

# 2009 Hurricane Season:

## *Financing Catastrophe Risks Amid the Economic Crisis*

**Insurance Information Institute  
Webinar**

**June 4, 2009**



**Download at:**

**<http://www.iii.org/media/presentations/2009hurricane/>**

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# *Presentation Outline*

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- **Top 10 Changes in Financing Catastrophe Loss Due to Crisis**
- **US Catastrophe Loss Trends**
- **Capital & Capacity**
- **Financial Strength & Ratings**
- **Critical Differences Between P/C Insurers and Banks**
- **Investment Trends**



# *Top 10 Changes in the Financing of Catastrophic Loss*

- 1. Capital Has Become Much More Scarce—But Markets Are Now Thawing**
  - Though still adequate, existing US p/c capital base shrank by 12.9% as of year-end 2008
  - Speed with which any given amount of capital can be raised has slowed
  - Ability of banks to recently raise tens of billion in new capital is very encouraging
  - Insurers should be able to do the same, if necessary
- 2. Capital Has Become More Expensive**
  - Scarcity and volatility have driven cost of capital higher
  - More competition on the open market for the limited amount of capital available
- 3. Investment Earnings Can Offset Only a Smaller Share of Catastrophe Losses**
  - Low interest rates, poor equity market performance, write downs eat into returns
- 4. Alternative Sources of Capital Dried-Up, But Are Beginning to Come Back**
  - E.g., hedge fund, private equity money is far less available
- 5. Catastrophe Bonds: Are They Uncorrelated With Tradition Financial Market Risk?**
  - There was counterparty risk in arising from Lehman-backed guarantees
  - Will result in changes in how such instruments are structured in terms of funding and investments held



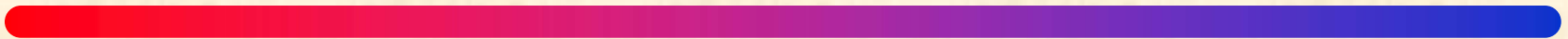
# Top 10 Changes in the

# Financing of Catastrophic Loss

- 6. State Run Residual Markets Are More Vulnerable Due to Shaky Financing Arrangements**
  - FL's situation is more precarious than ever & growing; Threatens state's finances
  - States using assessment mechanism as zero cost lines of credit (e.g., Texas) creating a high opportunity cost for insurers without fixing state's fiscal exposure
- 7. Economics of Start-Ups and Take-Out Companies in CAT Zones Becomes Less Compelling Due to Higher Cost of Capital**
  - Harder to raise cash
  - Tougher to meet target ROI as cost of capital rises
- 8. Financial Services Regulatory Overhaul Will Change How the Business of Insurance Is Regulated**
  - Unclear how this will affect how cat loss is financed
  - Nat Cat legislation is not (currently) part of the overhaul discussion
  - Systemic Risk Regulator: What are p/c systemic risk points? (Guaranty Funds?)
  - Will be impacts on sources of capital as well (e.g., hedge funds)
- 9. Federal Government is Fiscally Constrained**
  - Can/would federal play a bigger role in financing CAT risk? Fed backstops to be sought?
- 10. Return on Investment for Mitigation is *Greatly* Increased**
  - Investments in mitigation provide a guaranteed high rate of return: up to 500%
  - Mitigation preserves and conserves scarce private capital and government resources

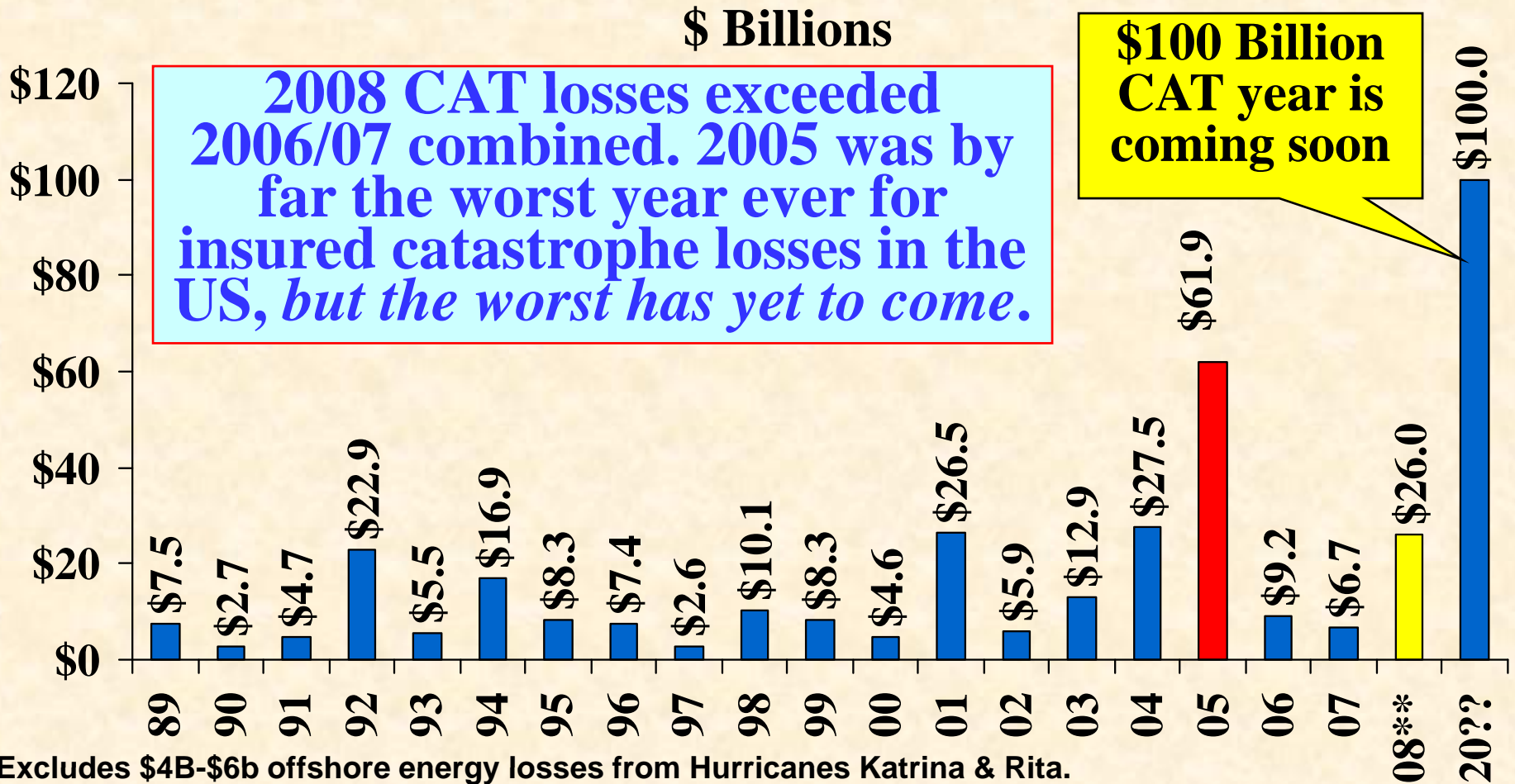
# Catastrophic Loss

*Catastrophe Losses Trends  
Are Trending Adversely*





# U.S. Insured Catastrophe Losses\*



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

\*\*Based on PCS data through Dec. 31. PCS \$2.1B loss of for Gustav. \$10.655B for Ike of 12/05/08.

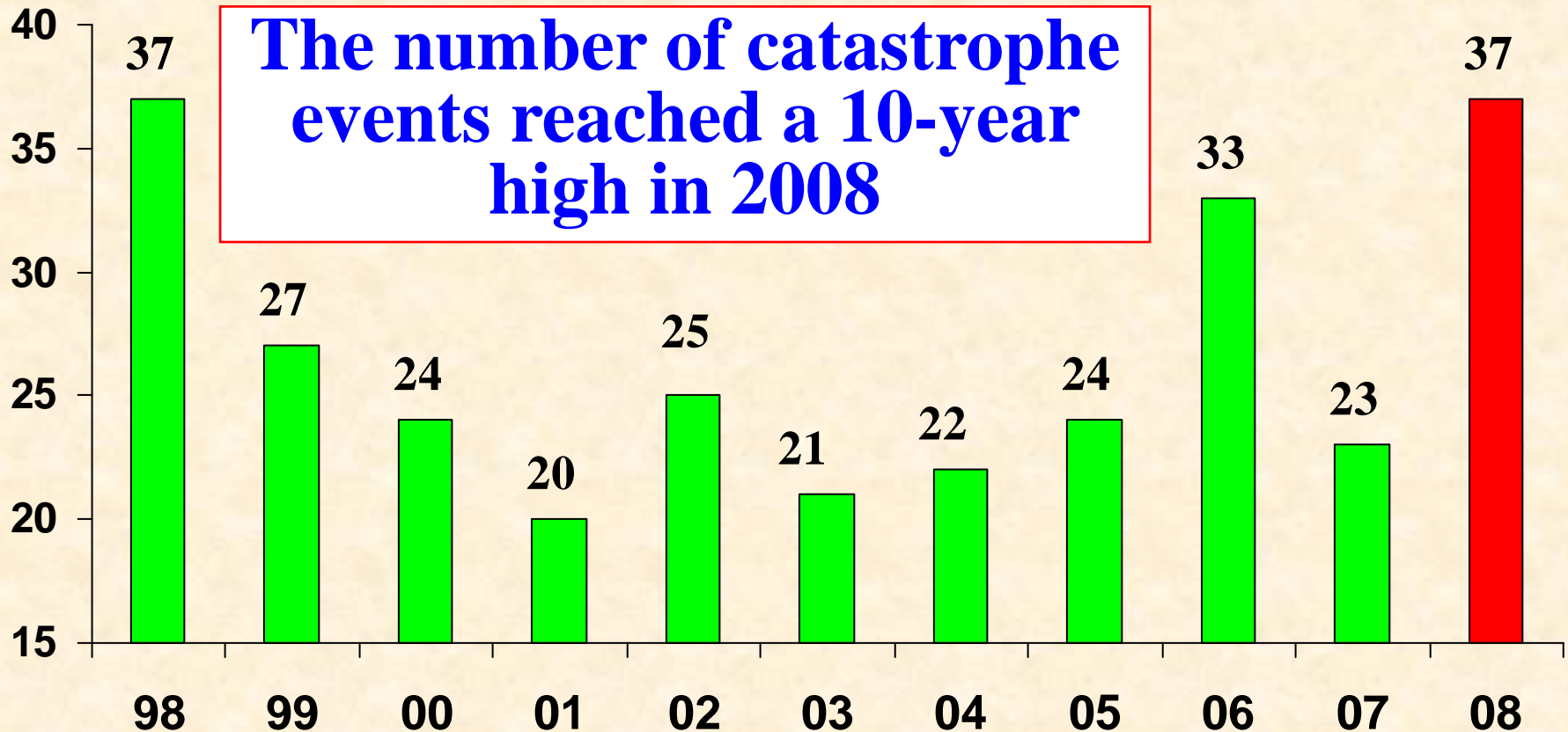
**Note:** 2001 figure includes \$20.3B for 9/11 losses reported through 12/31/01. Includes only business and personal property claims, business interruption and auto claims. Non-prop/BI losses = \$12.2B.

