
Alternative Risk Transfer

INSR 230/825

Fall 2002

Roadmap: Purpose • Structure • Tax Treatment • Dis-/Advantages • Other

Alternative Risk Transfer: Overview

- ◆ What is alternative risk transfer (ART)?
“Any transaction or financial instrument, aside from conventional insurance policies, that reduces or transfers a business firm’s pure risks.”
- ◆ What are pure risks?
 - ◆ Risks traditionally managed or transferred by buying insurance.
 - ◆ More broadly, “Risks for which a company does not have a comparative advantage in managing.”
- ◆ “ART allows firms to dedicate their capital to their core business and thereby generate a higher rate of return.”

ART Instruments and Solutions

- ◆ The Surplus Lines market
- ◆ Self insurance
- ◆ Captive insurance companies
- ◆ “Finite” insurance and reinsurance
- ◆ Multi-year, multi-line integrated hedging products
- ◆ Securitization
 - ◆ CAT options
 - ◆ CAT bonds
 - ◆ Contingent capital
- ◆ Risk retention groups (RRGs)

The Surplus Lines Market: Overview

- ◆ Defined: Market for insurance where suppliers are “non-admitted,” i.e., unlicensed insurers.
- ◆ Rationale: Provides insurance capacity for unusual or hard-to-place risks that cannot find coverage in the regulated market.
- ◆ Exempt from most pricing and policy form regulation, but it may be necessary to present regulator with
 - ◆ “Consent to rate” form
 - ◆ Evidence that the risk was rejected in the regulated market
- ◆ Cyclical: Grows during hard markets and shrinks in soft markets.

Self Insurance: Overview

- ◆ Fundamental principle of insurance: Risk-reduction through pooling:

$$\bar{x} = \frac{1}{N} \sum_{i=1}^N x_i = \text{average claim in a risk pool}$$

$$E(\bar{x}) = \frac{1}{N} \sum_{i=1}^N E(x_i) = \mu$$

$$\sigma(\bar{x}) = \left[\frac{1}{N} \sum_{i=1}^N (x_i - \mu)^2 \right]^{1/2} = \frac{\sigma}{\sqrt{N}}$$

- ◆ Therefore, uncertainty about the average claim $\rightarrow 0$ as $N \rightarrow \infty$

Self Insurance: Overview II

- ◆ Based on the principle of diversification, a firm with many units (e.g., trucks) exposed to risk can take advantage of the principle of law of large numbers to manage its risk
- ◆ For self insurance to work, the firm needs
 - ◆ A large number of units
 - ◆ That are statistically independent
 - ◆ For which σ and μ are not “too large”
- ◆ Main advantage of self insurance: Avoid paying transactions costs and profit to the insurance company

What is a Captive Insurance Company?

- ◆ “A captive is an insurance company that exists primarily to insure the risks of its parent corporation.”
- ◆ Alternatively, a captive can be defined as “an insurance company that is wholly owned by a non-insurance company and provides coverage for the risks of the parent company and its affiliates.”

What is a Captive Insurance Company?

- ◆ Features of captives:
 - ◆ A captive formalizes a self-insurance program by absorbing it into a subsidiary of the parent.
 - ◆ Captives have direct access to reinsurance markets, which are usually less receptive to self-insurance programs
 - ◆ Captives sometimes insure risks that are unrelated to the parent corporation, further increasing diversification
 - ◆ Captives may have tax advantages to the parent (see below)

Driving Forces Behind Captive Formation

- ◆ Scarcity of insurance coverage and high prices during hard markets
- ◆ Asymmetric information
 - ◆ Good risks in an industry pay premiums > claim payments on average and subsidize bad risks
 - ◆ Internalizing risk management and insurance pricing enables the parent to benefit fully from its own favorable claims experience
 - ◆ Incentive compatible because parent obtains direct benefit from employing loss control programs
- ◆ Tax advantages – currently not a primary reason although it pays to create tax-efficient captive structures

