

Financing Catastrophic Loss Amid Financial Catastrophe What Have We Learned?

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Presentation Outline



- After the Crisis: Insurance Industry Financial Overview & Outlook
 - Profitability
 - Sector Performance: Personal & Commercial Lines, Reinsurance
 - Premium Growth
 - Underwriting Performance
 - Financial Market Impacts
 - Catastrophe Loss Review

Seven Lessons (Re)Insurers Must Learn from the Financial Crisis

- 1. Capital Becomes Scarce Exactly When You Need It Most
- 2. Capital Becomes Most Expensive Just When You Can Afford It the Least
- ART Market Is Not Immune to Financial Turmoil
- 4. Investment Earnings Shrink Just When You Could Really Use It
- 5. Government-Run Insurers Are Not Immune to Financial Crises Despite What They Think and How They Act
- 6. Exposures Get Slammed
- 7. P/C Insurance & Reinsurance Industries Are Resilient & Strong

Q&A

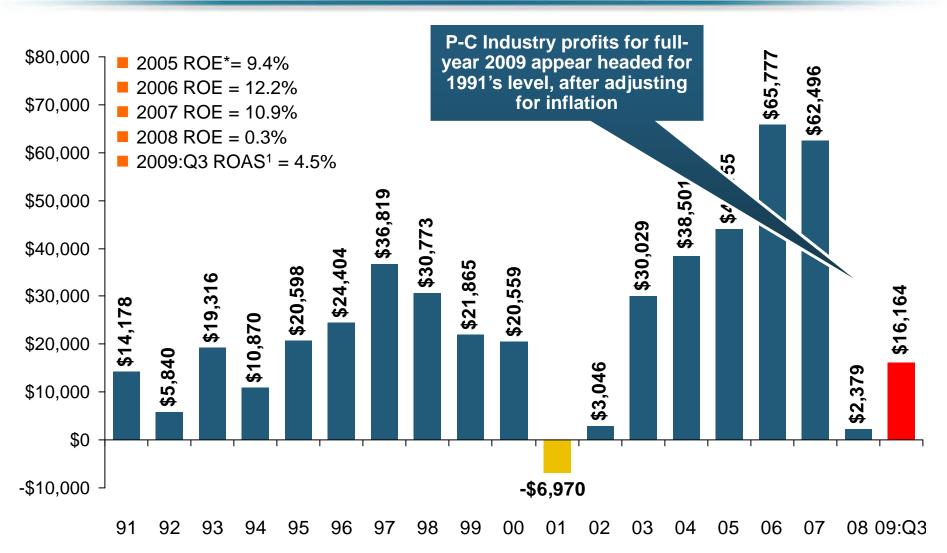


Profitability

Historically Volatile

P/C Net Income After Taxes 1991–2009:Q3 (\$ Millions)



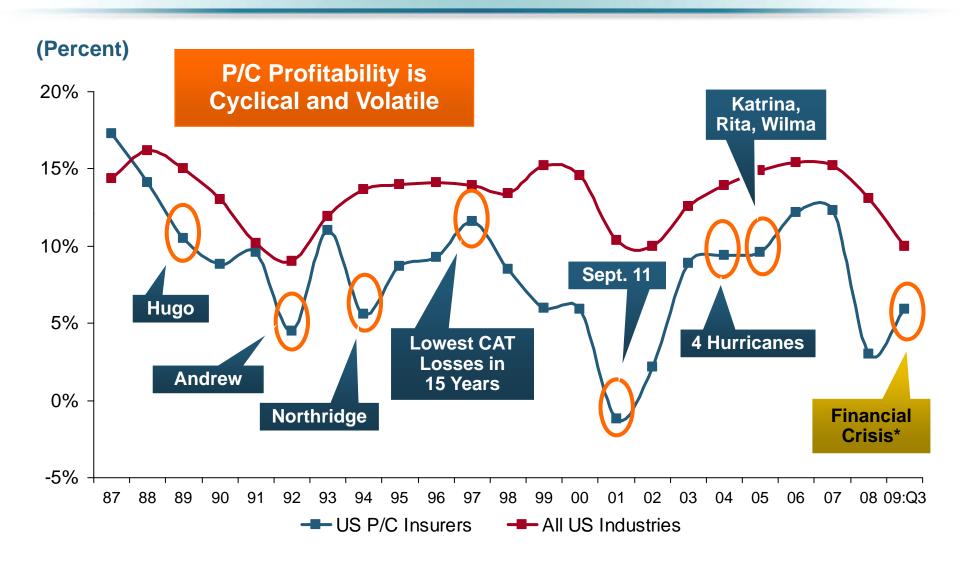


^{*} ROE figures are GAAP; ¹Return on avg. surplus. Excluding Mortgage & Financial Guaranty insurers yields a 4.5% ROAS for 2008 and 5.9% for the first 9 months of 2009. 2009:Q3 net income was \$20.5 billion excluding M&FG.

