

# Financial Overview & Outlook for Global Marine Insurers

## *Clear Sailing or Rough Seas?*

**International Union of Marine Insurers**

**Copenhagen, Denmark  
12 September 2007**



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# *Presentation Outline*

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- **Premium & Pricing Overview**
- **Underwriting Performance Trends**
- **Premium Growth**
- **Reinsurance Market Summary**
- **Capital & Capacity: Underleveraged → ROE Pressure**
- **Investments: Less Bang for the Buck**
- **Financial Strength & Ratings**
- **Economic Environment for Marine Insurers**
  - **China Trade Outlook**
- **Catastrophe Loss Overview**
  - **Energy Market Overview**
- **Marine Terrorism Issue**
- **Arctic Marine Opportunities**
- **Q&A**

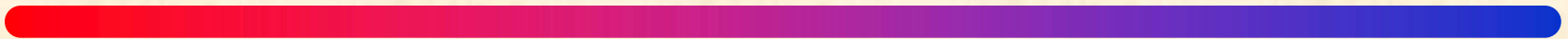
# PREMIUMS, PROFITS & GROWTH

*Marine Market is More Stable  
!!! Than Market Overall*

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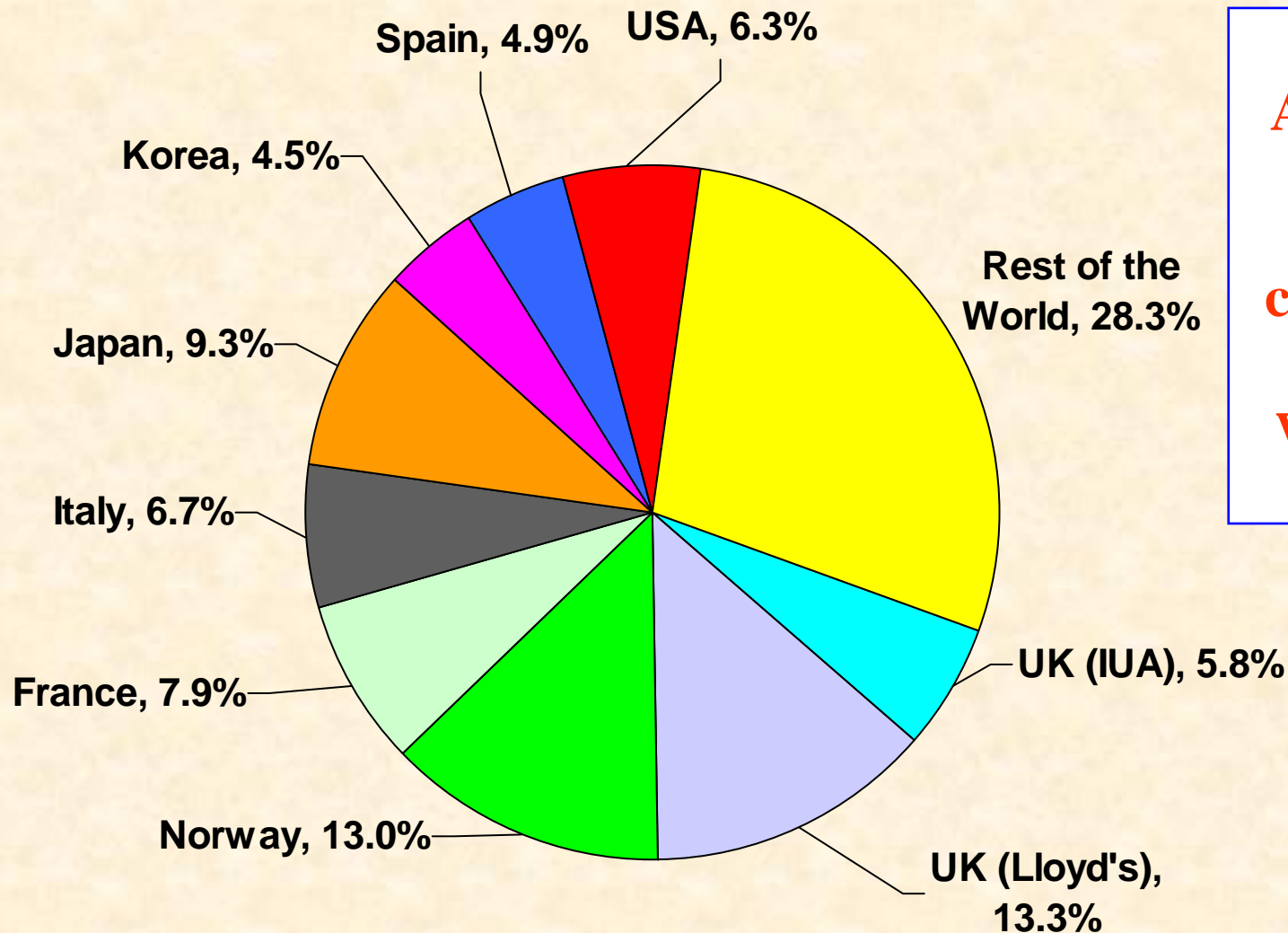
# PREMIUMS

*Market is Stable With Some  
Growth; Future Growth Maybe  
More Difficult to Realize*





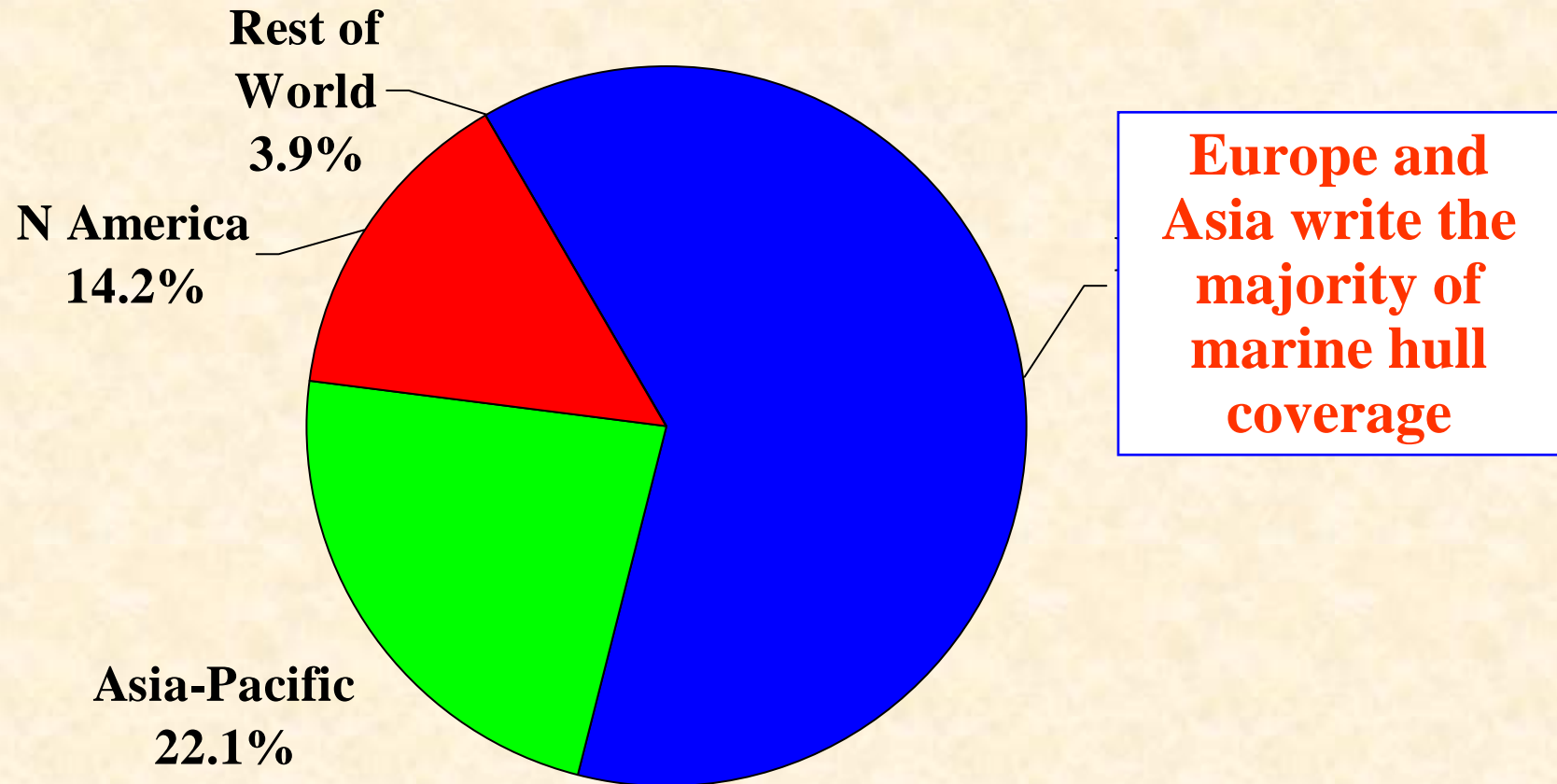
# *Global Marine Hull Premium* *2005*



**Europe and Asia write the majority of marine hull coverage; Just 6.3% was written in the US in 2005.**



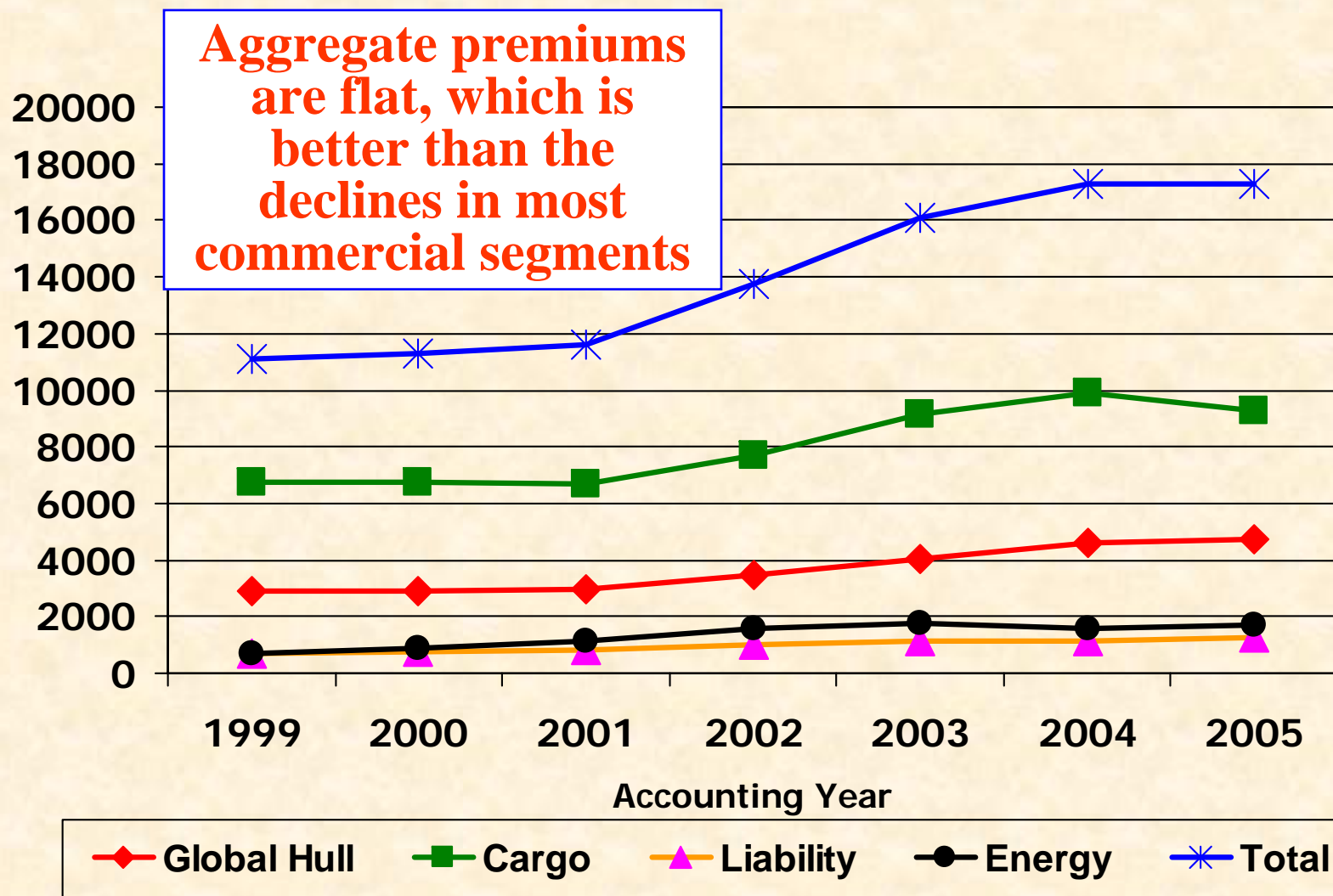
# *Marine Insurance Hull Premiums 2005, Market Share*





# *Global Marine Premium 1999-2005*

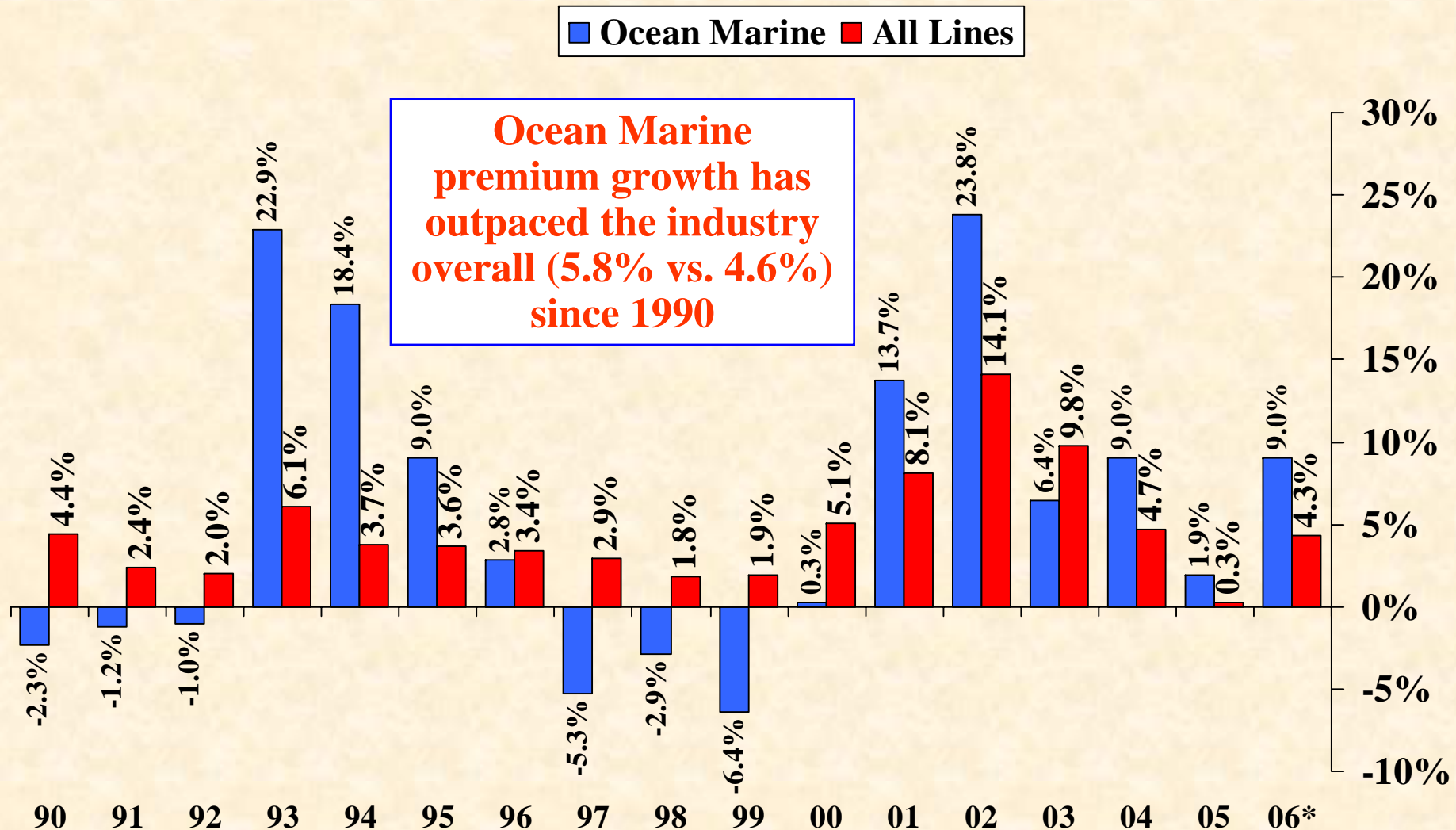
*(US\$ Million), as reported*







# Net Written Premium Growth: Ocean Marine vs. All Lines

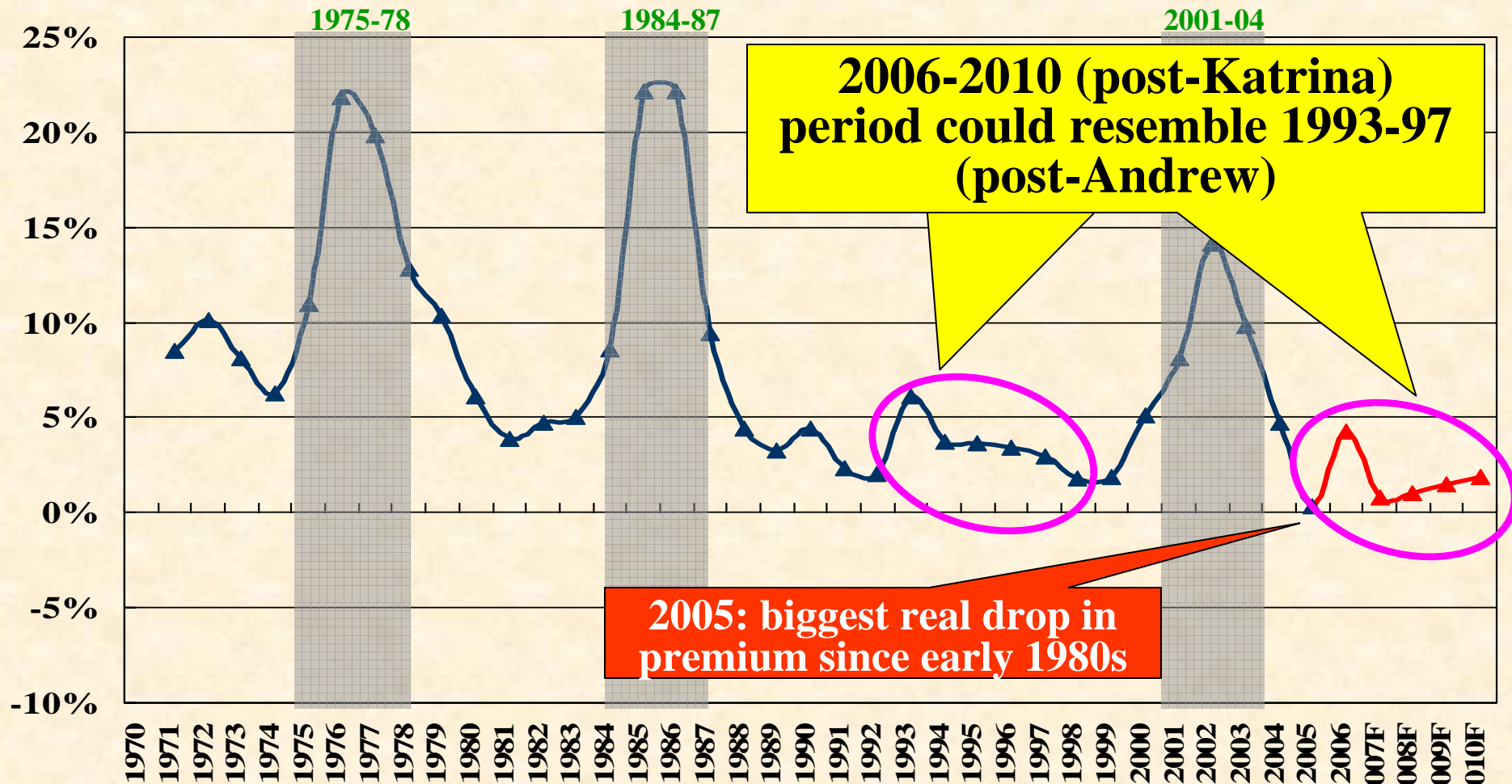


Source: A.M. Best, Insurance Information Institute





# US Net Written Premium Growth, All Lines\*

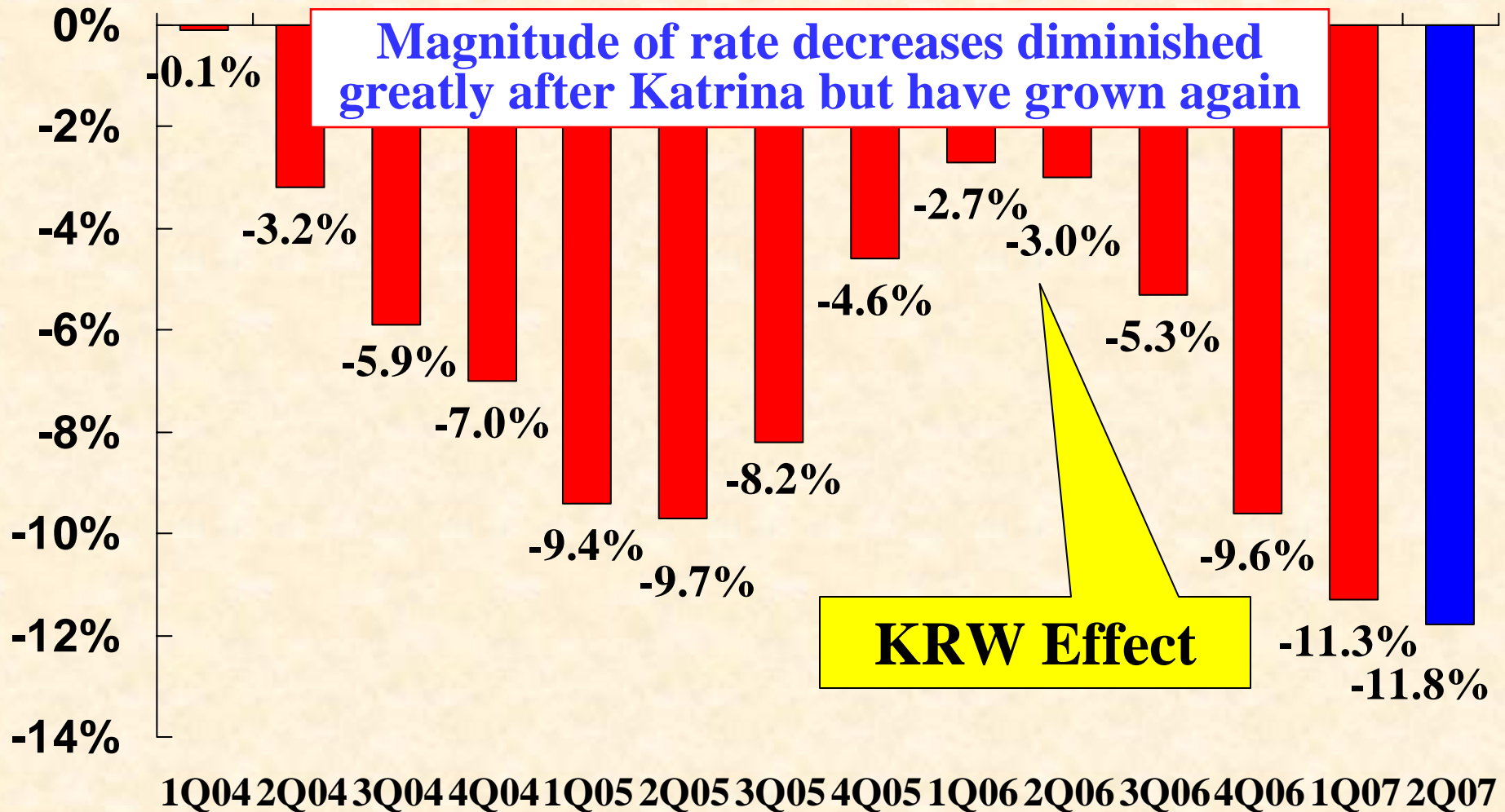


\*2007-10 figures are III forecasts/estimates. 2005 growth of 0.4% equates to 1.8% after adjustment for a special one-time transaction between one company and its foreign parent. 2006-2008 figures from III Groundhog Survey.