Captives: Viable Size

- ◆ Estimate: Worthwhile and cost effective at a minimum of USD 500,000 of expected premiums

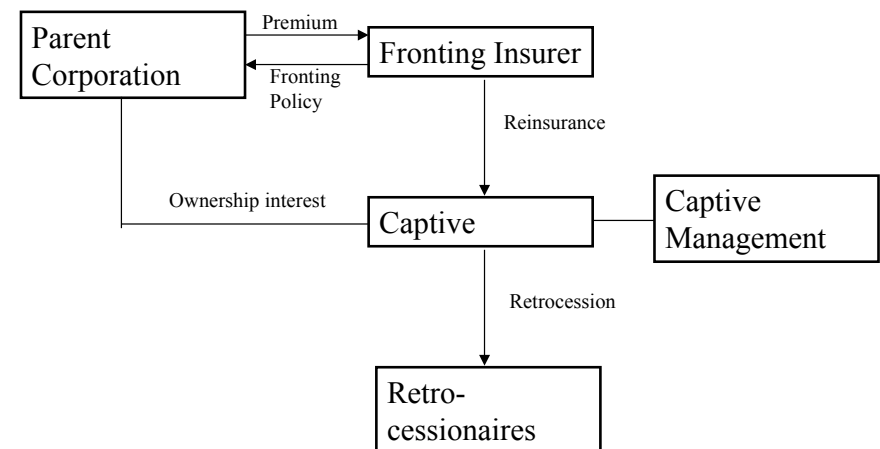
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Types of Captives

- ◆ **Single-parent only or Pure Captive:** A wholly owned or controlled company which only insures or reinsures the risks of its non-insurance parent or affiliated companies.
- ◆ **Association or Industry Captive:** An insurance company owned by a group of industrial or commercial companies or members of a professional association solely to insure or reinsure the risks of its shareholders.

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Single-Parent Reinsurance Captive



Rationale for Fronting

- ◆ Fronting insurer is licensed and regulated in the relevant jurisdiction
- ◆ Having a fronting company enables the captive to be organized as a reinsurer
 - ◆ Licensed in a jurisdiction with light regulation such as Bermuda, Cayman Islands, etc.
 - ◆ Take advantage of deregulated international reinsurance markets

Criteria for Successful Fronting

- ◆ Fronter generally needs well-organized international infrastructure to
 - ◆ Maintain records
 - ◆ Manage claim payments in multiple currencies
 - ◆ Analyze loss development and trends
 - ◆ Bear part of the risk to
 - ◆ Satisfy regulatory requirements and/or
 - ◆ Act as retrocessionnaire

Types of Captives (cont.)

- ◆ **Agency Captive:** An insurance company which is owned by insurance brokers or agents who reinsure a portion of the insurance they sell with their own captive insurance company.
- ◆ **Quasi Profit Center or Open Market Captive:** A subsidiary which primarily insures or reinsures the risk of its parent or affiliated companies but, at the same time, insures the risks of unrelated parties .

Types of Captives (cont.)

- ◆ **Rent-a-Captive:** An insurance company which provides captive facilities to others for a fee
 - ◆ Useful for firms that can't afford to set up a separate captives
 - ◆ Each renter has an account credited with premiums and charged for losses and expenses
 - ◆ All assets of the rent-a-captive are available to pay losses of 3rd parties, exposing renters to potential losses due to default of other renters

Types of Captives (cont.)

- ◆ **Protected Cell Captives (PCCs):** A new type of corporate structure that is a single legal entity consisting of a core and an unlimited number of cells
 - ◆ Cells are statutorily segregated from each other
 - ◆ 3rd party claimants can only reach the assets of specific cells with whom they have contracted through the overall entity

■ <http://www.reactionsnet.com/contents/publications/reactions/>

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Types of Captives (cont.)