Source: Property Claims Service/ISO; Insurance Information Institute



# Number of PCS Catastrophe Events, 1998-2008\*

**\$ Billions**



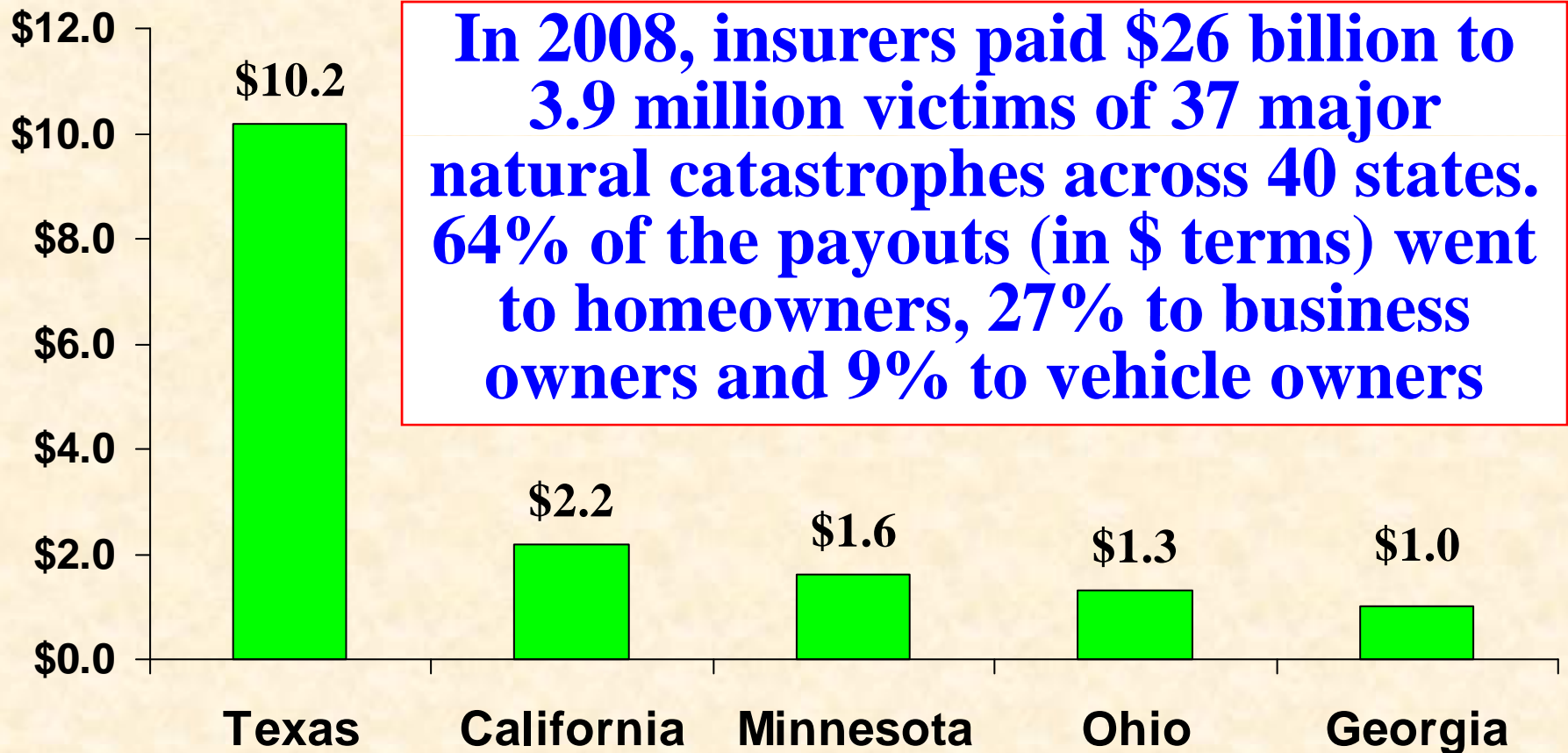
\*PCS defines a catastrophe as an even that caused at least \$25 million in insured property damage and affects and significant number of policyholders and insurers.

Source: PCS; Insurance Information Institute



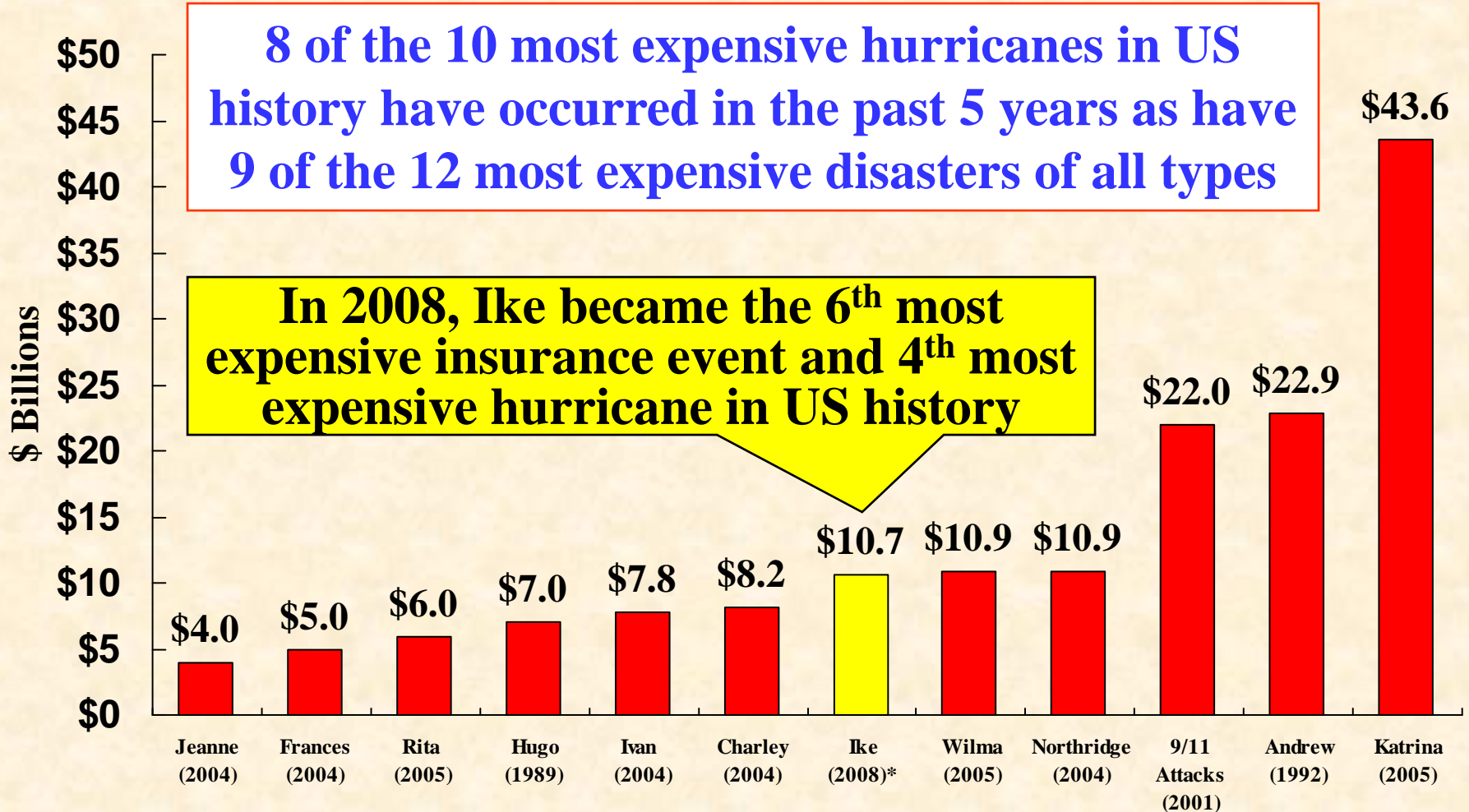
# States With Highest Insured Catastrophe Losses in 2008

\$ Billions





# Top 12 Most Costly Disasters in US History, (Insured Losses, \$2007)

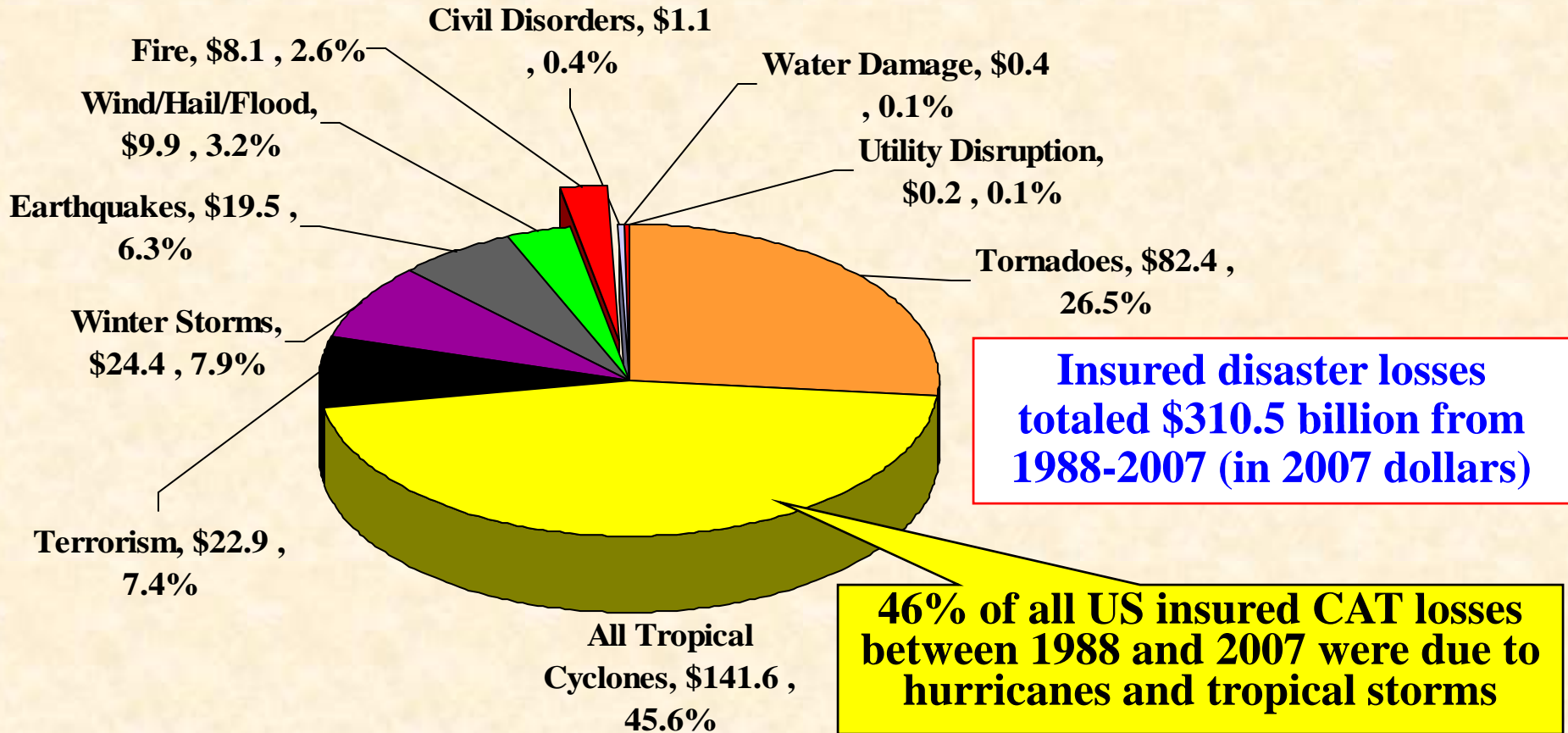


\*PCS estimate as of 12/15/08.

Sources: ISO/PCS; AIR Worldwide, RMS, Egecat; Insurance Information Institute inflation adjustments.



# Inflation-Adjusted U.S. Insured Catastrophe Losses By Cause of Loss, 1988-2007<sup>1</sup>



<sup>1</sup> Catastrophes are all events causing direct insured losses to property of \$25 million or more in 2007 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.

