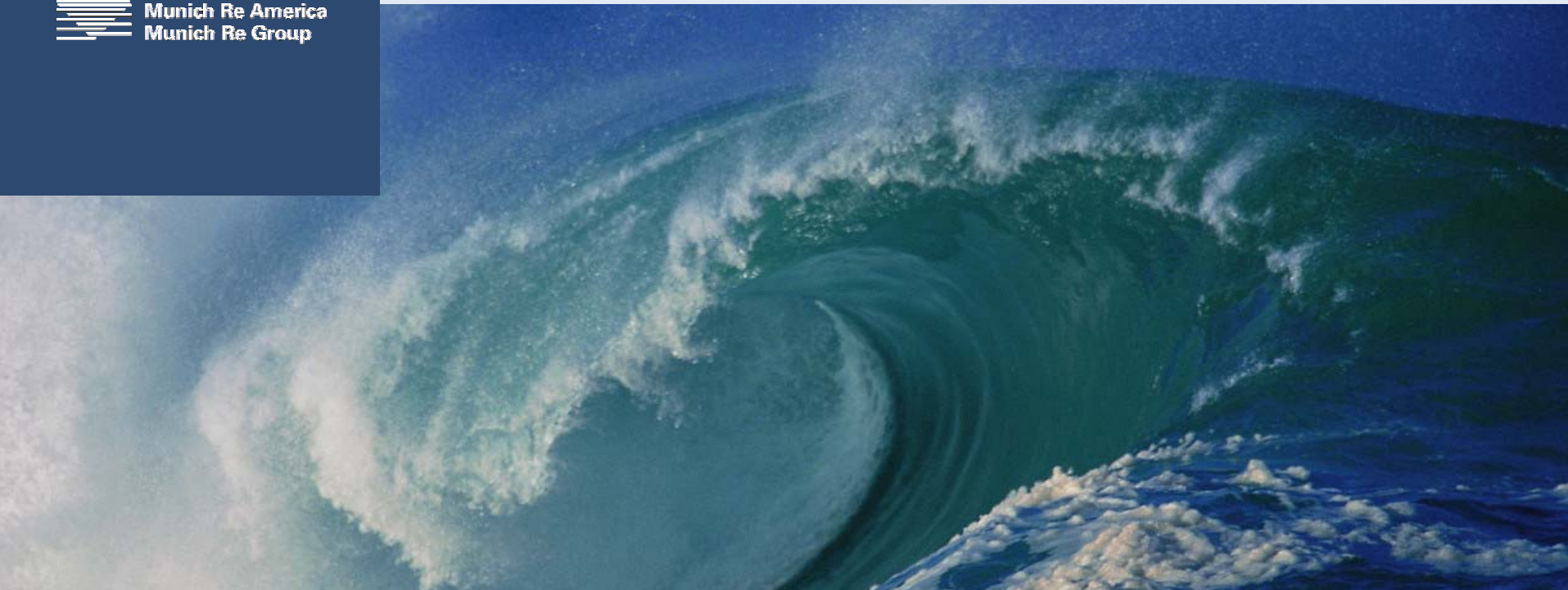


**2007 CAS Spring Meeting - Lake Buena Vista, FL
The State of the Reinsurance Market (C24)
Tuesday, June 19, 2007 10:00 a.m. – 11:30 a.m.**

Joy Takahashi
Chief Marketing Officer, Munich Reinsurance America



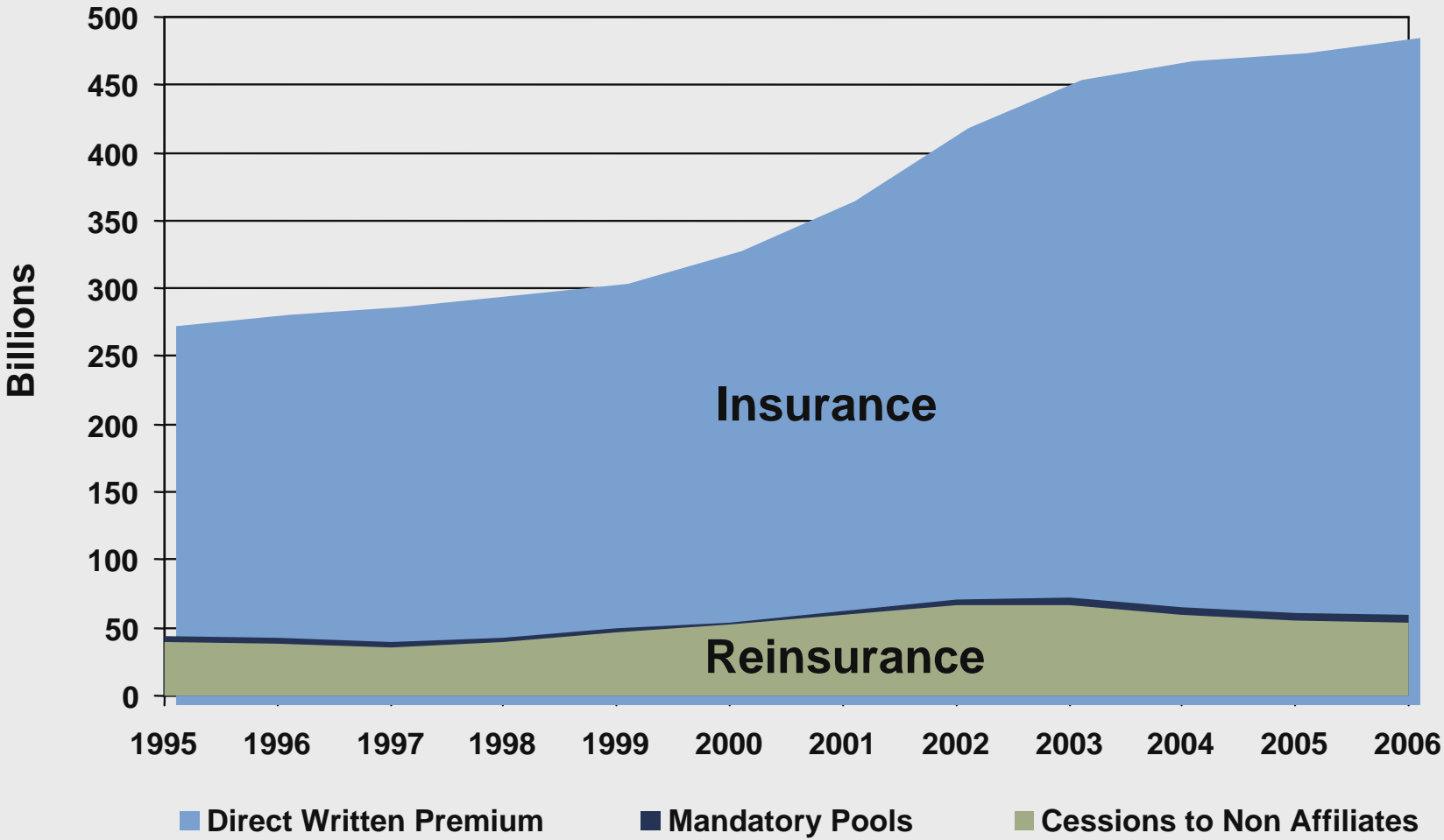
Agenda

Q&As

3

How big is the reinsurance market?

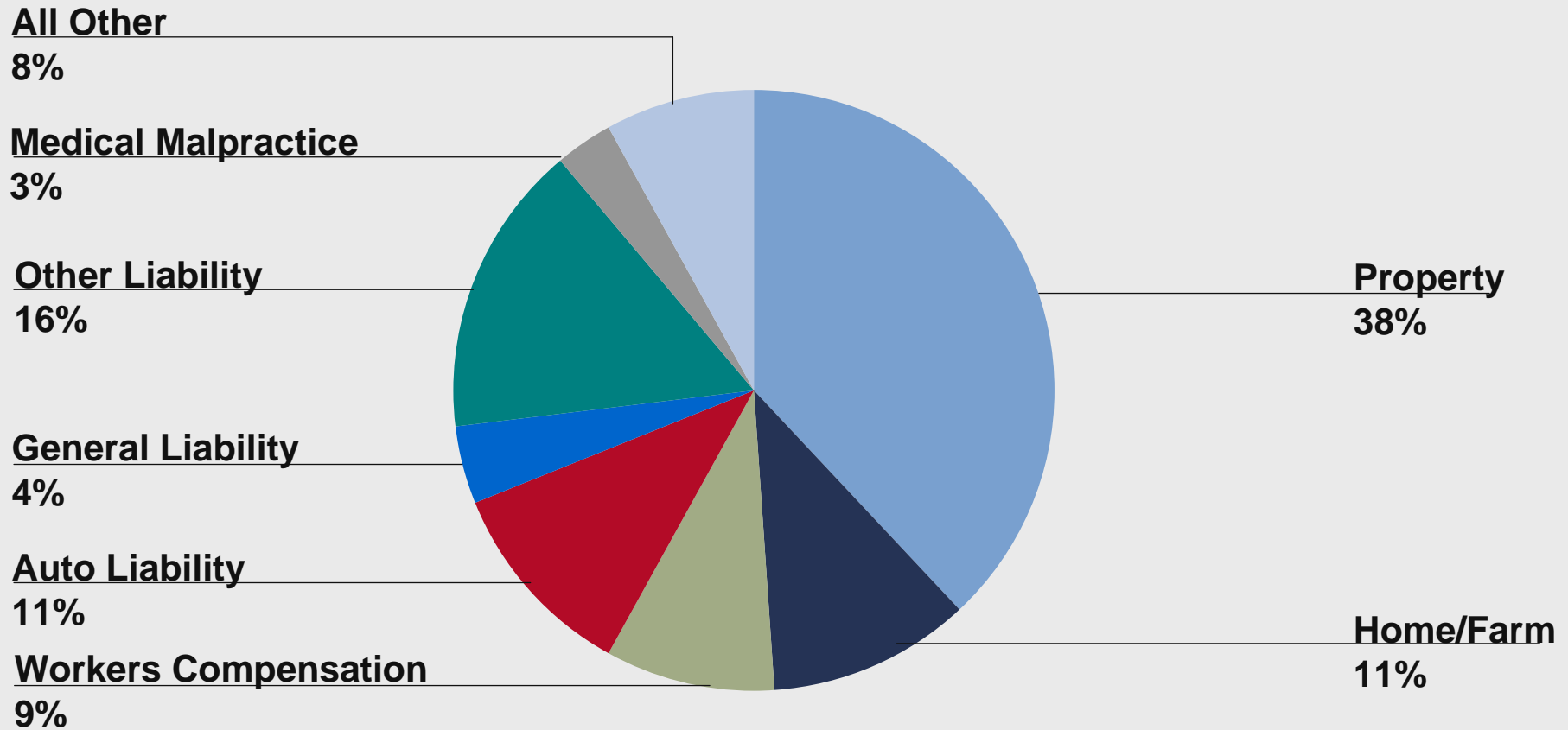
Traditional Insurance/Reinsurance Markets Size Over Time



Cessions and DWP: 06 as of 12/31/06, 00-05 as of 12/31/05, 94-99 as of 12/31/99
 Cessions and DWP: 06 based on Individuals, all other years based on Consolidateds and Unaffiliated Singles
 Source Highline Data, U&I

What Lines of Business are Ceded?