Note: Shaded areas denote hard market periods.  
Source: A.M. Best, Insurance Information Institute



# Average Commercial Rate Change, All Lines, (1Q:2004 – 2Q:2007)



# UNDERWRITING PERFORMANCE

*Results are Generally Healthy*





## Combined Ratio:

# *Ocean Marine vs. Commercial Lines*

**Ocean Marine has consistently outperformed Commercial Lines—generally by a wide margin in recent years**



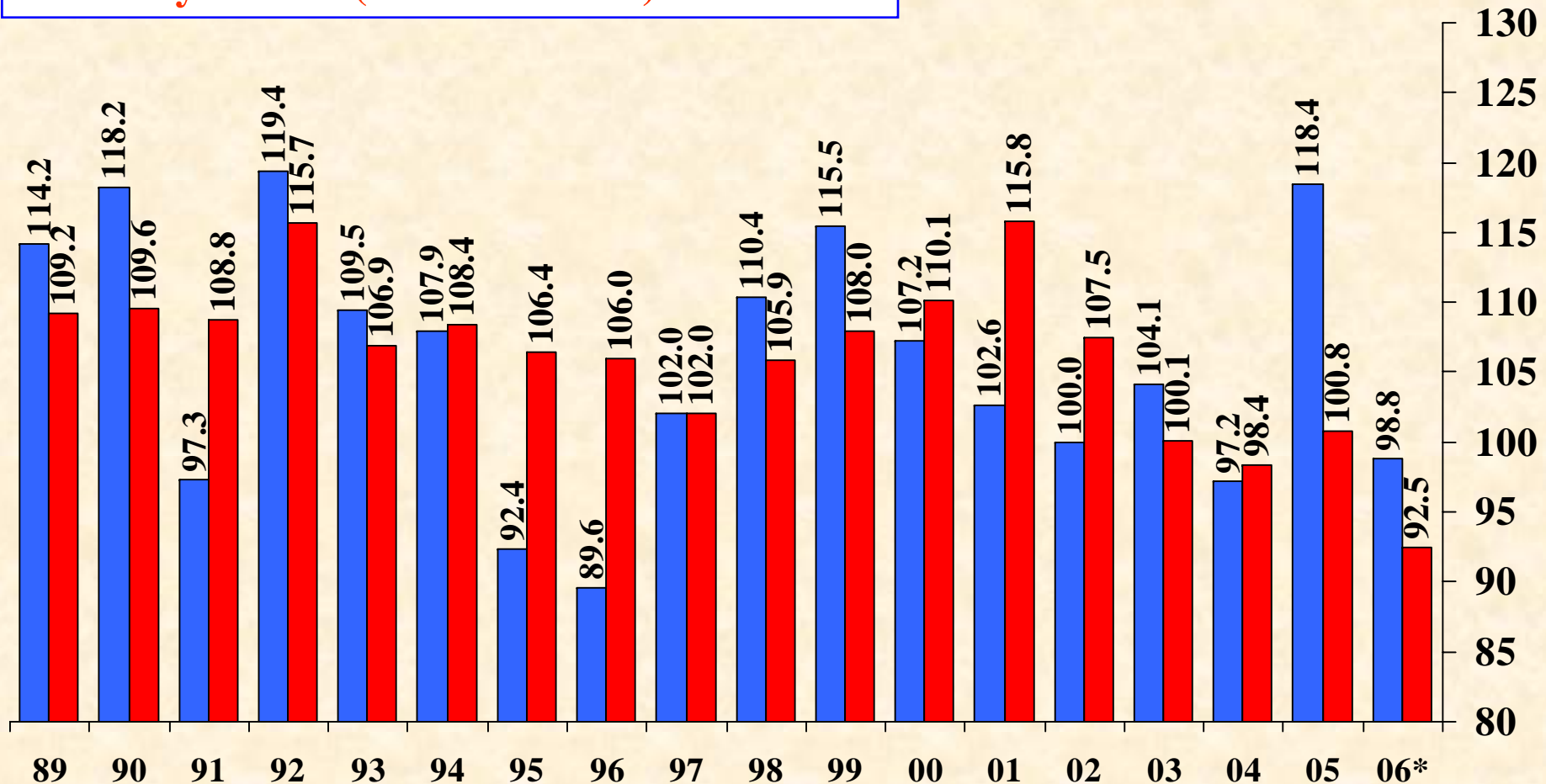
Source: A.M. Best, American Institute of Marine Underwriters, Insurance Information Institute



# Combined Ratio: Ocean Marine vs. All Lines

**Ocean Marine has slightly outperformed the industry overall (105.8 vs. 106.2) since 1989**

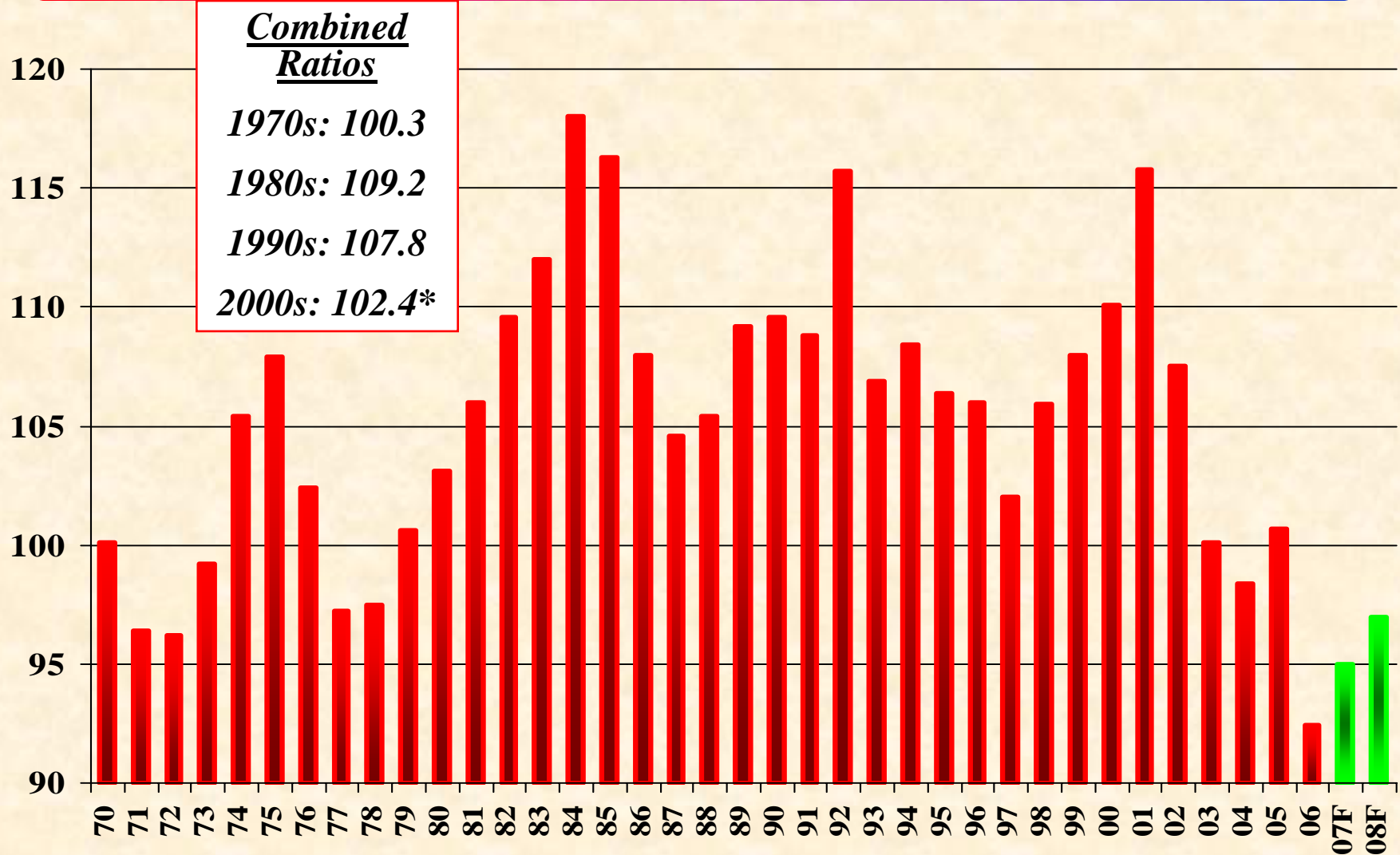
■ Ocean Marine ■ All Lines



Source: A.M. Best, Insurance Information Institute



# *US P/C Insurance Combined Ratio, All Lines: 1970-2008F*



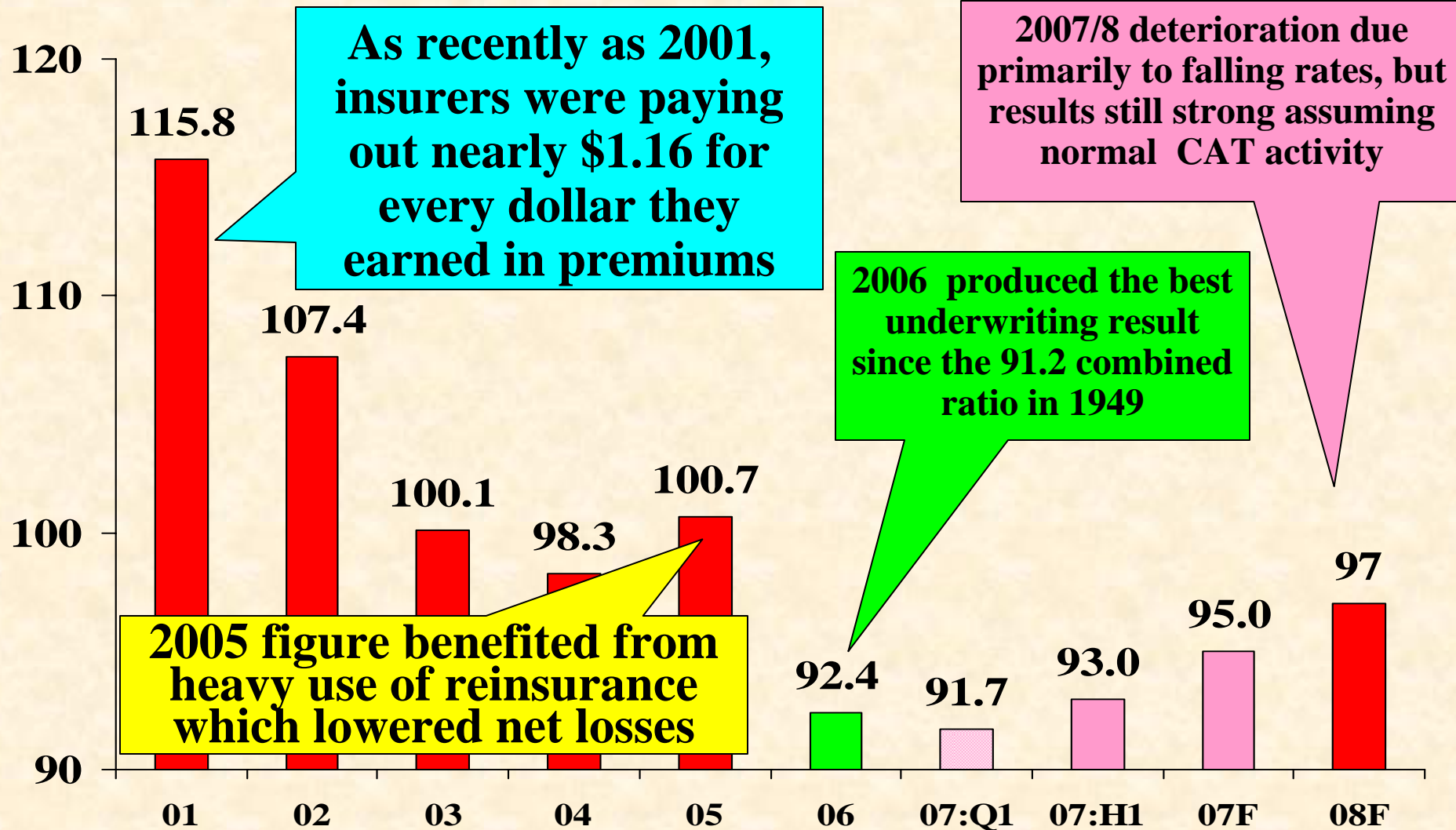
Sources: A.M. Best; ISO, III

\*Through 2008E; 103.6 through 2006 actual.



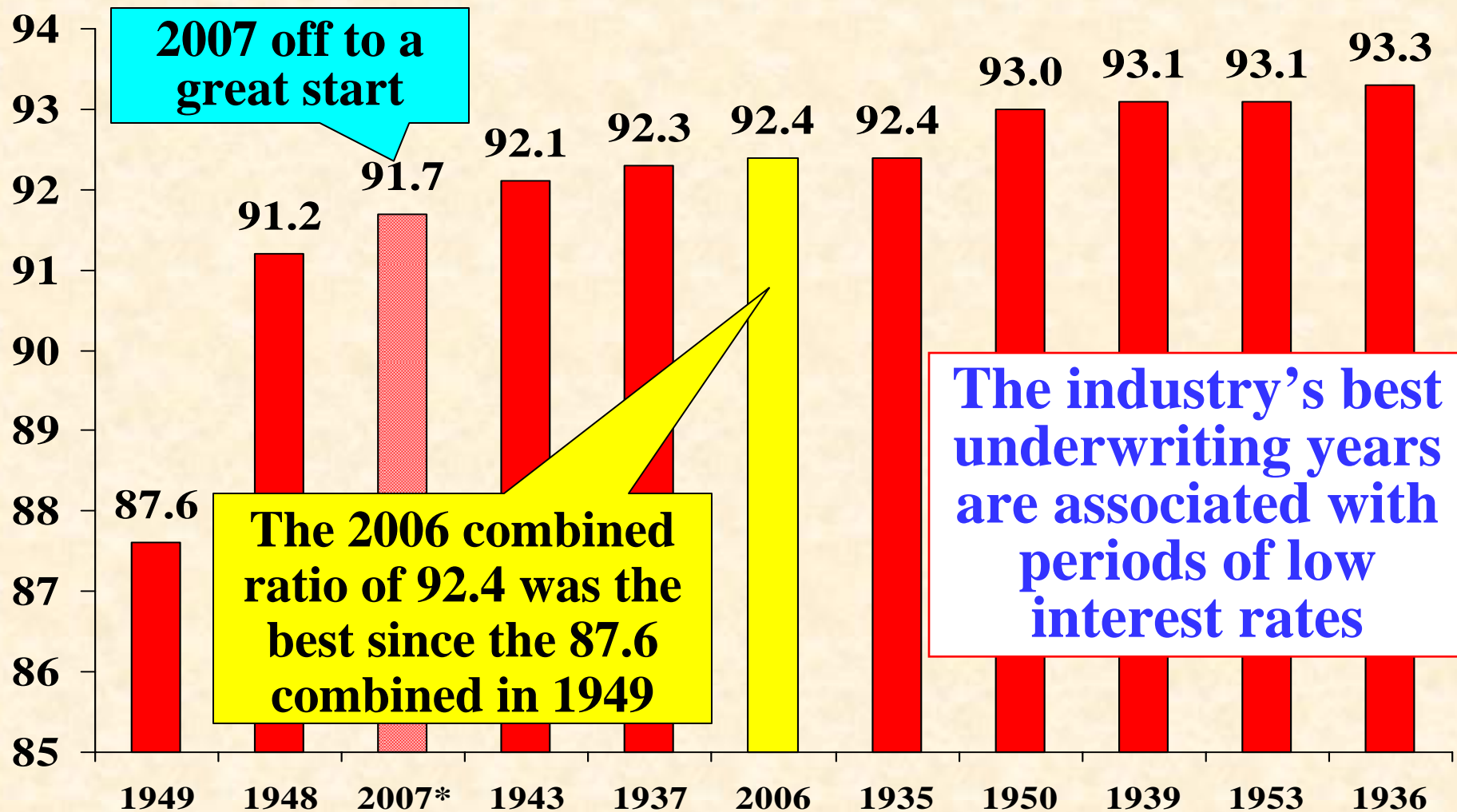


# *P/C Insurance Combined Ratio, 2001-2008F*





# *Ten Lowest P/C Insurance Combined Ratios Since 1920 (& 2007:Q1)*

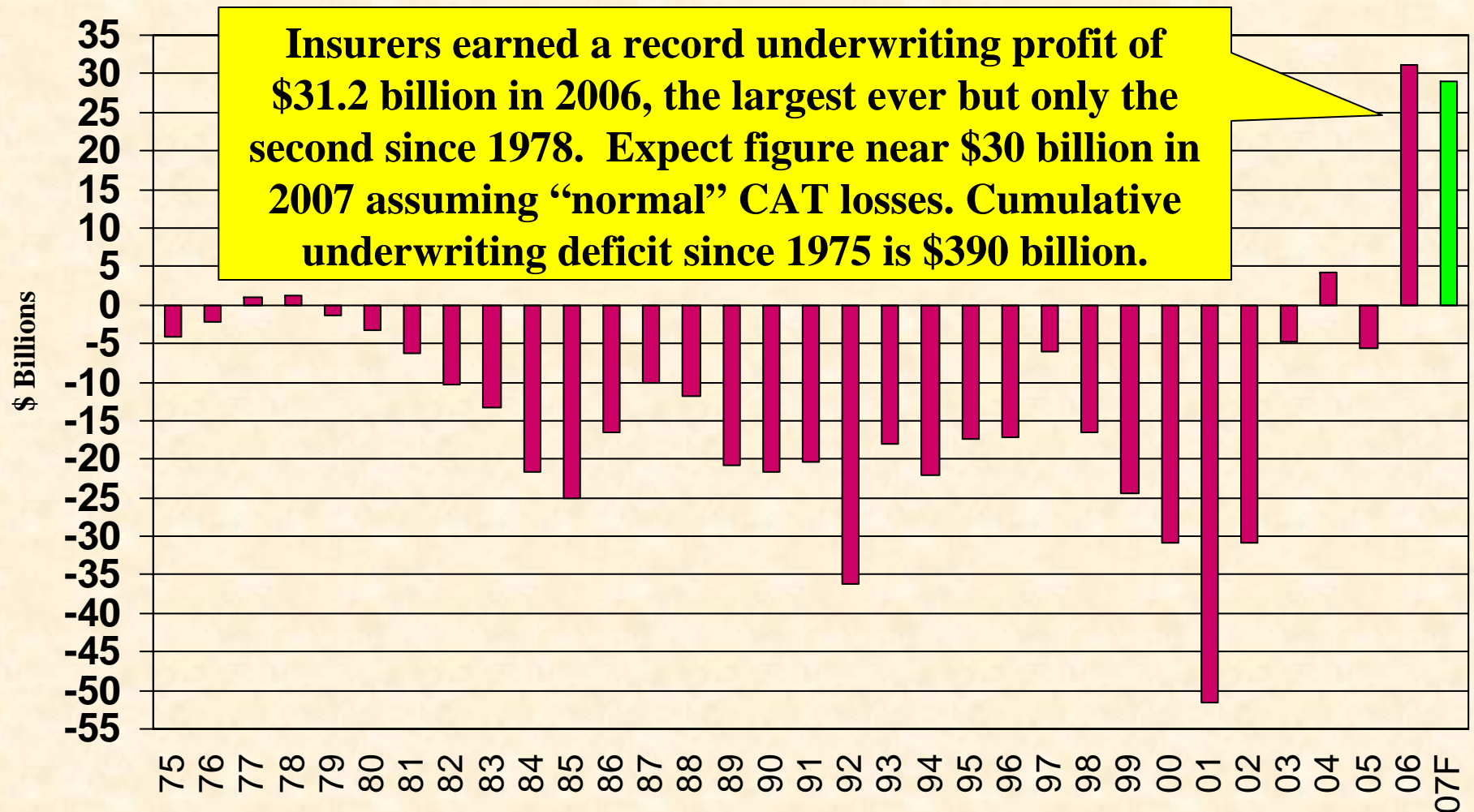


Sources: Insurance Information Institute research from A.M. Best data. \*2007:Q1 actual.