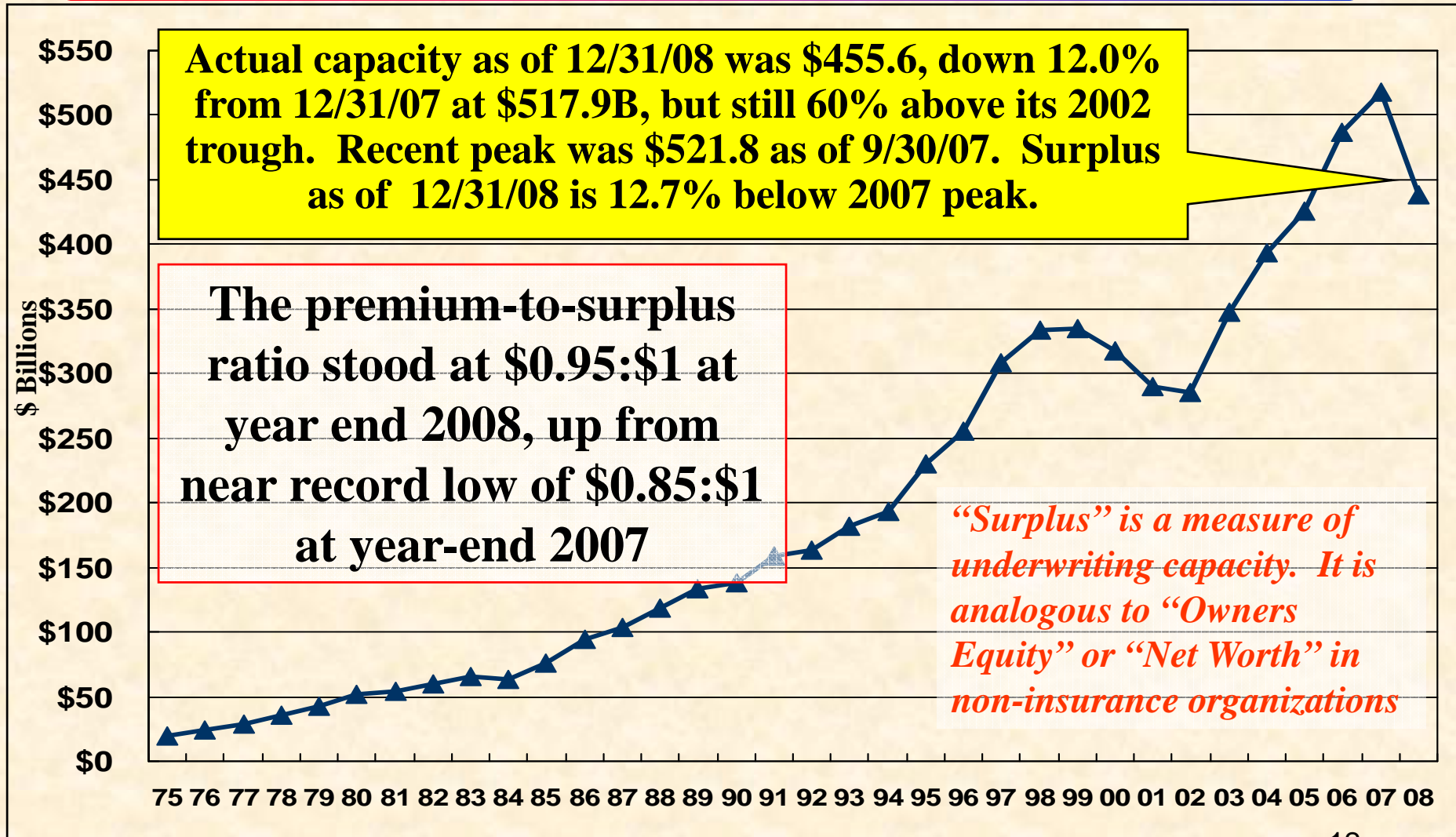
# Capital/Capacity

**Shrinkage, but  
Capital Levels are Within  
Historic Norms**



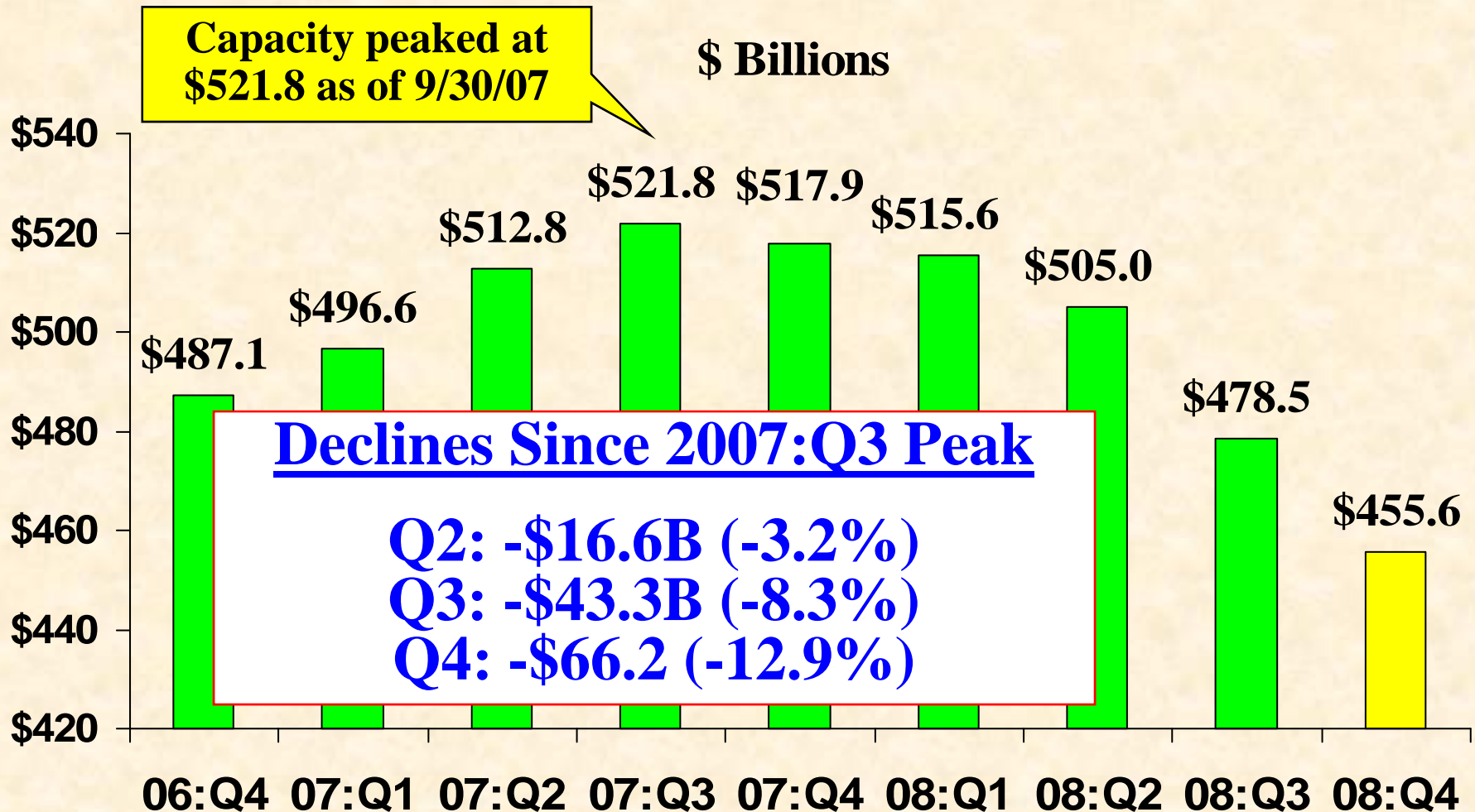


# U.S. Policyholder Surplus: 1975-2008\*



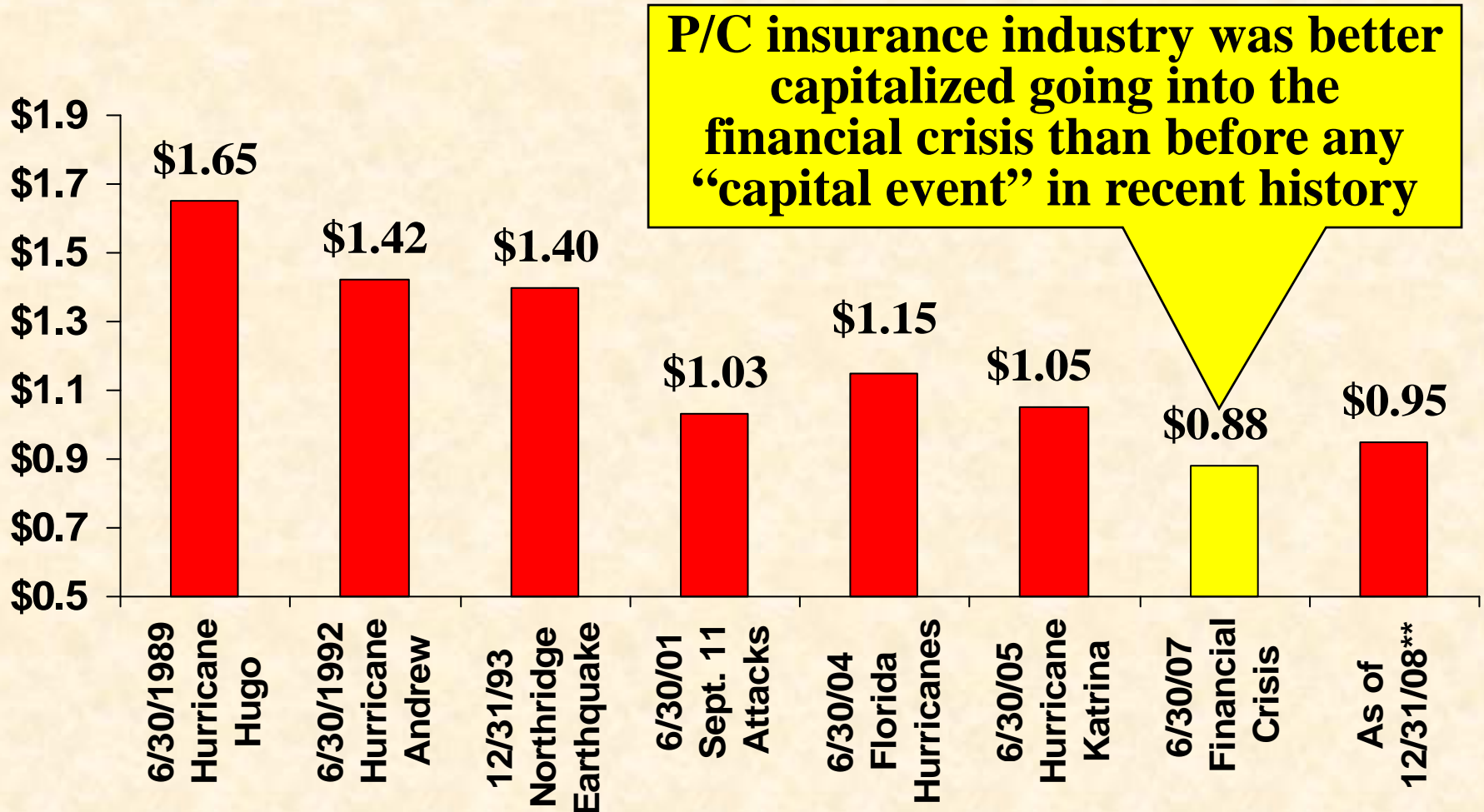


# Policyholder Surplus, 2006:Q4 – 2008:Q4





# Premium-to-Surplus Ratios Before Major Capital Events\*



\*Ratio is for end of quarter immediately prior to event. Date shown is end of quarter prior to event.