- ◆ **PCCs: Advantages**
 - ◆ Protects each cell's assets from liabilities of other cells, unlike the rent-a-captive structure
 - ◆ Can be used for a firm with multiple divisions for management and M&A purposes
 - ◆ Can be used for other types of securitizations
- ◆ **PCCs: Disadvantages**
 - ◆ Fronting companies may charge higher fees due to higher counterparty credit risk
 - ◆ Vulnerable to lawsuits from jurisdictions where the PCC structure is not recognized, i.e., may not "stand up in court"

<http://www.reactionsnet.com/contents/publications/reactions/>

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Types of Captives (cont.)

- ◆ **Special Purpose Vehicles:** An insurance company formed with the sole intention of reinsuring a specific risk where the risk capital is obtained via the capital markets, usually in the form of bonds or notes (often used in securitizing CAT risk and other asset backed structures)

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Why Form A Captive Insurer?

Control over Insurance Costs

Tax and Regulatory Factors

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Control over Insurance Costs

- ◆ Control over where the money is spent
- ◆ Captive can retain premiums and loss reserves (improved cash flow)
- ◆ Realize the returns from both underwriting and investment income
- ◆ Coverage can be increased or tailored to meet specific needs

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Control over Insurance Costs II

- ◆ Avoid price and availability problems in traditional insurance markets (hard markets)
- ◆ Risk management and loss control
- ◆ Have a greater control over reinsurance purchasing including direct access to these markets
- ◆ Diversification into profit center

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Control over Insurance Costs III

- ◆ Stable and reduced premiums
 - ◆ Not pooled with uncontrollable bad risks
 - ◆ No moral hazard
 - ◆ No hard market (due to the underwriting cycle)
 - ◆ Immediate reward for controlling the cost of claims
 - ◆ No information asymmetries
 - ◆ No litigation costs

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Tax Factors

- ◆ Reduce Expected Tax Payment
 - ◆ Tax advantage of insurance companies
 - ◆ Loss financing is treated as insurance expense
 - ◆ Captive income is taxable a year later (tax deferral)
 - ◆ Tax deferral for long-tail claims in comparison with self-insurance
 - ◆ Purchase foreign insurance at a better tax rate

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Regulatory Factors

- ◆ Company can retain a large portion of risk and still satisfy compulsory insurance requirements
- ◆ Comply with restrictions on selection of Insurers
- ◆ Meet third party demand for certificates of insurance from rated insurers (through fronting insurer)
- ◆ Captive has access to reinsurance market which is not regulated as to prices and policy forms

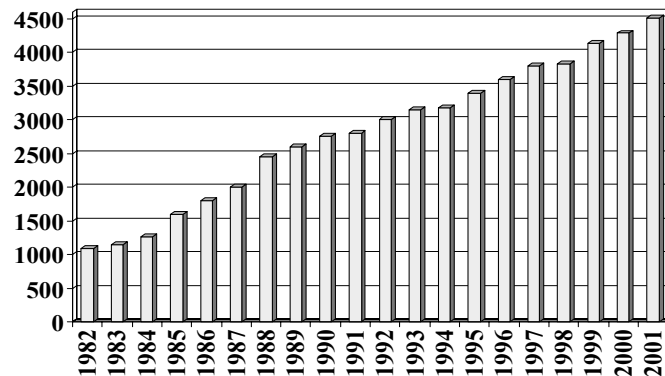
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Structure of Industry



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Number of Active Captives



Premiums Written

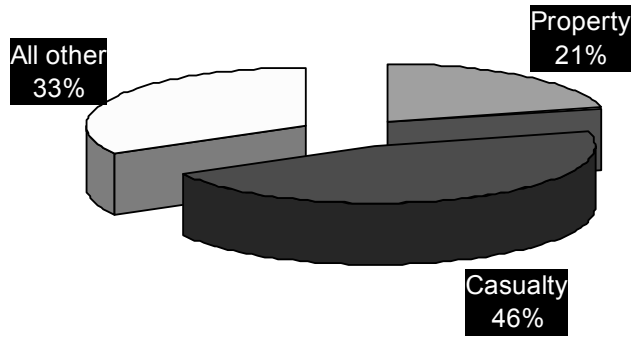
Year	Number of Captives	Captive Premium	Capital and Surplus
2000	4389	\$50.3	\$101

Recall: Total commercial lines premiums to US property-liability insurers = \$147.6 billion in 2000.