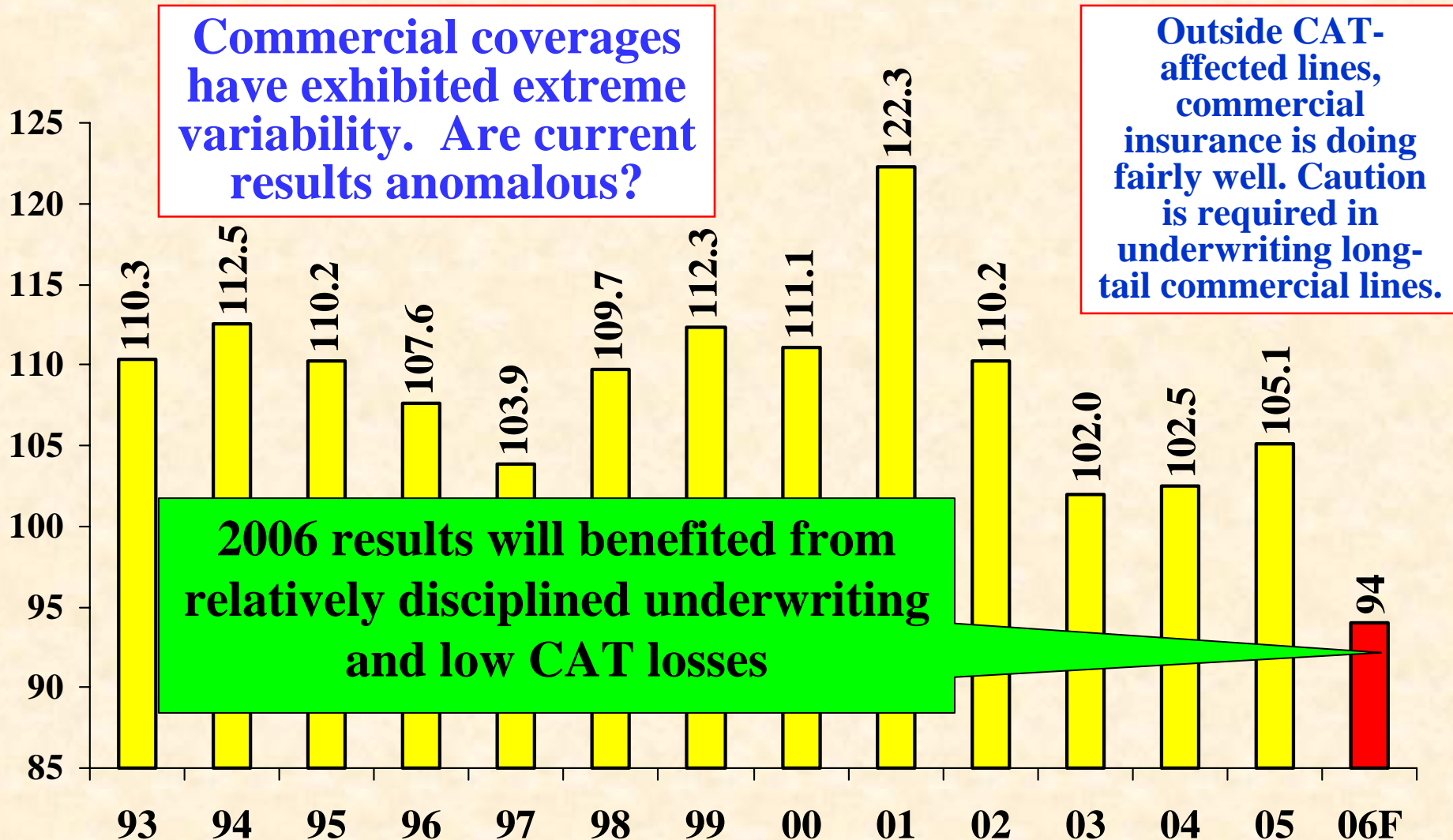
# *Underwriting Gain (Loss)*

## *1975-2007F\**





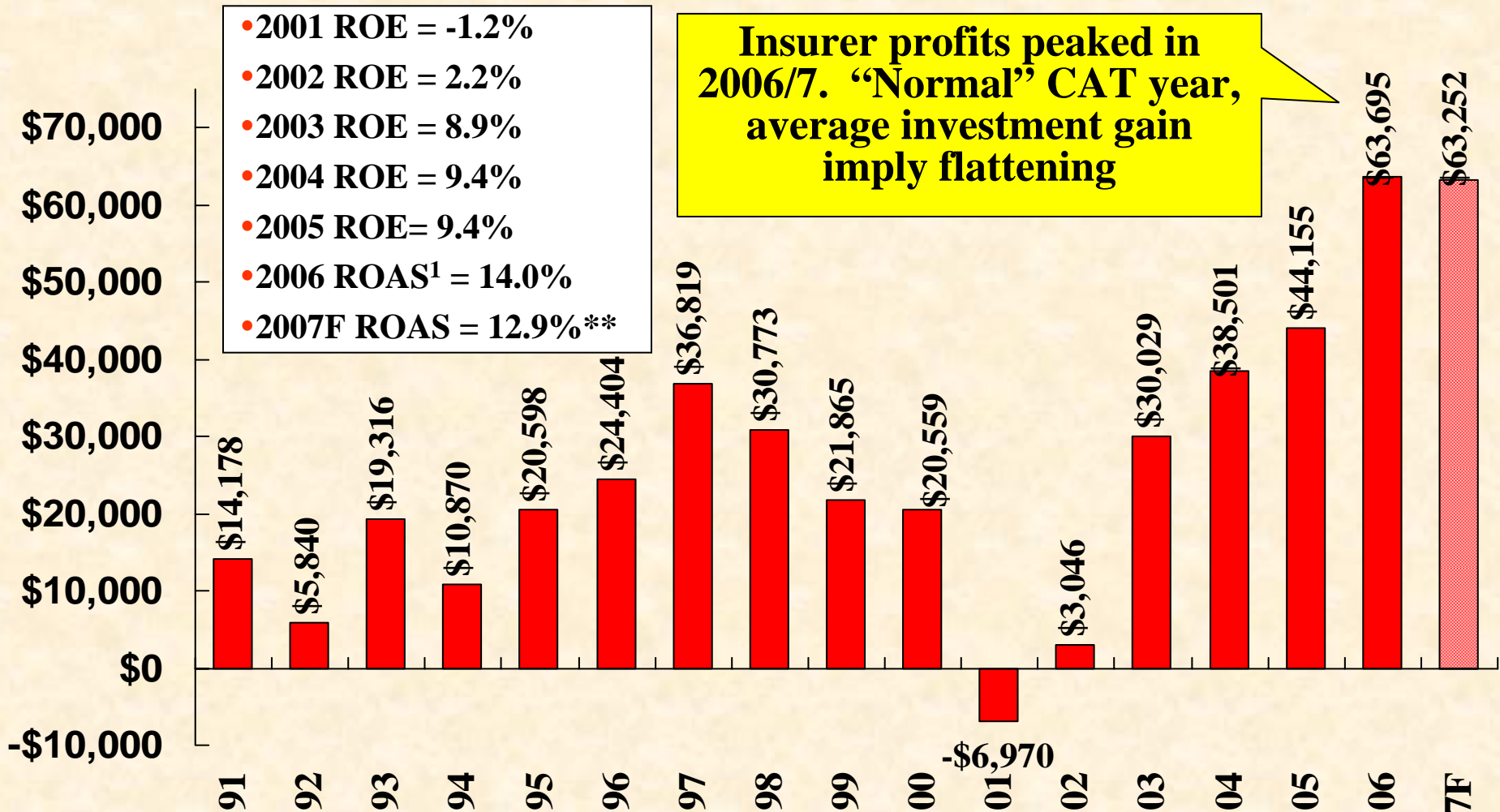
# *Commercial Lines Combined Ratio, 1993-2006E\**





# *P/C Net Income After Taxes*

## *1991-2007F (\$ Millions)\**



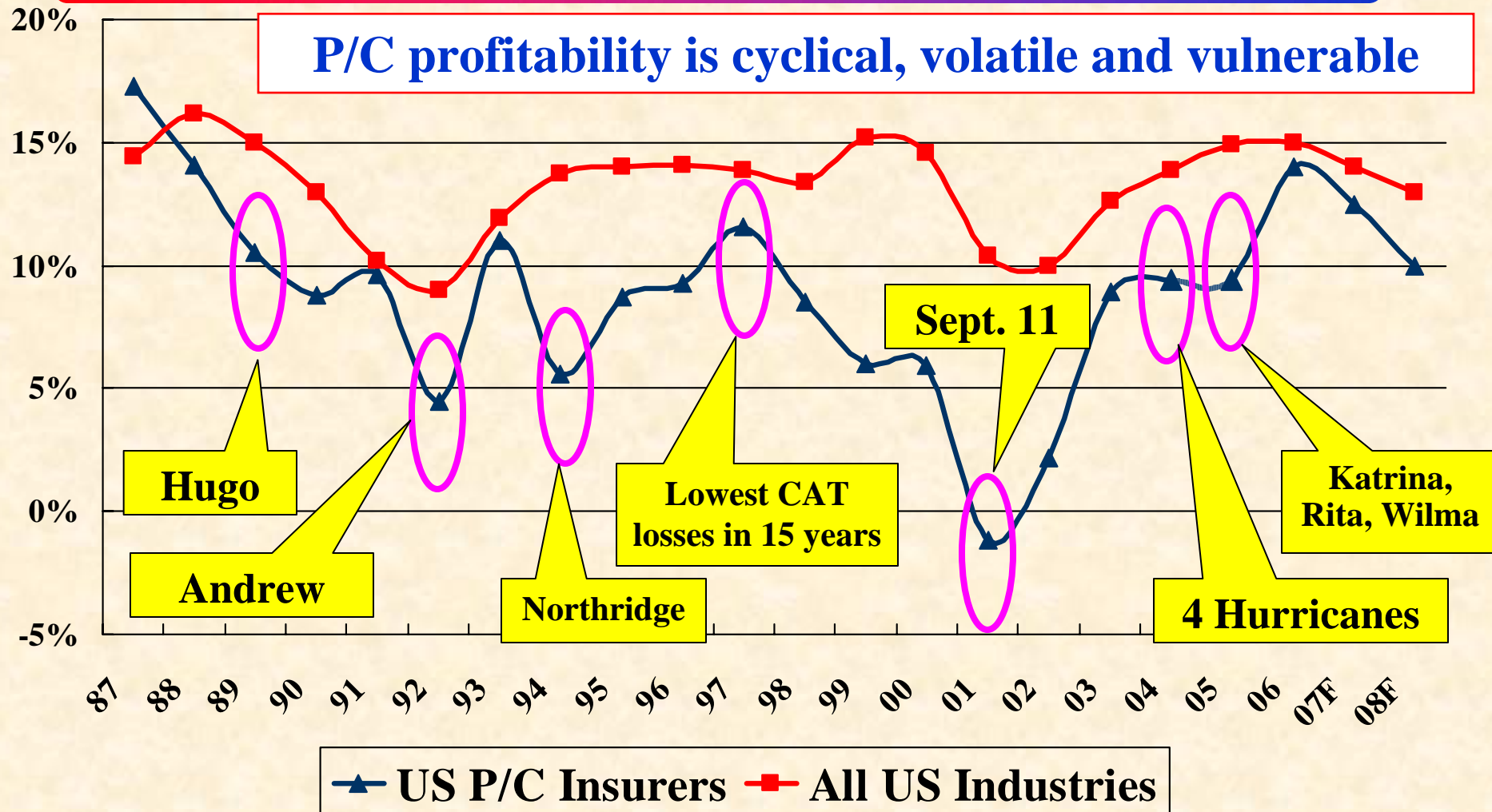
\*ROE figures are GAAP; <sup>1</sup>Return on avg. surplus. 2007F figure is annualized actual Q1 net income of \$15.813B \*\*Actual first quarter 2007 result.

Sources: A.M. Best, ISO, Insurance Information Inst.



# *ROE: P/C vs. All Industries*

## *1987–2008E*

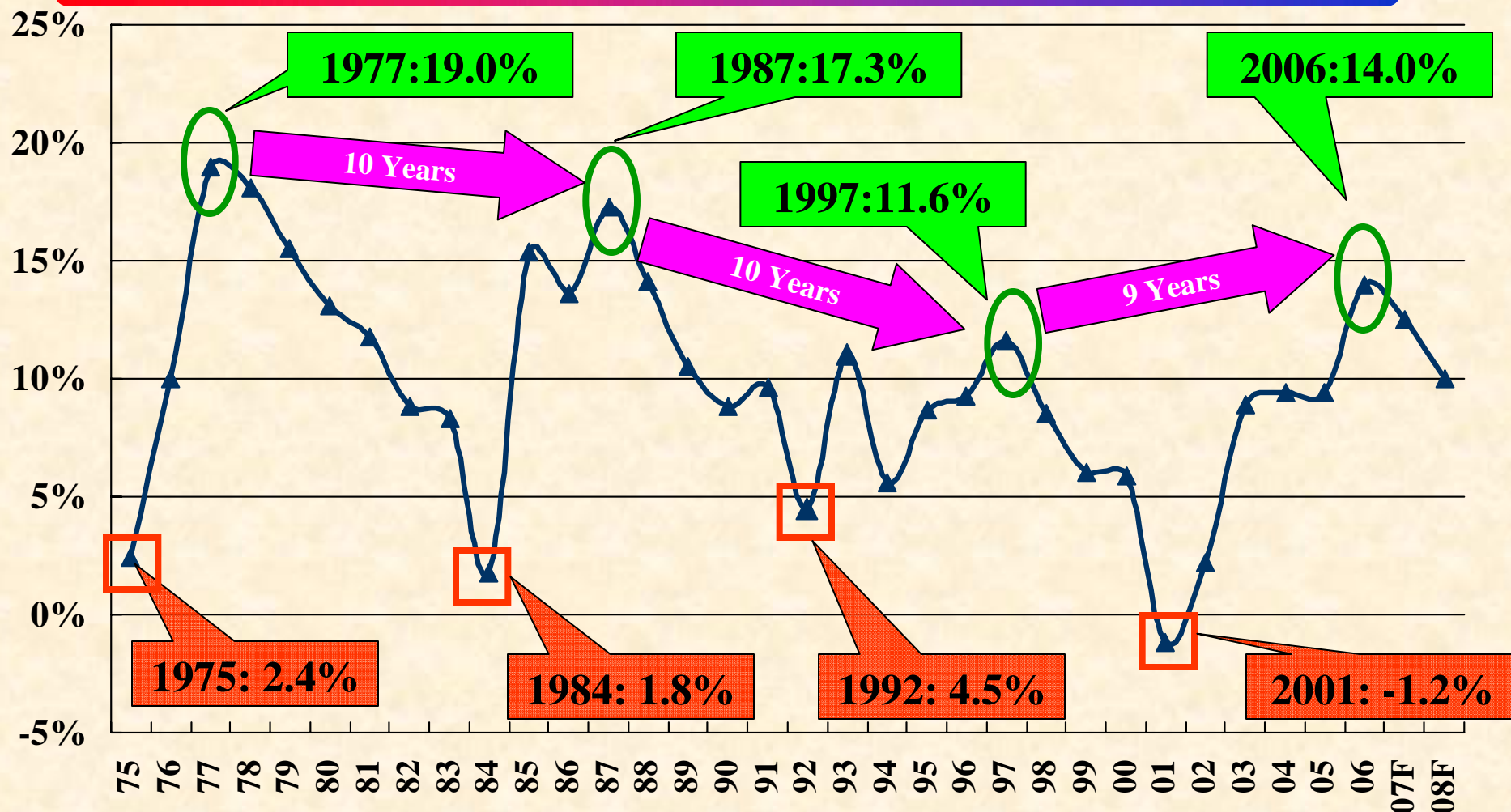


\*2007-08 P/C insurer ROEs are I.I.I. estimates.

Source: Insurance Information Institute; *Fortune*



# *Profitability Peaks & Troughs in the P/C Insurance Industry, 1975 – 2008F*



\*2007-08 P/C insurer ROEs are I.I.I. estimates.

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



# REINSURANCE MARKETS

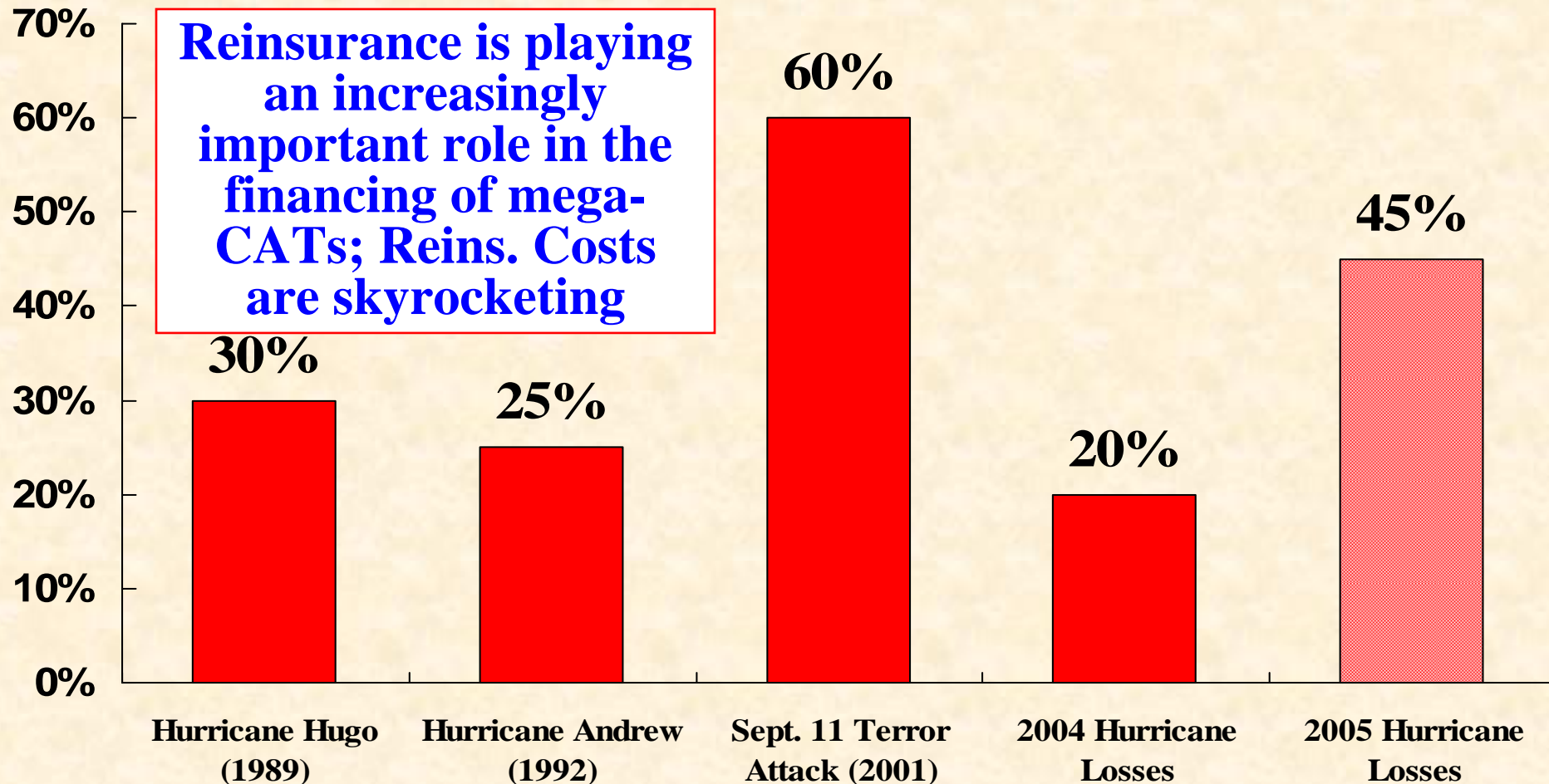
*Reinsurance Prices are  
Stabilizing; Falling in Some  
Areas*







# *Share of Losses Paid by Reinsurers, by Disaster\**

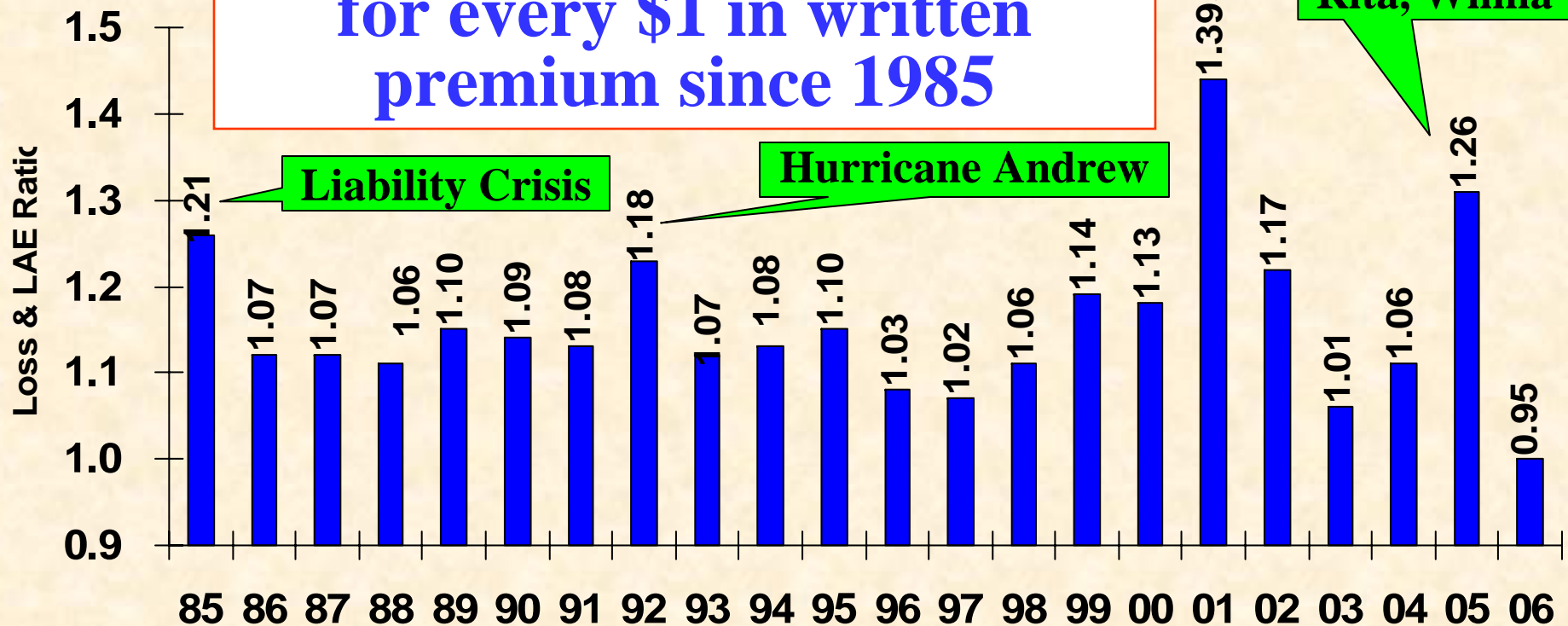


\*Excludes losses paid by the Florida Hurricane Catastrophe Fund, a FL-only windstorm reinsurer, which was established in 1994 *after* Hurricane Andrew. FHCF payments to insurers are estimated at \$3.85 billion for 2004 and \$4.5 billion for 2005.