\*\*Latest available

Source: PCS; Insurance Information Institute.



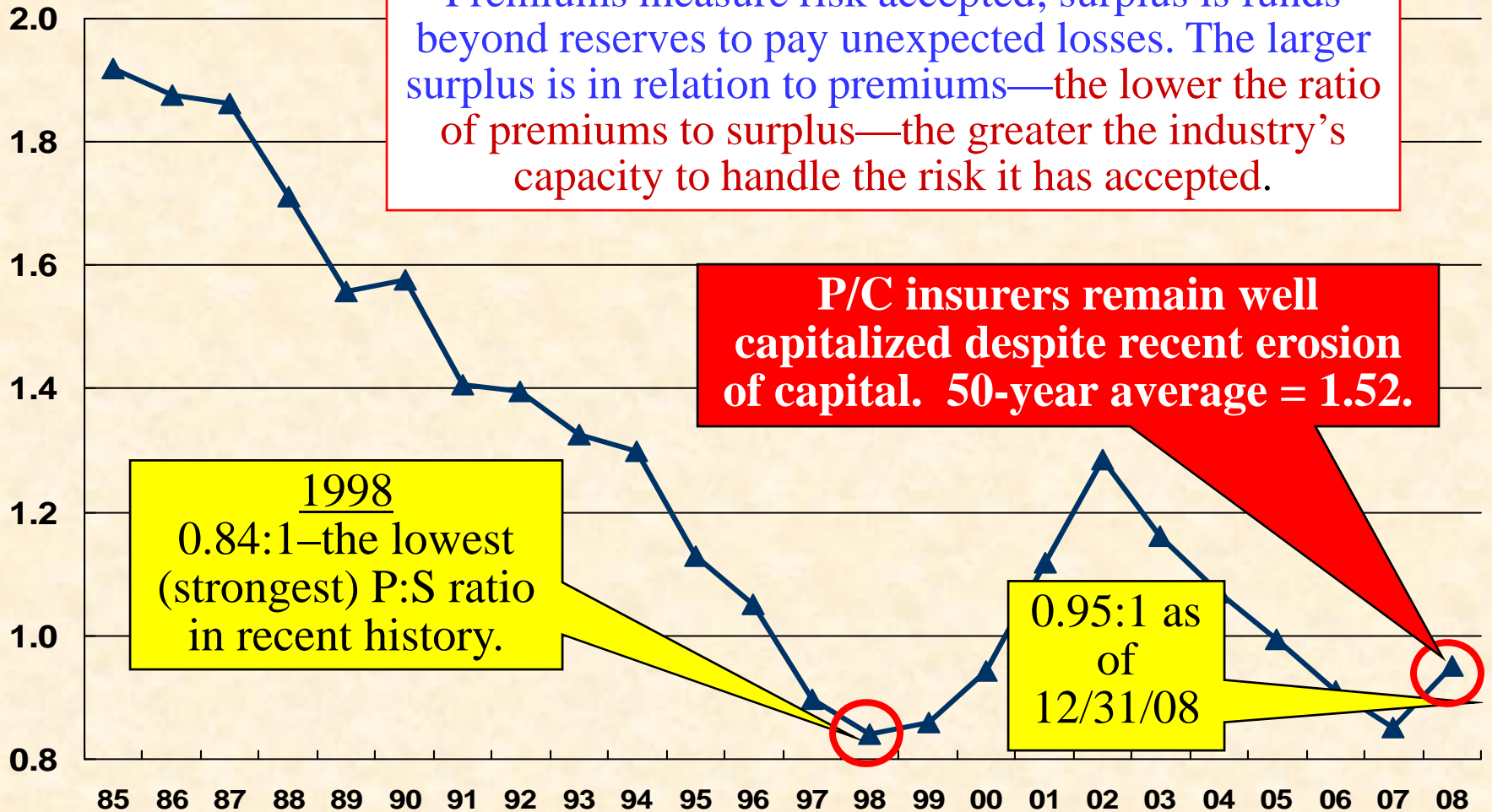
# U.S. P/C Industry Premiums-to-Surplus Ratio: 1985-2008

Premiums measure risk accepted; surplus is funds beyond reserves to pay unexpected losses. The larger surplus is in relation to premiums—the lower the ratio of premiums to surplus—the greater the industry's capacity to handle the risk it has accepted.

**P/C insurers remain well capitalized despite recent erosion of capital. 50-year average = 1.52.**

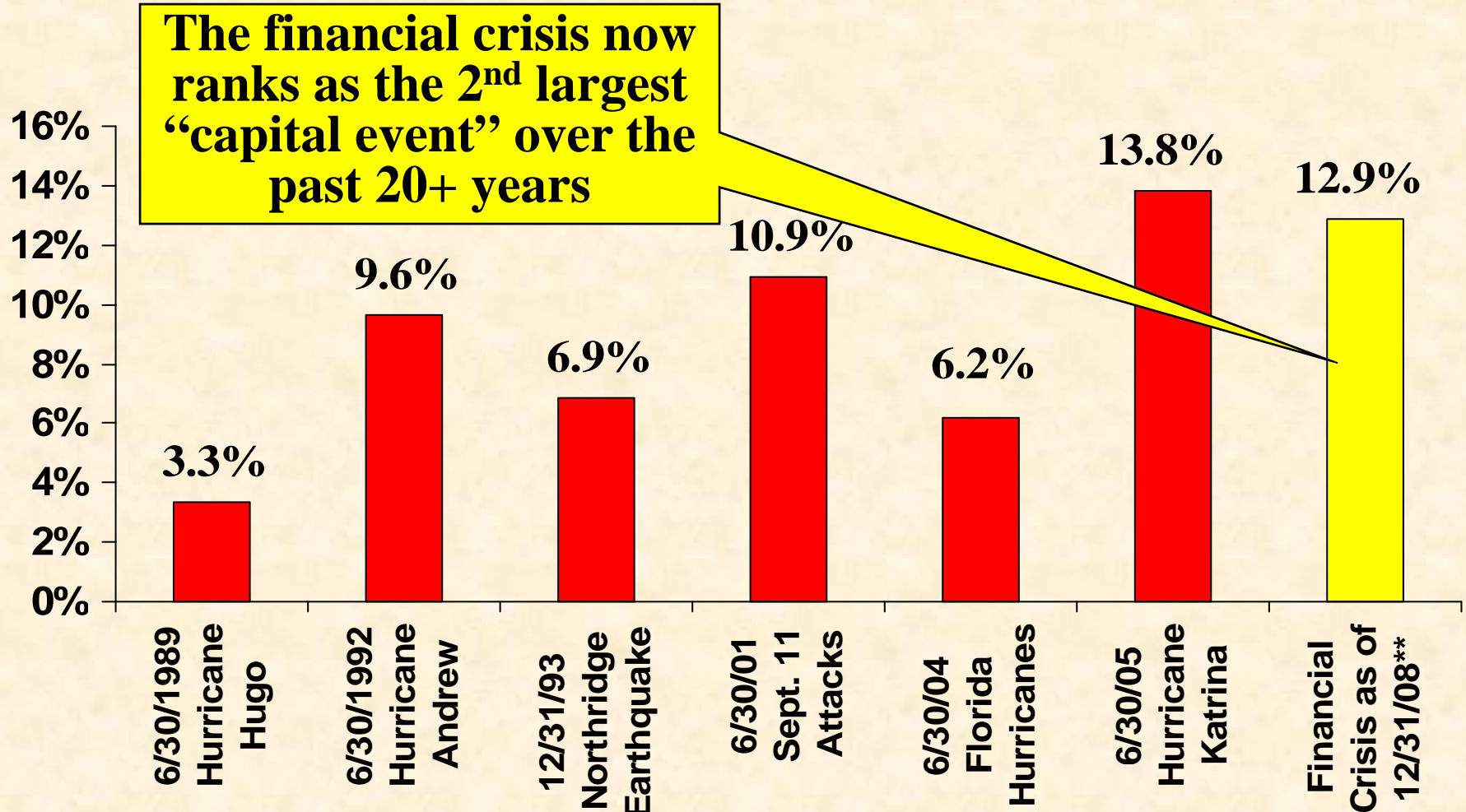
**1998**  
0.84:1—the lowest (strongest) P:S ratio in recent history.

0.95:1 as of 12/31/08





# Ratio of Insured Loss to Surplus for Largest Capital Events Since 1989\*



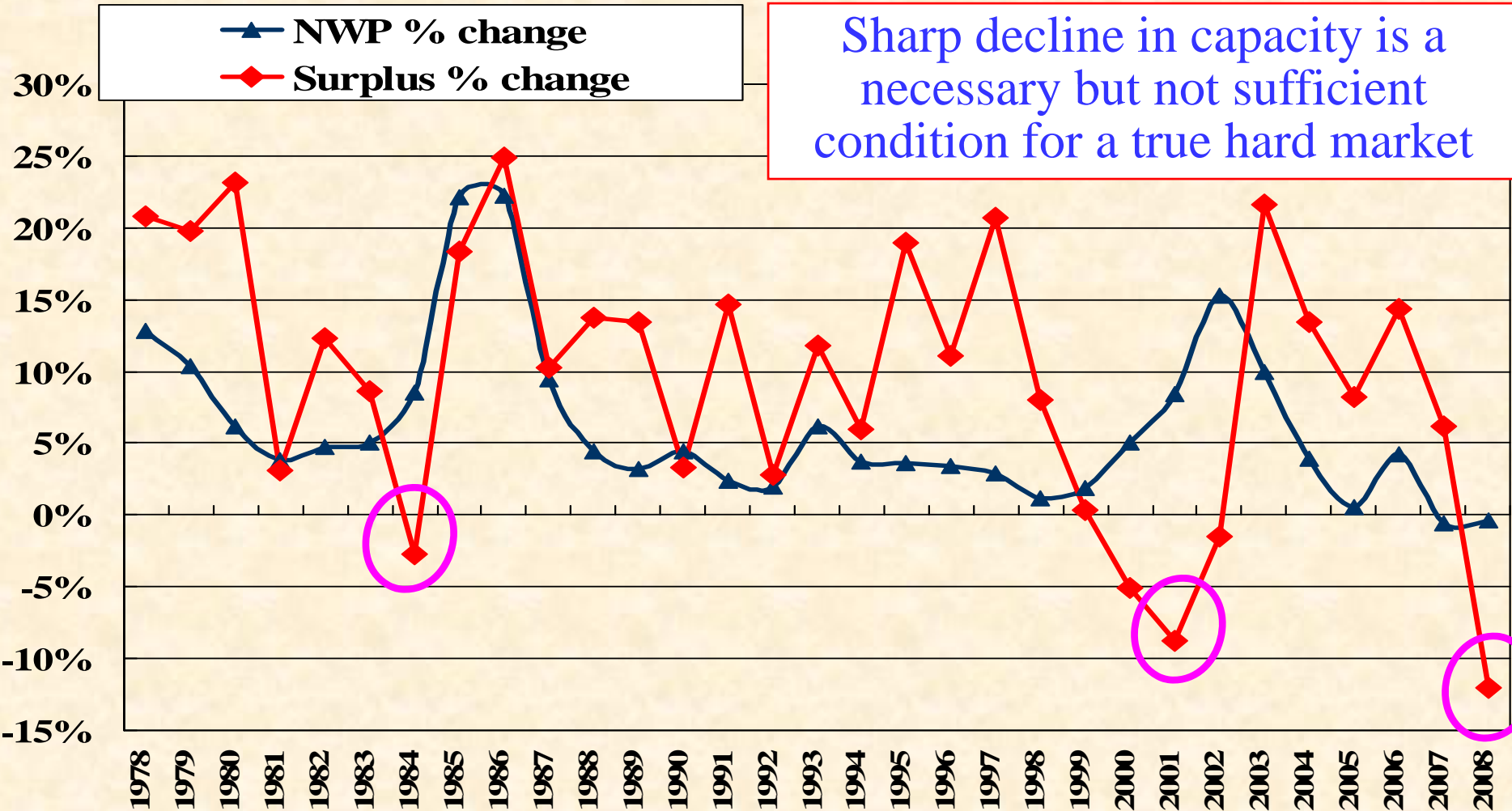
\*Ratio is for end-of-quarter surplus immediately prior to event. Date shown is end of quarter prior to event.