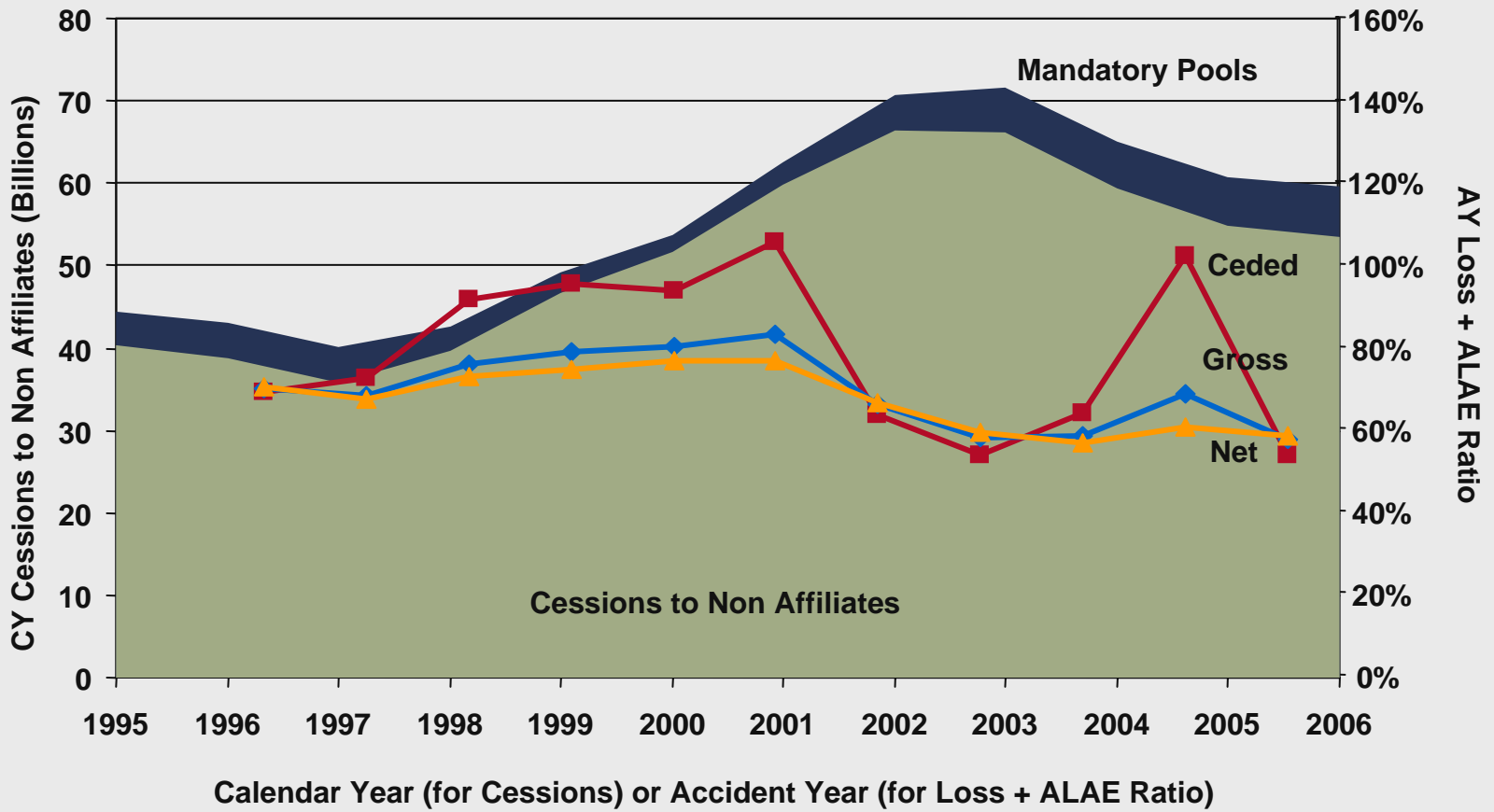
Reinsurance of U.S. Business by Line of Business



How Cyclical is Reinsurance Relative to Insurance?

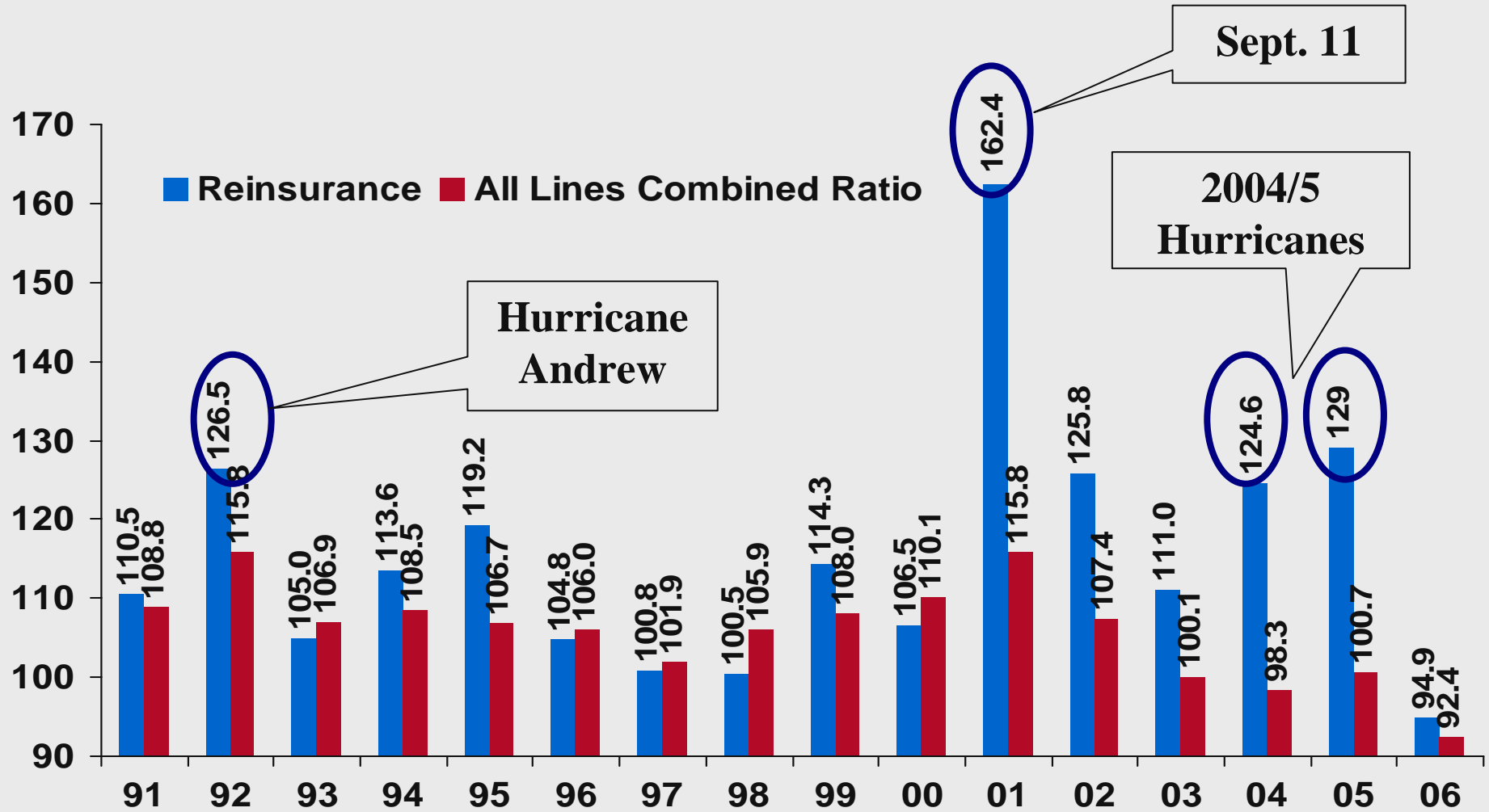
Are Reinsurers More or Less
Profitable than Insurers?

Reinsurance Market Size and Profitability Over Time



Cessions: Highline Data, U&I (pg 8), Column5. 06 as of 12/31/06, 00-05 as of 12/31/05, 94-99 as of 12/31/99
 Loss Ratios: Highline Data, 97-06 as of 12/31/06, 96 as of 12/31/05

Combined Ratio: Reinsurance vs. P/C Industry

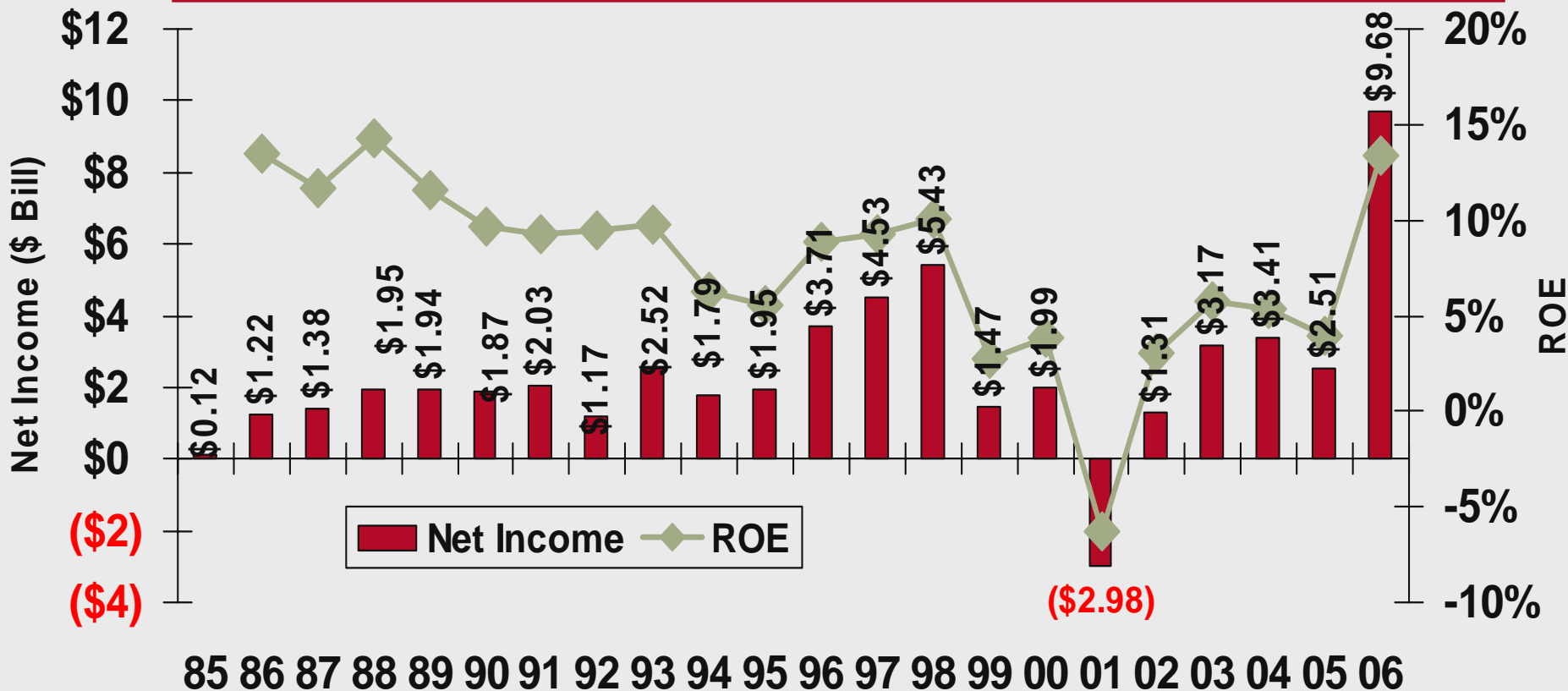


* All lines figure is full-year III estimate. RAA figure for full-year 2005

Source: A.M. Best, ISO, Reinsurance Association of America, Insurance Information Institute