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

# *Ratio of Reinsurer Loss & Underwriting Expense to Premiums Written, 1985-2006*

Despite the respite in 2006, reinsurers paid an average of \$1.11 in loss and expense for every \$1 in written premium since 1985



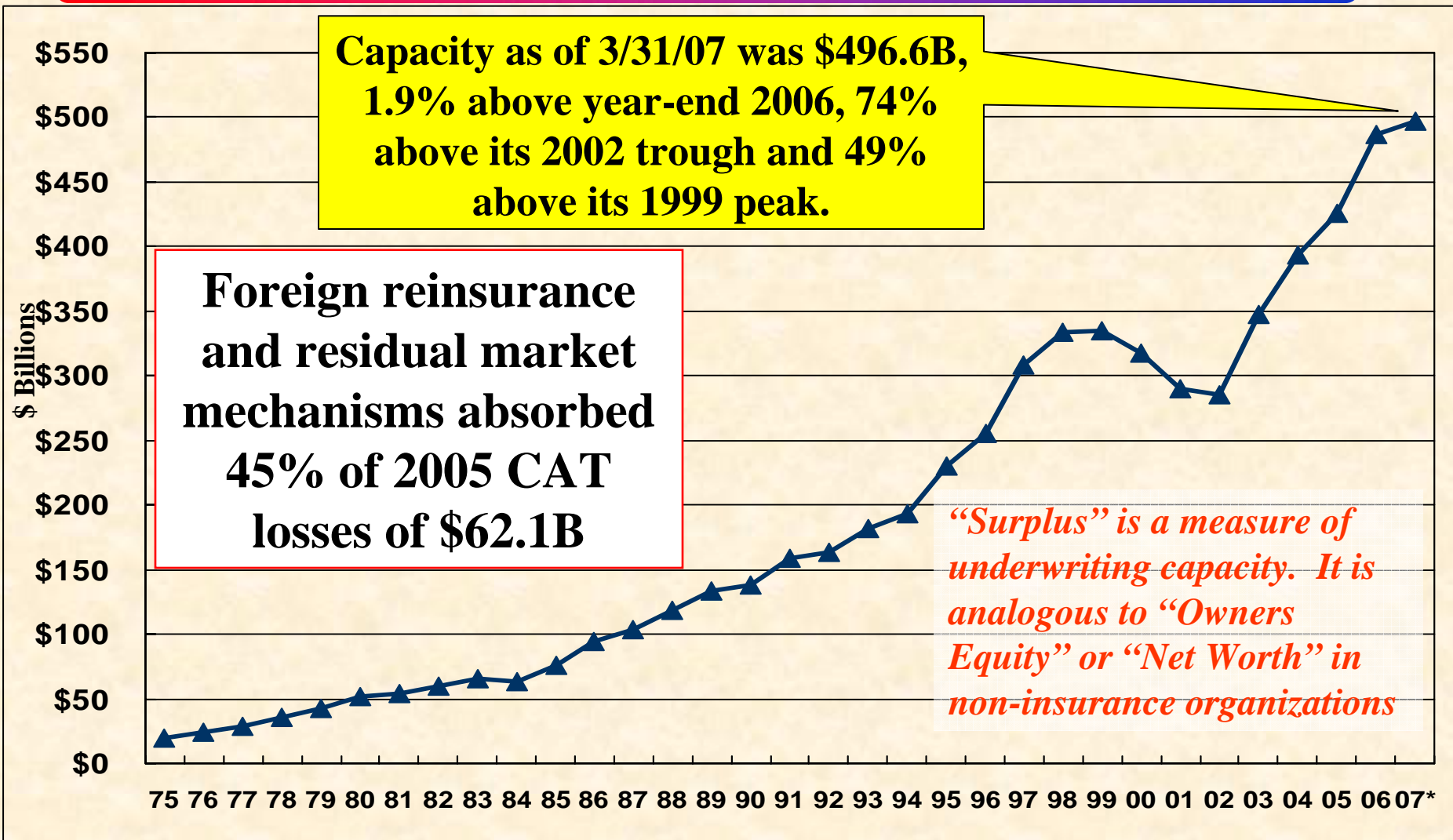
# CAPACITY/ SURPLUS

**The Industry in  
Underleveraged**





# *U.S. Policyholder Surplus: 1975-2007\**



Source: A.M. Best, ISO, Insurance Information Institute. \*As of March 31, 2007

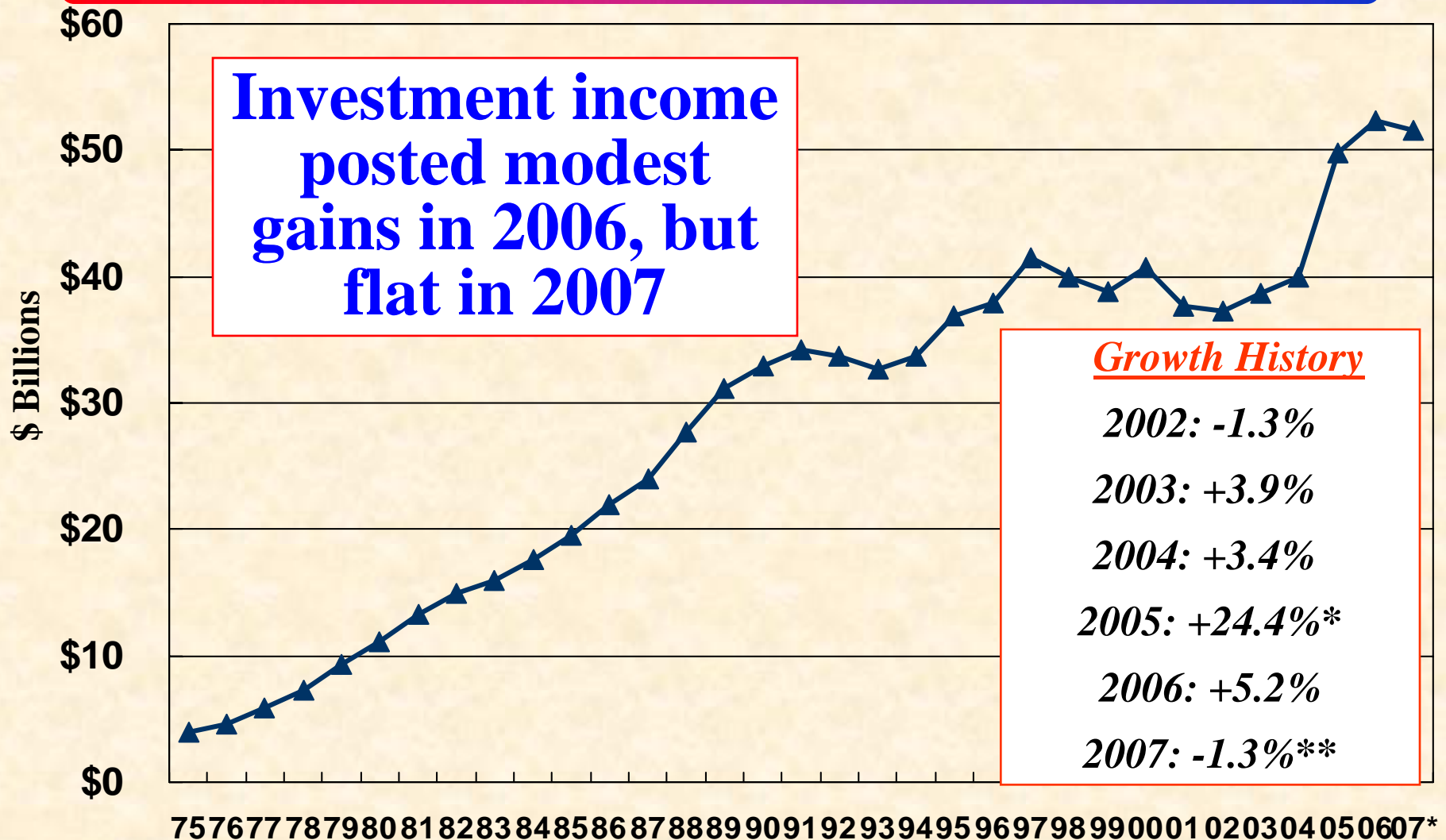
# INVESTMENT RETURNS

*Marginal Gains  
Enforce Discipline*





# Net Investment Income



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

\*Includes special dividend of \$3.2B. Increase is 15.7% excluding dividend. \*\*Based on annualized Q1 result of \$12.905B.





# *Total Returns for Large Company Stocks: 1970-2007\**

**S&P 500 was up 13.62% in 2006, Up 4.31% YTD 2007\***



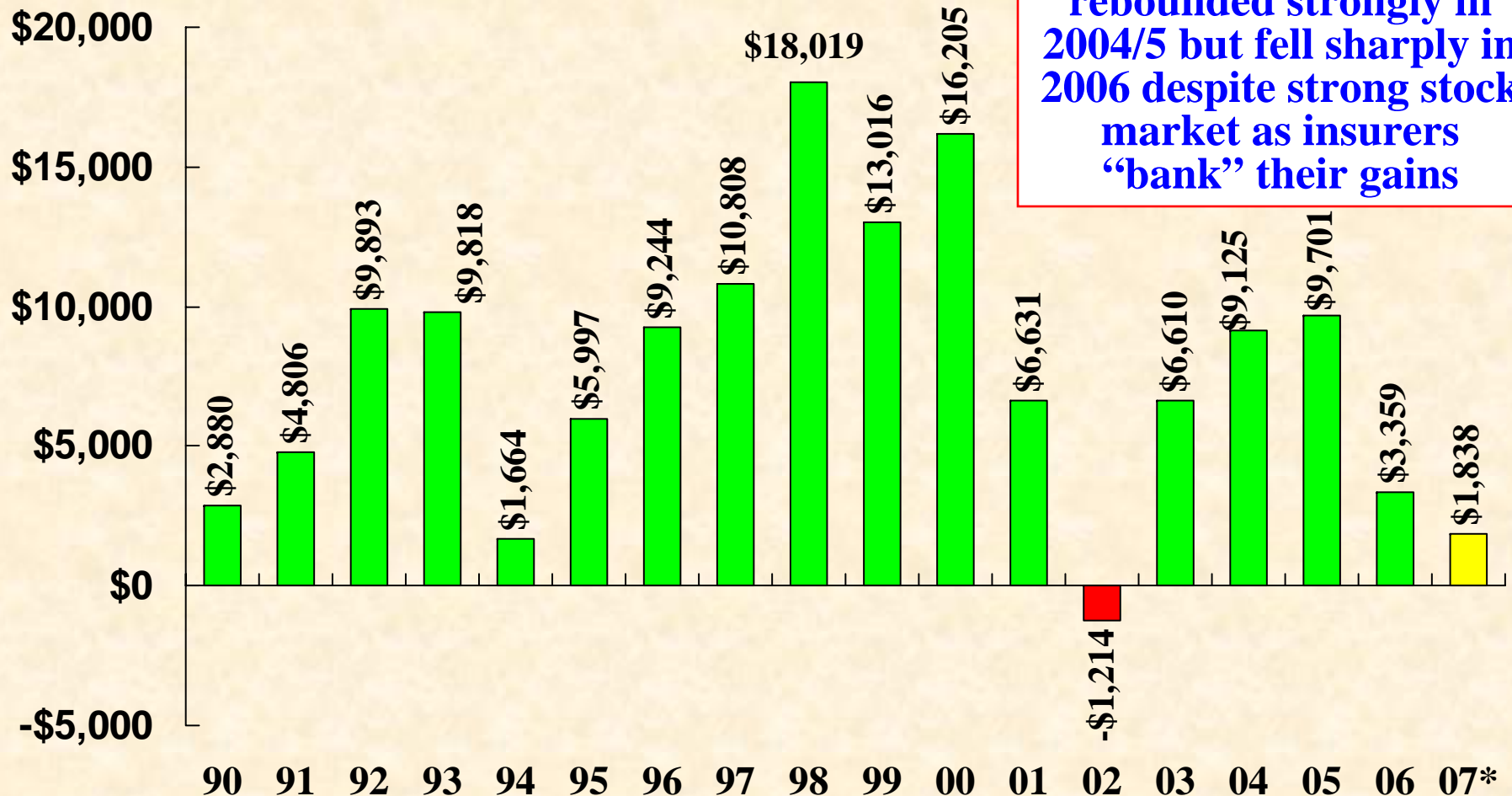
Source: Ibbotson Associates, Insurance Information Institute.

\*Through August 31, 2007.





# *US P/C Net Realized Capital Gains, 1990-2007:Q1 (\$ Millions)*

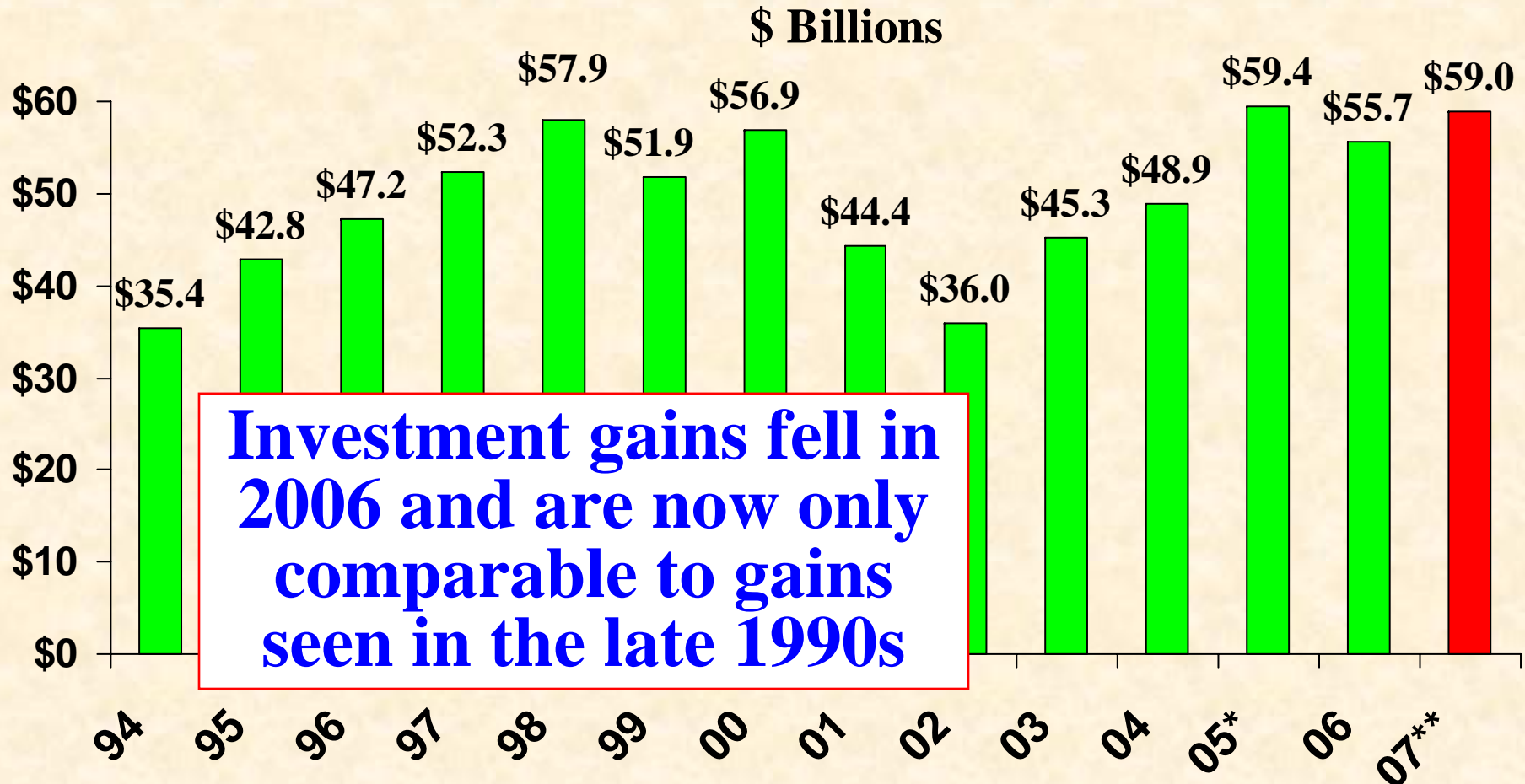


Sources: A.M. Best, ISO, Insurance Information Institute.

\*As of March 31, 2007.



# *Property/Casualty Insurance Industry Investment Gain<sup>1</sup>*



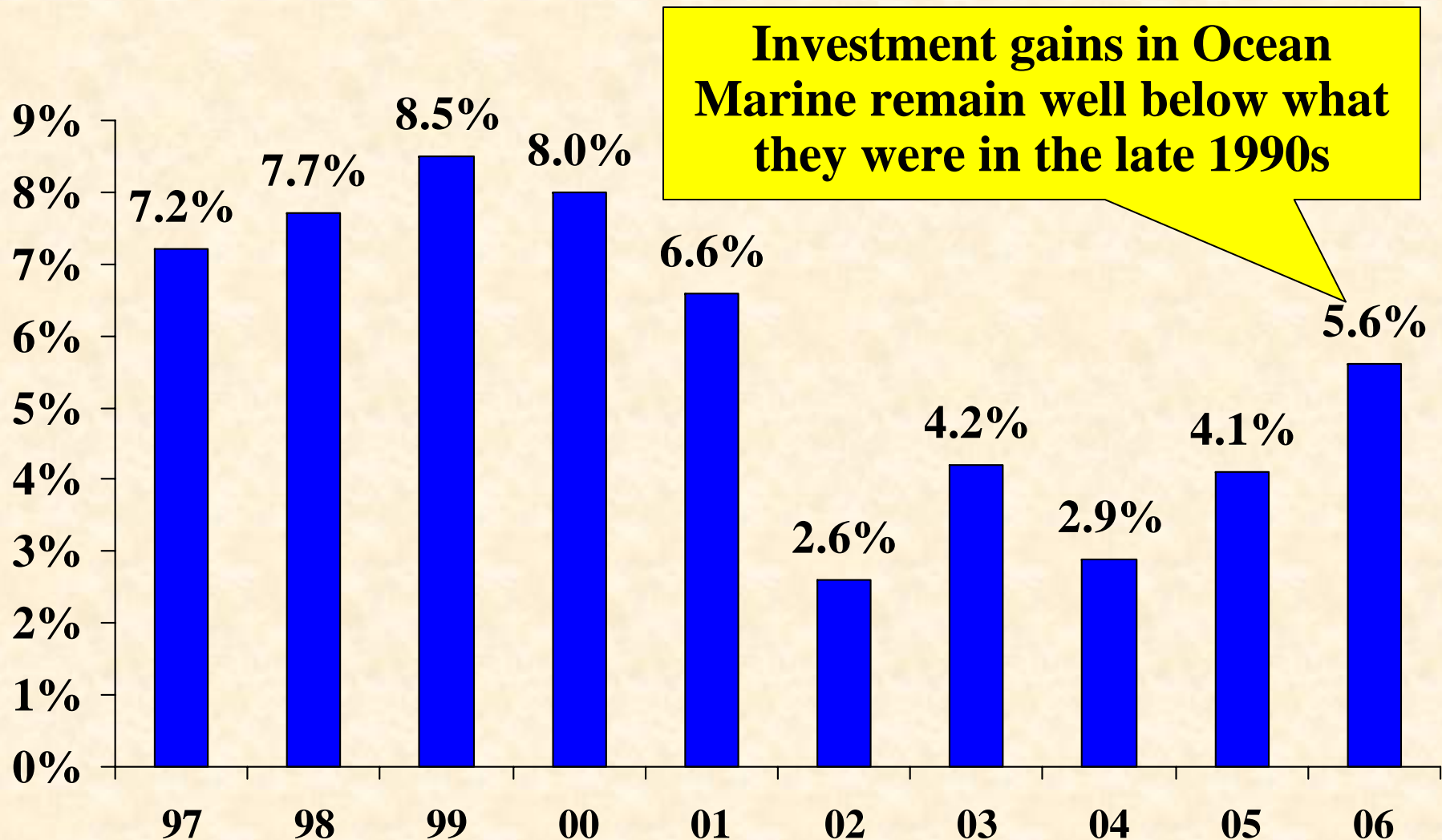
<sup>1</sup>Investment gains consist primarily of interest, stock dividends and realized capital gains and losses. 2006 figure consists of \$52.3B net investment income and \$3.4B realized investment gain.

\*2005 figure includes special one-time dividend of \$3.2B. \*\*Annualized Q1 result of \$14.743B.

Sources: ISO; Insurance Information Institute.



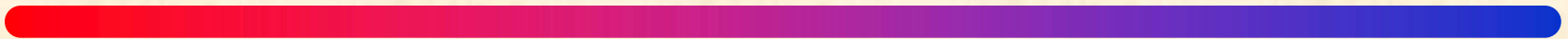
# *Investment Gain for Ocean Marine Insurers\**



Source: A.M. Best; Insurance Information Institute. \*US reporting companies only; Includes misc. other income.

# FINANCIAL STRENGTH & RATINGS

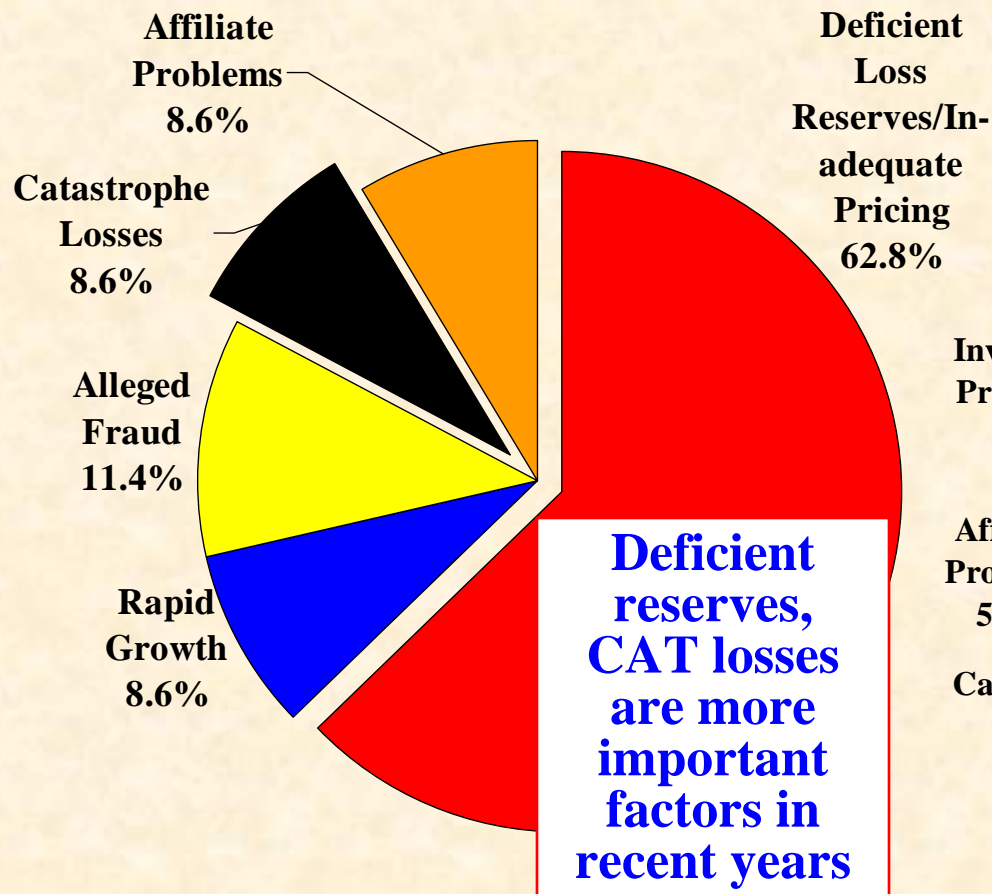
Industry Has Weathered  
the Storms Well



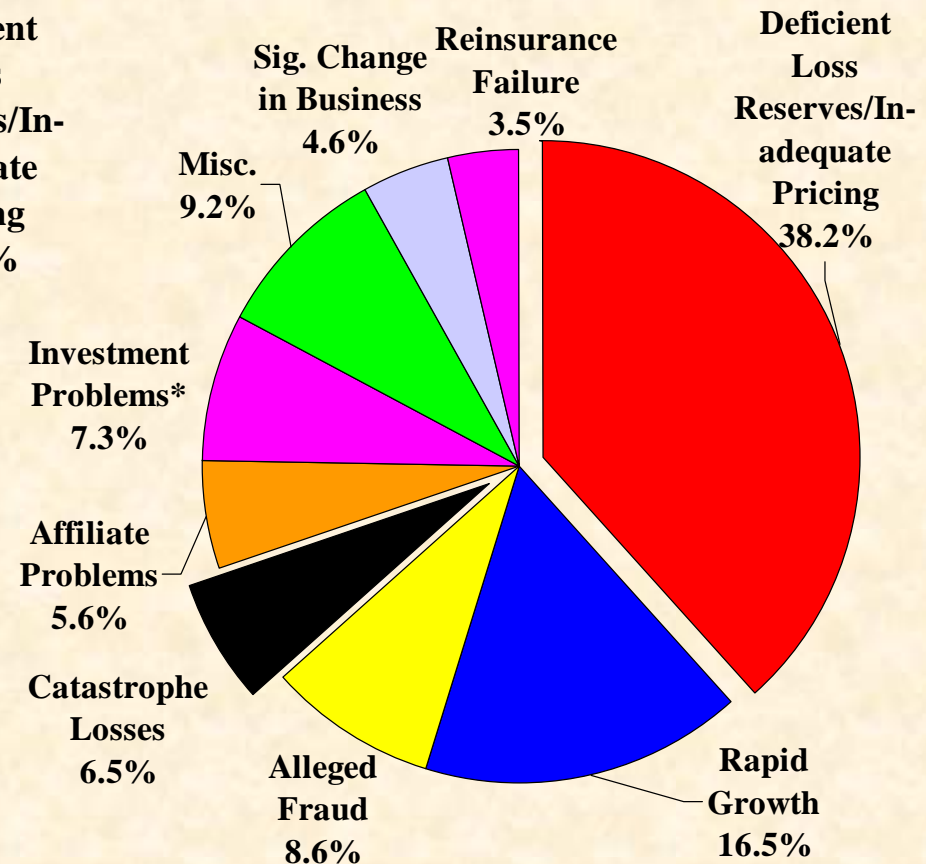


# *Reasons for US P/C Insurer Impairments, 1969-2005*

**2003-2005**



**1969-2005**



\*Includes overstatement of assets.



