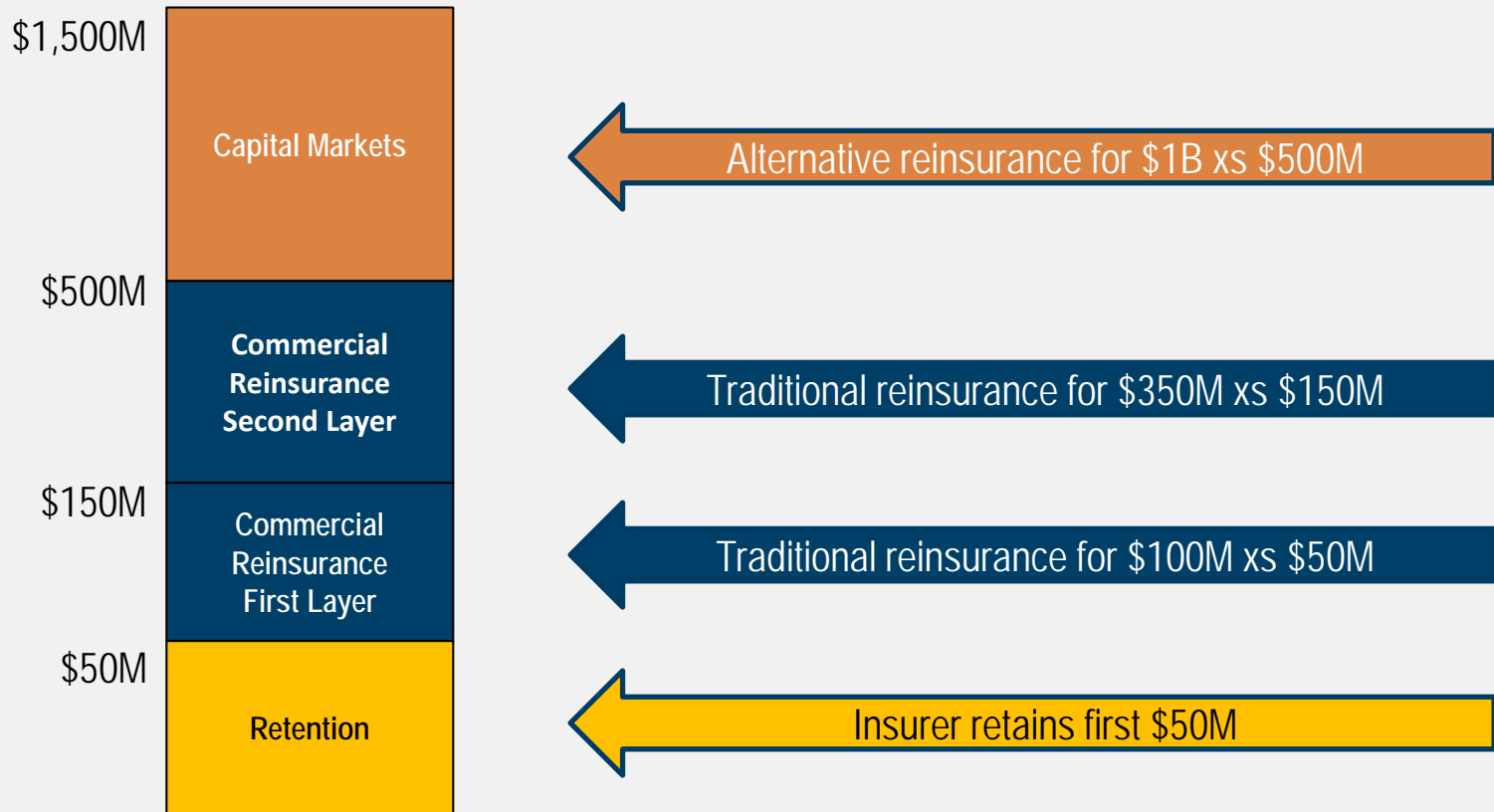
TRADITIONAL REINSURANCE SOLUTIONS

- 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

EXAMPLE – CATASTROPHE RISK