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

ROE: P/C vs. All Industries1987–2009:Q3*





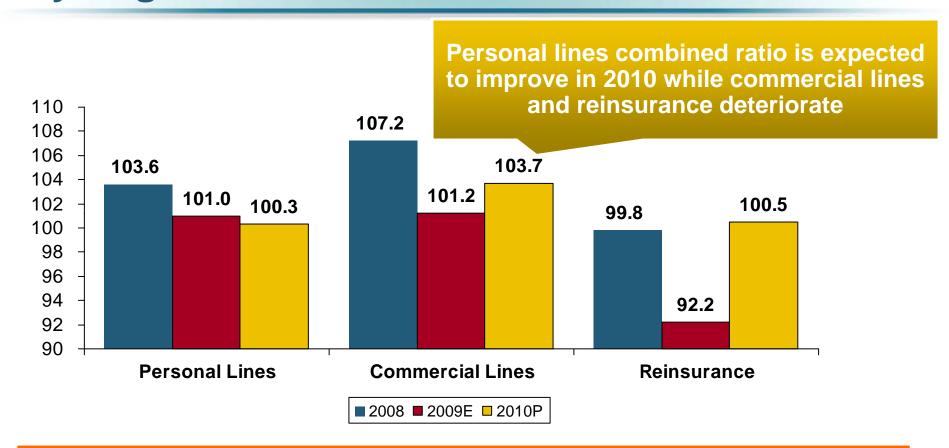
^{*} Excludes Mortgage & Financial Guarantee in 2008 and 2009 through Q3. Sources: ISO, *Fortune*; Insurance Information Institute.



Performance by Segment: Commercial/Personal Lines & Reinsurance

Calendar Year Combined Ratios by Segment: 2008-2010P

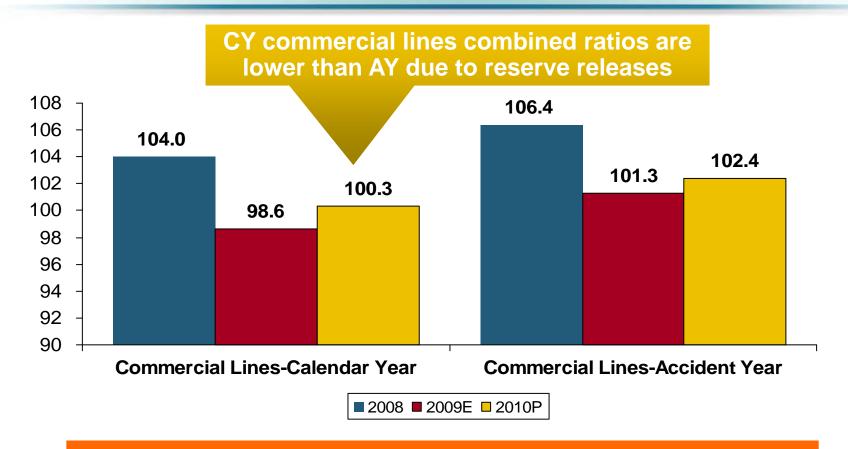




Overall deterioration in 2010 underwriting performance is due to expected return to normal catastrophe activity along with deteriorating underwriting performance related to the prolonged commercial soft market

Calendar vs. Accident Year Combined Ratios by Segment: 2008-2010P*





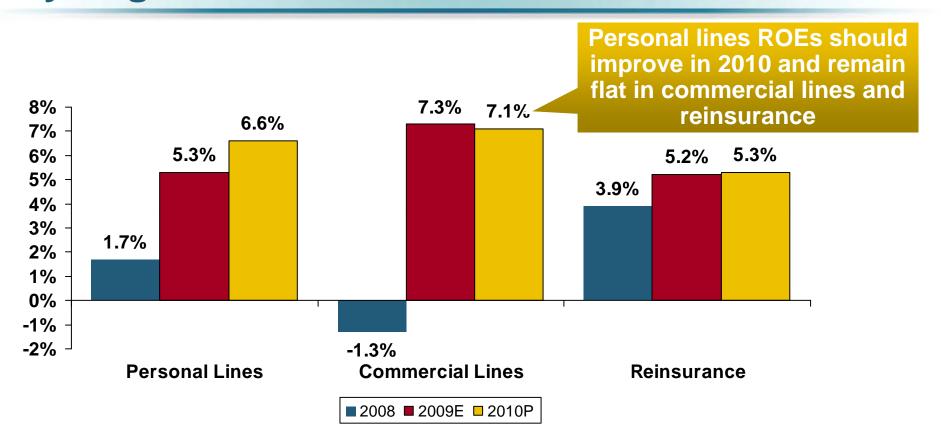
The ability of reserves releases to favorably impact calendar year results will diminish over time reserved redundancies fall

^{*}Normalized to reflect average/typical level of catastrophe losses.

Sources: A.M. Best (historical and estimates/projected for 2009 and 2010); Insurance Information Institute.

After-Tax Return on Surplus (ROE) by Segment: 2008-2010P

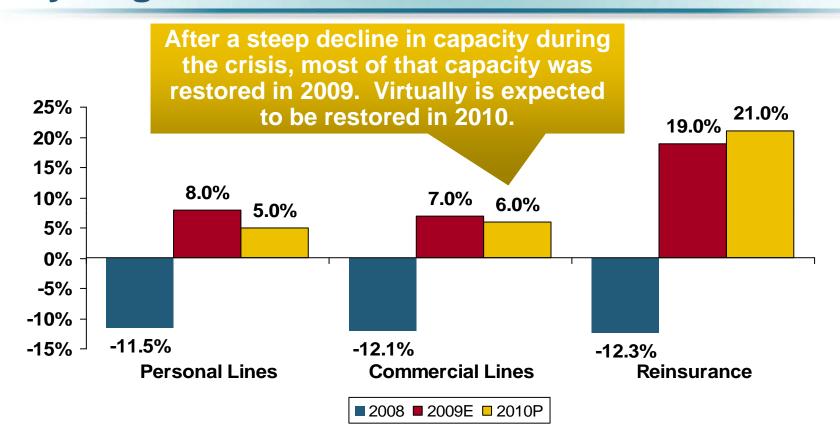




Profitability will rise or stabilize across most p/c lines, barring a financial crisis relapse or major catastrophic losses