# *P/C Insurer Impairments, 1969-2006*

**The number of impairments varies significantly over the p/c insurance cycle, with peaks occurring well into hard markets**

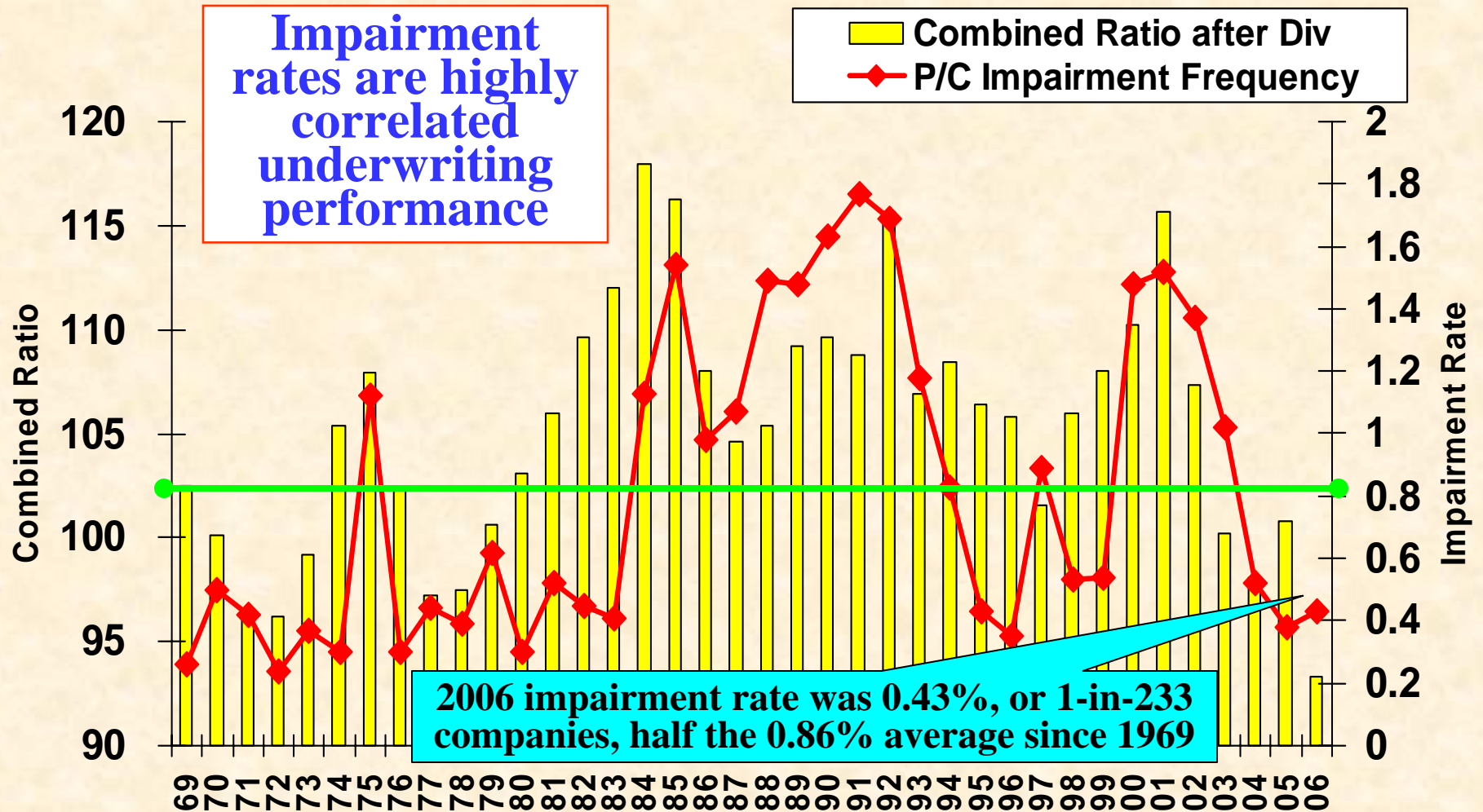


Source: A.M. Best; Insurance Information Institute





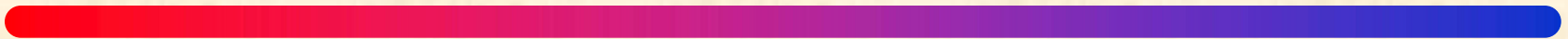
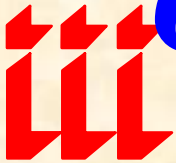
# *P/C Insurer Impairment Frequency vs. Combined Ratio, 1969-2006*





# ECONOMIC ENVIRONMENT

*Global Economic Growth  
Implies Greater Demand for  
Ocean Marine Insurance*





# *Global Economic Outlook Points to Marine Insurance Growth*

- **Relatively healthy global economy suggests intl. trade in finished products, raw materials as well as energy demand and exploration will remain strong.**
  - **Current credit crunch will hurt global growth next 12 months**
- **The 21<sup>st</sup> century is the century of Chinese ascendancy. China today is very much like late 19<sup>th</sup> century America—industrious, rapid growth, internationally and militarily ambitious and certain of its destiny and primacy over the old world order. But inflation looms and country is an environmental disaster.**
  - **Shoddy products scare not a major issue relative to overall export market.**
- **Depreciating US dollar is pushing US exports up**
- **European economies are performing relatively well**



# *But Patterns of Global Economic Growth and Trade May Shift*

- **Maturation of Chinese economy implies web of trade will extend further into developing world (South Asia, Africa), aiding international marine shipping business**
- **Intra-Asian trade will grow**
- **US Fed Reserve Chairman Ben Bernanke said in Berlin at a speech on global trade imbalances on Sept. 11 that China can help resolve global imbalances by reducing its reliance on exports, which it can accomplish by, among other things, letting its currency rise.\***
  - **Critics say China keeps the value of its currency artificially low, giving its products an unfair price advantage in world markets.**
- **Bernanke said that *“Imbalances in the export of capital from developing countries to industrialized economies may prove counterproductive over time.”***

*\*Wall Street Journal, Sept.12, 2007.*

Source: Insurance Information Institute.

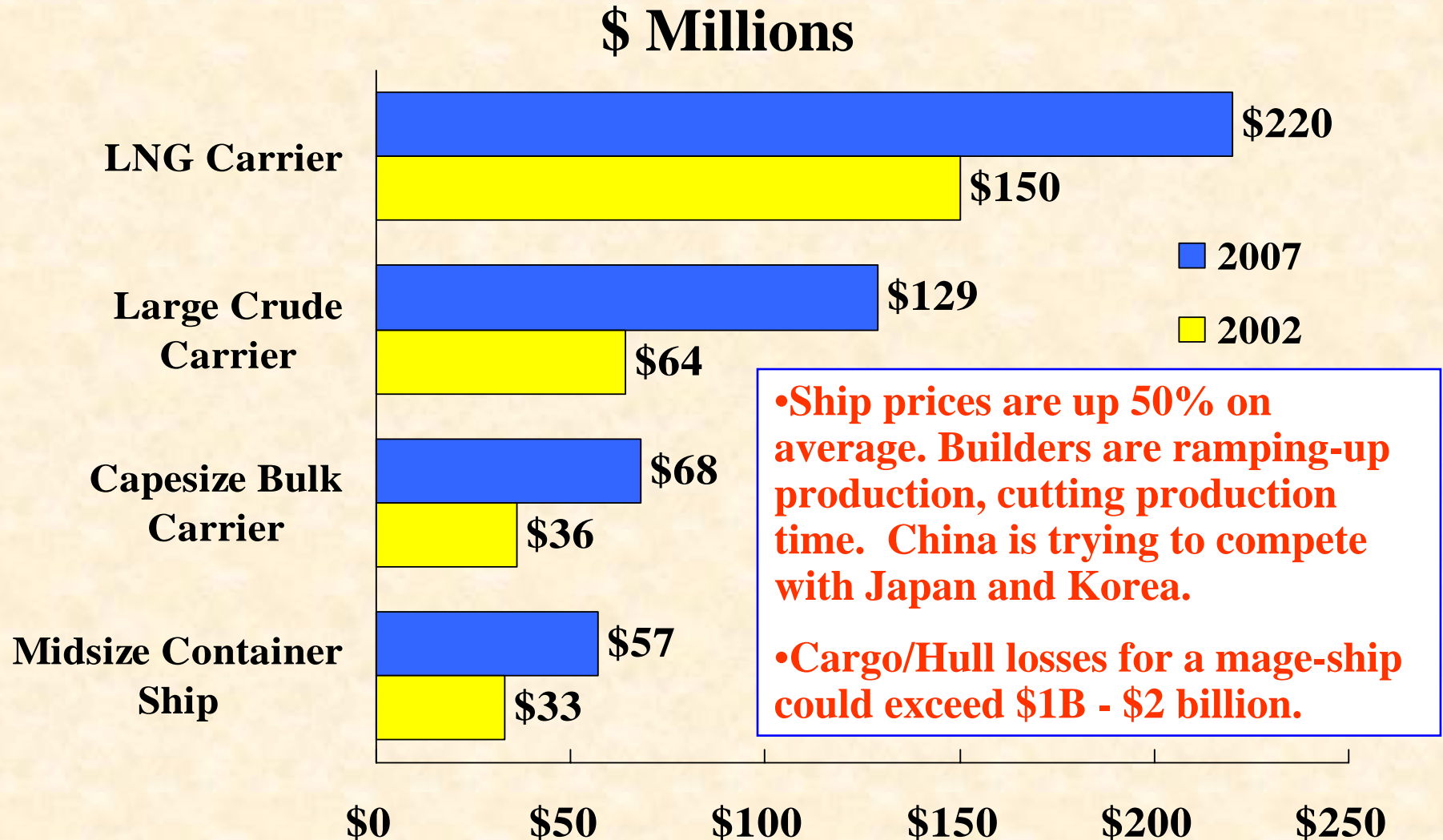


# *Changes in Global Economy are Pushing Shipping Industry Changes*

- **Strong demand for shipping**
- **Building of ever larger ships**
  - **Creates concentration of risk problem**
- **Significant number of new ships under construction**
  - **Shipyards are building for or have orders for in 2007/2008 as much as 20% of the current world fleet**
- **Manpower (crew) shortages are more likely**
- **Port and lock log jams; New routes needed**
  - **Expansion of Panama Canal**
  - **Arctic routes**
- **Eventually shipping industry will see overcapacity and falling transport prices**



# *Ship Prices Rising: Bigger Ships, Strong Demand*



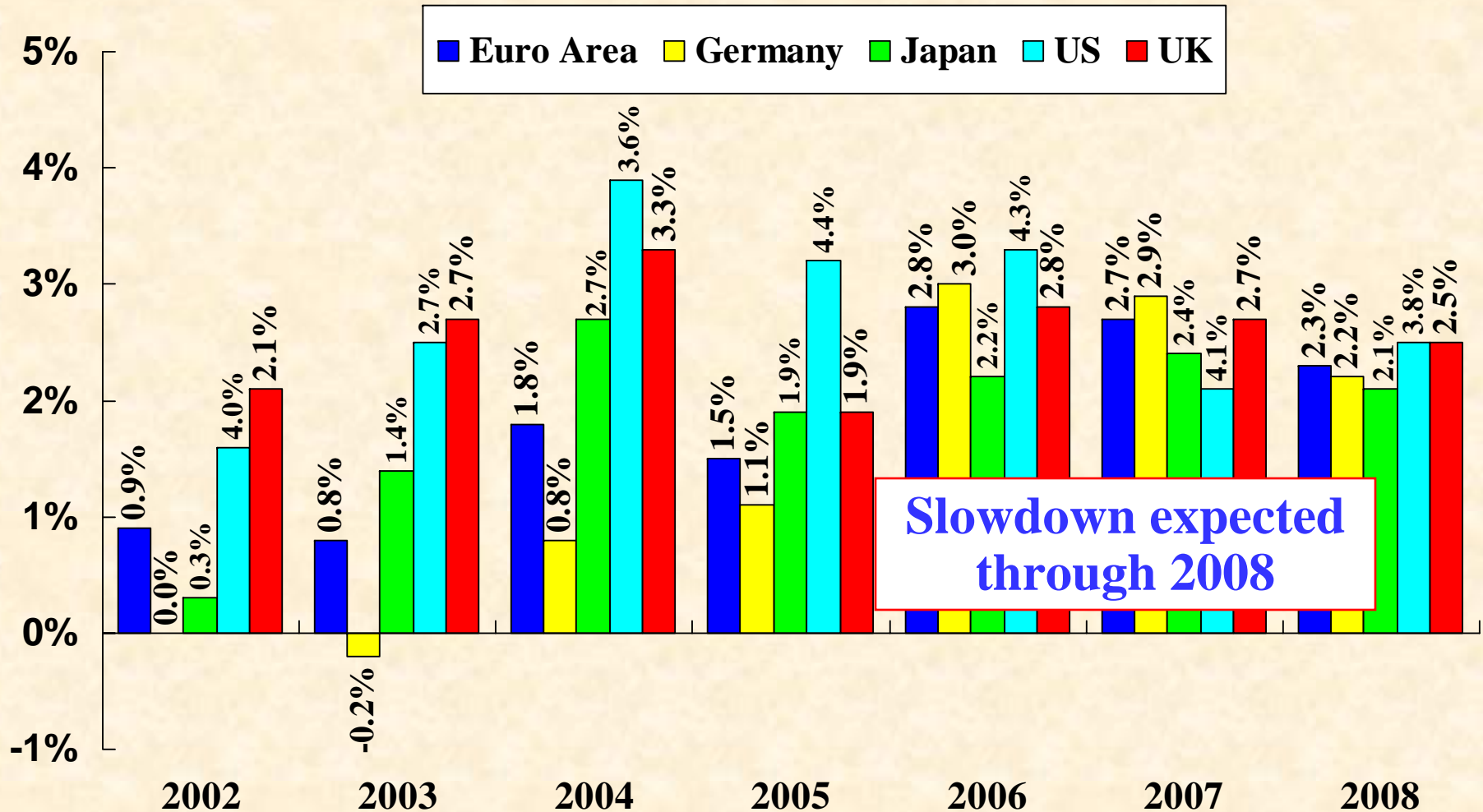
Source: Clarkson Research Services, Insurance Information Institute





# Real GDP By Country 1994-2008E

(% change from previous year)

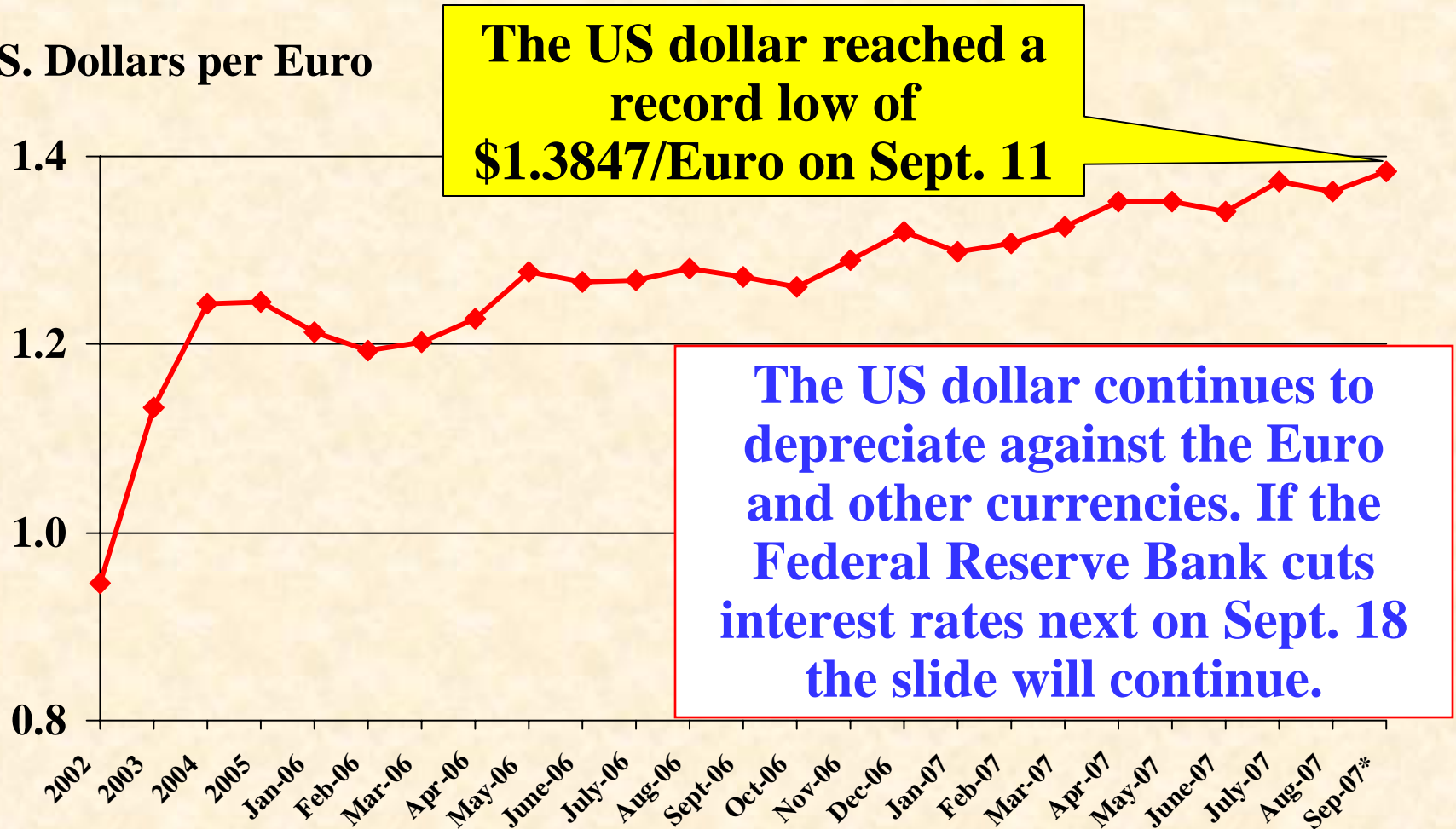






# *Weak Dollar Means US Exports Should Continue to Rise*

U.S. Dollars per Euro



\*As of 11 September.

Source: Federal Reserve Board



# Current Account Balances as a % of GDP

America's current account deficit continues to grow and remains one of the biggest risks to economic stability. It also contributes to the dollar's depreciation which should eventually lead to export growth.



■ Japan

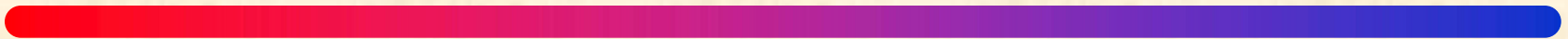
■ US

■ EU

\*Forecasts

Source: OECD Economic Outlook 81 database

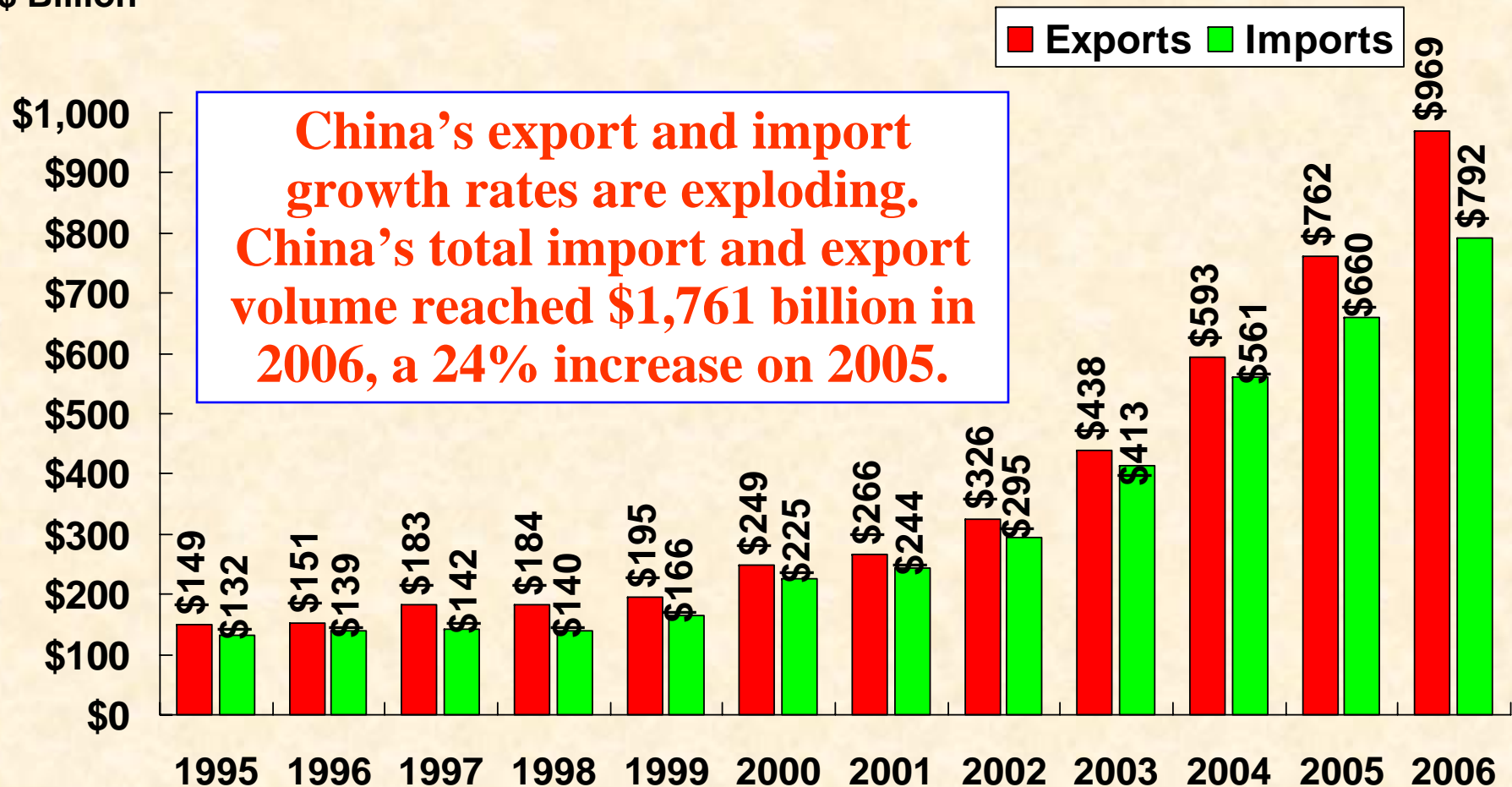
# U.S./CHINA TRADE





# China's Trade With The World (\$ billion)

\$ Billion



Note: PRC exports reported on a FOB basis;

Sources: U.S. China Business Council; PRC General Administration of Customs, China's Customs Statistics; and the National Bureau of Statistics.