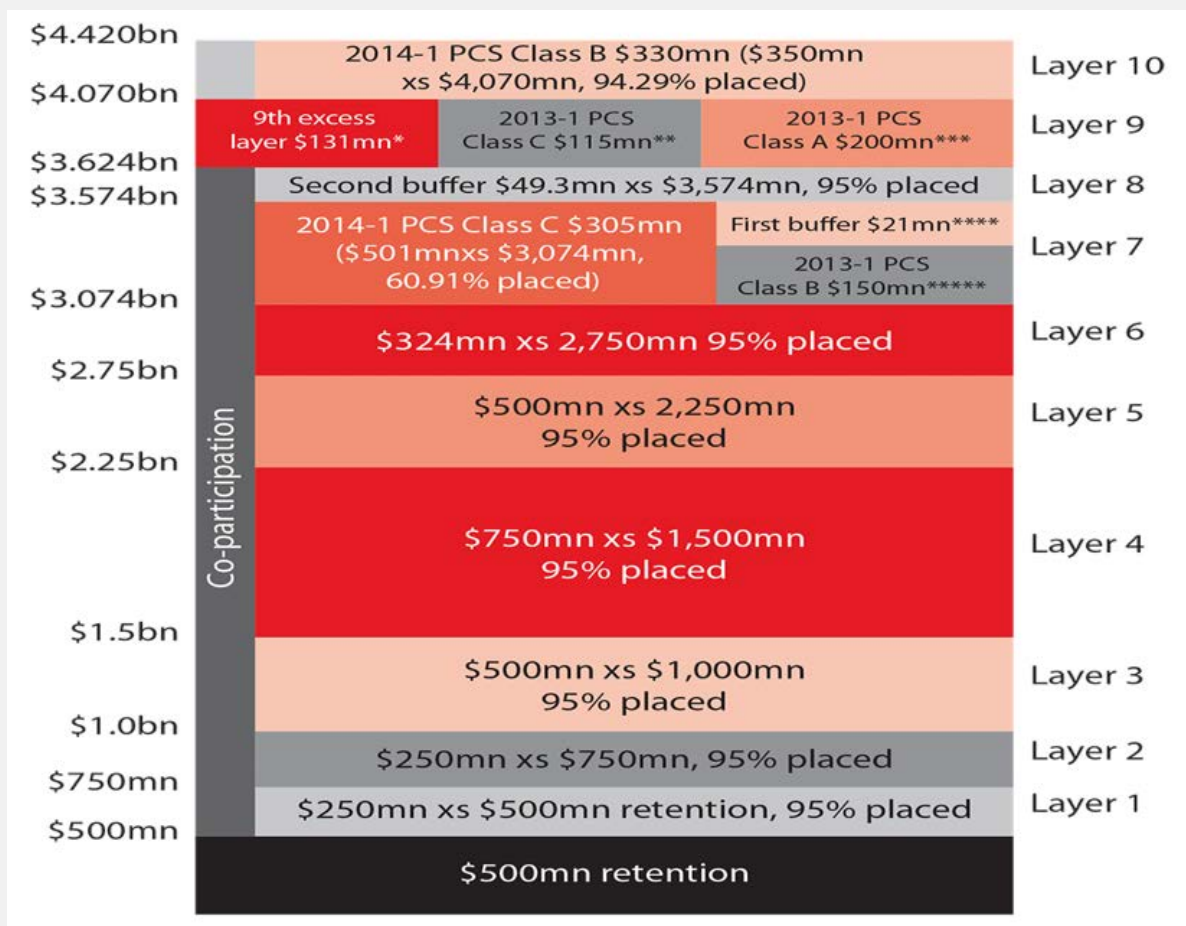


CAT REINSURANCE PROGRAM EXAMPLE



Note: Not drawn to scale

CAT REINSURANCE PROGRAM EXAMPLE



ALTERNATIVE RISK TRANSFER

Alternative Risk Transfer (ART)