Change in Policyholder Surplus by Segment: 2008-2010P

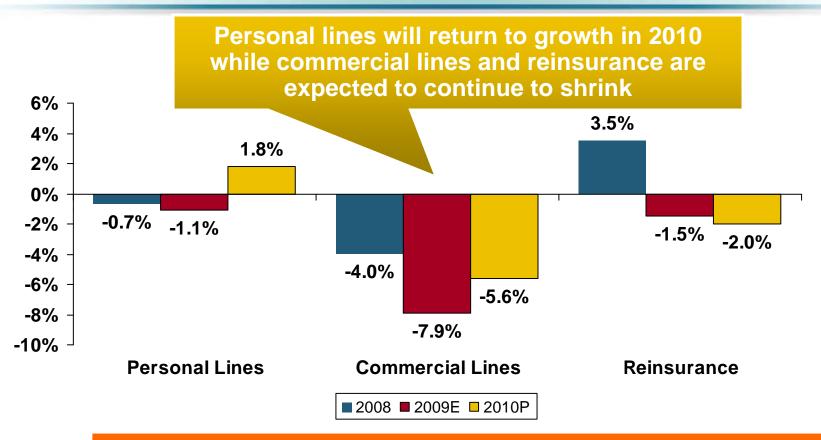




Rapid growth in policyholder surplus to pre-crisis levels combined with ongoing slow growth or declines in premiums (esp. in commercial lines) implies a build-up of excess capacity—a major factor in weak commercial lines and reinsurance pricing

Net Written Premium Growth by Segment: 2008-2010P

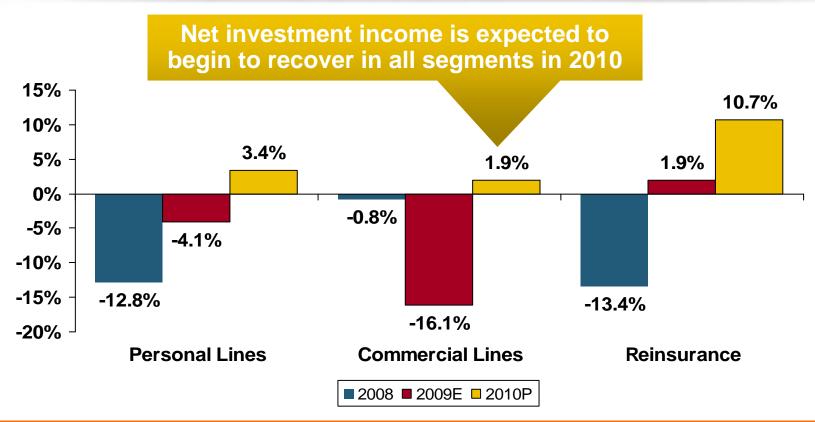




Rate and exposure are more favorable in personal lines, whereas a prolonged soft market and sluggish recovery from the recession weigh on commercial lines. Low catastrophe losses and ample capacity are holding down reinsurance prices while higher insurer retentions impact premiums

Change in Net Investment Income by Segment: 2008-2010P*

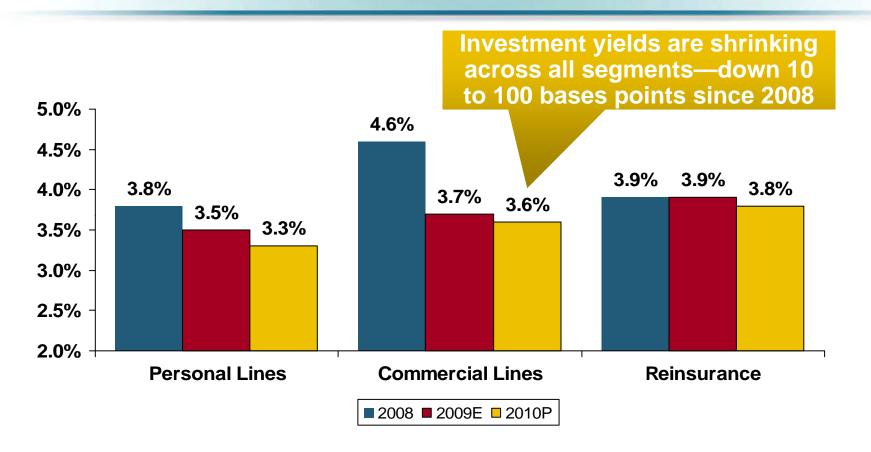




Investment income consists primarily of interest on bonds and stock dividends. Both were hit hard during the financial crisis as the Fed slashed interest rates to near zero and corporations cut dividends. A recovery in investment asset values beginning in Q2 2009—which reduced realized capital losses—has helped offset some of the decrease in investment income.