# *China's Top Trade Partners 2006* *(\$ billion)*

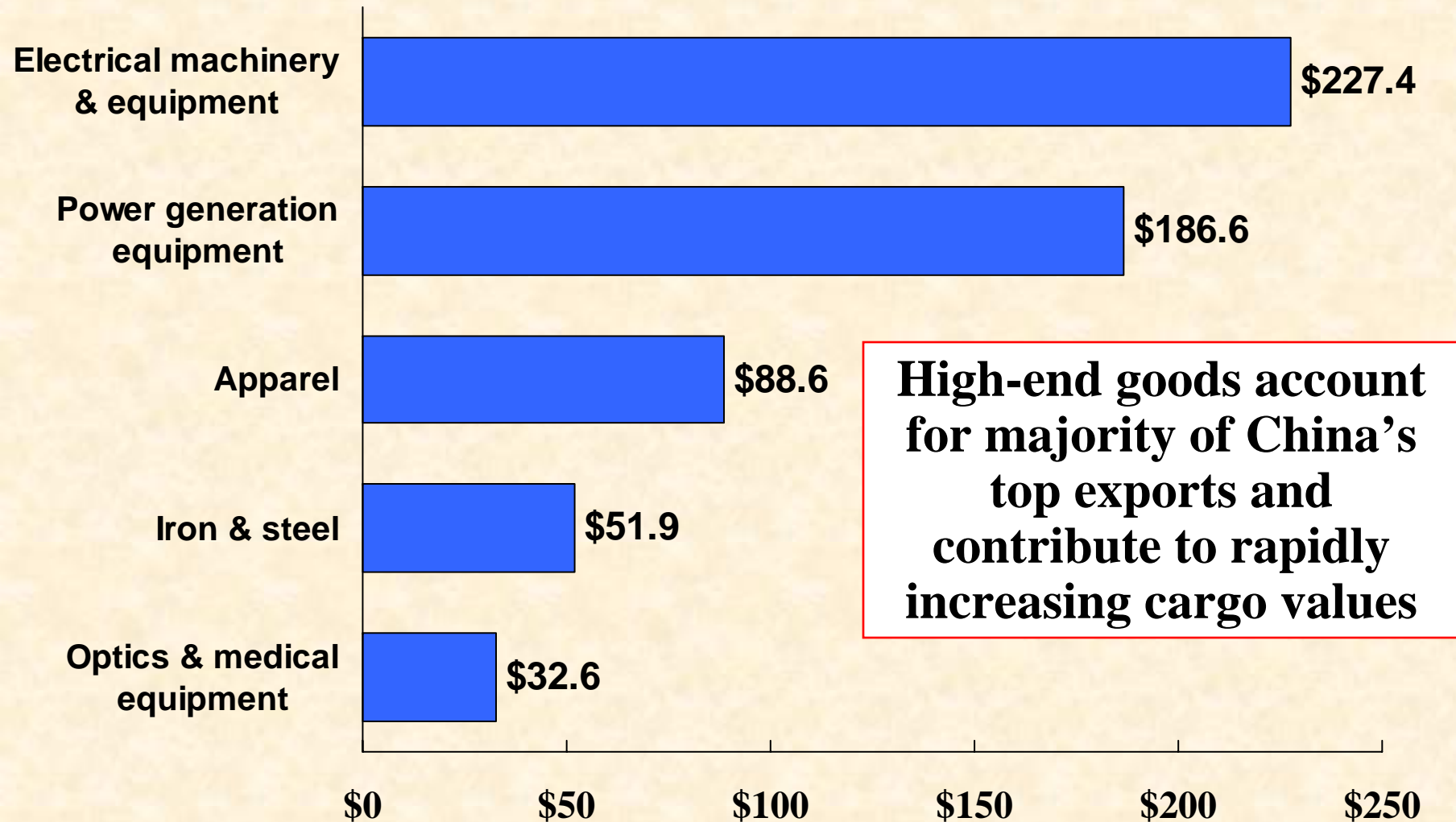


Source: PRC General Administration of Customs, China's Customs Statistics



# *Top 5 Exports from China 2006*

## *(Volume \$ billion)*







# *China's Trade With The U.S.* *(\$ billion)*

\$ billion

■ U.S. Exports ■ U.S. Imports

**U.S. imports from China grew by \$242.2 billion from 1997 to 2006, while U.S. exports to China grew by \$43.4 billion during the same period**



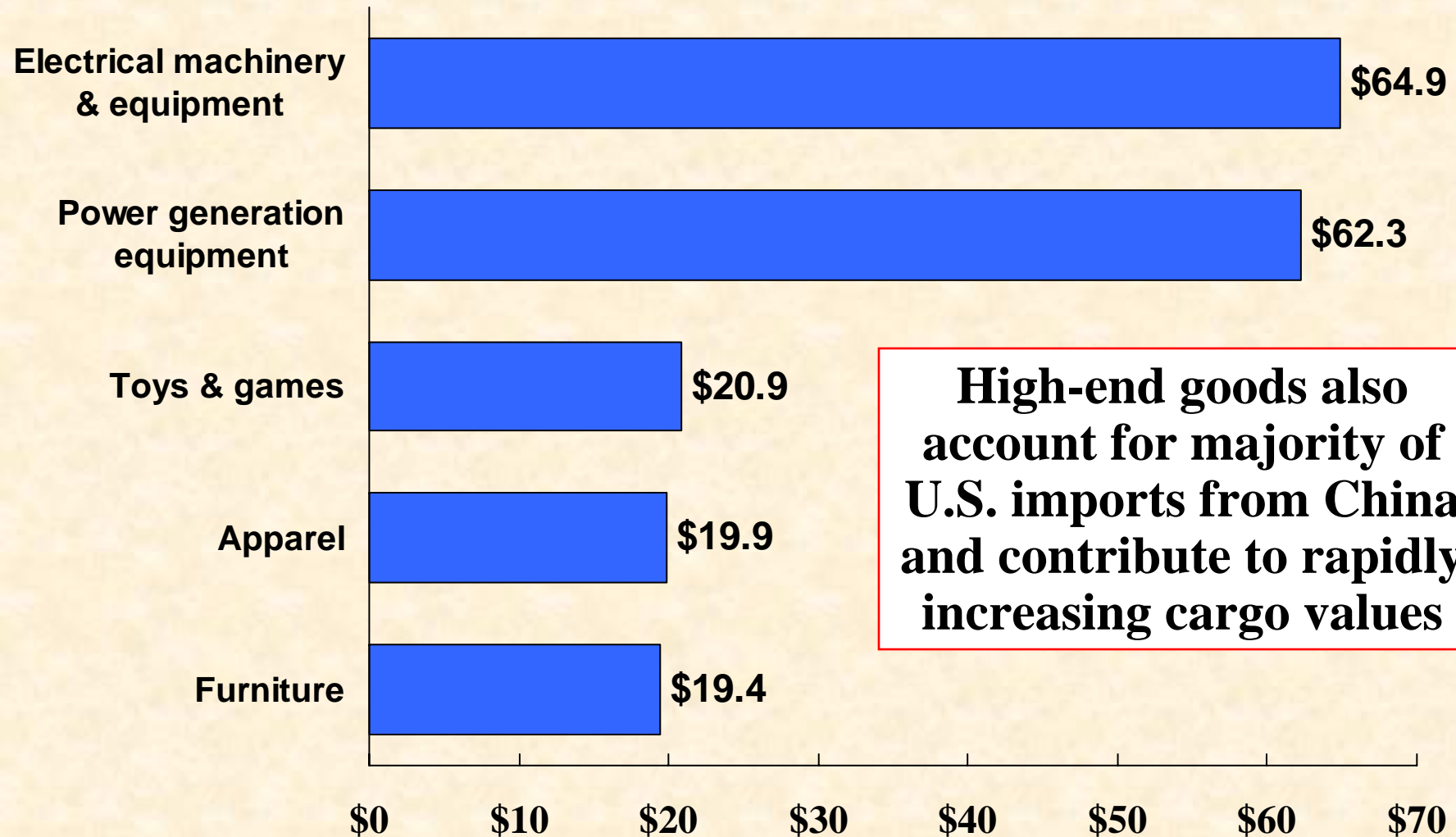
Note: U.S. exports reported on FOB basis; imports on a general customs value, CIF basis

Sources: U.S. International Trade Commission, U.S. Department of Commerce; and U.S. Census Bureau.



# *Top 5 U.S. Imports from China 2006*

## *(Volume \$ billion)*



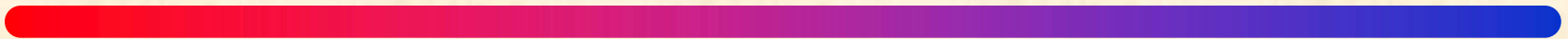


# *Recent Insurer Expansions in China*

- **China's liberalizing market brings opportunities in non-life insurance, including marine:**
  - **July 2007: AIG subsidiary AIU Insurance Co (AIU) granted approval to establish wholly owned subsidiary in China. AIG General will expand non-life capabilities.**
  - **March 2007: Lloyd's receives approval for new reinsurance operation Lloyd's Reinsurance Co China Ltd (LRCCL). Will write onshore reinsurance biz throughout China.**
  - **January 2007: Marsh awarded China's first Wholly Owned Foreign Enterprise insurance broking license. Marsh (Beijing) Insurance Brokers will expand company's focus on large-scale commercial risk, including international marine.**
  - **Zurich gains control of a Chinese broker in Aug. 2007**

# CATASTROPHIC LOSS

**Insurers Accused of  
Crying Wolf Over Cats**





# *2007 Hurricane Season: No Big Hits...So Far*

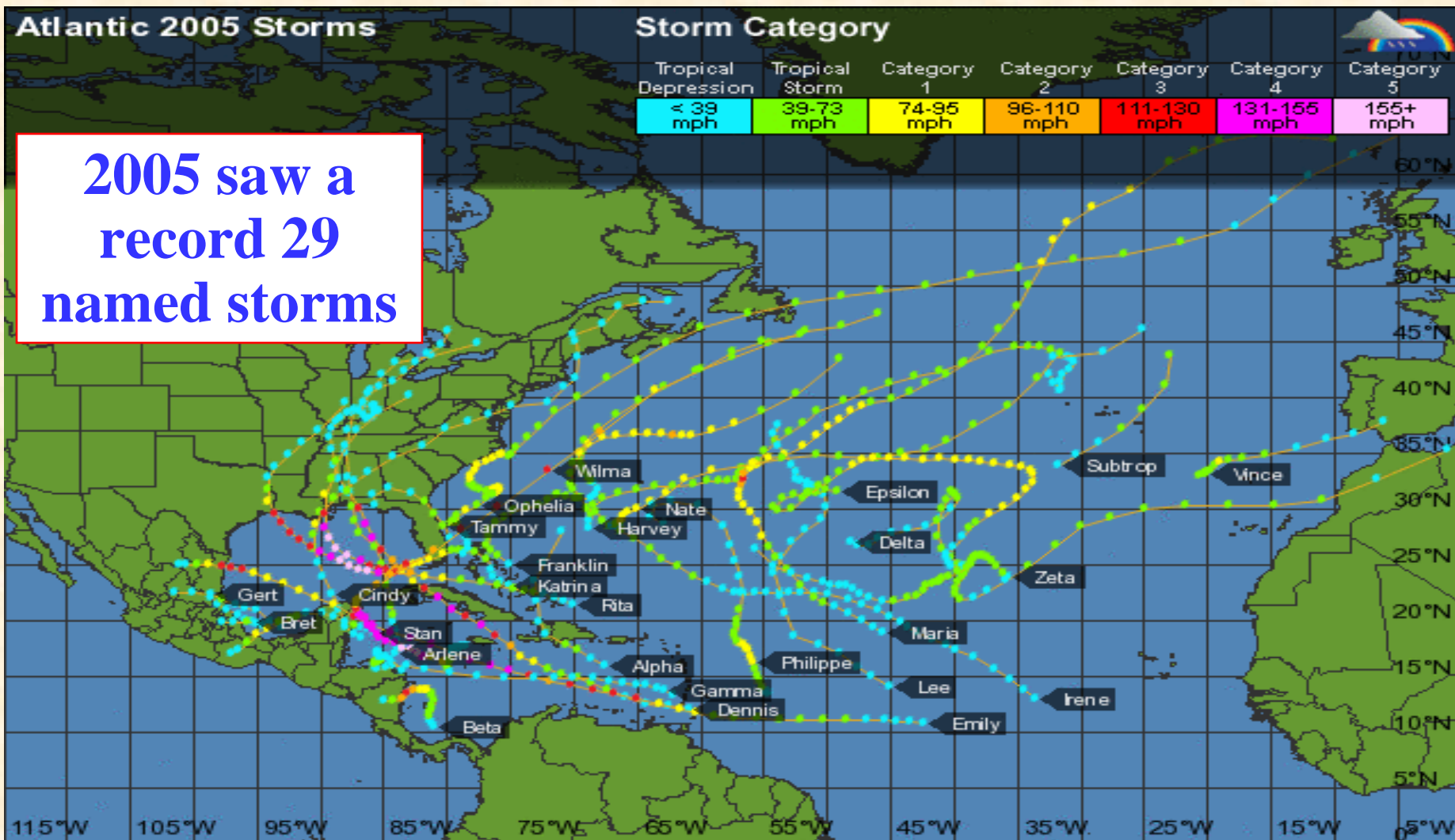






# 2005 Hurricane Season: *One for the Record Books, Including Marine & Energy Insurers*

**2005 saw a  
record 29  
named storms**

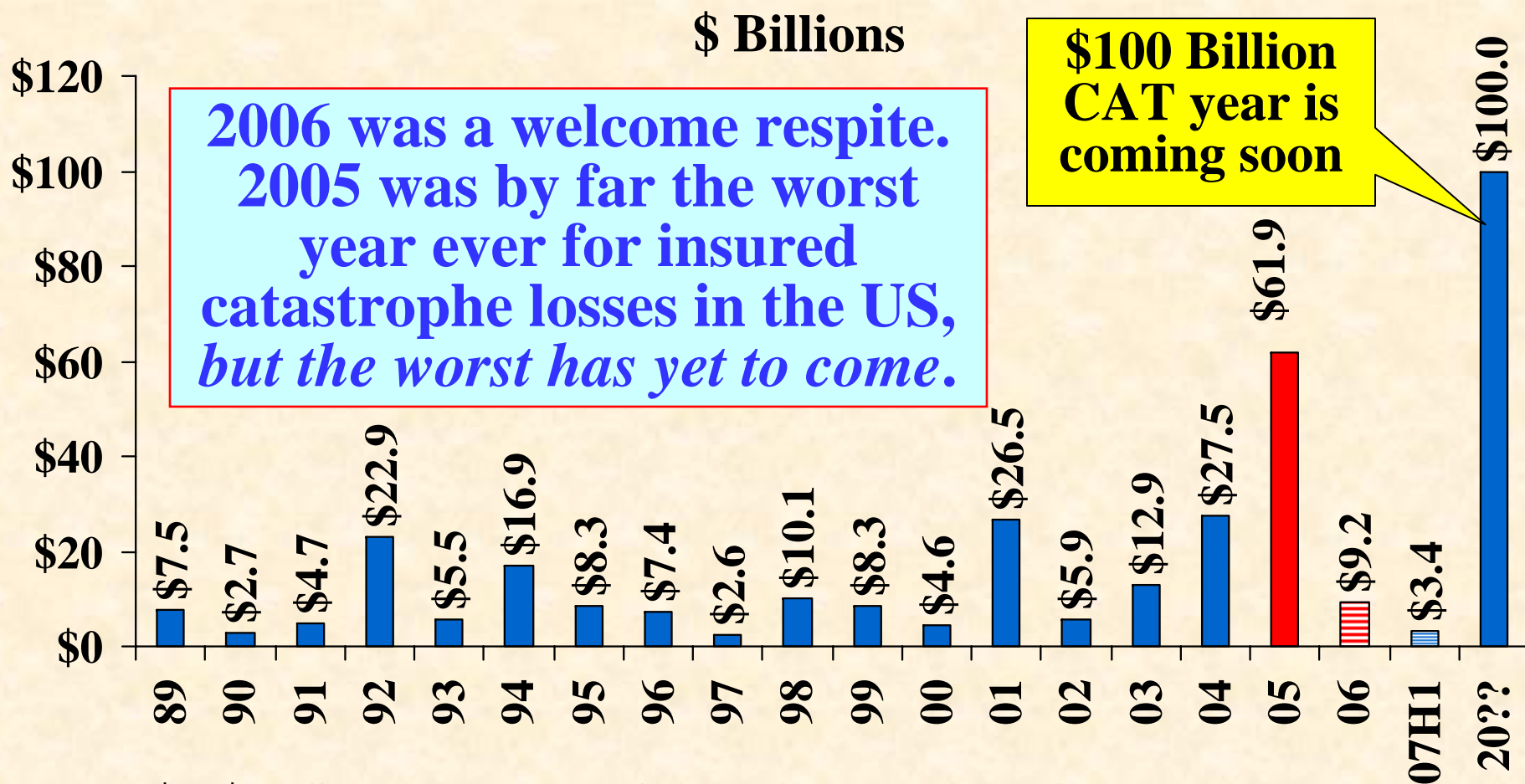


Source: [www.wunderground.com](http://www.wunderground.com), accessed 9/12/07; Insurance Information Institute





# U.S. Insured Catastrophe Losses\*



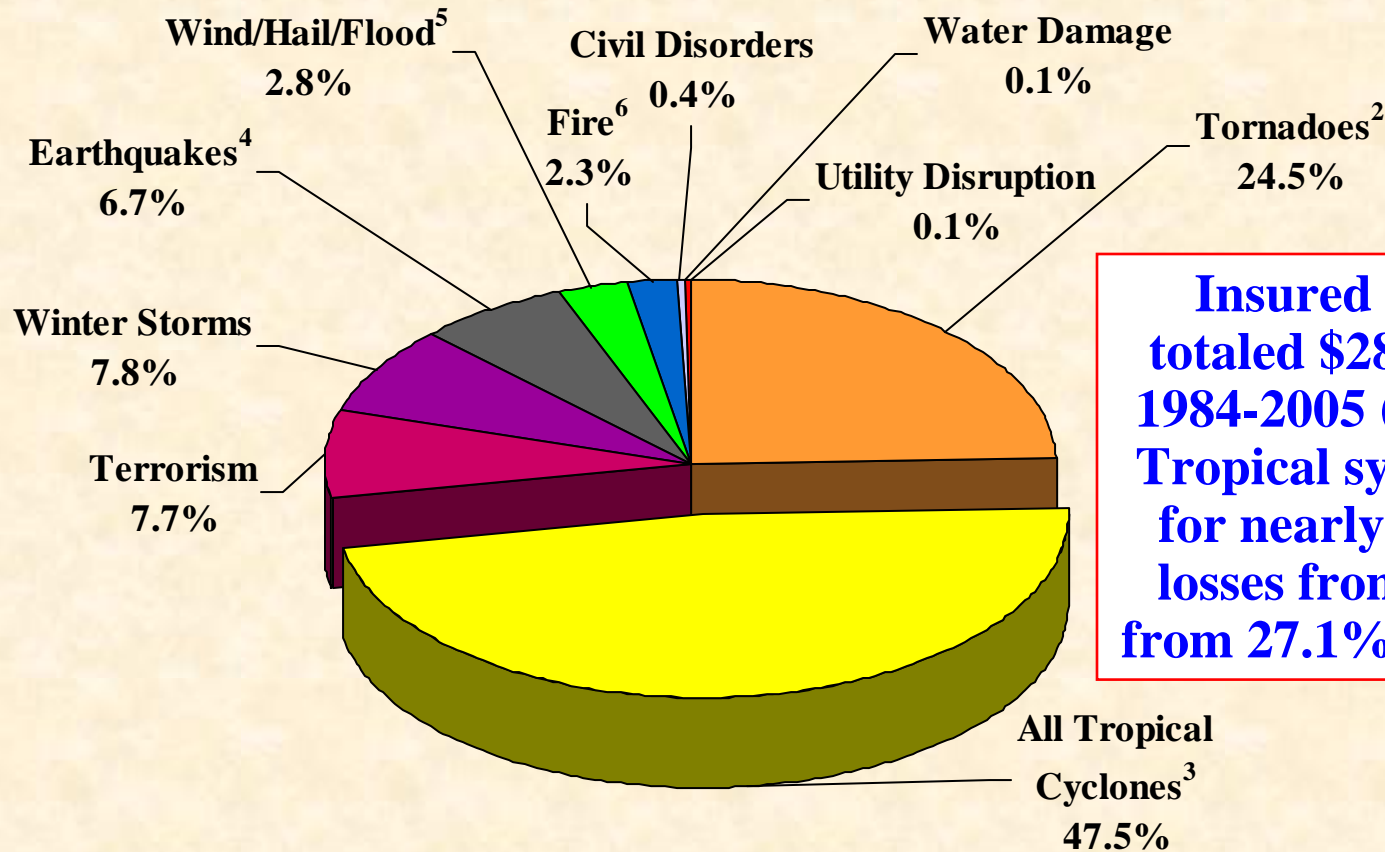
\*Excludes \$4B-\$6b offshore energy losses from Hurricanes Katrina & Rita.

Note: 2001 figure includes \$20.3B for 9/11 losses reported through 12/31/01. Includes only business and personal property claims, business interruption and auto claims. Non-prop/BI losses = \$12.2B.

Source: Property Claims Service/ISO; Insurance Information Institute



# *Inflation-Adjusted U.S. Insured Catastrophe Losses By Cause of Loss, 1986-2005<sup>1</sup>*



**Insured disaster losses totaled \$289.1 billion from 1984-2005 (in 2005 dollars). Tropical systems accounted for nearly half of all CAT losses from 1986-2005, up from 27.1% from 1984-2003.**

<sup>1</sup> Catastrophes are all events causing direct insured losses to property of \$25 million or more in 2005 dollars. Catastrophe threshold changed from \$5 million to \$25 million beginning in 1997. Adjusted for inflation by the III.

<sup>2</sup> Excludes snow. <sup>3</sup> Includes hurricanes and tropical storms. <sup>4</sup> Includes other geologic events such as volcanic eruptions and other earth movement. <sup>5</sup> Does not include flood damage covered by the federally administered National Flood Insurance Program. <sup>6</sup> Includes wildland fires.