US Reinsurer Net Income & ROE, 1985-2006

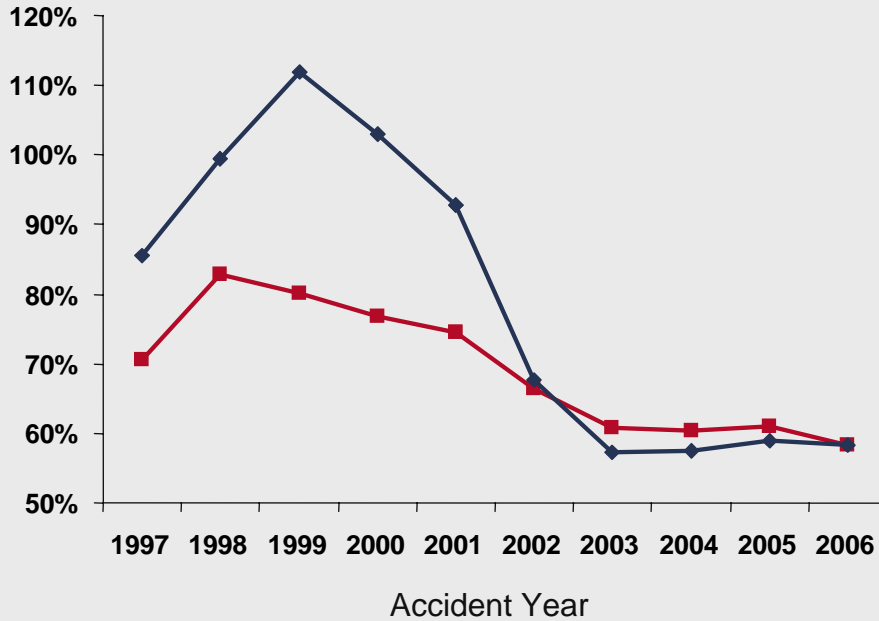
Reinsurer profitability has rebounded



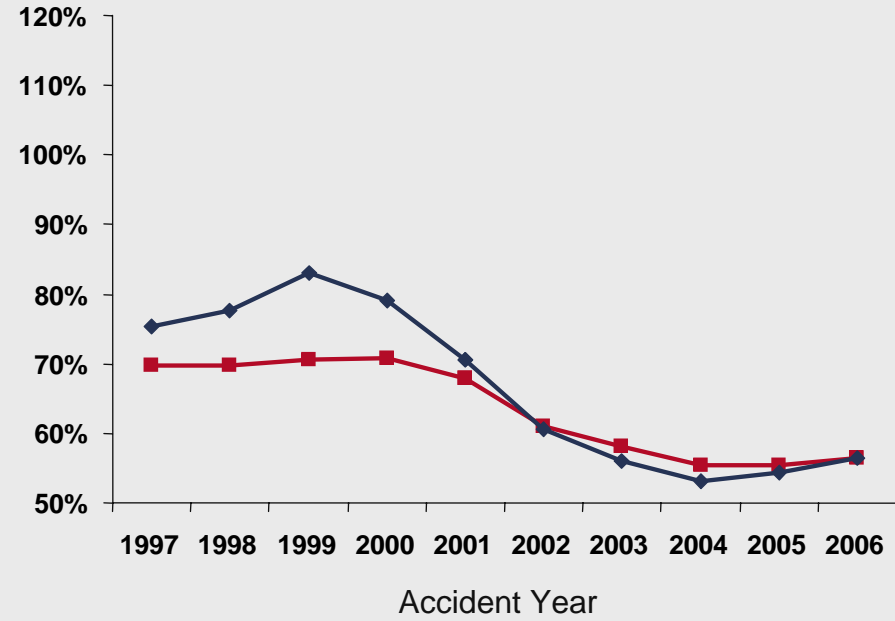
Just How Differently Do Reinsured Losses Develop From Insured Losses?