Investment Yield by Segment: 2008-2010P*

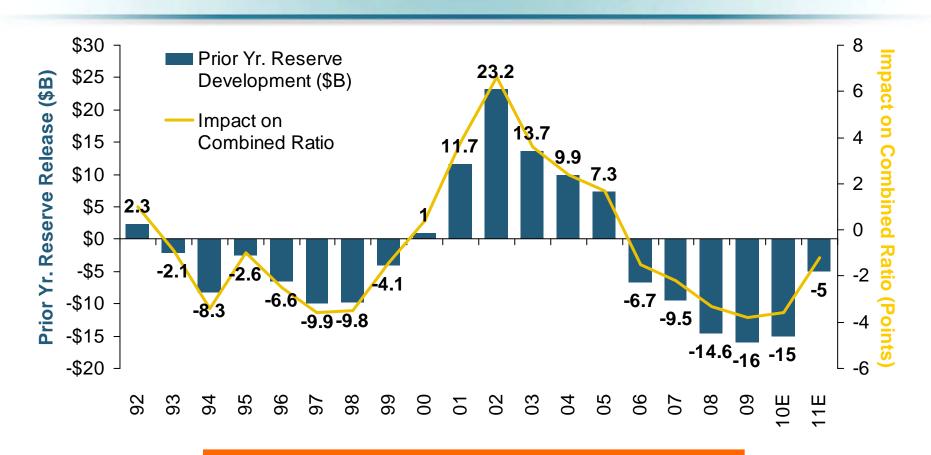




The Fed slashed interest rates in 2008 and has kept them low since, eroding the yield on all types of bonds, especially US Treasury securities. Yields will not recover until the Fed begins monetary policy tightening.

P/C Reserve Development, 1992–2011E





Reserve Releases Will Expected to Taper Off in 2010 and Drop Significantly in 2011

Note: 2005 reserve development excludes a \$6 billion loss portfolio transfer between American Re and Munich Re. Including this transaction, total prior year adverse development in 2005 was \$7 billion. The data from 2000 and subsequent years excludes development from financial guaranty and mortgage insurance.

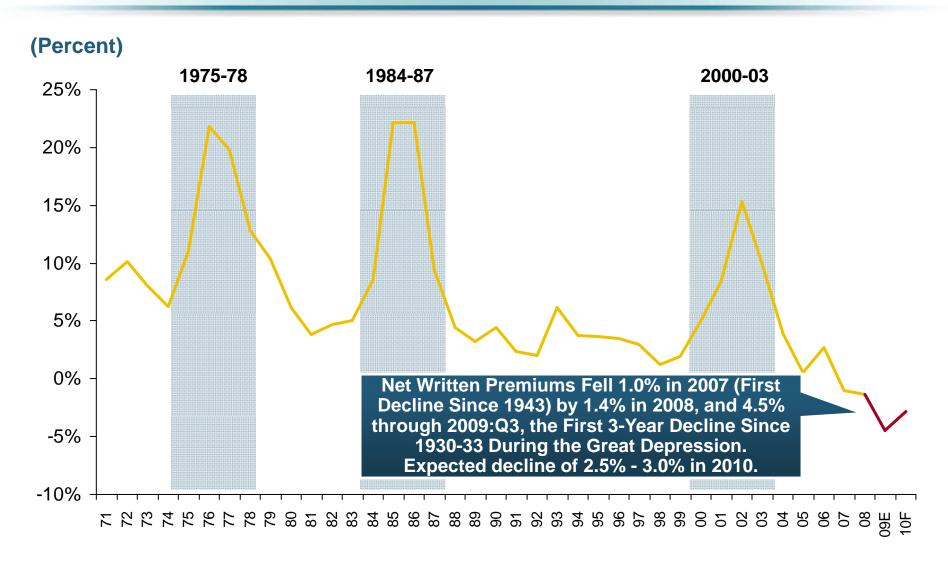
Sources: Barclay's Capital; A.M. Best.



P/C Premium Growth Primarily Driven by the Industry's Underwriting Cycle, Not the Economy

Strength of Recent Hard Markets by NWP Growth

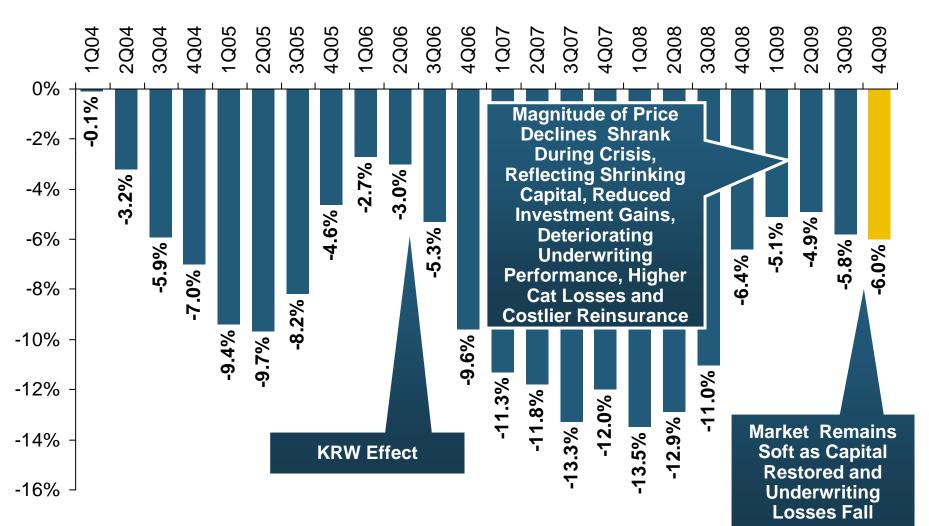




Average Commercial Rate Change, All Lines, (1Q:2004–4Q:2009)