Source: Captive Insurance Company Reports, March 2002.

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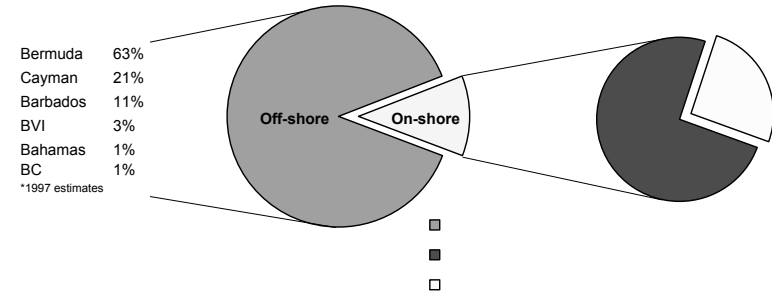
Premium Volume by Line



Source: J&H/M&M data as provided by Captive Insurance Company Reports, November 1997

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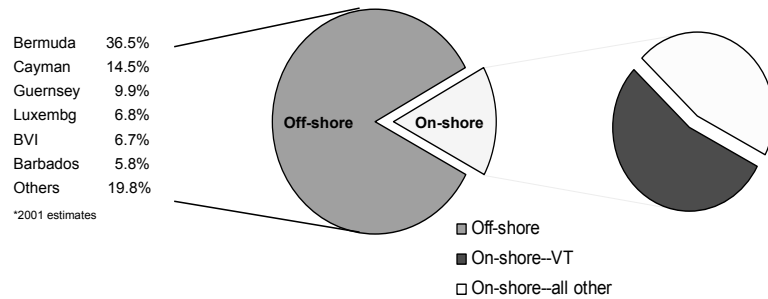
Domicile of Captives (1998)



Source: Treasury and Risk Management, April 1998 and Captive Insurance Company Reports January 1997

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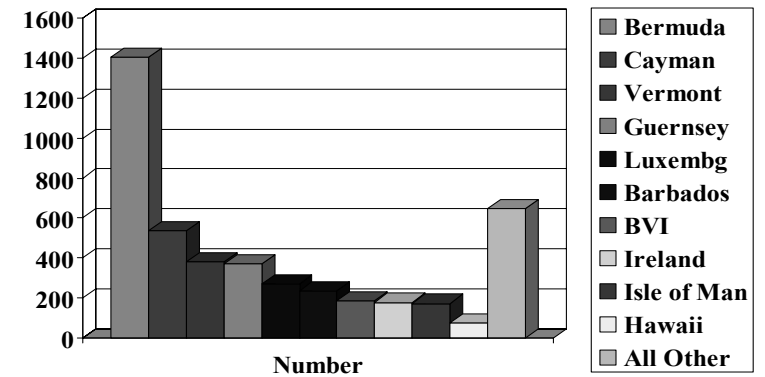
Domicile of Captives (2001)



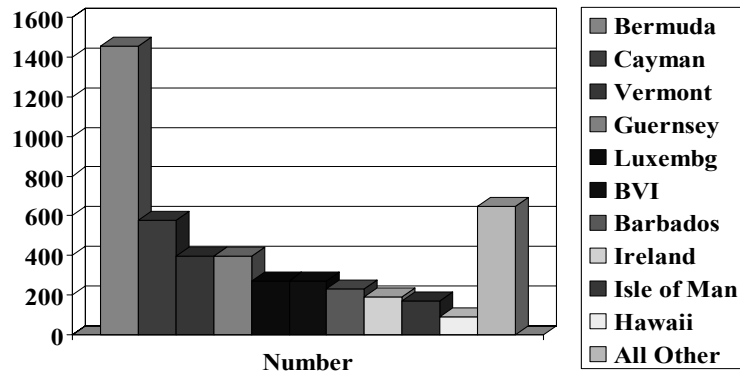
Source: Captive Insurance Company Reports, May 2002.