Commercial Auto Soft and Hard Market Years

Ceded Loss Ratio



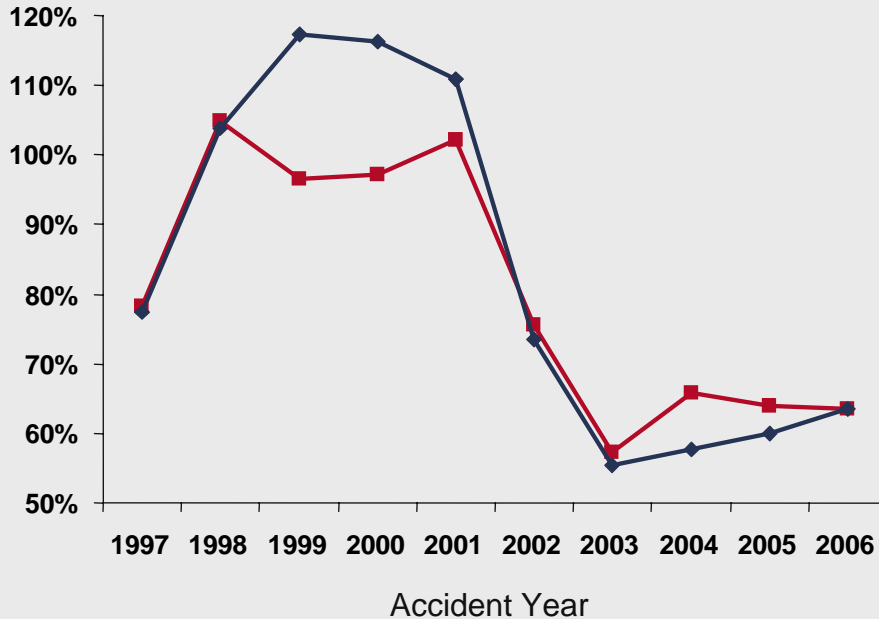
Net Loss Ratio



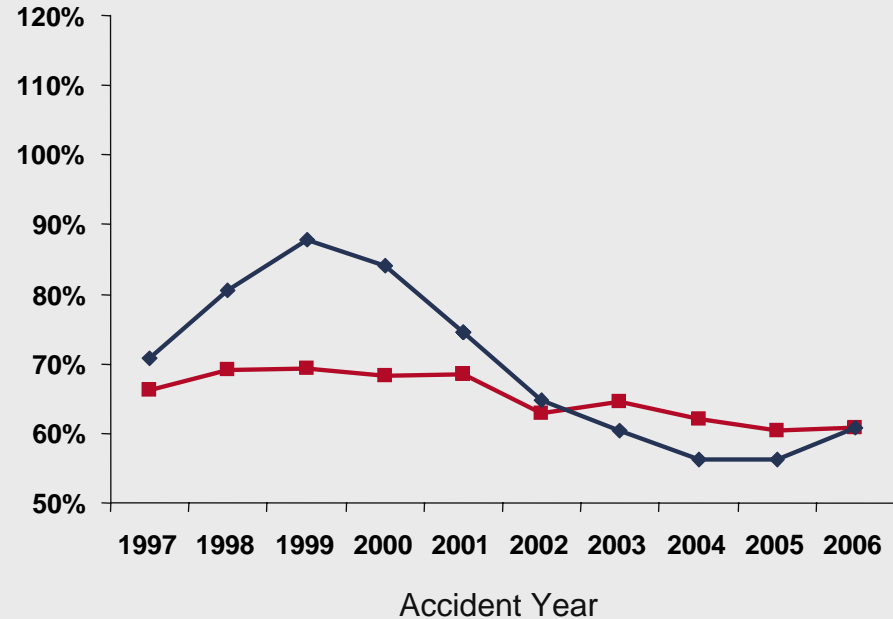
—■ at 12 months
—◆ as of 12/31/06

Workers Compensation Soft and Hard Market Years

Ceded Loss Ratio



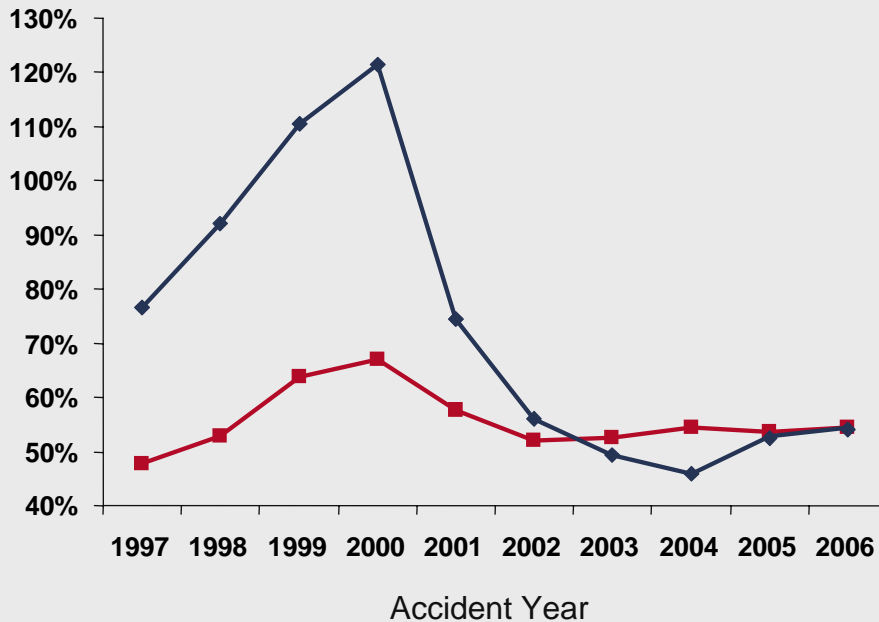
Net Loss Ratio



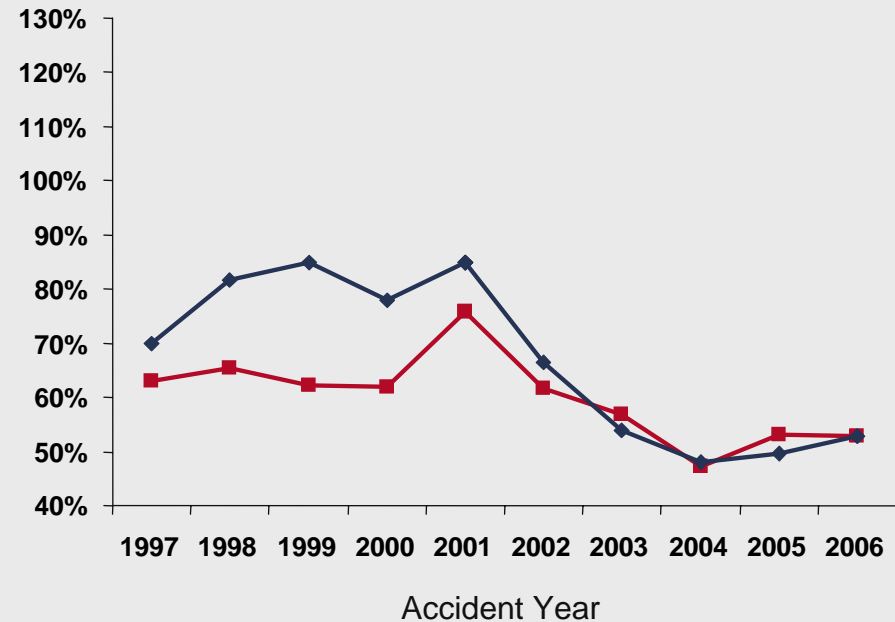
—■ at 12 months
—◆ as of 12/31/06

General Liability Soft and Hard Market Years

Ceded Loss Ratio



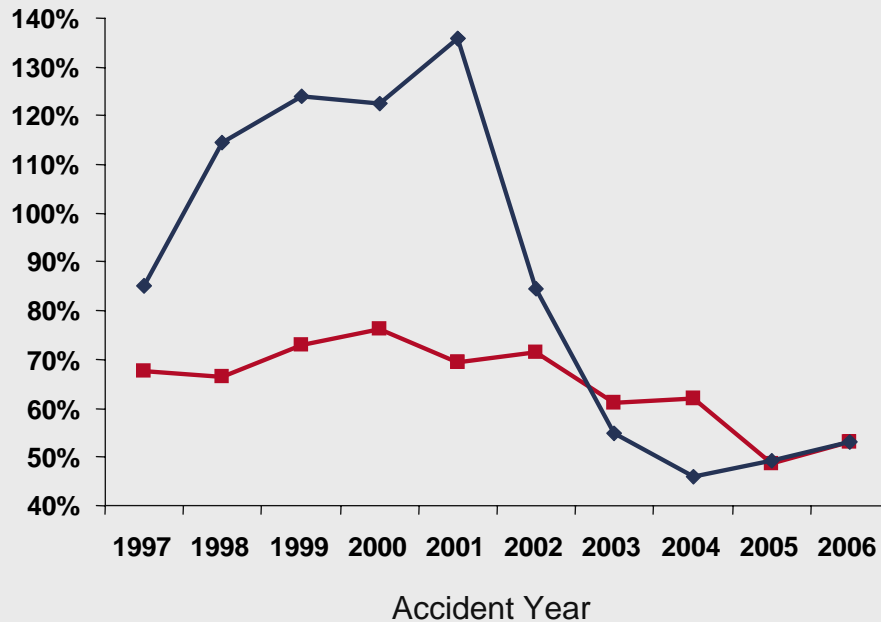
Net Loss Ratio



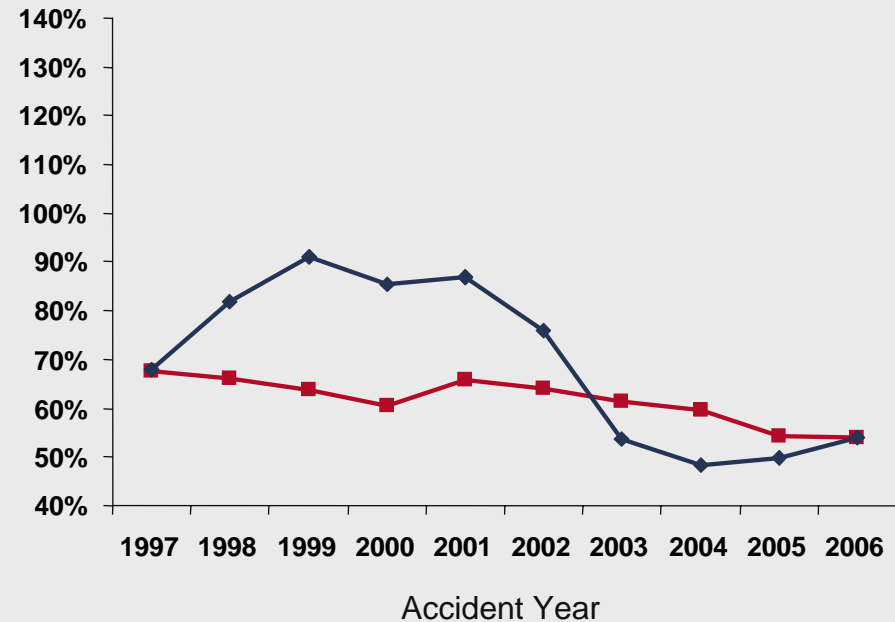
—■ at 12 months
—◆ as of 12/31/06

Professional Liability Soft and Hard Market Years

Ceded Loss Ratio



Net Loss Ratio

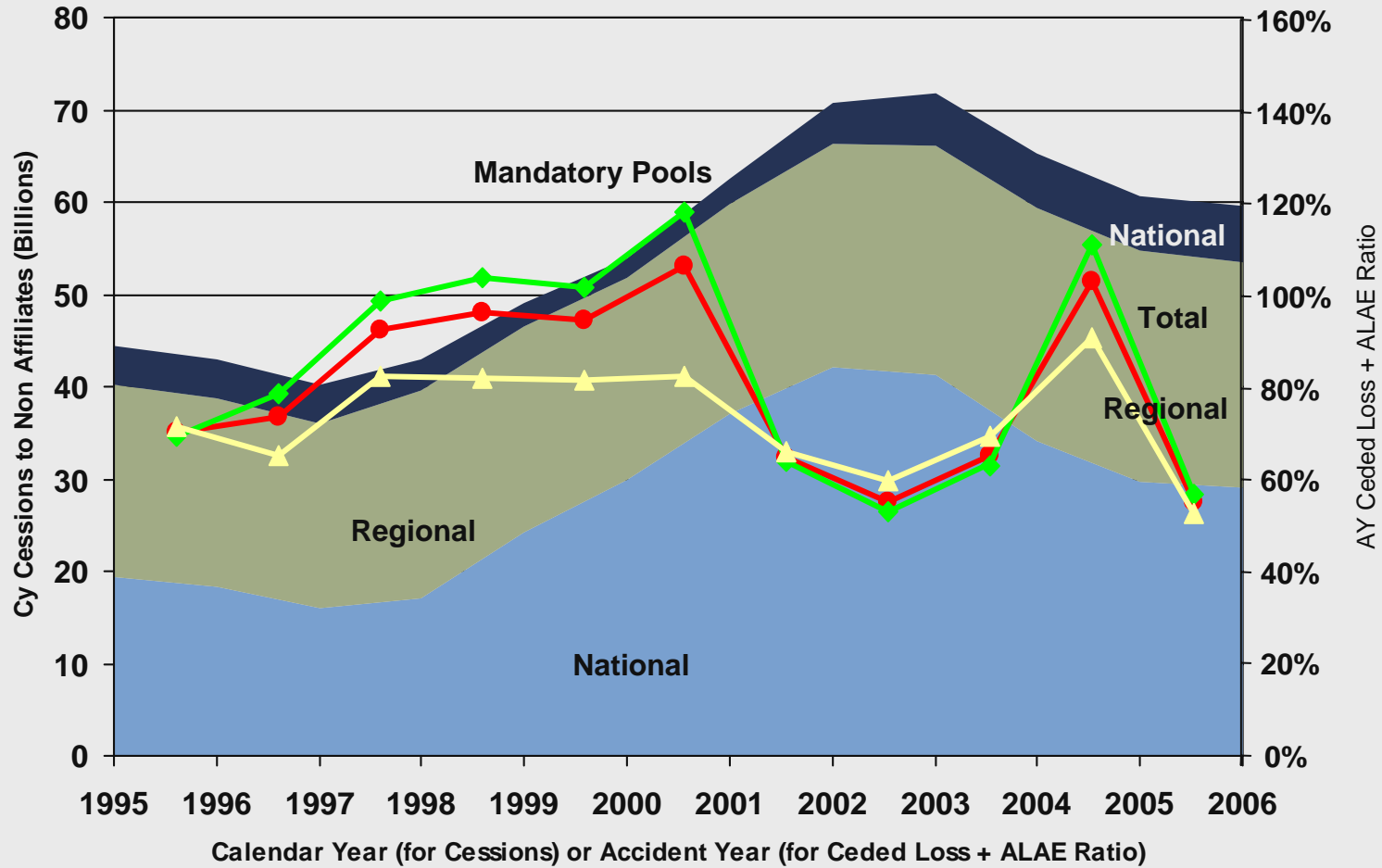


—■ at 12 months
—◆ as of 12/31/06

Do Different Segments Buy Reinsurance Differently?