\*\*Latest available

Source: PCS; Insurance Information Institute.



# Historically, Hard Markets Follow When Surplus “Growth” is Negative



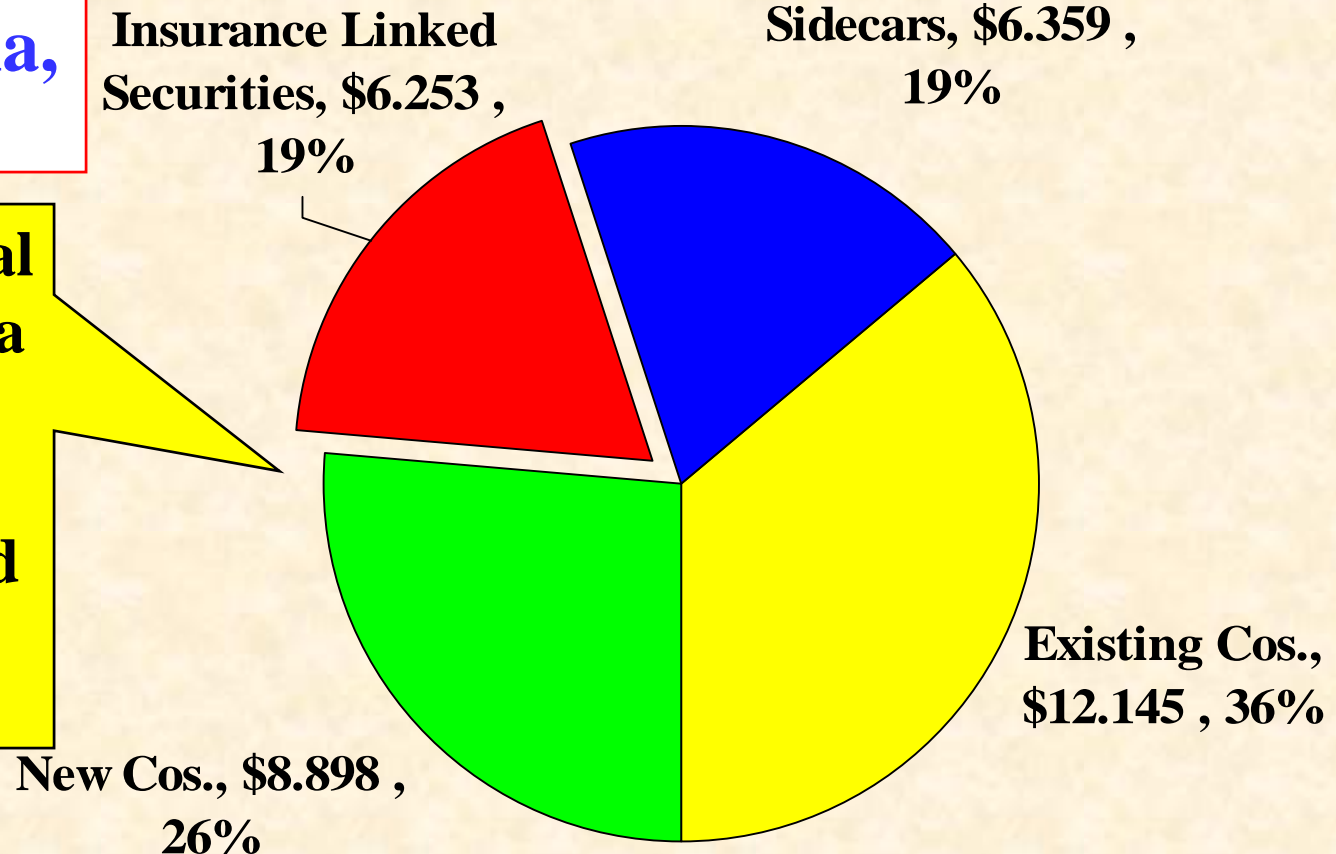


# Capital Raising by Class Within 15 Months of Katrina, Rita, Wilma

**\$33.7B in capital  
was raised in the  
wake of Katrina,  
Rita, Wilma**

**Nearly 2/3 of capital  
raised post-Katrina  
was from non-  
traditional  
sources—but could  
similar sums be  
raised in 2009?**

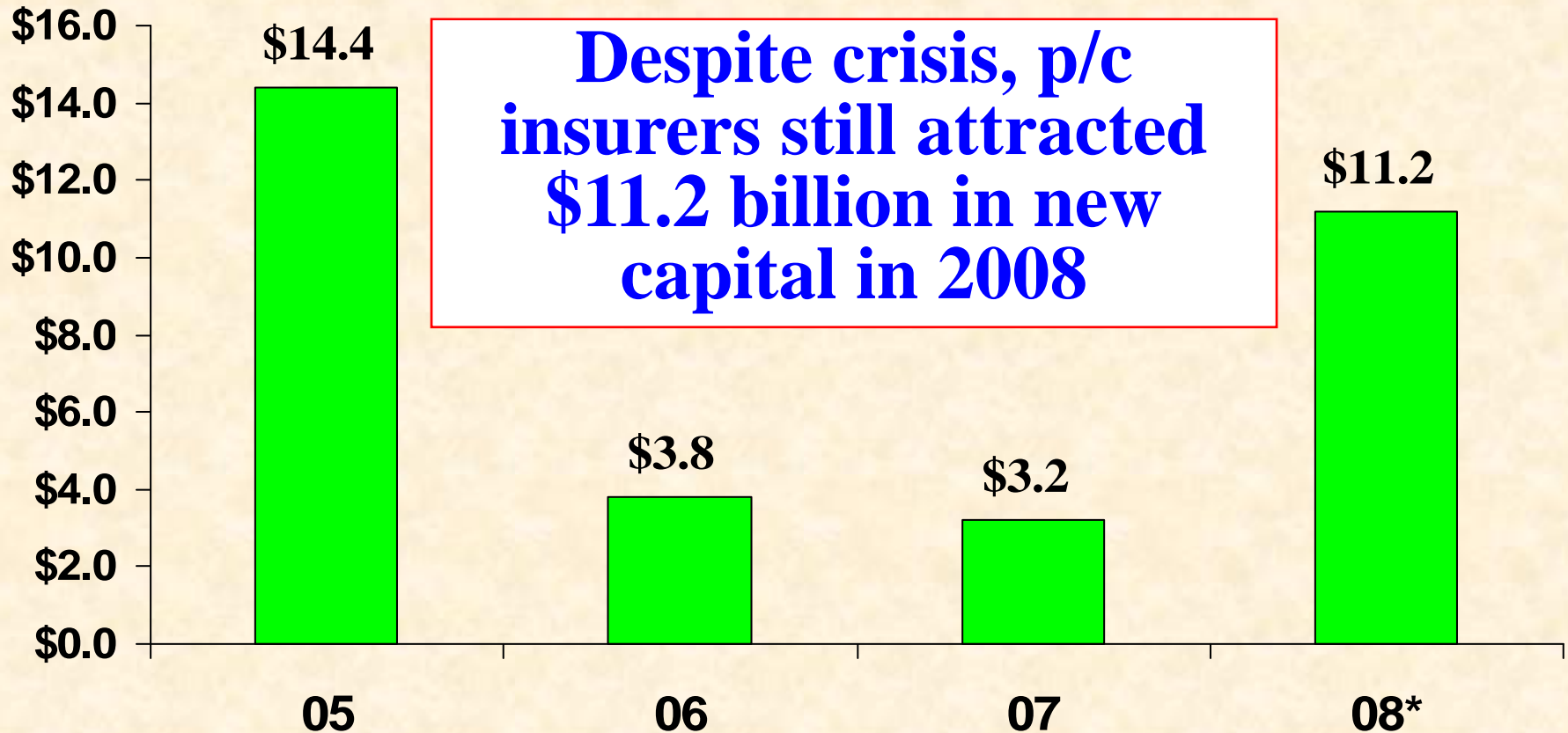
**\$ Billions**





# *New Funds Contributing to US Policyholder Surplus, 2005-2008*

**\$ Billions**

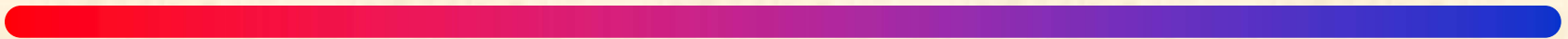


\*Through Q4 2009 (latest available).

Source: ISO; Insurance Information Institute

# FINANCIAL STRENGTH & RATINGS

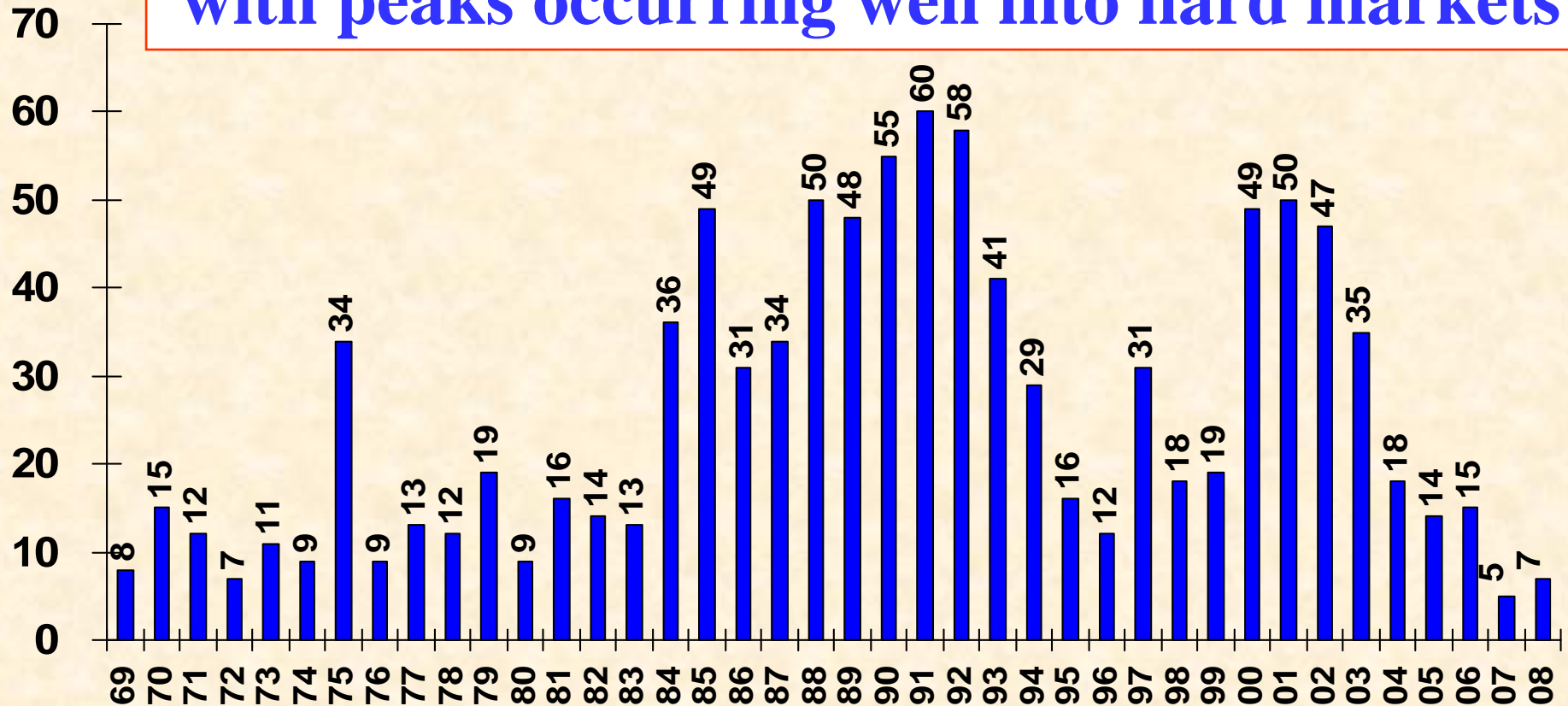
**Industry Has Weathered  
the Storms Well**