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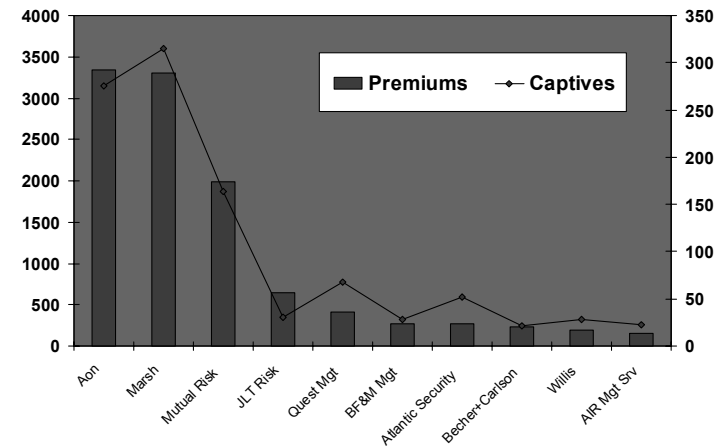
Captives By Domicile: 2000



Captives By Domicile: 2001



Largest Managers of Bermuda Captives



Tax Treatment of Captives

Tax Treatment of Self Insurance

- ◆ Generally, self insurance “set asides,” i.e., funds reserved for estimated self insurance claim payments are not deductible
- ◆ Losses are deductible when paid

Tax Treatment of Captives

- ◆ Question: Should captive insurance premiums be characterized as deductible insurance premiums or as self-insurance set-asides?
- ◆ IRS has often challenged deductibility in the past:
 - ◆ Rationale: Tax avoidance and evasion
 - ◆ Deduction for premiums (IRC §162)
 - ◆ Deduction of loss reserves (IRC §832)

Definition of Insurance

- ◆ Not defined by Internal Revenue Code
- ◆ Poorly defined by courts
- ◆ Best definition: Helvering v. LeGierse, 312 U.S. 531 (1941)
 - ◆ Two elements
 - ◆ Risk shifting
 - ◆ Risk Distribution

Risk Shifting and Risk Distribution

- ◆ Risk Shifting
 - ◆ Transfer of economic consequences of a loss away from the entity claiming the deduction
- ◆ Risk Distribution
 - ◆ Requires the pooling of funds in order to spread the economic consequences of claims over a group large enough to yield predictable losses

The Economic Family Theory

- ◆ For many years, the IRS pursued “economic family” theory
 - ◆ Payments to a captive are per se not deductible because risk shifting can never occur when an insurer and an insured are members of the same economic family
 - ◆ Revenue Ruling 77-316: No shifting of funds from one pocket to another will result in a deduction

Tests: Economic Family (cont.)

- ◆ Revenue Ruling 2001-31 (6/4/2001): IRS abandoned “economic family theory” following several court rejections of the theory
- ◆ Problems with economic family theory
 - ◆ Ignores the separate treatment of corporate entities for tax purposes, which is recognized for most other purposes
 - ◆ Does not recognize that captives can lead to legitimate risk shifting and diversification

Tests for Deductibility: Recharacterization

- ◆ Looks to substance over form of transaction to determine if captive is providing insurance or self-insurance
- ◆ Premiums will be deemed deductible if there is significant
 - ◆ Risk shifting and/or
 - ◆ Risk distribution

Qualifying for Deductibility

- ◆ Premiums paid to single parent captives will be challenged by IRS because of no risk shifting or distribution
- ◆ Premiums paid by parent corporation to a captive subsidiary which underwrites sufficient or “significant” unrelated risk remain deductible (Private Letter Ruling 81-11087)
 - ◆ How much unrelated business is “significant”?