National Vs. Regional

Reinsurance Market Size and Profitability Over Time National vs. Regional

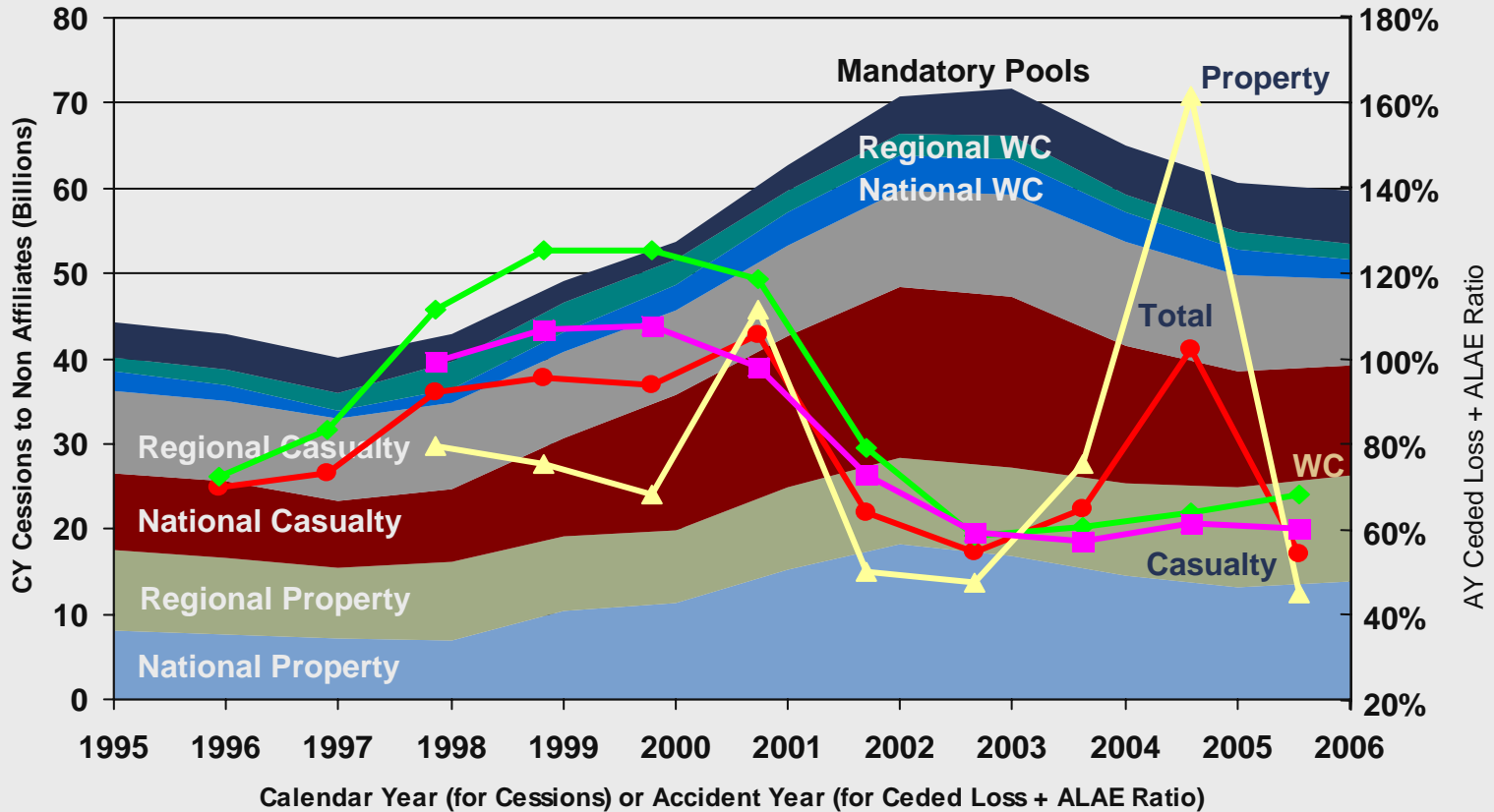


Cessions: Highline Data, U&I (pg 8), Column5. 06 as of 12/31/06, 00-05 as of 12/31/05, 94-99 as of 12/31/99
 Loss Ratios: Highline Data, 97-06 as of 12/31/06, 96 as of 12/31/05

Do Different Segments Buy Reinsurance Differently – By Line? Property Vs. Casualty Vs. WC

Reinsurance Market Size and Profitability Over Time

Casualty vs. Property vs. WC

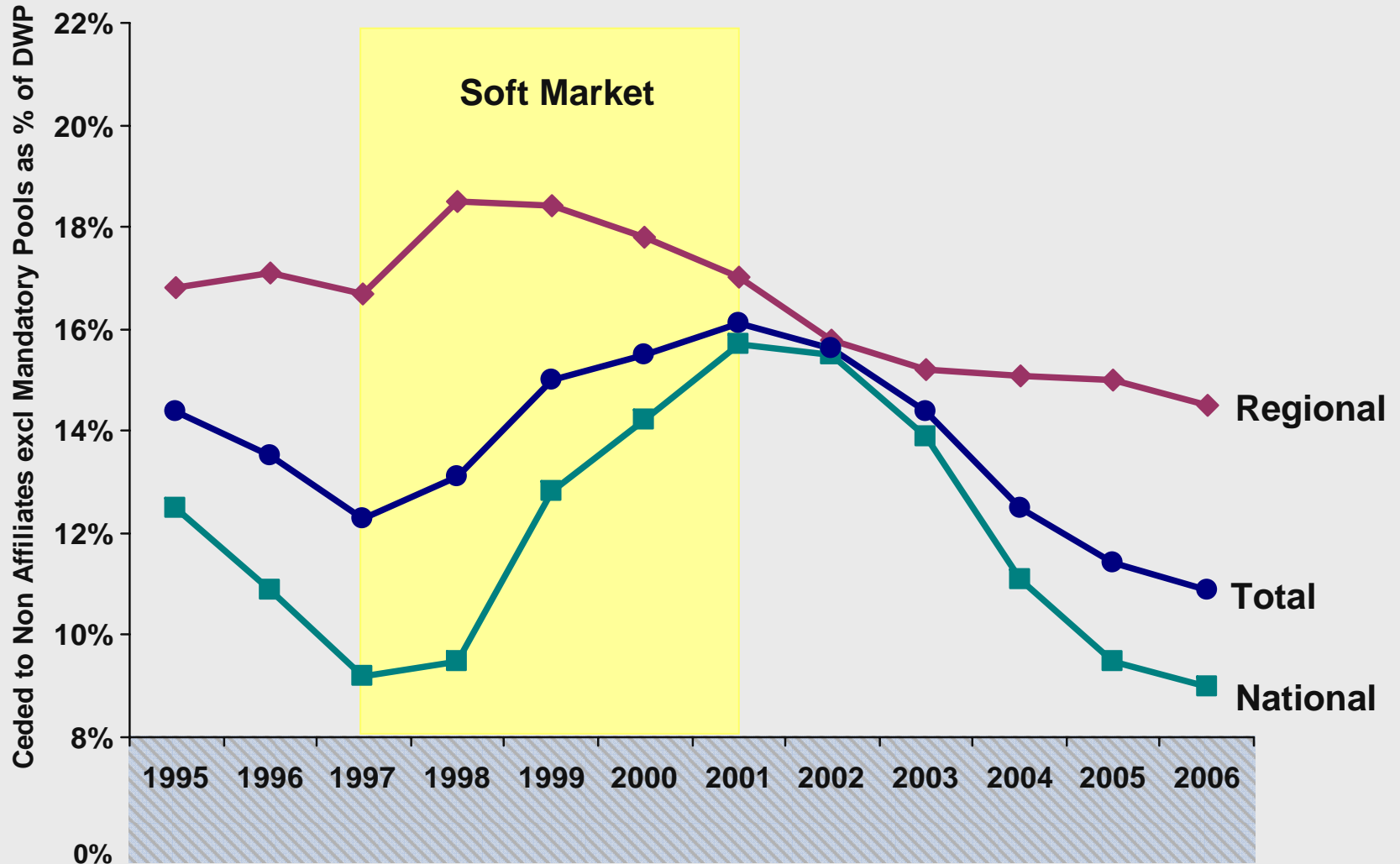


Cessions: Highline Data, U&I (pg 8), Column5. 06 as of 12/31/06, 00-05 as of 12/31/05, 94-99 as of 12/31/99
 Loss Ratios: Highline Data, 97-06 as of 12/31/06, 96 as of 12/31/05

What Are Net Retention Trends?

(National Vs. Regional)

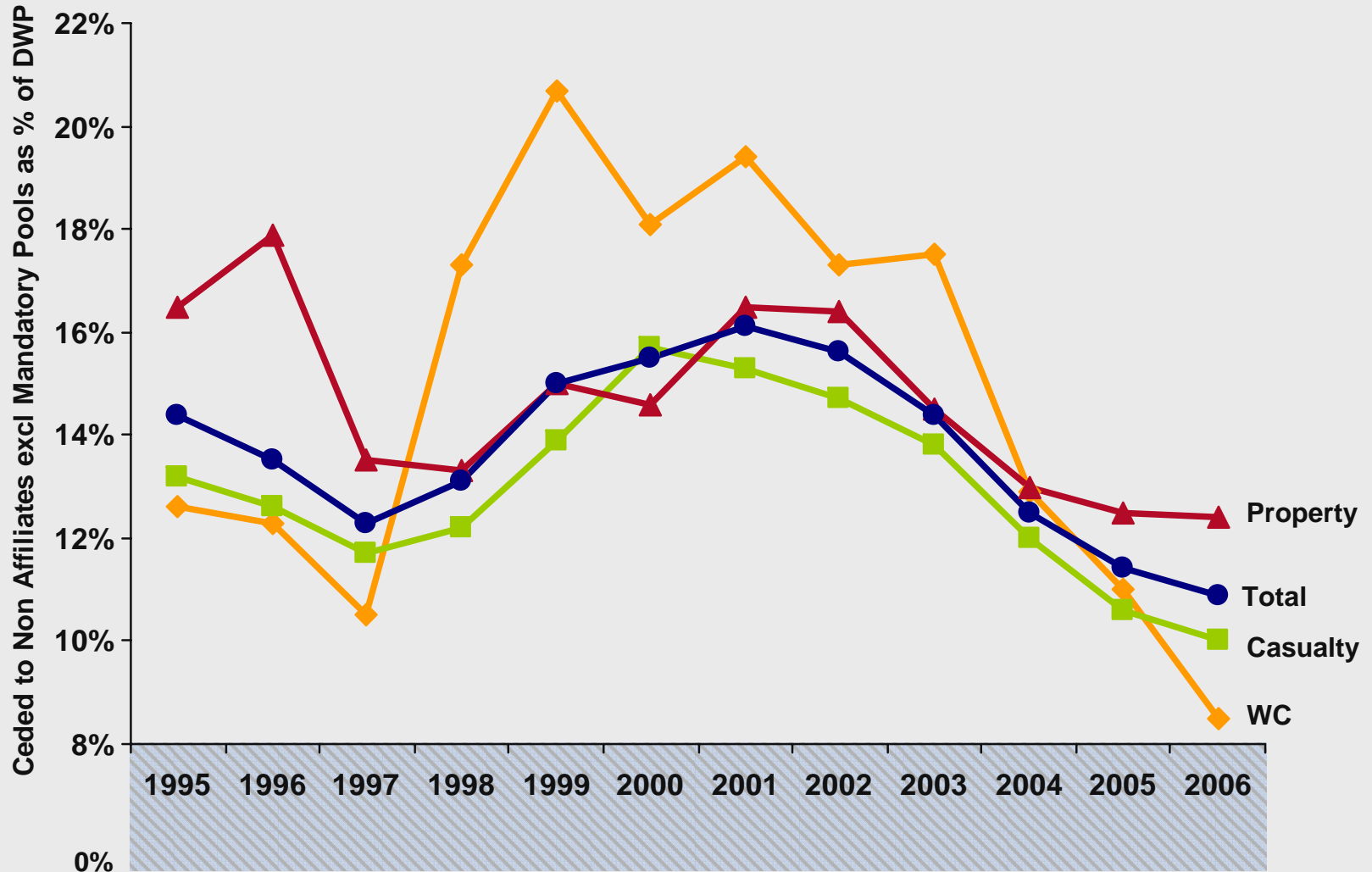
Cession Rate (Retention Trends) National vs. Regional



Cessions and DWP: 06 as of 12/31/06, 00-05 as pf 12/31/05, 94-99 as of 12/31/99
 Cessions and DWP: 06 based on Individuals, all other years based on Consolidateds and Unaffiliated Singles
 Source Highline Data, U&I

What Are Net Retention Trends? (Property Vs. Casualty Vs. WC)