Transfer of risk using methods other than traditional commercial reinsurance

Insurance-Linked Securities (ILS)

Financial Instruments sold to investors with valuation affected by insured loss events

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)

TRADITIONAL REINSURANCE

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

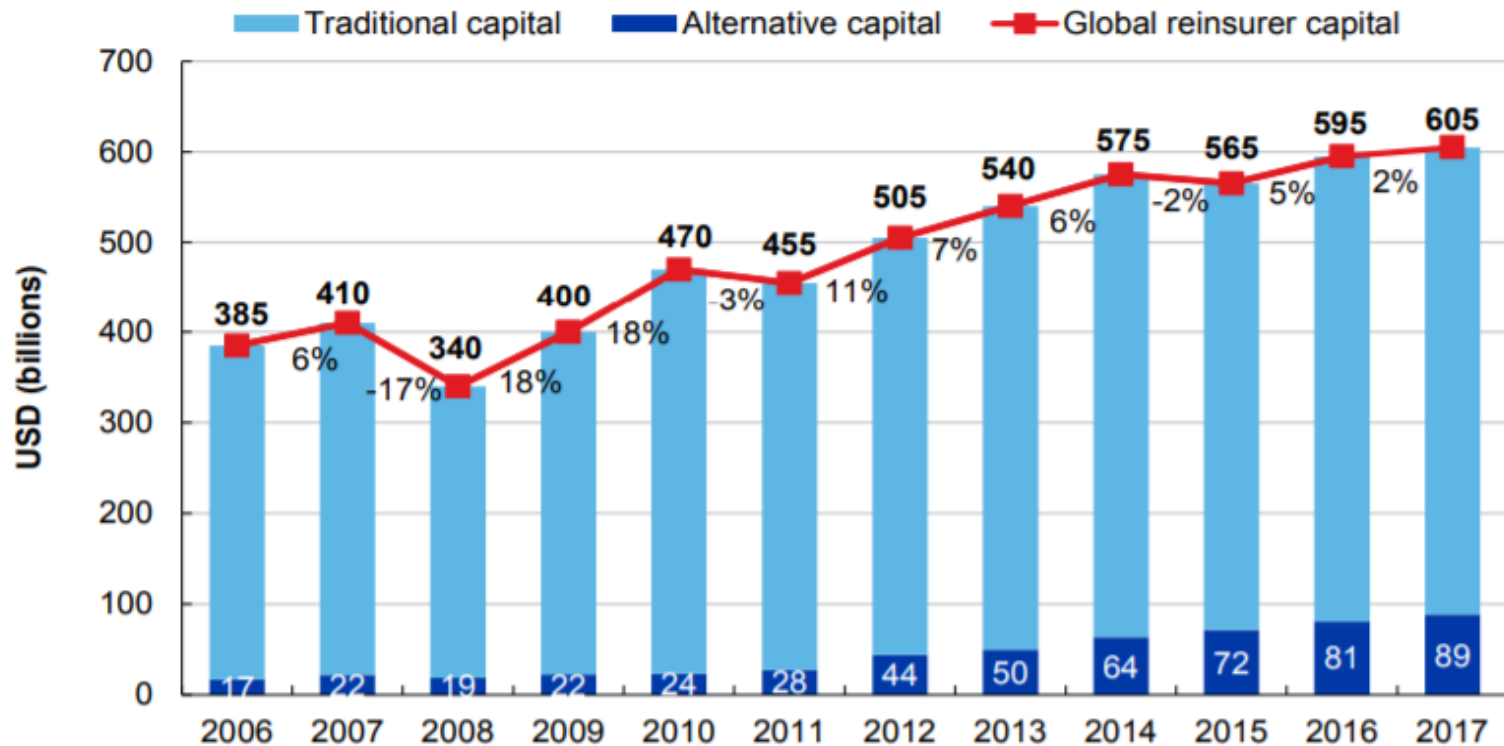
Ranked by gross reinsurance premium written in 2016 (USD Millions)