Case Law

- ◆ Amerco, Inc. v. Commissioner, 979 F.2d 162 (9th Cir. 1992)
 - ◆ A large pool of risks from other unrelated companies allows risk to be shifted to captive insurer (Parent’s risk placed with captive and spread among all in the pool)
 - ◆ On the flip-side, risk distribution achieved by captive among the pool of unrelated companies

Amerco (cont.)

- ◆ Insurance risk v. Speculative Risk
 - ◆ Insurance risk: Possible outcomes are loss or no loss (never opportunity for profit)
 - ◆ Speculative risk: Profit or loss
- ◆ If only writing parent's risk, insurance risk not transferred because parent will still be in the same economic position. Speculative risk comes only from it's own funds.

Case Law: "Significant" Unrelated Risk Present

- ◆ The Harper Group v. Commissioner, 979 F.2d 1341 (9th Cir. 1992)
 - ◆ 30% unrelated risk
- ◆ Sears, Roebuck & Co. v. Commissioner, 972 F.2d 858 (7th Cir. 1992)
 - ◆ 99% unrelated risk

Qualifying for Deductibility II

- ◆ "Brother-sister" transactions: Premiums paid to single parent captive by other subsidiaries of the parent (but not by the parent itself) are deductible
 - ◆ Provided that the level of sibling risk is "significant"

Case Law

- ◆ Humana, Inc. v. Commissioner, 881 F.2d 247 (6th Cir. 1989)
 - ◆ Reverses Tax Court and allows deductibility of sibling payments to captive
 - ◆ Sibling corporations suffer no economic loss (captive stock owned by parent corporation and only affects it) so risk shifting has occurred
 - ◆ Separate entities suffice for risk distribution

Tests: Recharacterization (cont.)

- ◆ Revenue Ruling 78-338: Group captives
 - ◆ captive with 31 unrelated owners no one of which accounts for > 5% of premiums constitutes true “insurance”

Case Law: What Doesn't Qualify

- ◆ Carnation Co. v. Commissioner, 640 F.2d 1010 (9th Cir. 1981)
 - ◆ Parent insured risk with domestic insurer
 - ◆ Reinsured 90% of risk with wholly-owned Bermuda sub (w/ promise of additional capital)
 - ◆ Court ruled no risk shifting and no risk distribution
- ◆ Deductibility is in jeopardy if the parent directly or indirectly guarantees the captive's obligations (no risk shifting)

Case Law

- ◆ Gulf Oil Corp. v. Commissioner, 914 F.2d 39 (3rd Cir. 1990)
 - ◆ Gulf purchased insurance from standard carriers
 - ◆ Reinsured with wholly-owned subsidiary
 - ◆ Sub wrote 2% unrelated risk
 - ◆ Court says that is de minimus and not sufficient for risk shifting and distribution

Case Law

- ◆ Beech Aircraft Corp. v. United States, 797 F.2d 920 (10th Cir. 1986)
 - ◆ 0.5% unrelated insufficient
- ◆ Substantial threshold remains uncertain
- ◆ Once threshold is met, if risk shifting and risk distribution occur, then the whole premium is deductible

Other Tax Issues

- ◆ Prior to 1987, parents of owners of non-US domiciled captives (e.g., Bermuda) could defer US income tax on the captive's profits indefinitely
 - ◆ And were subject to low or zero tax rates off shore
- ◆ Tax Reform Act of 1986 now taxes US parents of most captives

Other Tax Issues

- ◆ All of the above rules are extremely complex and how the “gray areas” will play out in any given case is uncertain

Advantages & Disadvantages of Captives

Captive Advantages

- ◆ Parent retains control (vs. buying insurance)
- ◆ Tax deductibility
- ◆ Parent earns any profits and risk contingencies rather than insurer
 - ◆ Including profit potential from unrelated business
- ◆ Parent avoids costs of information asymmetries (adverse-selection costs)