Cession Rate (Retention Trends) Casualty vs. Property vs. WC



Cessions and DWP: 06 as of 12/31/06, 00-05 as of 12/31/05, 94-99 as of 12/31/99
 Cessions and DWP: 06 based on Individuals, all other years based on Consolidateds and Unaffiliated Singles
 Source Highline Data, U&I

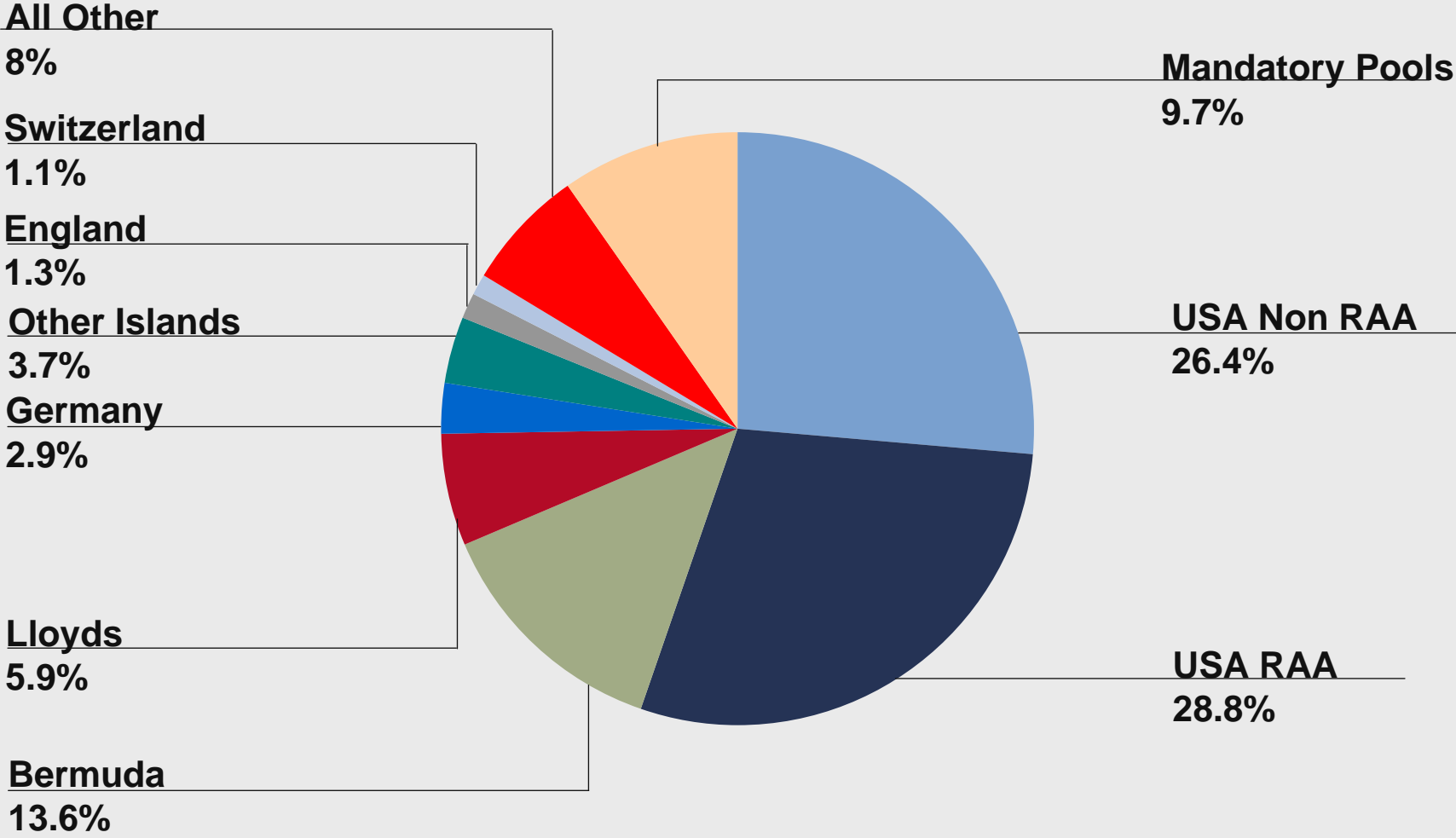
Where Are The Reinsurers?

What is the RAA Market Share?

The Bermuda Market Share?

Which Markets are Growing?

Domiciles of Reinsurers of U.S. Business



Source: Highline Data/Schedule F.com as of 12/31/06

Reinsurers Reporting to RAA: 1996

49 RAA reinsurers in 1996

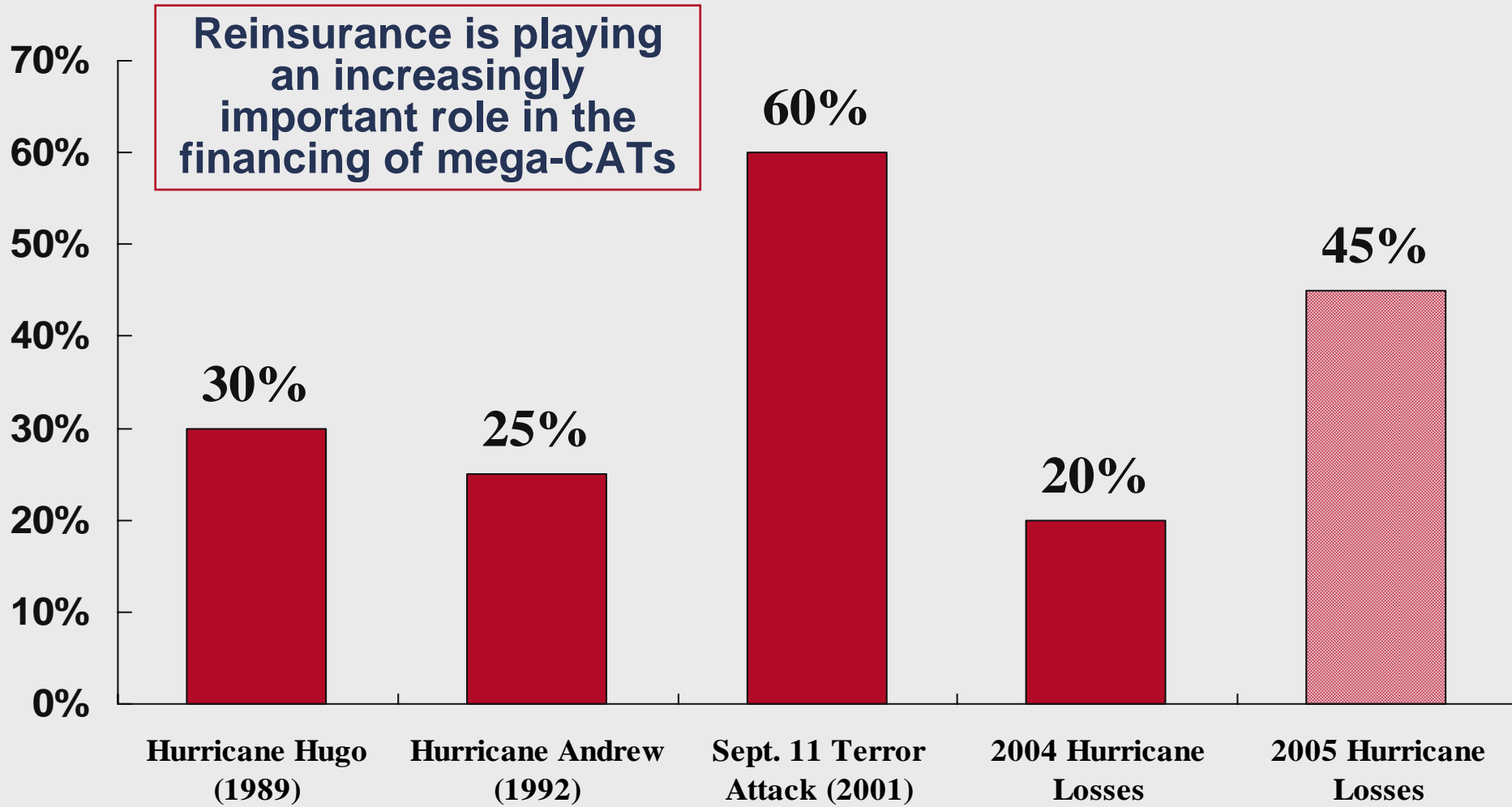
| | | |
|----------------------------------|---------------------------------|--------------------------------|
| 1. American Agriculture Ins. | 21. Ins. Corp. of Hannover | 41. TIG Reins. Co. |
| 2. American Re-Insurance. | 22. Kemper Reins. Co. | 42. Toa-Re Ins. Co. of America |
| 3. Asset Guaranty Insurance | 23. M&G Reins. Co. of America | 43. Transatlantic Re/Putnam Re |
| 4. AXA Reins. | 24. Munich Re Group | 44. Transnational Ins. Co. |
| 5. Capital Re Group | 25. NAC Reins. | 45. Trenwick Re |
| 6. Chartwell Re | 26. Odyssey Re. | 46. Underwriters Reins. Co. |
| 7. Cologne Reins. Co. of America | 27. PMA Reins. | 47. USF Re Ins. Co. |
| 8. Constitution Re Corp. | 28. PXRE Reins. | 48. Winterthur Re |
| 9. Employers Reins. Group | 29. Reliance Reins. | 49. Zurich Reins. Centre Inc. |
| 10. Enhance Reins. | 30. Republic Western | |
| 11. Everest Re | 31. Risk Capital Holdings Group | |
| 12. Farmers Mutual Hail Ins. | 32. SAFR Reins. Corp. | |
| 13. F&G Re | 33. SCOR U.S. Group | |
| 14. First American Ins. | 34. Security Reins. Co. | |
| 15. Folksamerica Reins. | 35. Signet Star Re | |
| 16. General Re | 36. Sirius Re Corp. | |
| 17. Gerling Global Re | 37. Sorema North America Corp. | |
| 18. Great Lakes Reins. | 38. St. Paul Re | |
| 19. Hartford Re | 39. Swiss Re America Corp. | |
| 20. Inner Harbor Re (USF&G) | 40. Sydney Re Corp. | |

Reinsurers Reporting to RAA: 2006

At 23, less than half the 1996 number

- | | |
|----------------------------------|--------------------------------|
| 1. American Agriculture Ins. | 21. Toa Reins. Co. of America |
| 2. Axis Re | 22. Transatlantic Re/Putnam Re |
| 3. Berkley Ins. Co. | 23. XL Reins. America |
| 4. Converium Re (North America) | |
| 5. EMC Re | |
| 6. Endurance Re Corp. of America | |
| 7. Everest Re | |
| 8. Farmers Mutual Hail Ins. | |
| 9. Folksamerica Reins. | |
| 10. General Re | |
| 11. Munich Re America | |
| 12. National Indemnity | |
| 13. Odyssey Re | |
| 14. Partner Re | |
| 15. Platinum Underwriters Reins. | |
| 16. Praetorian | |
| 17. PXRE Reins. | |
| 18. QBE Reins. Corp. | |
| 19. SCOR U.S. Group | |
| 20. Swiss Re America Corp. | |