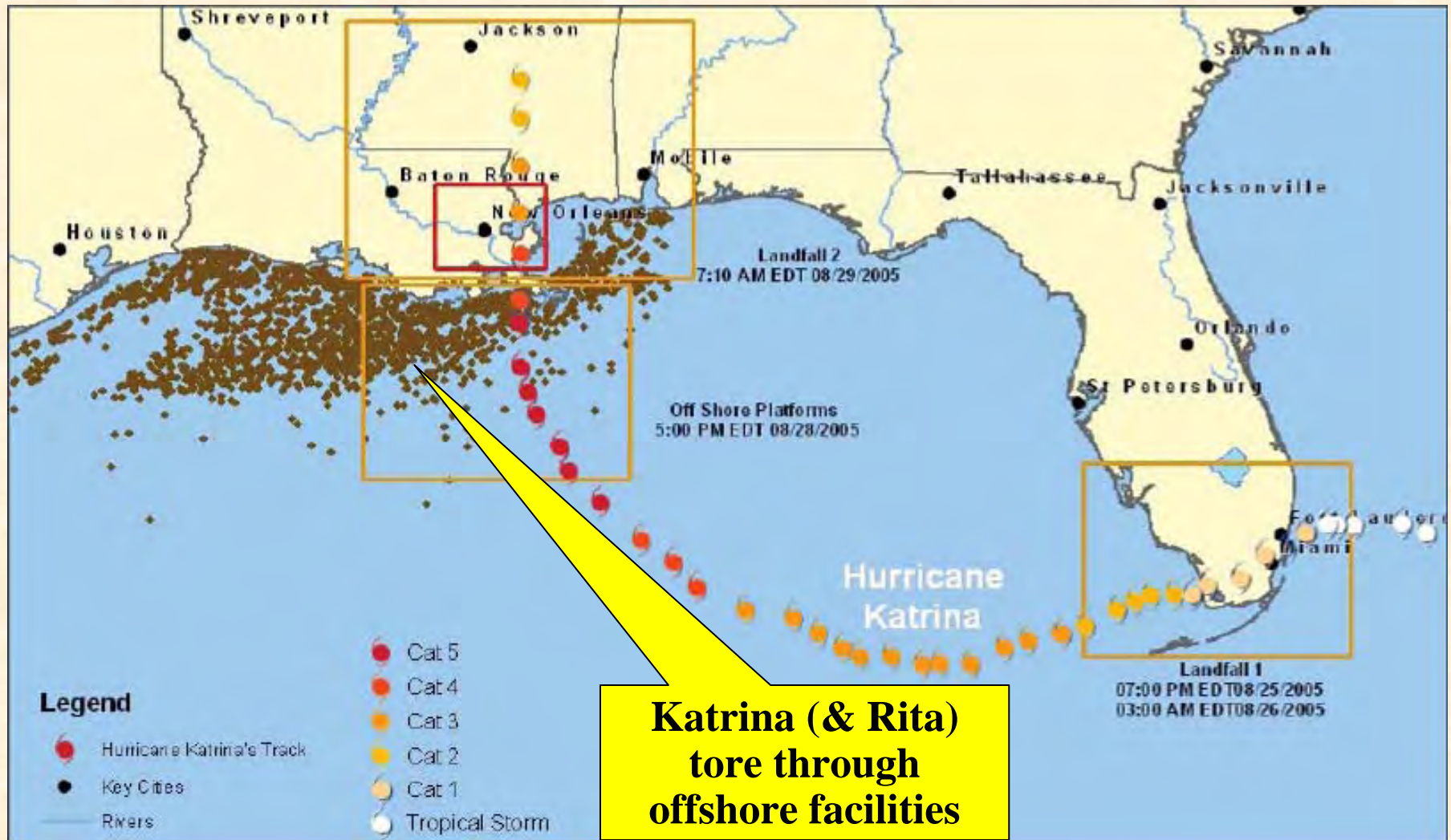
# ENERGY MARKET OVERVIEW

*The Biggest Casualty  
of 2004/5*





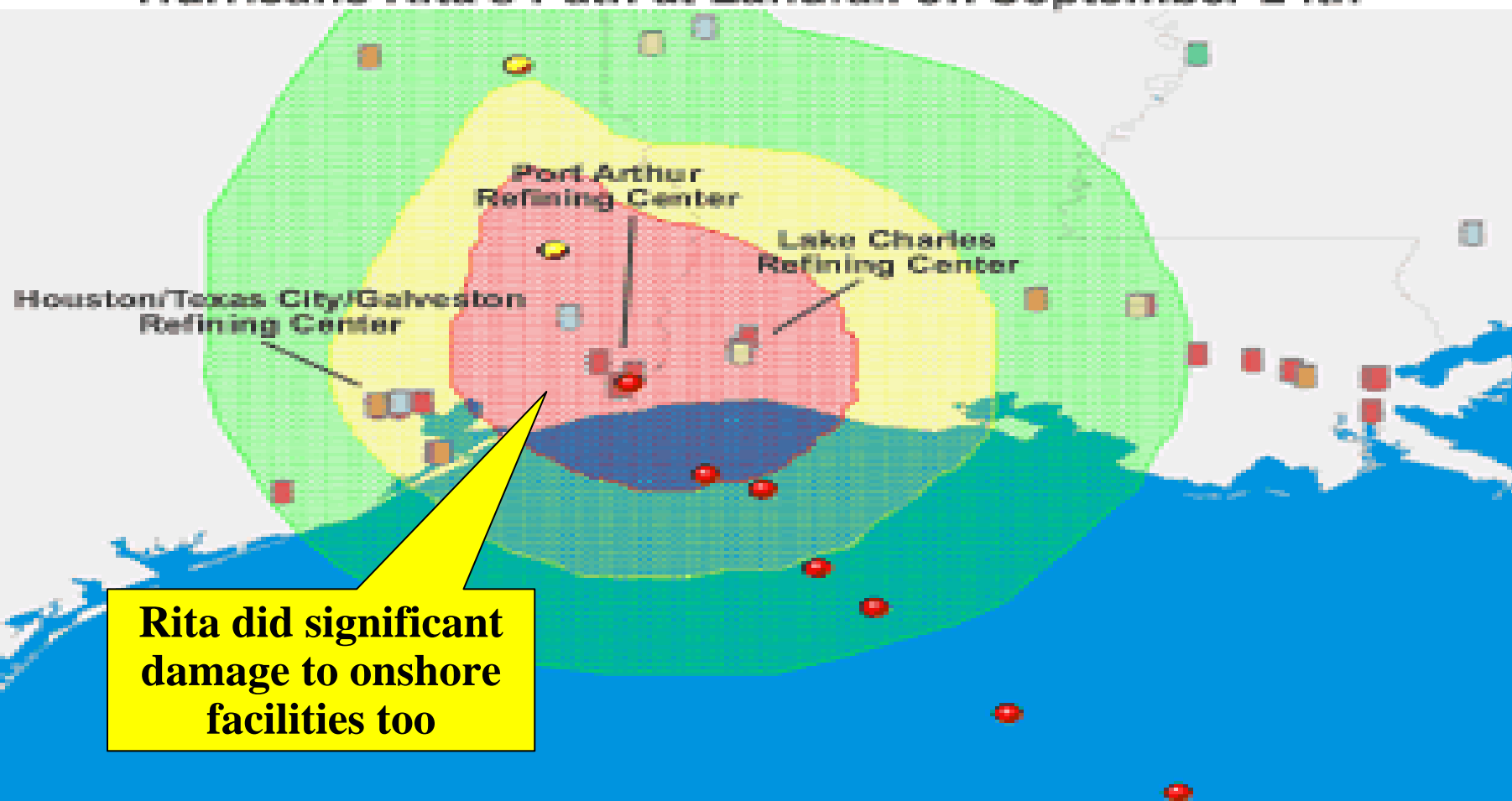
# *Katrina's Path of Destruction Through the Offshore Energy Industry*





# *Hurricane Rita's Path Was at Least as Devastating for Energy Concerns*

Hurricane Rita's Path at Landfall on September 24th

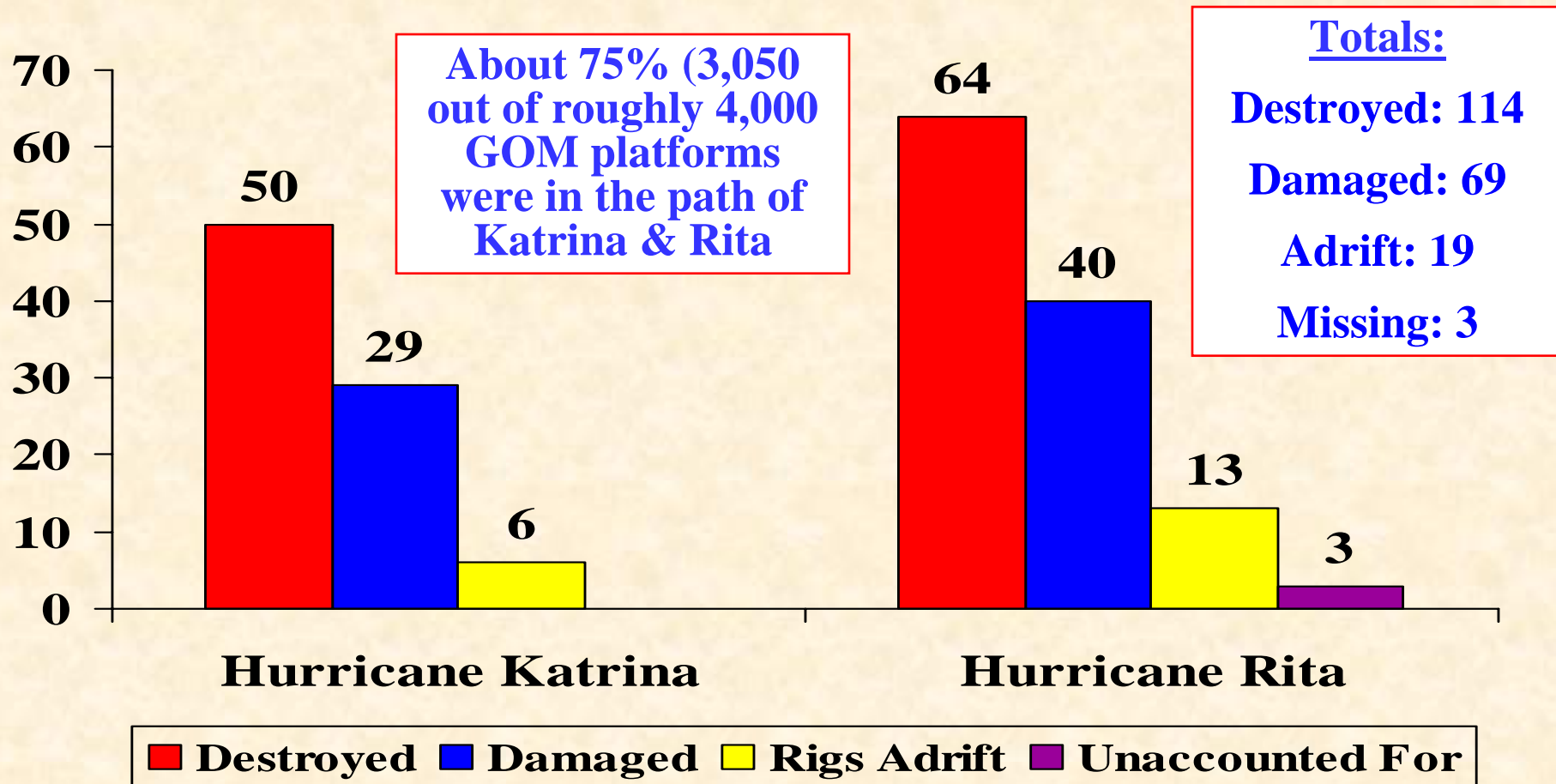


**Rita did significant damage to onshore facilities too**



# *Hurricanes Katrina/Rita: Initial Damage to Oil Platforms & Rigs in Gulf of Mexico*

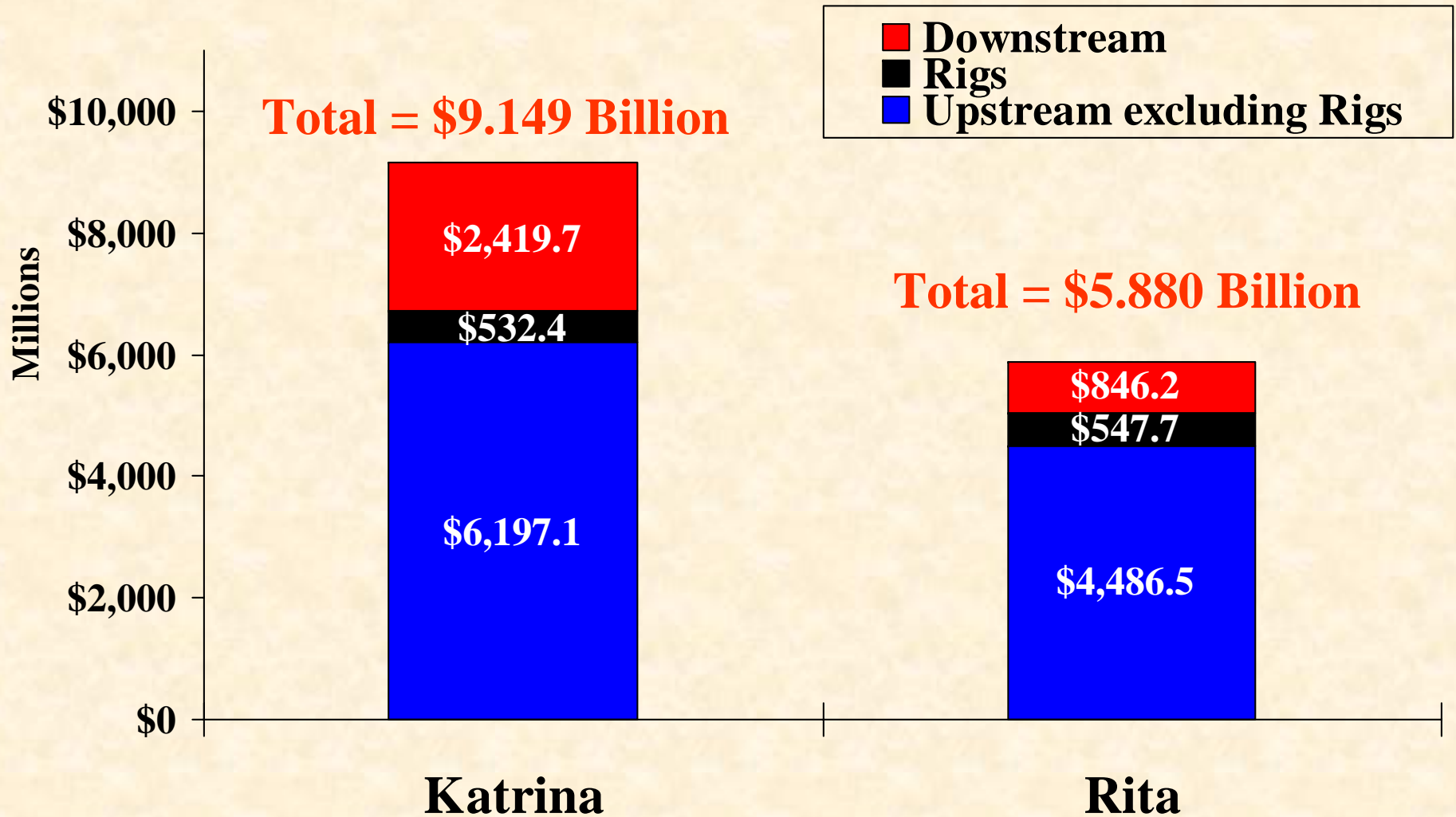
No. of Platforms/Rigs Destroyed, Damaged or Adrift, as of October 4, 2005.







# *Katrina and Rita Total Energy Sector Estimated Losses\**

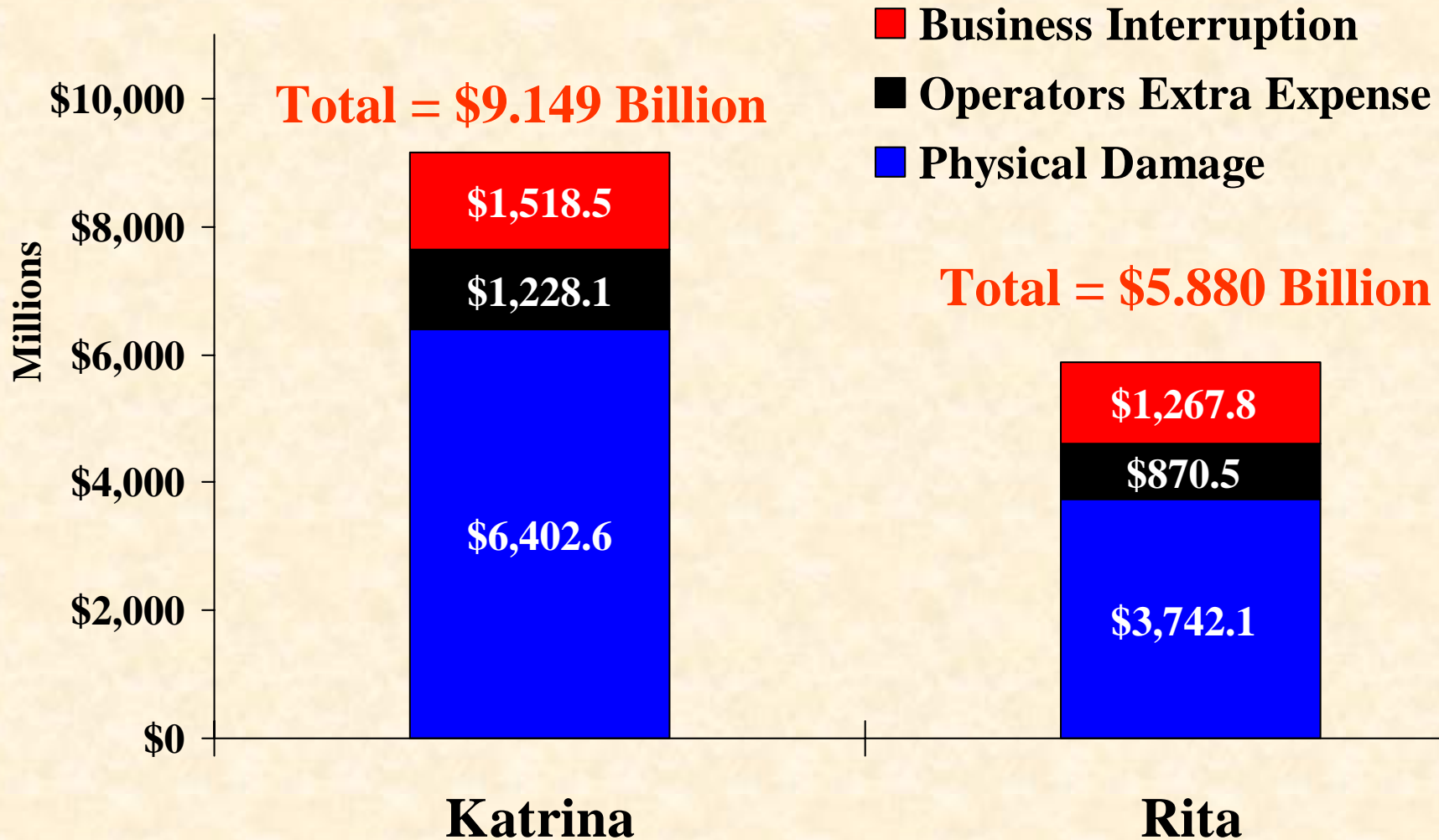


Source: Willis, *Energy Market Review*, May 2006.

\*Loss estimates are total losses, not just insured losses.



# *Katrina and Rita Total Energy Sector Losses, by Type\**

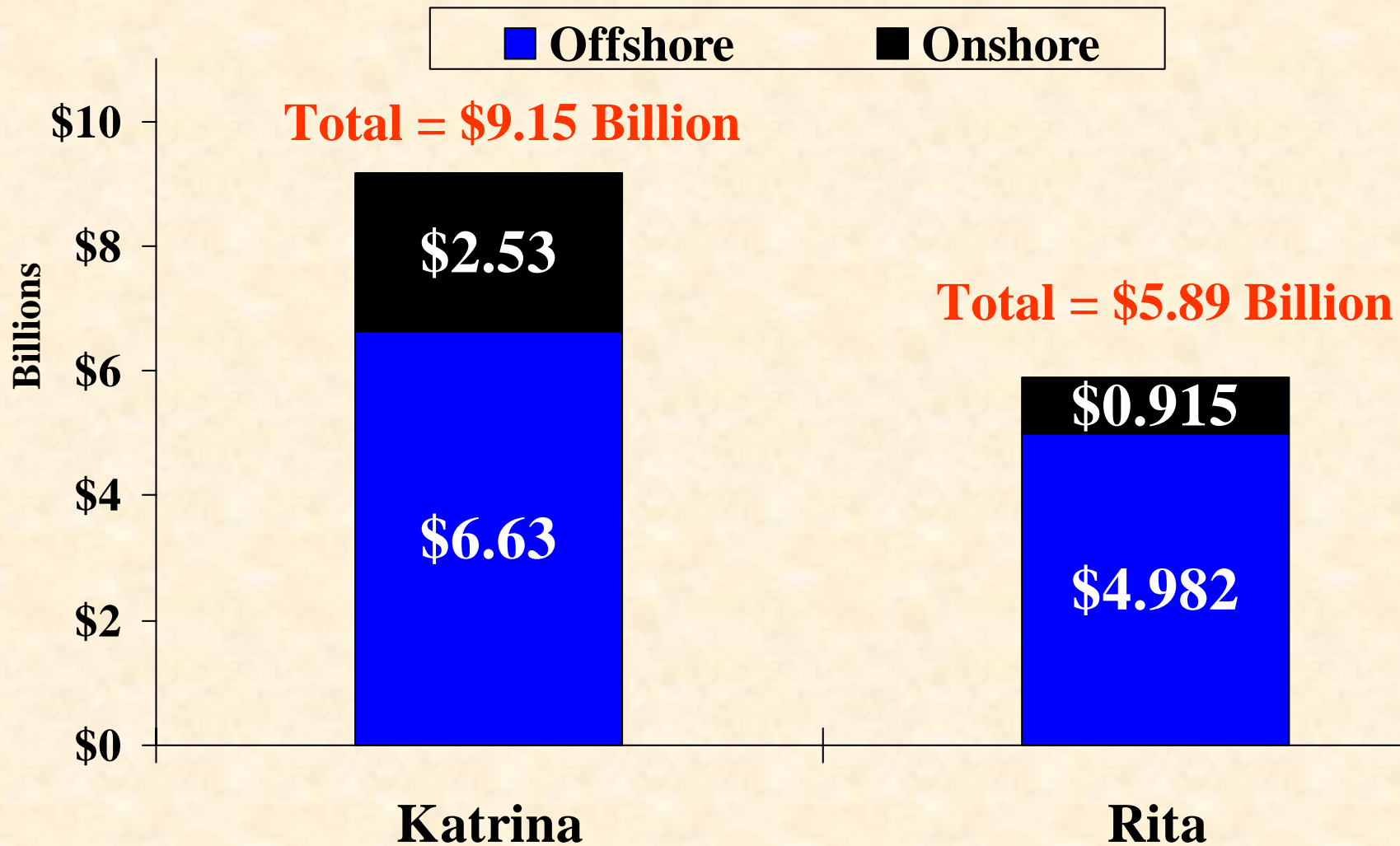


Source: Willis, *Energy Market Review*, May 2006.

\*Loss estimates are total losses, not just insured losses.