Captive Disadvantages

- ◆ Captive potentially creates significant systematic and non-systematic risk for the overall business entity
- ◆ Exposure to regulatory risk, both US and offshore
- ◆ Unrelated business creates additional risk
- ◆ Commitment to captive limits opportunity to take advantage of soft insurance market

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Risk Retention Groups

- ◆ A risk retention group (RRG) is a liability insurance company that is owned by its members, established under the Liability Risk Retention Act (LRRRA) of 1986
- ◆ Under the (LRRRA), RRGs must be domiciled in a state. Once licensed by its state of domicile, an RRG can insure members in all states.
- ◆ Because the LRRRA is a federal law, it preempts state regulation, making it much easier for RRGs to operate nationally.
- ◆ As insurance companies, RRGs retain risk.

Source: <http://www.rrr.com/education/index.cfm#5>

RRGs: Types of Insurance

- ◆ RRGs provide "liability" insurance, including all types of third party liability, such as general liability, errors and omissions, directors and officers, medical malpractice, professional liability, products liability, etc.
- ◆ The LRRRA does not extend to workers compensation, property insurance, or to personal lines insurance, such as homeowners and personal auto insurance coverage.

Advantages of Participating in RRGs

- ◆ Members have more control over their liability programs, (possibly) leading to
 - ◆ lower rates,
 - ◆ broader coverage,
 - ◆ more effective loss control & risk management programs,
 - ◆ participation by RRG members in favorable loss experience,
 - ◆ access to reinsurance markets, and
 - ◆ stability of coverage, notwithstanding insurance market cycles

Disadvantages of Participating in RRGs

- ◆ RRGs typically have lower capitalization and less diversification than commercial insurers, leading to a higher probability of insolvency
- ◆ Members may be liable to pay claims in the event the RRG defaults

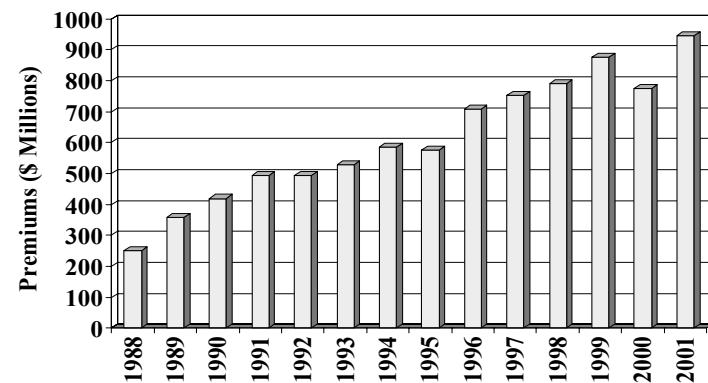
Purchasing Groups (PGs)

- ◆ A purchasing group (PG) is comprised of insurance buyers who band together, typically on a national basis, to purchase their liability insurance coverage from
 - ◆ an admitted insurer,
 - ◆ a surplus lines insurers, or
 - ◆ a risk retention group

Differences between PGs & RRGs

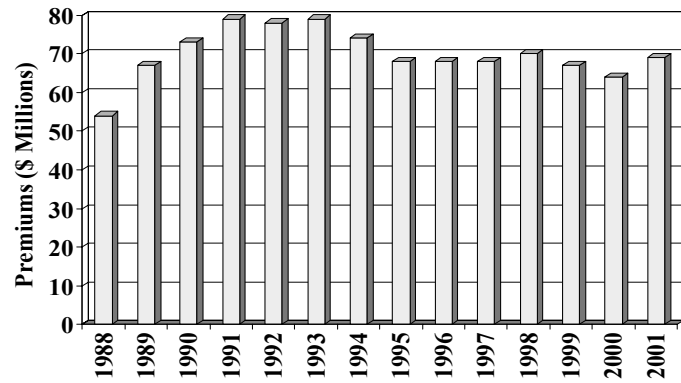
- ◆ RRGs retain risk (act as insurers) whereas PGs do not
 - ◆ RRGs are capitalized but PGs are not
 - ◆ RRGs purchase reinsurance, etc., whereas PGs rely on the insurer to bear risk and diversify