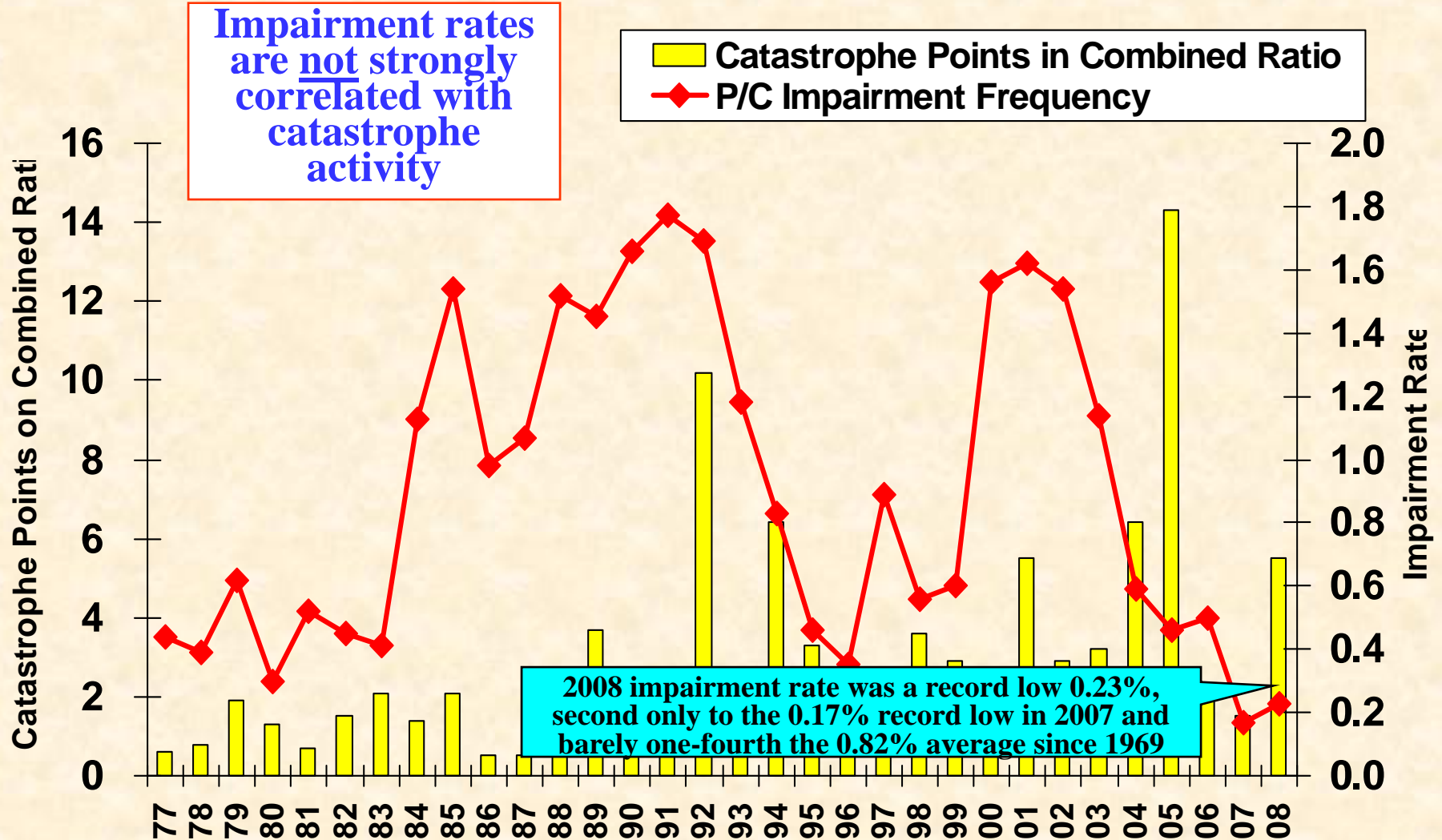
# *P/C Insurer Impairments, 1969-2008*

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



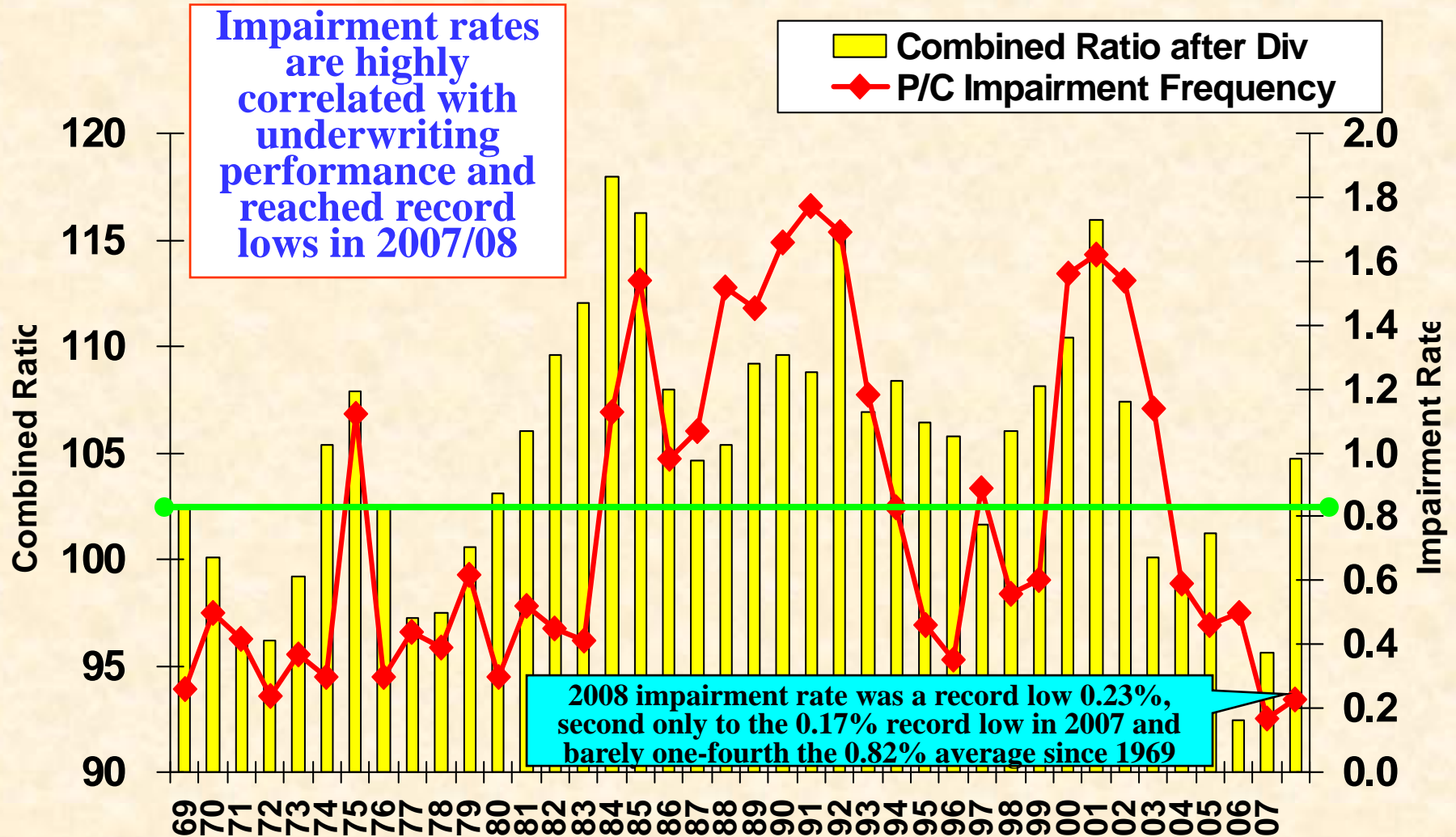


# *P/C Impairment Frequency vs. Catastrophe Points in Combined Ratio, 1977-2008*





# *P/C Insurer Impairment Frequency vs. Combined Ratio, 1969-2008*





# Number of Impairments by State, 1969-2008



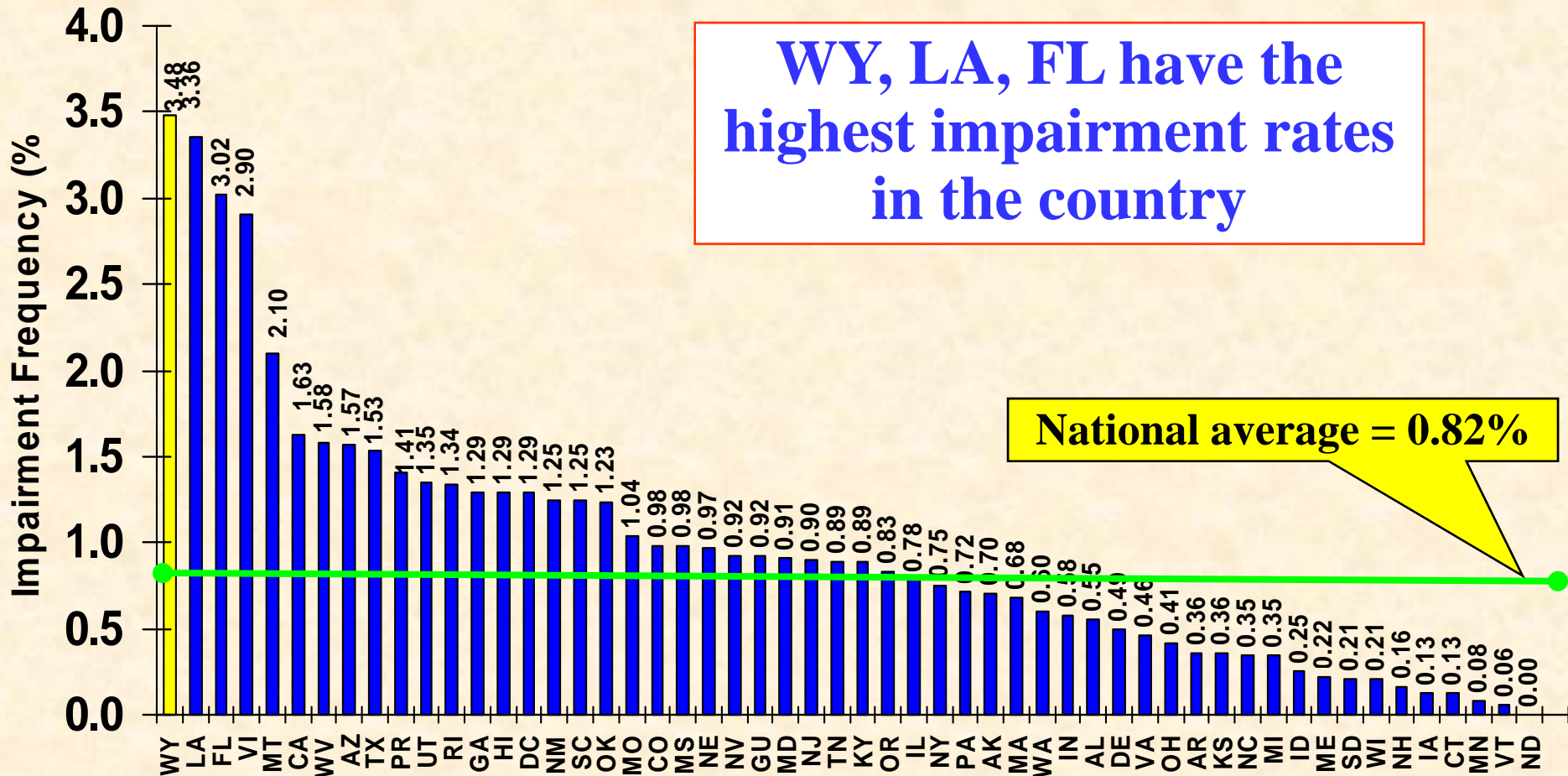


# Frequency of Impairments by State, 1969-2008

(Impairments per 100 Insurers Domiciled in State)