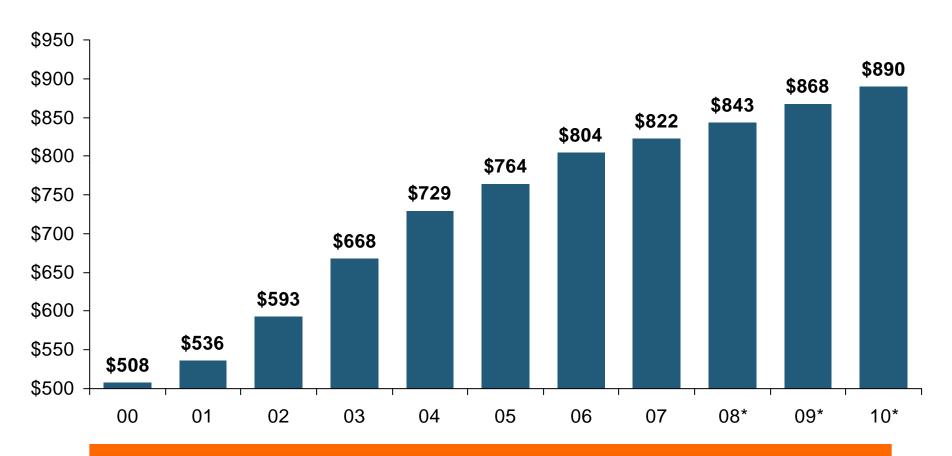


(Percent)



Average Premium for Home Insurance Policies**





Countrywide Home Insurance Expenditures Increased by an Estimated 2.5%in 2008, 3% in 2009 and 2010

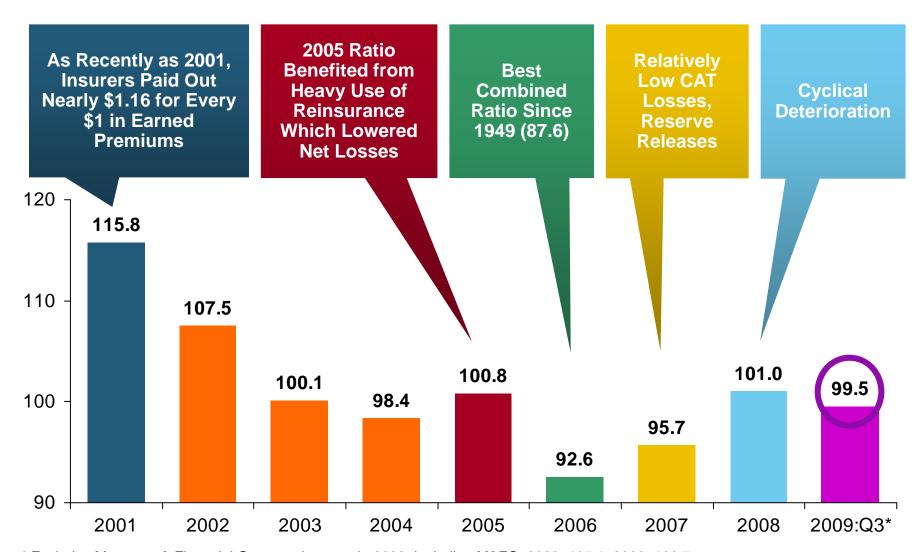
^{*} Insurance Information Institute Estimates/Forecasts **Excludes state-run insurers. Source: NAIC, Insurance Information Institute estimates 2008-2010 based on CPI data.



Underwriting Trends – Financial Crisis Does *Not*Directly Impact Underwriting Performance

P/C Insurance Industry Combined Ratio, 2001–2009:Q3*

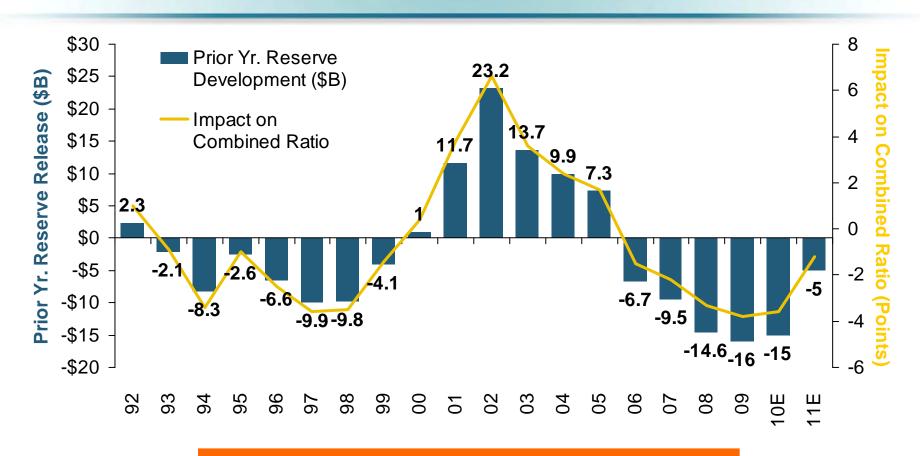




^{*} Excludes Mortgage & Financial Guaranty insurers in 2008. Including M&FG, 2008=105.1, 2009=100.7 Sources: A.M. Best, ISO.