2017 Ranking	Company Name	Reinsurance Premiums Written			
		Life & Non-Life Gross	Life & Non-Life Net	Non-Life Only Gross	Non-Life Only 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

MARKET PARTICIPATION

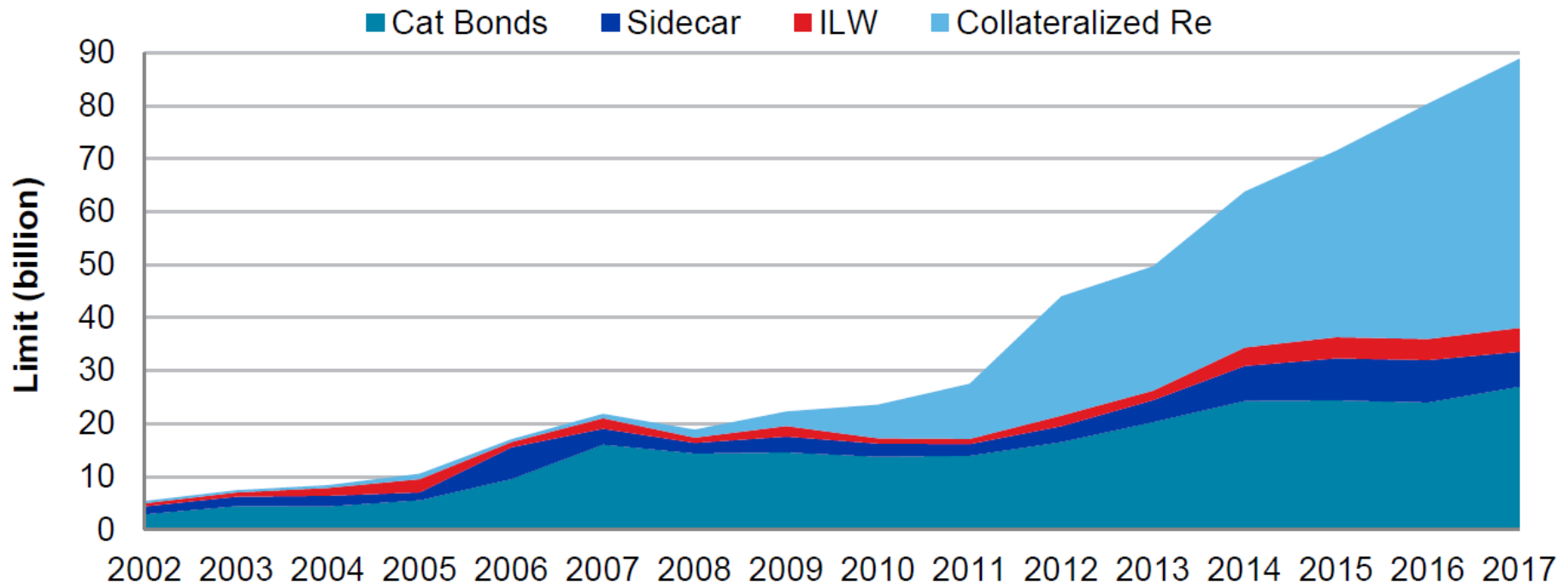
Exhibit 1: Change in global reinsurer capital



Sources: Company financial statements / Aon Benfield Analytics / Aon Securities Inc.

ILS MARKET PARTICIPATION

Exhibit 9: Alternative capital deployment



Source: Aon Securities Inc.