WY, LA, FL have the highest impairment rates in the country

National average = 0.82%

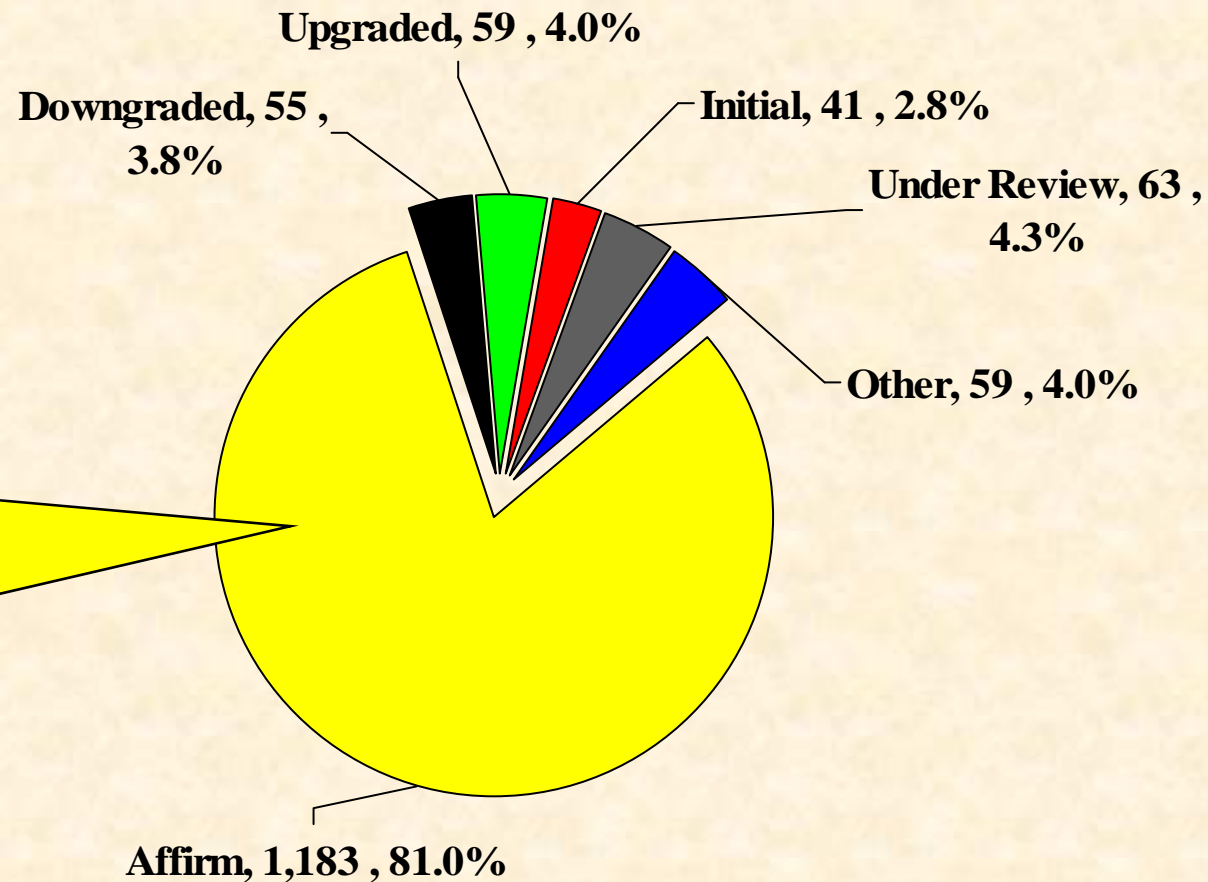




# Summary of A.M. Best's P/C Insurer Ratings Actions in 2008\*

P/C insurance is by design a resilient in business. The dual threat of financial disasters and catastrophic losses are anticipated in the industry's risk management strategy.

Despite financial market turmoil, high cat losses and a soft market in 2008, 81% of ratings actions by A.M. Best were affirmations; just 3.8% were downgrades and 4.0% upgrades



\*Through December 19.

Source: A.M. Best.



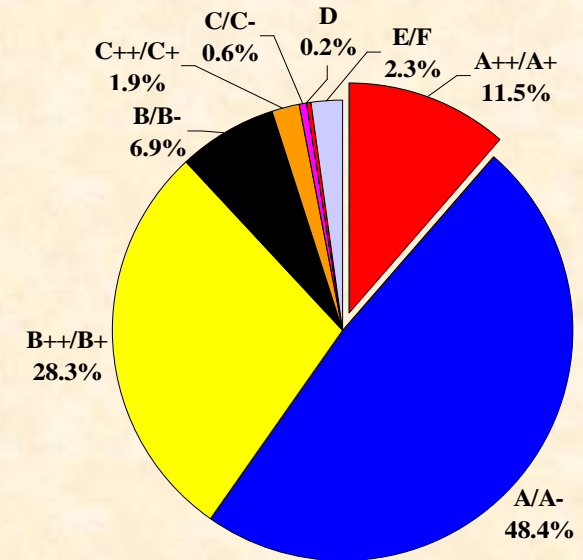
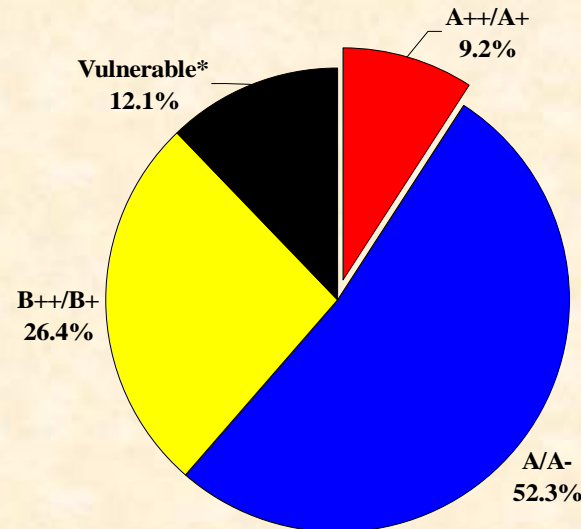
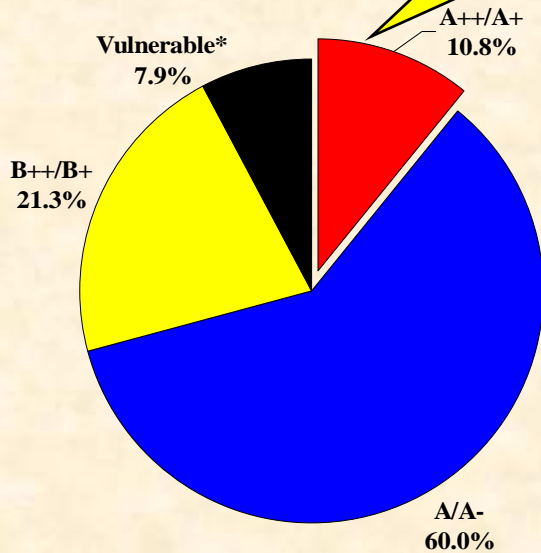
# Historical Ratings Distribution, US P/C Insurers, 2008 vs. 2005 and 2000

**2008**

**A++/A+ and  
A/A- gains**

**2005**

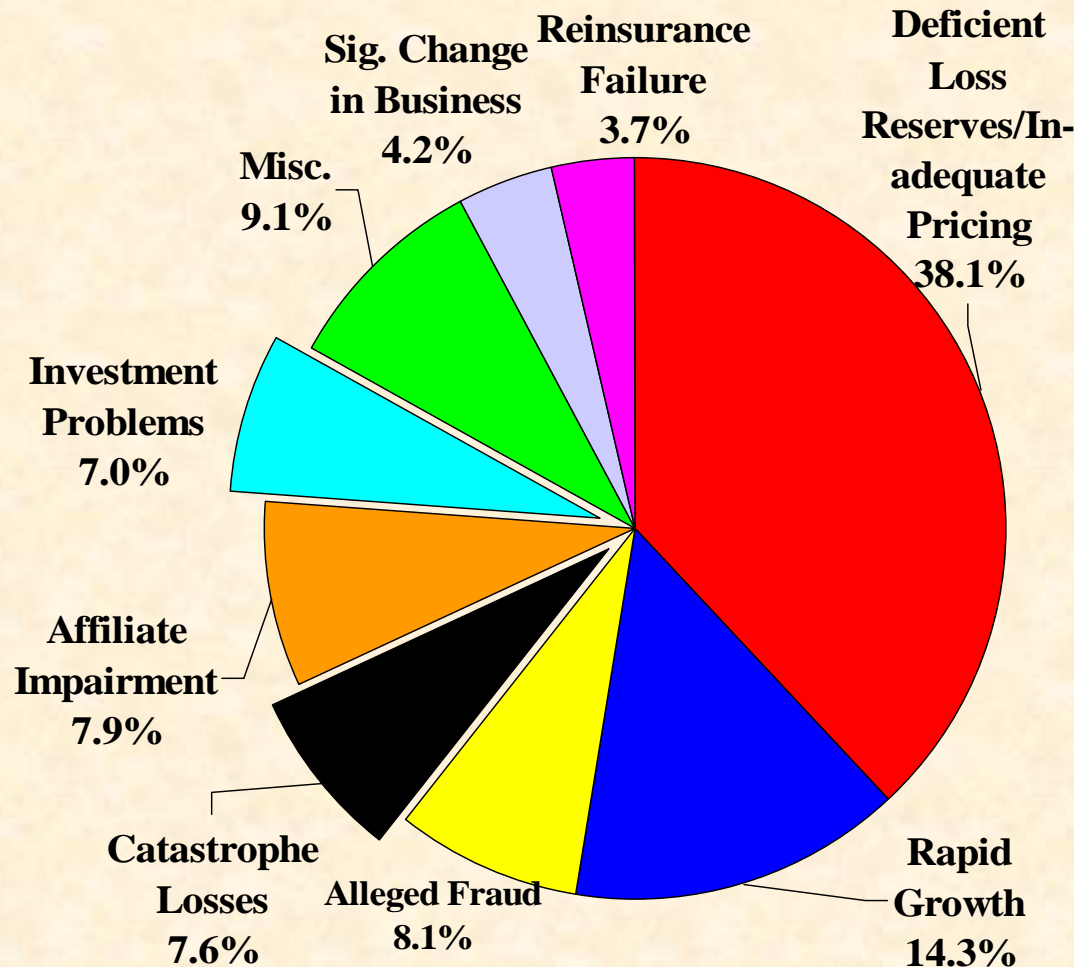
**2000**



**P/C insurer financial strength  
has improved since 2005  
despite financial crisis**



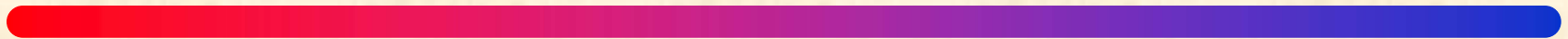
# Reasons for US P/C Insurer Impairments, 1969-2008