P/C Reserve Development, 1992–2011E





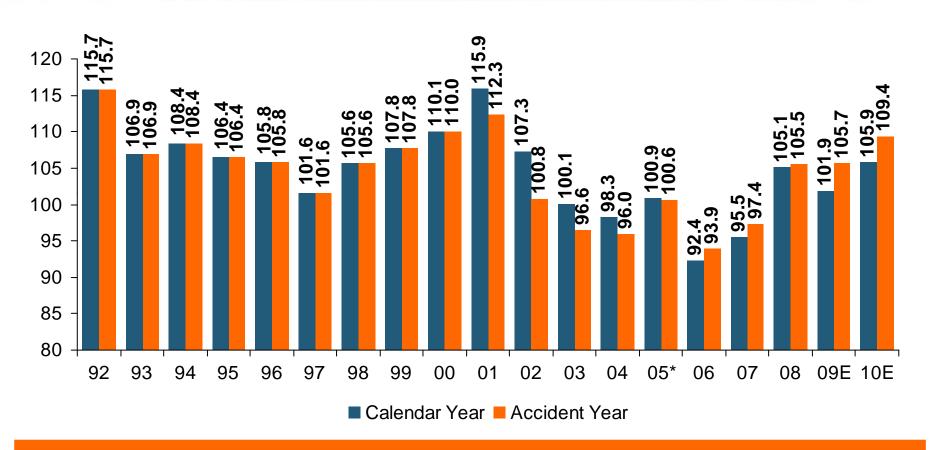
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Sources: Barclay's Capital; A.M. Best.

Calendar Year vs. Accident Year P/C Combined Ratio: 1992–2010E¹





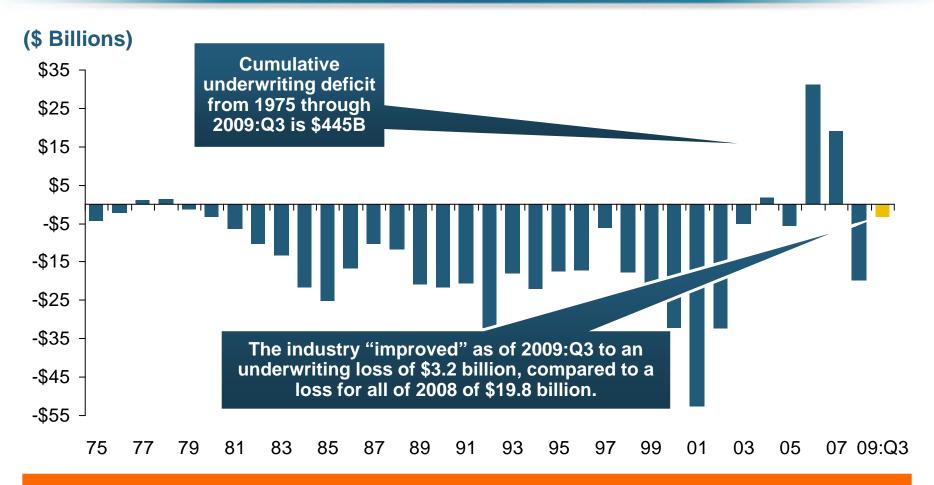
Accident Year Results Show a More Significant Deterioration in Underwriting Performance. Calendar Year Results Are Helped by Reserve Releases

Note: 2005 reserve development excludes a \$6 billion loss portfolio transfer between American Re and Munich Re. Including this transaction, total prior year adverse development in 2005 was \$7 billion. The data from 2000 and subsequent years excludes development from financial guaranty and mortgage insurance.

Sources: Barclay's Capital; A.M. Best.

Underwriting Gain (Loss) 1975–2009:Q3*





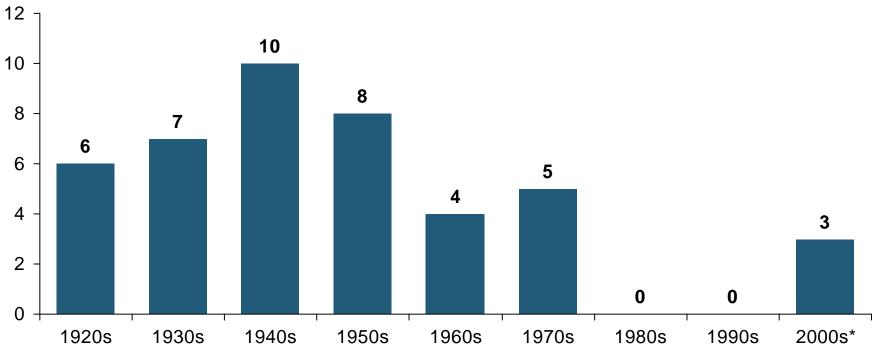
Large Underwriting Losses Are *NOT* Sustainable in Current Investment Environment

^{*} Includes mortgage and financial guarantee insurers. Sources: A.M. Best, ISO; Insurance Information Institute.