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

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

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

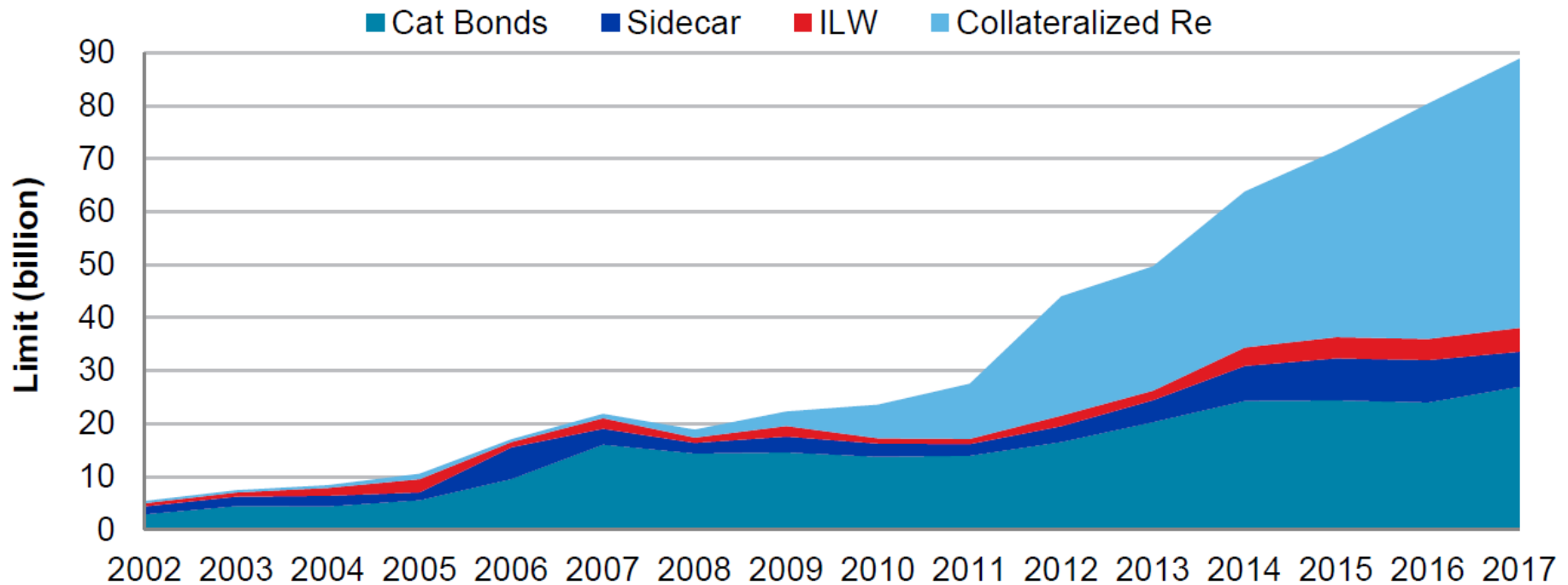
INSURANCE-LINKED SECURITIES

Industry Loss Warranty (ILW)

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

ILS MARKET PARTICIPATION

Exhibit 9: Alternative capital deployment



Source: Aon Securities Inc.

TYPES OF ALTERNATIVE RISK TRANSFER

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

TYPES OF ALTERNATIVE RISK TRANSFER

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

TYPES OF ALTERNATIVE RISK TRANSFER

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.

TYPES OF ALTERNATIVE RISK TRANSFER

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

EXAMPLES OF RRGs & SELF-INSURERS

- Medical Professional
 1. Hospitals
 2. Nursing Homes/Senior Living Centers
 3. Physicians
- Trucking Delivery Firm
- Contractors