Risk Retention Group Premiums



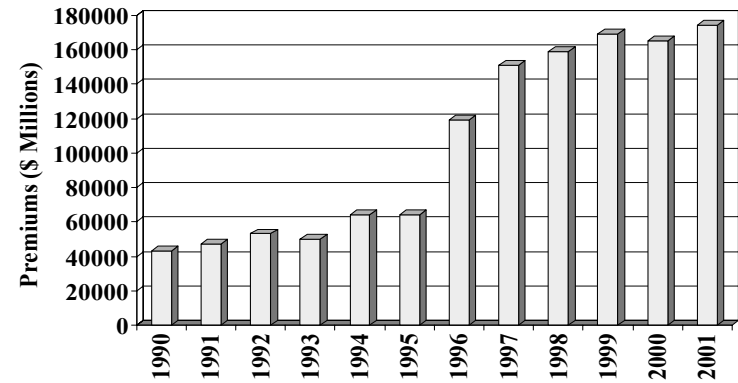
Source: <http://www.rrr.com/education/growth.cfm>

Number of Risk Retention Groups

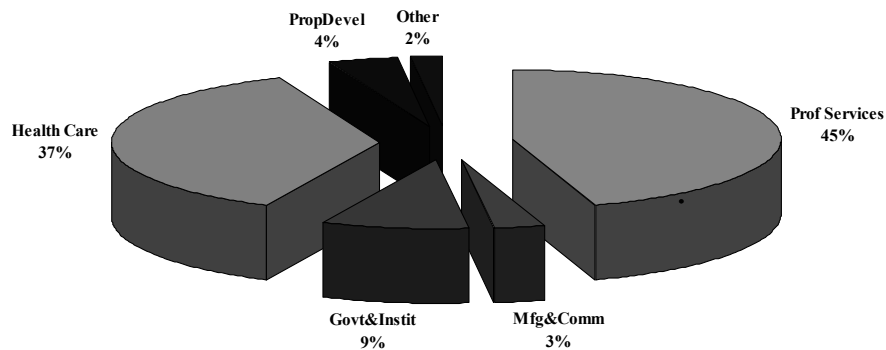


Source: <http://www.rrr.com/education/growth.cfm>

No. of Risk Retention Group Insureds

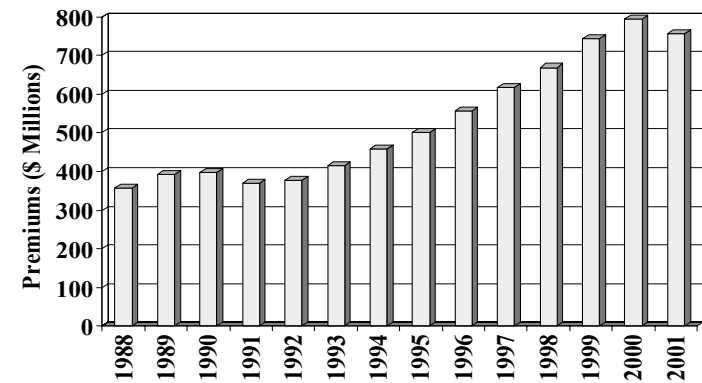


RRGs: Premiums by Industry



Number of Purchasing Groups

(Estimated 2001 Premium Volume = \$3 Billion)



Source: <http://www.rrr.com/education/growth.cfm>

Overall Conclusion

- ◆ Expect the importance of captives to continue to grow in the future as long as
 - ◆ IRS is not successful in reversing the trend toward liberalizing deductibility of premiums
 - ◆ No other unfavorable tax or regulatory changes occur in the US or offshore
- ◆ Expect ART in general also to increase in importance
- ◆ Expect more ART innovations