Number of Years with Underwriting Profits by Decade, 1920s–2000s



Number of Years with Underwriting Profits



Underwriting Profits Were Common Before the 1980s (40 of the 60 Years Before 1980 Had Combined Ratios Below 100) – But Then They Vanished. Not a Single Underwriting Profit Was Recorded in the 25 Years from 1979 Through 2003

Note: Data for 1920-1934 based on stock companies only.

Sources: Insurance Information Institute research from A.M. Best Data.

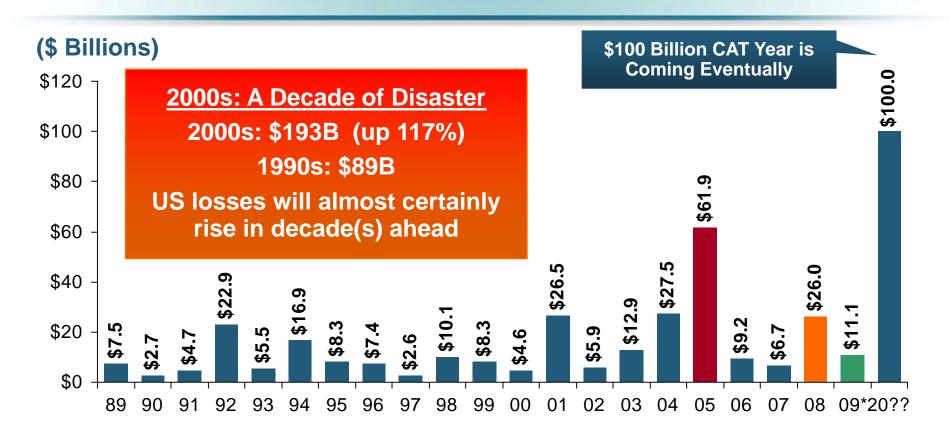
^{* 2000} through 2009. 2009 combined ratio was 100.7 through Q3.



Catastrophic Loss – Catastrophe Losses Trends Are Trending Adversely

US Insured Catastrophe Losses





Losses in the Decade of the 2000s Were More than Double the 1990s,

But the Worst Has Yet to Come

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.

Sources: Property Claims Service/ISO; Insurance Information Institute.

^{* 2009} figure is Munich Re estimate.

Natural Catastrophe Losses in the U.S. 2009

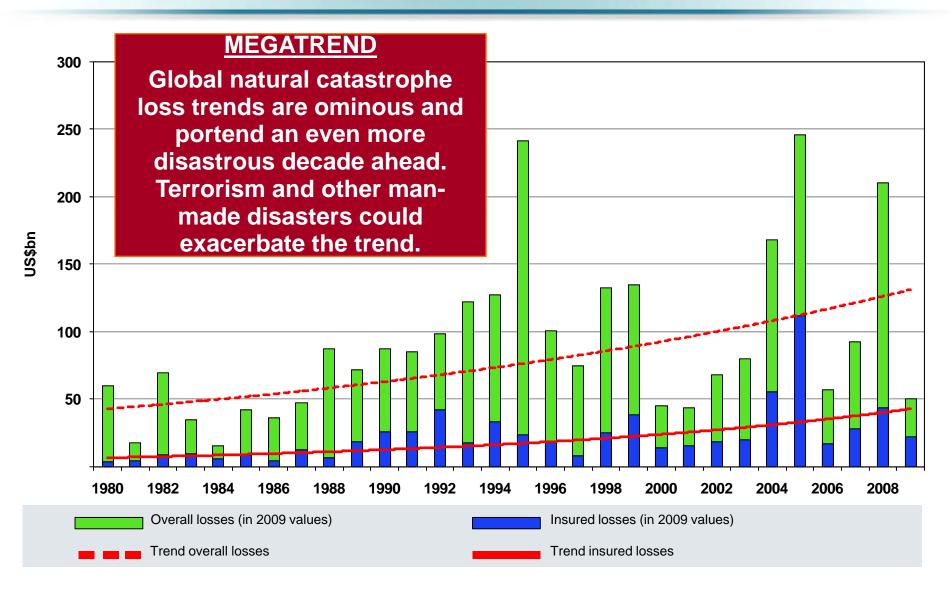


As of January 2010	Fatalities	Estimated Overall Losses (US \$m)	Estimate Insured (US \$m)	
Tropical Cyclones	8	Minor	Minor	
Severe Thunderstorms	21	13,710	9,625 [†]	
Winter Storms	70	1,600	770 [†]	2009 was a
Wildfires	6	280	185	year for thunderstori losses
Floods	22	1,600	232	

Sources: (unmarked) - MR NatCatSERVICE, ^{†-} Property Claims Services (PCS)