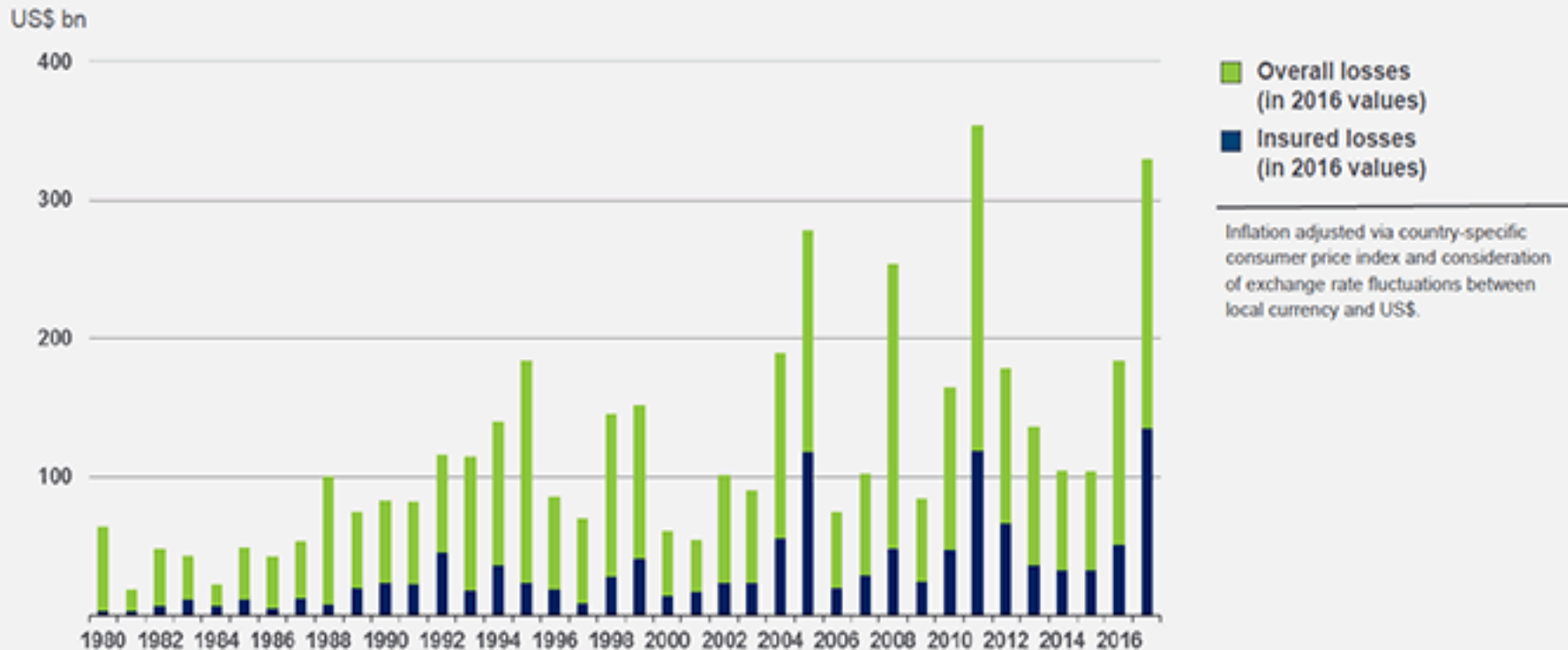
CAPTIVES BY THE NUMBERS

CAPTIVE GROWTH, 2008-2017

SOURCE: STRATEGIC RISK SOLUTIONS (SRS)

Year	Number of Captives
2008	5,211
2009	5,525
2010	5,587
2011	5,831
2012	6,125
2013	6,420
2014	6,739
2015	6,851
2016	6,700
2017	6,647

SUPPLY & DEMAND CONSIDERATIONS



Source: Munich Re NatCatSERVICE

SUPPLY & DEMAND CONSIDERATIONS

Insurance-Linked Securities - Supply & Demand Factors

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



SUPPLY & DEMAND CONSIDERATIONS

Insurance-Linked Securities - Supply & Demand Factors

- Multi-Year Contracts
- ORSA and Solvency II
- Catastrophe Losses
- Lack of Reinstatement Provision