**Deficient loss reserves and inadequate pricing are the leading cause of insurer impairments, underscoring the importance of discipline. Investment and catastrophe losses play a much smaller role.**

# Critical Differences Between P/C Insurers and Banks

**Superior Risk Management Model  
& Low Leverage Make  
a Big Difference**





# *How Insurance Industry Stability Has Benefitted Consumers*

## **BOTTOM LINE:**

- **Insurance Markets—Unlike Banking—Are Operating *Normally***
- **The Basic Function of Insurance—the Orderly Transfer of Risk from Client to Insurer—Continues *Uninterrupted***
- **This Means that Insurers Continue to:**
  - **Pay claims (whereas 61 banks have gone under as of 5/31)**
    - *The Promise is Being Fulfilled*
  - **Renew existing policies (banks are reducing and eliminating lines of credit)**
  - **Write new policies (banks are turning away people who want or need to borrow)**
  - **Develop new products (banks are scaling back the products they offer)**

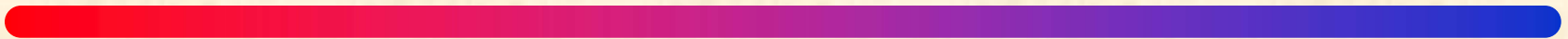


# Reasons Why P/C Insurers Have Fewer Problems Than Banks: A Superior Risk Management Model

- **Emphasis on Underwriting**
  - Matching of risk to price (via experience and modeling)
  - Limiting of potential loss exposure
  - *Some banks sought to maximize volume and fees and disregarded risk*
- **Strong Relationship Between Underwriting and Risk Bearing**
  - **Insurers always maintain a stake in the business they underwrite, keeping “skin in the game” at all times**
  - *Banks and investment banks package up and securitize, severing the link between risk underwriting and risk bearing, with (predictably) disastrous consequences—straightforward moral hazard problem from Econ 101*
- **Low Leverage**
  - Insurers do not rely on borrowed money to underwrite insurance or pay claims → *There is no credit or liquidity crisis in the insurance industry*
- **Conservative Investment Philosophy**
  - High quality portfolio that is relatively less volatile and more liquid
- **Comprehensive Regulation of Insurance Operations**
  - The business of insurance remained comprehensively regulated whereas a separate banking system had evolved largely outside the auspices and understanding of regulators (e.g., hedge funds, private equity, complex securitized instruments, credit derivatives—CDS’s)
- **Greater Transparency**
  - Insurance companies are an open book to regulators and the public

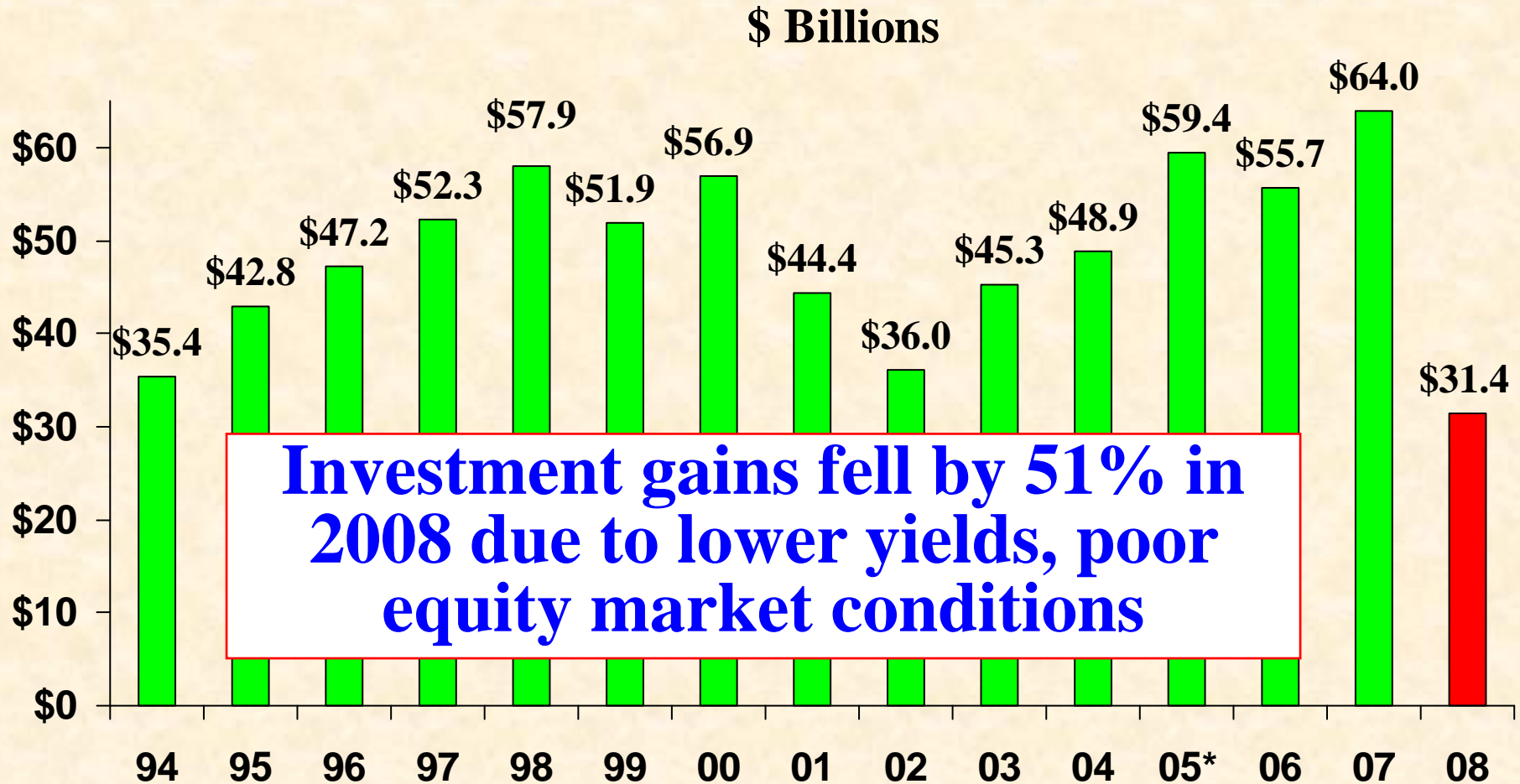
# Investment Performance

*Investments are the Principle  
Source of Declining  
Profitability*





# Property/Casualty Insurance Industry Investment Gain: 1994- 2008<sup>1</sup>



<sup>1</sup>Investment gains consist primarily of interest, stock dividends and realized capital gains and losses.

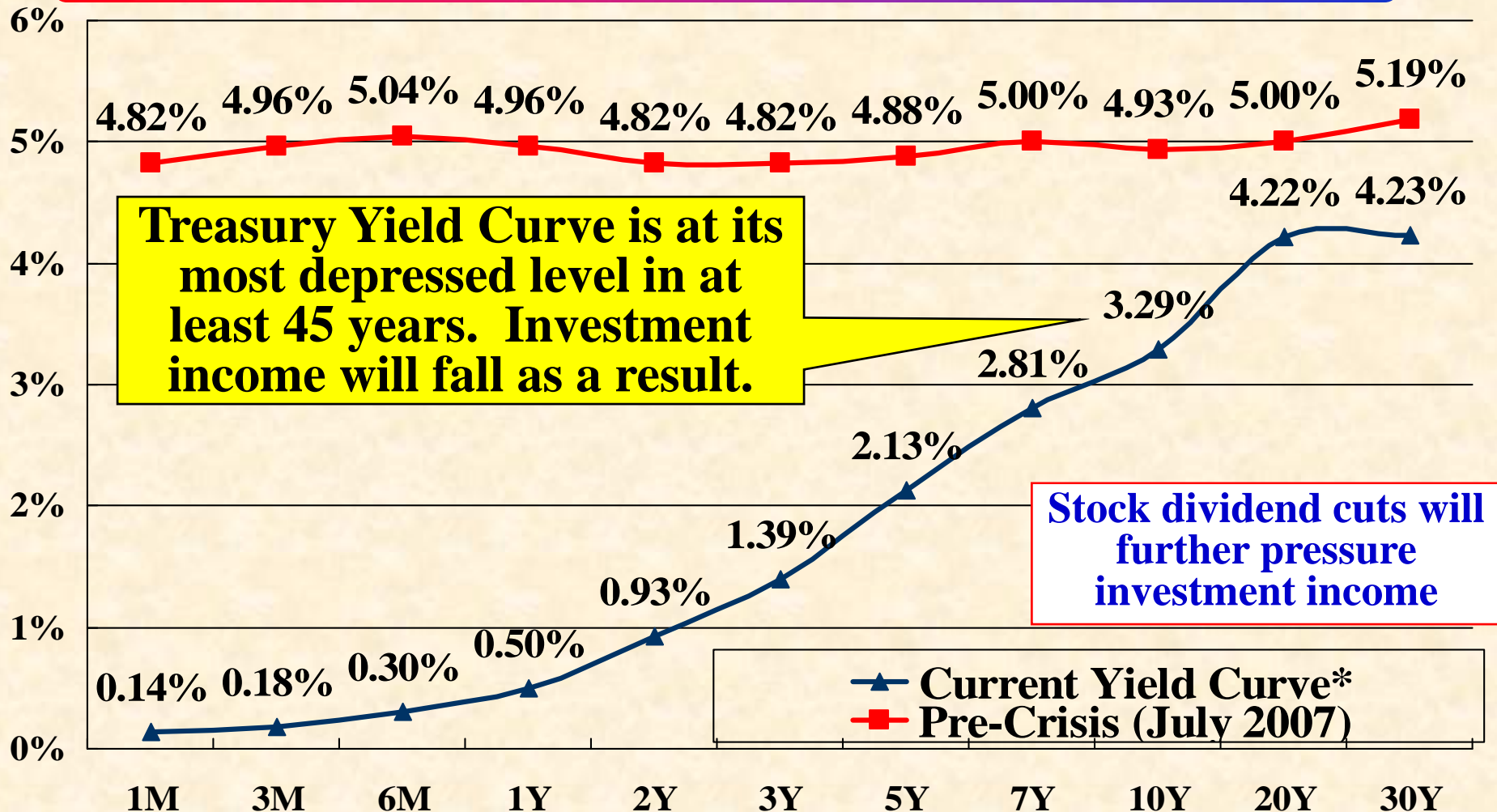
2006 figure consists of \$52.3B net investment income and \$3.4B realized investment gain.

\*2005 figure includes special one-time dividend of \$3.2B.

Sources: ISO; Insurance Information Institute.



# Treasury Yield Curves: Pre-Crisis vs. Current\*



\*May 2009.

Sources: Federal Reserve; Insurance Information Institute.



# *Insurance Information Institute On-Line*

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