Share of Losses Paid by Reinsurers, by Disaster*



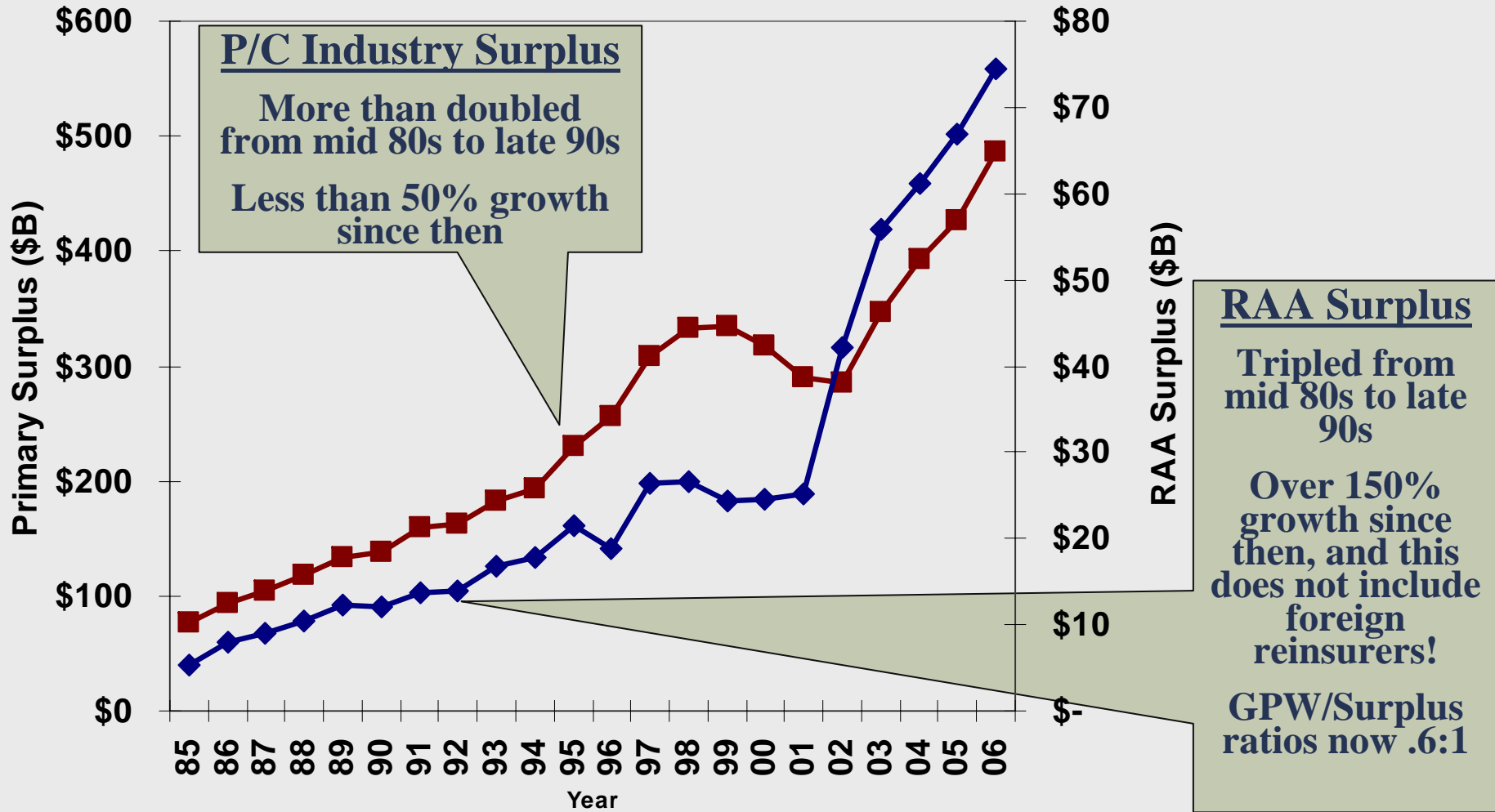
*Excludes losses paid by the Florida Hurricane Catastrophe Fund, a FL-only windstorm reinsurer, which was established in 1994 *after* Hurricane Andrew. FHCF payments to insurers are estimated at \$3.85 billion for 2004 and \$4.5 billion for 2005.

Sources: Wharton Risk Center, Disaster Insurance Project; Insurance Information Institute.

What Are Surplus and Capital Raising Trends?

U.S. Policyholder Surplus: 1985-2006

Reinsurer surplus growth huge relative to primary



Source: A.M. Best, ISO, Insurance Information Institute, RAA

Bermuda Start-Ups: Capital Raising Class of 1985-1986 (Liability Crisis)

| <u>Company Name</u> | <u>Initial Capital Raised</u> |
|---|-----------------------------------|
| Ace Limited | \$100 Million |
| XL Limited | |
| CODA (Corporate Officers & Directors Assurance Ltd.) | |

Bermuda Start-Ups: Capital Raising

Class of 1992/1993 (post Hurr. Andrew): \$2.3 Billion

| <u>Company Name</u> | <u>Initial Capital Raised</u> |
|---------------------------------|-------------------------------|
| Centre Cat Ltd. | \$300 Million |
| Global Capital Reinsurance Ltd. | \$425 Million |
| IPC Holdings Ltd. | \$300 Million |
| LaSalle Re Ltd. | (Unknown) |
| Mid Ocean Ltd. | \$359 Million |
| PartnerRe Ltd. | \$255 Milion |
| Renaissance Re Holdings Ltd. | \$140 Million |
| Tempest Reinsurance Co. Ltd. | \$500 Million |
| | \$2.3 Billion |

Bermuda Start-Ups: Capital Raising

Class of 2001 (post WTC): \$7.5 Billion

| <u>Company Name</u> | <u>Initial Capital Raised</u> |
|--------------------------------|-------------------------------|
| Allied World Assurance Company | \$1.484 Billion |
| Arch Capital Group | \$750 Million |
| Aspen Insurance Holdings, Ltd | \$448 Million |
| Axis Capital Holdings | \$1.6 Billion |
| DaVinci Re | \$500 Million |
| Endurance Specialty | \$1.2 Billion |
| Montpelier Re Holdings | \$1.0 Billion |
| Olympus Re Holdings | \$500 Million |
| | \$7.482 Billion |

New Startups: Capital Raising

Class of 2005 (Post-KRW): \$8.89 billion

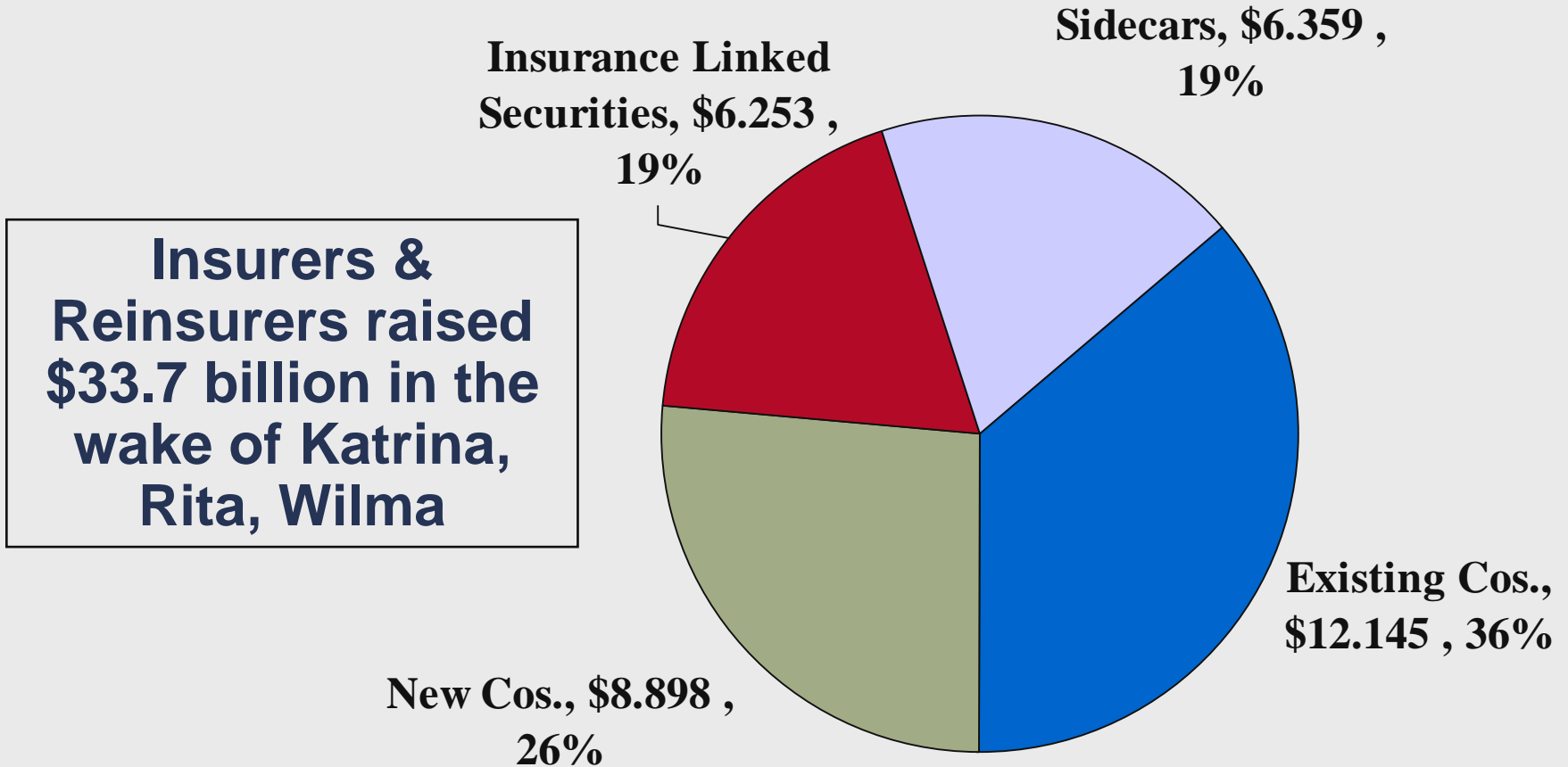
| New Company | <u>Initial Capital Raised</u> |
|-----------------------|-------------------------------|
| Harbor Point | \$1.5 billion |
| Amlin | \$1.0 billion |
| Lancashire | \$1.0 billion |
| New Castle | \$500 million |
| Kiln | \$145 million |
| Validus Re | \$1.65 billion |
| Omega | \$170 million |
| Flagstone Re | \$795 million |
| Ariel Re | \$1.0 billion |
| Hiscox | \$500 million |
| Ascendant Re | \$100 million |
| Aeolus Re | \$500 million |
| Advent Re | \$38 million |
| Industry Total | \$8.89 billion |

Sidecars: Capital Raising (Post-KRW): \$6.36 billion

| Sidecar | <u>Initial Capital Raised</u> | Sidecar | <u>Initial Capital Raised</u> |
|-------------|-------------------------------|-----------------------|-------------------------------|
| Olympus Re | \$180 million | Starbound | \$311 million |
| Rockridge | \$91 million | Monte Fort Re | \$60 million |
| Cyrus | \$525 million | Scirocco | \$95 million |
| Blue Ocean | \$355 million | Concord Re | \$730 million |
| Helicon | \$330 million | Stoneheath Re | \$350 million |
| Timicuan | \$70 million | Panther Re | \$360 million |
| Flatiron | \$840 million | Norton Re | \$108 million |
| K5 | \$414 million | New Point Re | \$250 million |
| Castlepoint | \$265 million | Triomphe Re | \$185 million |
| Petral | \$200 million | SPS 5103 | \$90 million |
| Bay Point | \$150 million | MaRI Ltd | \$400 million |
| | | Industry Total | \$6.36 billion |

Capital Raising by Class Within 15 Months of KRW

\$ Billions



Reinsurance Debate: Free Market Or Government?