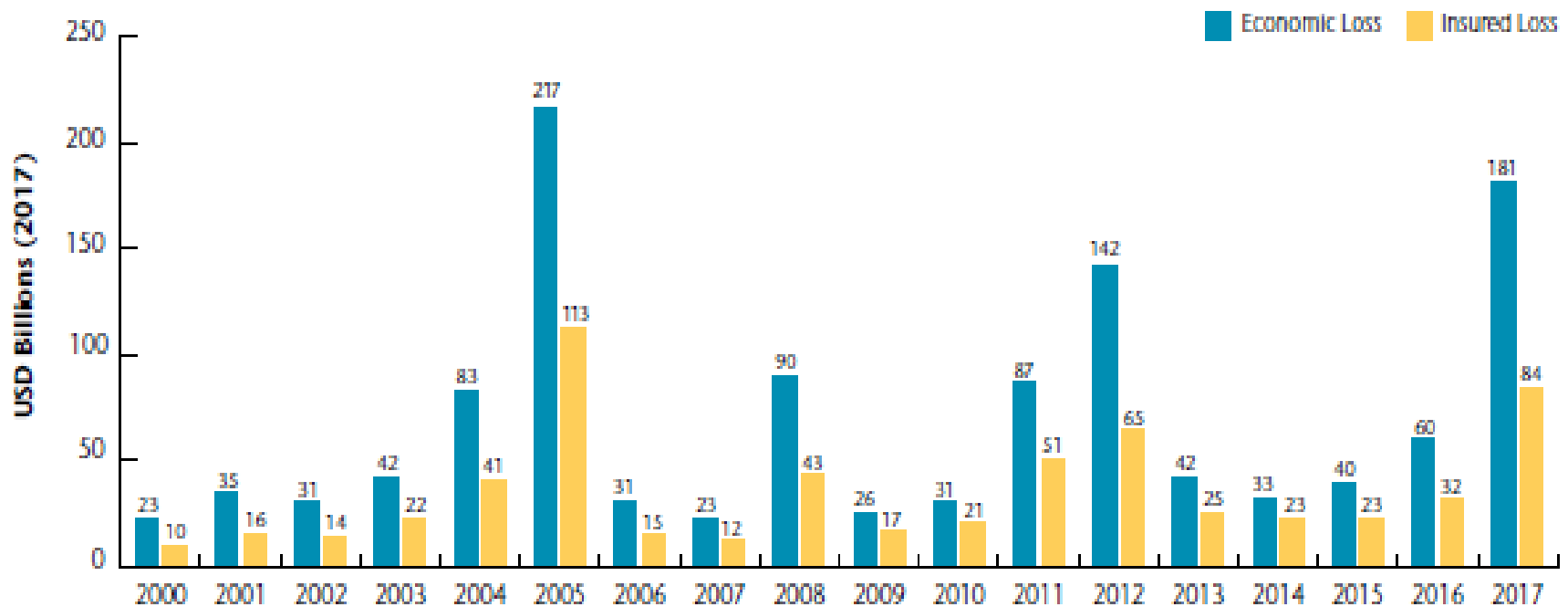
SUPPLY & DEMAND CONSIDERATIONS

2017 Hurricanes - Harvey & Irma & Maria

-  Traditional Reinsurance Impact
-  Catastrophe Bond and ILS Impact

SUPPLY & DEMAND CONSIDERATIONS

Exhibit 32: United States Economic and Insured Losses (All Natural Disasters)



Source: AON Benfield Weather, Climate & Catastrophe Insight - 2017 Annual Report

STATUTORY REINSURANCE ACCOUNTING

Disclosure Requirements

- SSAP No. 1
 - Now requires specific ILS-related narrative disclosures in the financial statements. These disclosures require information that includes the number of outstanding ILS contracts and potential ILS proceeds as of the financial statement date.

STATUTORY REINSURANCE ACCOUNTING

Financial Statement Reporting

- SSAP No. 74: Insurance-Linked Securities Issued Through a Protected Cell
 - Now requires reporting of ILS-related transactions through the designated 'protected cell' lines in the balance sheet and income statement, instead of through the 'aggregate write-in' accounts.