# *Katrina & Rita: Total Energy Losses, Onshore vs. Offshore\**



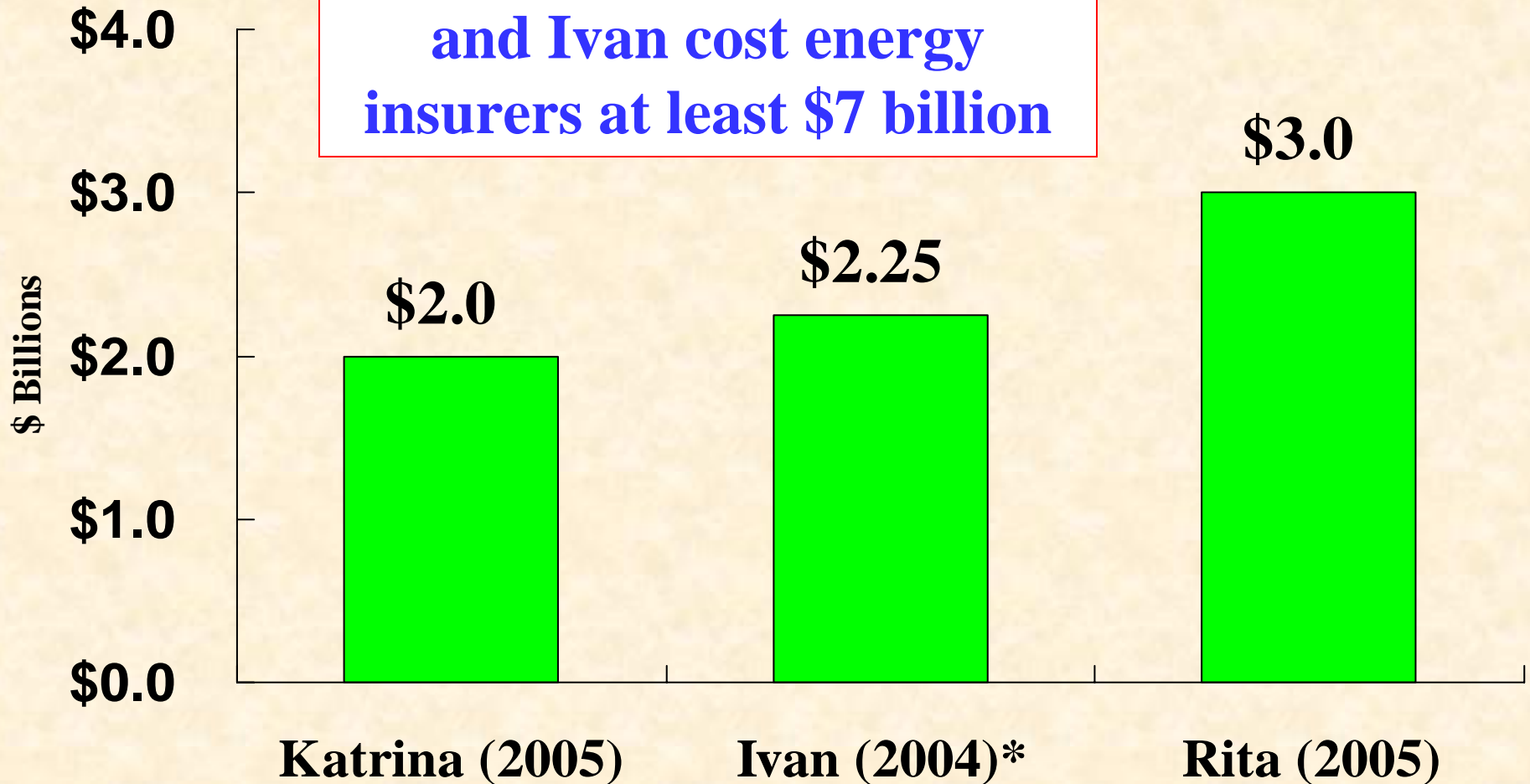
Source: Willis, *Energy Market Review*, May 2006.

\*Loss estimates are total losses, not just insured losses.



# *Insured Offshore Energy Losses for Recent Major Gulf Storms*

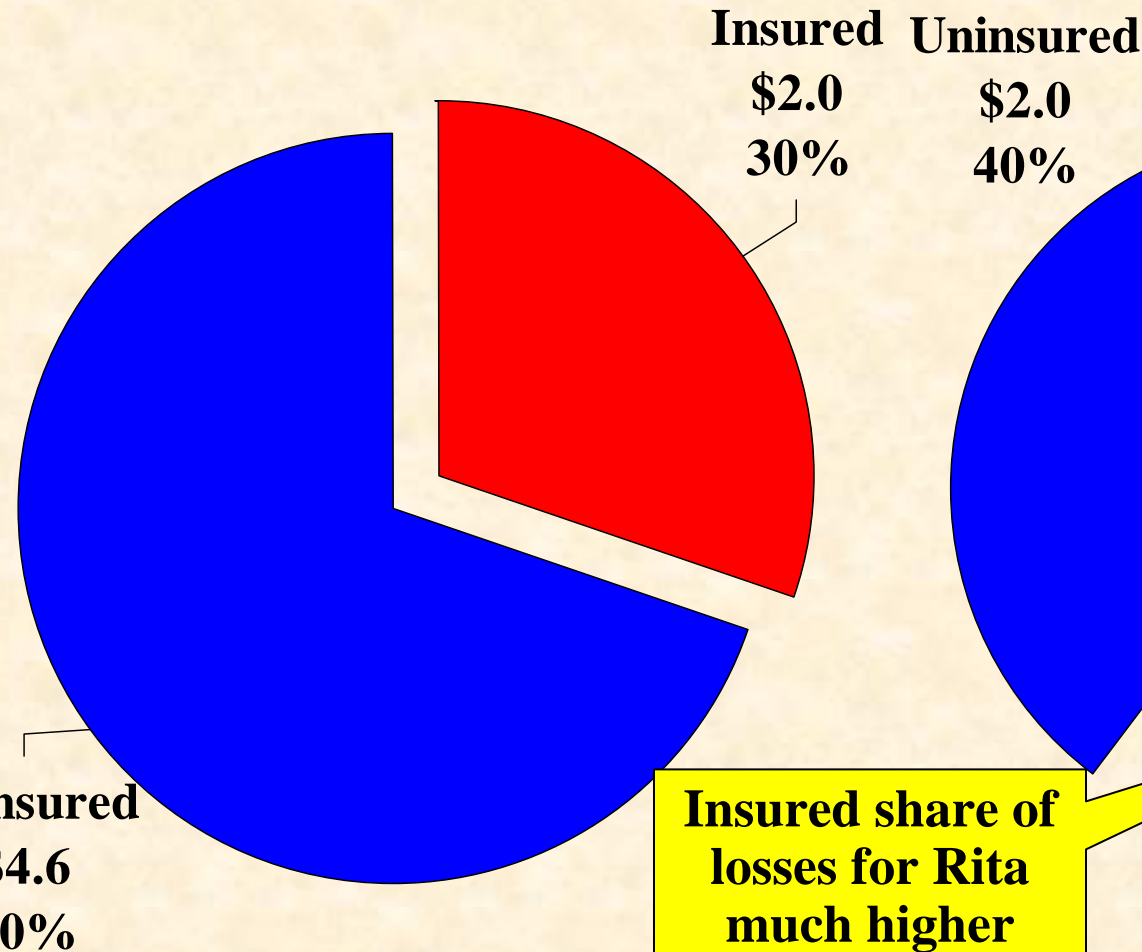
**Hurricanes Katrina, Rita  
and Ivan cost energy  
insurers at least \$7 billion**



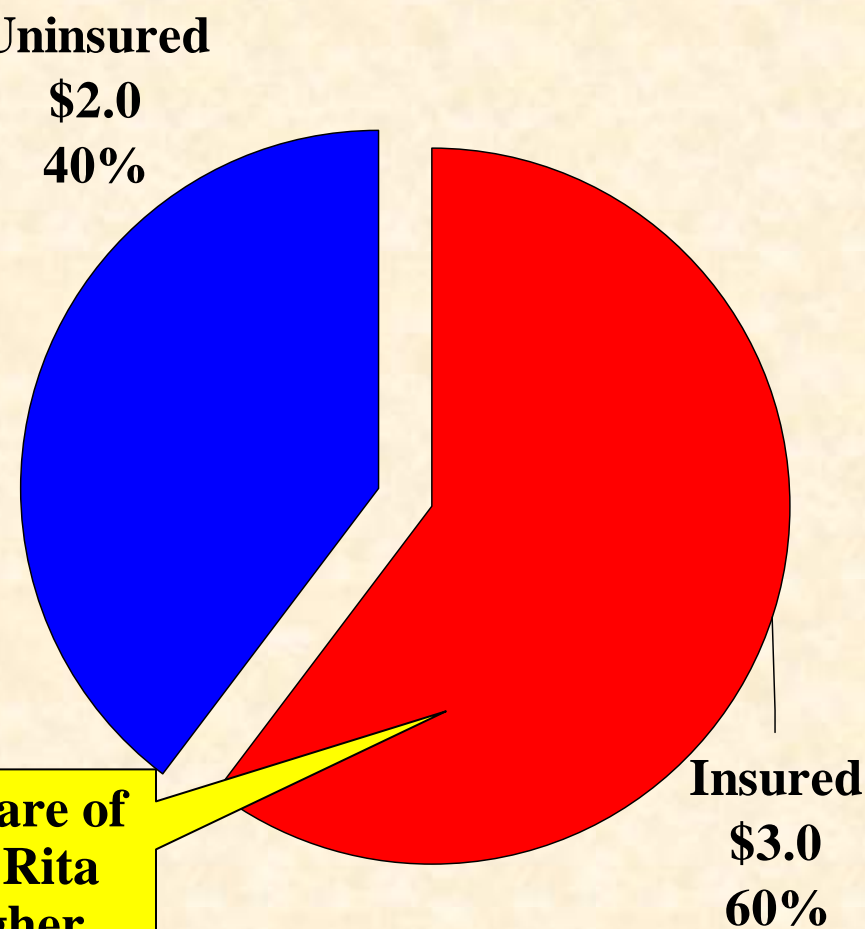


# *Insured vs. Uninsured Energy Losses from Katrina & Rita*

## Katrina



## Rita

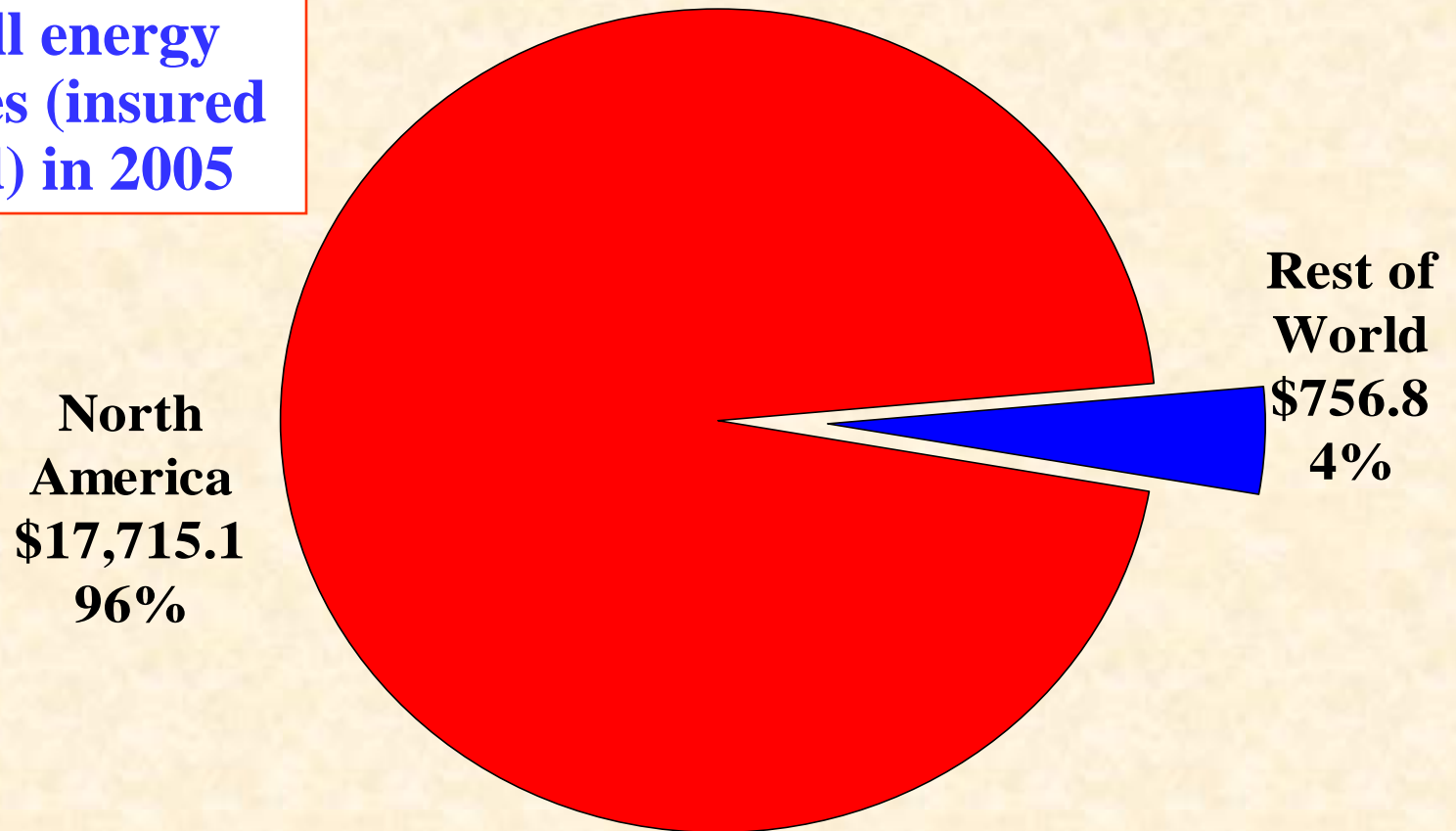




# *2005 North American Energy Losses a % of Worldwide Losses*

**North American  
losses accounted for  
96% of all energy  
sector losses (insured  
& insured) in 2005**

**\$ Millions**



**Rest of  
World  
\$756.8  
4%**

**North  
America  
\$17,715.1  
96%**



# MARITIME TERRORISM



# *Risks of Doing Business Internationally: Top 10 Country Rankings (2003-2006)*

Ranking	Country	Business Partner Score*
1.	Afghanistan	10.0
2.	Equatorial Guinea	10.0
3.	Tajikistan	10.0
4.	Syria	10.0
5.	Iraq	8.0
6.	Serbia	7.7
7.	Colombia	7.0
8.	Angola	7.0
9.	Venezuela	7.0
10.	Vietnam	7.0

**Business partner risk is the risk of entering into a transaction, project or other form of relationship with a business partner.**

•Business Partner Score is a mean score, out of a maximum of 10, derived from three components: ventures halted or modified, transparency and integrity.

•Source: Aon 2007 Political and Economic Risk Map; The Risk Advisory Group



# *Scenarios of Potential Maritime Terrorist Activity*

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- **Use of a commercial container ship to smuggle chemical, biological, or radiological (CBR) materials for an unconventional attack carried out on land or at a major commercial port, e.g. New York, Los Angeles**
- **Use of a “trojan horse”, such as a fishing trawler, resupply ship, tug, or similar to transport weapons and other materials**
- **Hijacking of a vessel as a fund-raising exercise to support a campaign of political violence directed toward ethnic, ideological, religious, or separatist designs**
- **Scuttling of a ship in a narrow SLOC (sea lines of communication) in order to block or disrupt maritime traffic**



# *Scenarios of Potential Maritime Terrorist Activity (Cont.)*

- **Hijacking of an LNG (liquefied natural gas) carrier that is then detonated as a floating bomb or used as a collision weapon**
- **Use of a small, high-speed boat to attack an oil tanker or offshore energy platform to affect international petroleum prices or cause major pollution**
- **Directly targeting a cruise liner or passenger ferry to cause mass casualties by contaminating the ship's food supply, detonating an on-board or submersible improvised explosive device (IED) or, again, by ramming the vessel with a fast-approach, small, attack craft**





# *Liability Problems in Maritime Terrorism*

## **KEY LIABILITY ISSUES**

- 1. Does the terrorist attack occur in U.S. territory, on U.S. waters, or on the high seas?**
- 2. Who are the persons harmed in an attack, and how?**
- 3. Will U.S. admiralty laws apply to claims resulting from an attack?**
- 4. Who are the potential defendants in civil suits, and what does negligence theory require of them?**
- 5. Do maritime security regulations have any implications for civil liability?**
- 6. Will a maritime attack result in disruptions to the supply chain?**



# *Liability Problems in Maritime Terrorism (Cont.)*

## **WHY DOES IT MATTER?**

- 1. Attacks that occur on the high seas or in foreign territory are less likely to be subject to U.S. jurisdiction.**
- 2. The answers help define the pool of potential claimants, and the nature and magnitude of their claims.**
- 3. If so, a special set of procedures and substantive legal standards will apply to resolving those claims.**
- 4. Parties with a range of commercial interests could become tort defendants in connection with terrorist attacks. Negligence-based theories of liability typically require that defendants take reasonable care against foreseeable harms, subject to duties of care.**
- 5. Maritime security regulations establish standards of care that are likely to be imported into civil claims based on negligence.**
- 6. Supply chain disruptions could generate contractual disputes as well as tort claims.**



# BACK TO THE FUTURE?

## ARCTIC MARINE ISSUES HEATING UP

 *An Economic Analysis*

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# *The Arctic: Maritime Challenge for the 21<sup>st</sup> Century?*



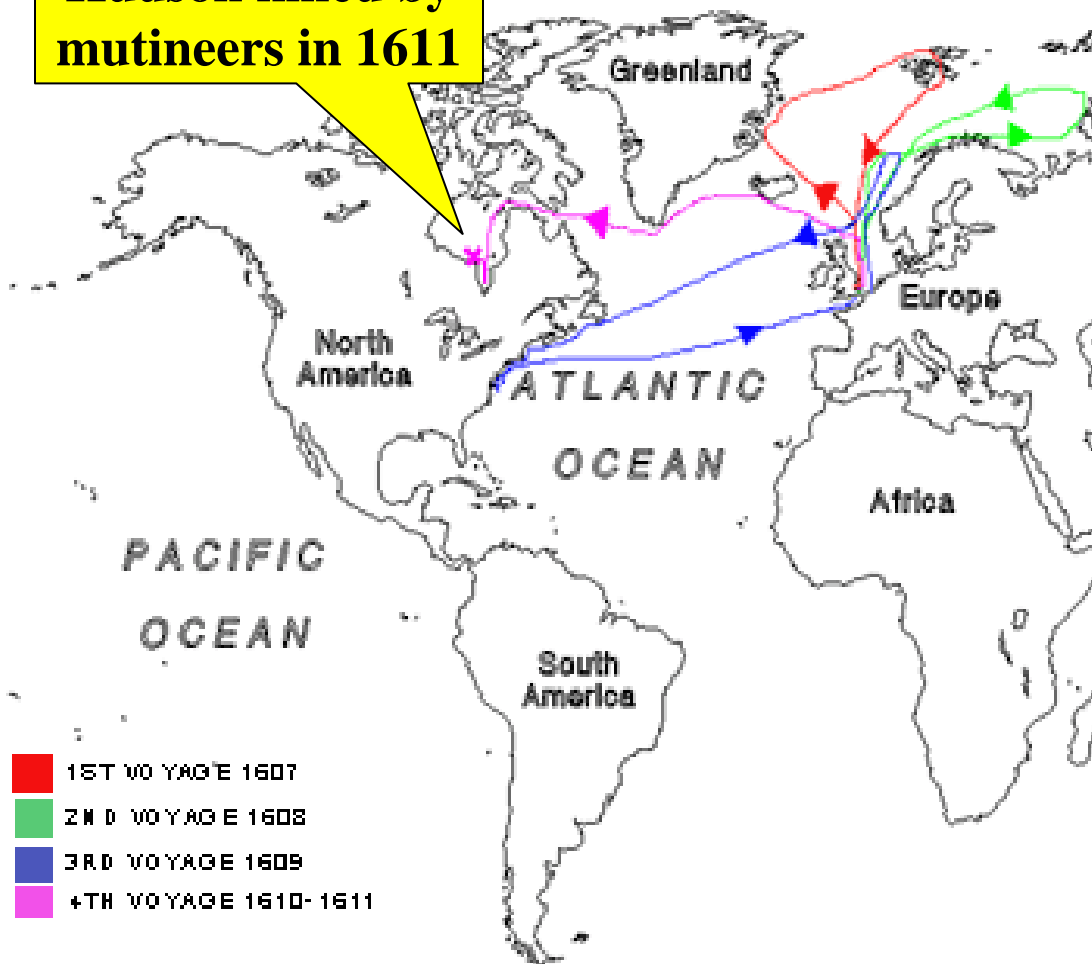
Henry Hudson in 1609 searching for the Northwest Passage and a faster route to India and China. Painting depicts Hudson's coming ashore from his ship, the *Half Moon* at Croton Point in the Hudson River and making contact with the Kitchiwank Indians.



# *The Arctic: A Dead End for Many a Mariner and Ship*

## HENRY HUDSON'S VOYAGES

**Hudson killed by  
mutineers in 1611**



John Collier (1850-1934) painting representing Henry Hudson cast adrift by mutineers on Hudson Bay in 1611 with son and loyalists. He was never heard from again.





# Why the Icy Arctic is Such a Hot Issue for Marine Interests



- Claims under 1982 United Nations “Law of the Seas” must be made soon (Russia, 2009; Canada, 2013, Denmark, 2014; US never ratified it)
- Immense natural resource deposits—high prices globally
- Fishing rights—dwindling stocks elsewhere
- Shorter shipping routes between Europe to Asia—burgeoning international trade
- Climate change—less ice makes travel, exploration and extraction easier



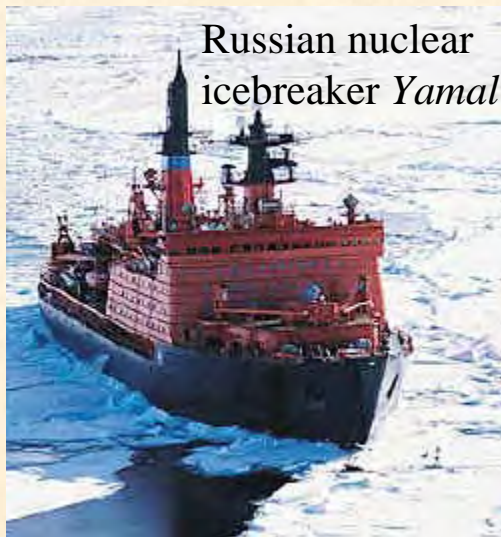




# Arctic Holds Immense Economic Opportunity Marine Interests...



Shell's *Frontier Discoverer* in Dutch Harbor, Alaska



Russian nuclear icebreaker *Yamal*



"Pirate" Russian fishing boats in Svelty Harbor

- Region holds 25% of world's undiscovered supplies of oil and gas
- Estimate 10 billion metric tons of oil and gas deposits. Also significant deposits of diamonds, gold, tin, manganese, nickel, lead and platinum
- Climate change is expanding trans-Arctic shipping, fishing, offshore mineral extraction opportunities.
- Arctic route cuts 2,500 miles off Europe to Asia voyage



# *...But Arctic Economics Spur Territorial/Sovereignty Disputes*



**Denmark to commit \$25 million to search for oil of Greenland coast**



Arctic Circle



**•PROBLEMS:** Disputes over territory heating up. Russia very aggressive, claiming North Pole is Russian territory on Lomonosov Ridge which Russia says is an extension of its continental shelf. Russian planted its flag on the seabed at the Pole in August 2007.







# *...Arctic Exploitation Leads to Huge Environmental Concerns*



- Climate change means more open water over longer period
- More ship traffic
- More chances for collisions, accidents and spillage of toxic cargo and oil
- Who's responsible for cleaning up a mess in disputed territory?
- Saber rattling will grow
- Rights of native peoples?
- Arctic wildlife in jeopardy
- Polar bears extinct in wild by 2050?
- Whaling?
- Overfishing?



# *Insurance Information Institute On-Line*

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