Debate Over Reinsurance Market Performance & Government

- Reinsurance markets typically suffer large shocks, followed by a period of higher prices and transient capacity constraints
- A new equilibrium between supply and demand is typically found within 18 months, commensurate with changes in the risk landscape. This is Economics 101 and is a textbook illustration of how capitalism works.
- A competing hypothesis suggests that reinsurance markets “fail” because they do not provide a stable price or quantity of protection as is required in an economy with *continuously exposed fixed assets, especially one that is growth oriented*
- Public Policy Solution: Acting on this hypothesis generally results in displacement of private (re)insurance capital by government intermediaries
- Open Question: Are policyholders and the economy better served through free markets, government or some hybrid?



Florida

Florida Legislature Special Session

Expansion of the Role of the State in Insuring Homes & In Reinsurance Markets

- More than doubles exposure of Florida Hurricane Catastrophe Fund to \$32 billion from \$16 billion, greatly displacing private reinsurers
- Allows Citizens to compete with private insurers by lowering rates and lowering eligibility standards
- Deletes the requirements that Citizens charge rates sufficient to purchase reinsurance
- Allows Citizens to displace private insurers by expanding into non-wind coastal business
- Expands the assessment base of Citizens to all P&C policies except workers' compensation, medical malpractice and accident & health.
- Defines and applies excess profits for residential property insurers.

Regulation

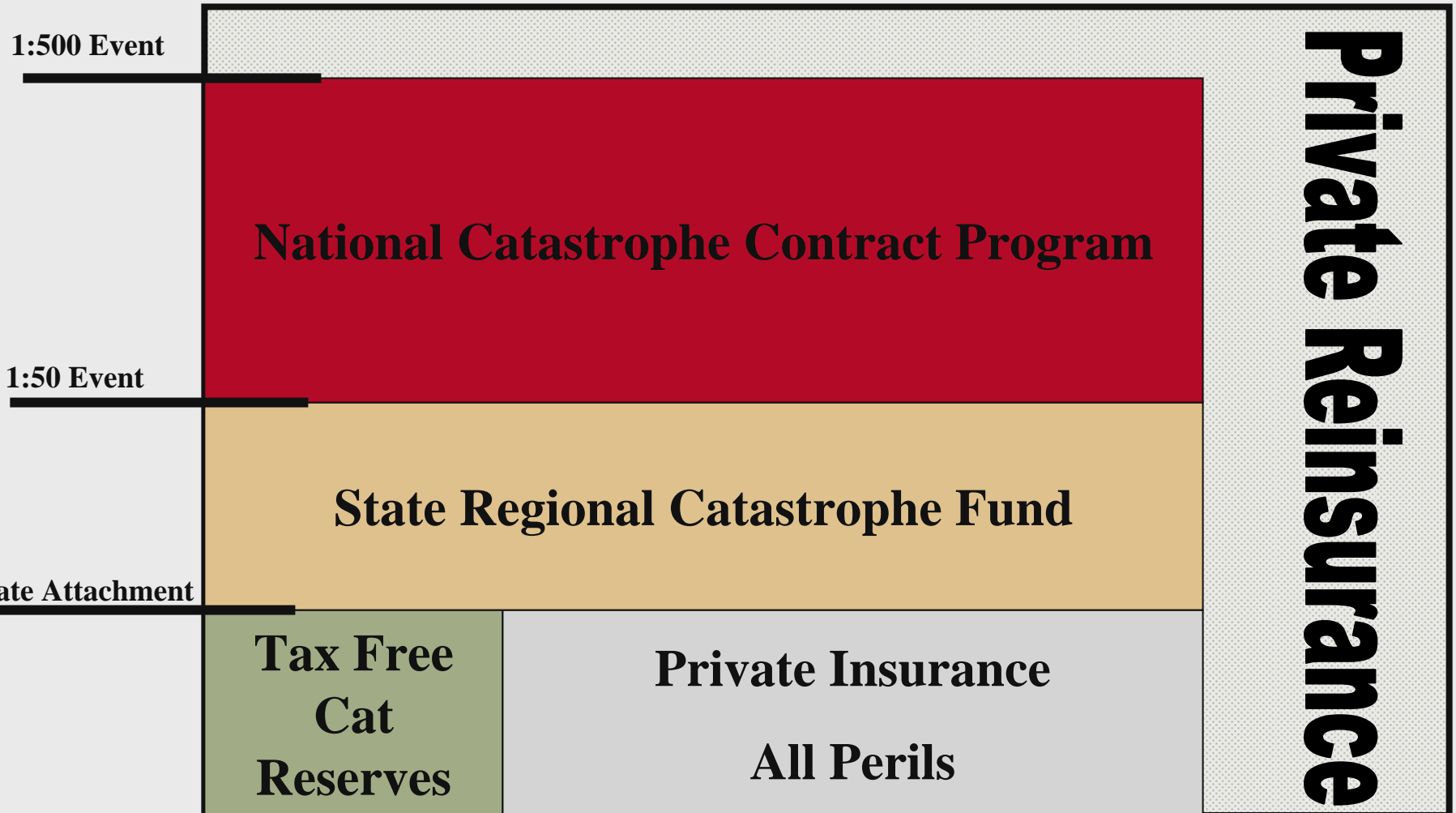


- Proposes Layered Approach to Risk
- Layer 1: Maximize resources of private insurance & reinsurance industry
 - Includes mandatory “All Perils” Residential Policy (includes floods, earthquakes, hurricanes and lava flows. Terrorism is not excluded)
 - Encourage Mitigation
 - Create Meaningful, Forward-Looking Reserves – voluntary tax-free cat reserves
- Layer 2: Establishes system of state catastrophe funds (like FHCF)
- Layer 3: Federal Catastrophe Reinsurance Mechanism

Guiding Principles of NAIC's National Catastrophe Plan

- Underlying premise of Plan is that natural disasters are uninsurable in the private market
- National program should promote personal responsibility among policyholders
- National program should support reasonable building codes, development plans & mitigation tools
- National program should maximize risk-bearing capacity of private markets, but there is no mechanism in the plan to modernize rate making regulations so that the free market is the prime factor in determining capital flows into the market.
- National plan should provide quantifiable risk management to the federal government

Comprehensive National Catastrophe Plan Schematic



Foreign Reinsurer Collateralization

NAIC Proposal to Grant Credit for Ceded Reins.

- NAIC is considering changing the requirement that non-admitted reinsurers post 100% collateral for their U.S. liabilities since it is concerned this does not adequately correlate the level of collateral to the degree of risk
 - Drafting proposal to establish a regulatory system that distinguishes reinsurers based on financial strength -- regardless of state or country of domicile
 - Proposal establishes the collateral amount necessary for ceding company to receive credit for reinsurance
 - Could extend collateral requirements to for U.S.-licensed reinsurers
 - NAIC continuing to evaluate the feasibility of this program
- NAIC ratings based on financial ratings of established rating agencies, strength of regulation in domicile jurisdiction, prompt payment reputation, and other factors
- Who will do it? New NAIC unit called the Reinsurance Evaluation Office (REO)

Legislative



Federal Terrorism Reinsurance (TRIAE)

- TRIAE expires 12/31/07. The current federal program offers \$100 billion of coverage subject to a \$27.5B industry aggregate retention.
- New Democratic Congress expected to extend TRIAE. Despite resistance/lackluster Administration support TRIAE will likely be extended for 10 years (last extension in 2005 was for 2 years)
- Potential changes include extensions of coverage for domestic terrorism losses (not included currently); insurers would be required to make available coverage for NBCR; event size would be lowered to \$50 million (from \$100 million).
- This legislation is expected to be introduced next week with House hearings in July and Senate hearings after that. Under these circumstances, we may be looking at another 11th-hour extension as in 2005.

Natural Disaster Coverage

- Some insurers and Congressional representatives in catastrophe-prone states are pushing for federal catastrophic risk fund coverage in the wake of billions of dollars of losses suffered by insurers from the 2004-2005 hurricane seasons.
- Legislative relief addressing property/casualty insurers' exposure to natural catastrophes, such as the creation of state and federal catastrophe funds, has been advocated by insurers include Allstate and State Farm recently. However, there is active opposition by other insurers and reinsurers.
- Skeptics in Congress believe such a plan would be a burden on taxpayers like the National Flood Insurance Plan and that the private sector can do a better job.
- Allowing insurers to establish tax free reserves for future catastrophe losses has also been proposed.

Optional Federal Charter (OFC)

- Legislation (Senate Bill 40) introduced in May 2007, which would allow life and property/casualty insurers to choose either a single federal charter or to remain in the existing multi-state license system. The “optional federal charter” regulatory system also would provide a single national framework for reinsurance regulation.
- Some large P&C and life insurers are the major supporters of OFC. Supporters argue that the current patchwork of 50 state regulators reduces industry competitiveness by imposing redundant regulation that slows new product introductions and adds cost to the system.
- A coalition of global P/C insurers, reinsurers and large brokers supports the concept, while some regulators (state insurance commissioners), small single-state and regional insurers, and independent agency groups oppose the idea.
- It is expected that a companion bill (to Senate Bill 40) will be introduced in the House by July 4th and hearings will be conducted in both chambers this fall. It is not anticipated that definitive action will be taken during this Congressional session.

McCarran-Ferguson Insurance Antitrust Exemption

- Under McCarran-Ferguson Act of 1945, insurers have limited immunity under federal anti-trust laws allowing insurers to pool past claims information to develop accurate (actuarially credible) rates.
- Key Senate leaders have threatened to repeal McCarran-Ferguson because of alleged collusive claims settlement practices in the wake of Hurricane Katrina. Some fear that repeal would harm small insurers that are particularly dependent on shared loss data.
- The government-appointed Antitrust Modernization Commission, in an April 2007 report, strongly encouraged Congress to re-examine the McCarran-Ferguson Act. Notably, 4 of the commissions 12 members called for a full repeal of the law.

Thank you very much for your attention.

Joy Takahashi



**Munich Re America
Munich Re Group**