Global Natural Catastrophes 1980–2009 Overall and insured losses with trend

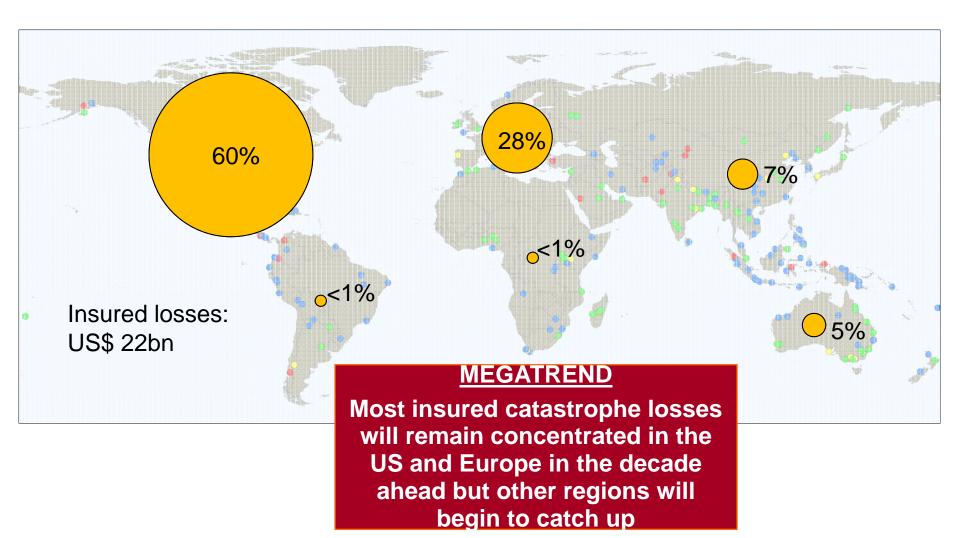




Source: Munich Re NatCatSERVICE; Insurance Information Institute.

Global natural catastrophes 2009 Percentage distribution per continent

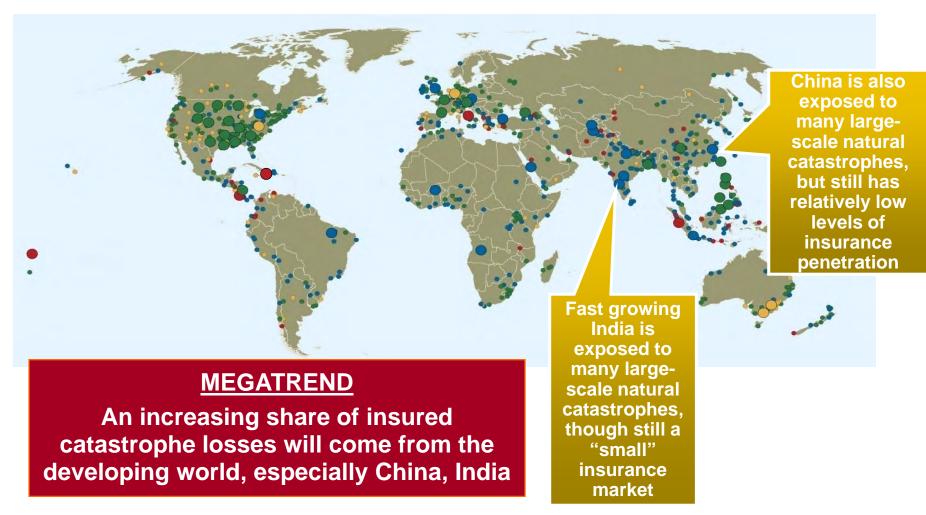




Sources: Munich Re NatCatSERVICE

Natural catastrophes 2009-2010 Worldmap





Source: Munich Re NatCatSERVICE; Insurance Information Institute.

U.S. Significant Natural Catastrophes in 2009



\$1+ billion economic loss and/or 50+ fatalities (as of Jan. 2010)

Date	Event	Est. Economic Losses (US \$m)	Estimated Insured Losses (US \$m)
January 26 - 28	Winter Storm	1,100	565 [†]
February 10 - 13	Thunderstorms	2,500	1,350 [†]
March 25 - 26	Thunderstorms	1,500	995 [†]
March – April	Flood	1,000	75
April 9 -11	Thunderstorms	1,700	1,150 [†]
June 10 -18	Thunderstorms	2,000	1,100 [†]
July 20 -21	Thunderstorms	1,000	800†

Sources: (unmarked) - MR

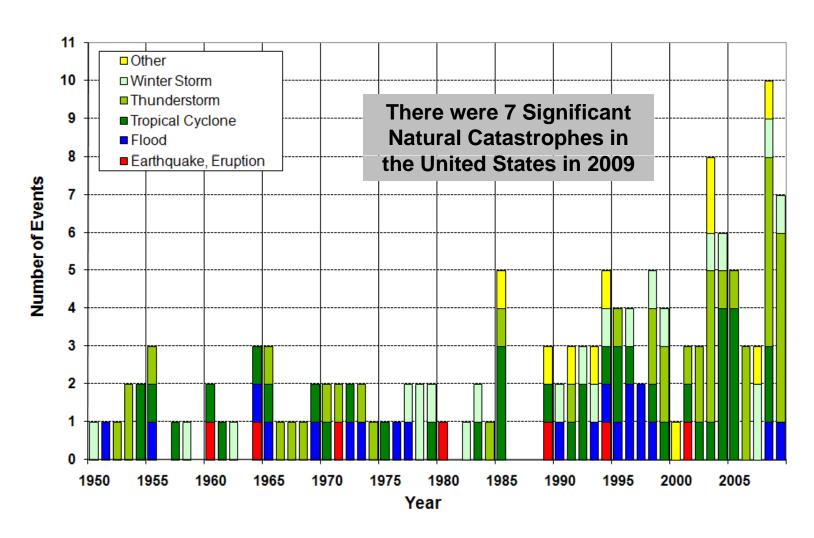
NatCat SERVICE,

t - Property Claims Services (PCS)

U.S. Significant Natural Catastrophes, 1950 – 2009



Number of Events (\$1+ Bill economic loss and/or 50+ fatalities)

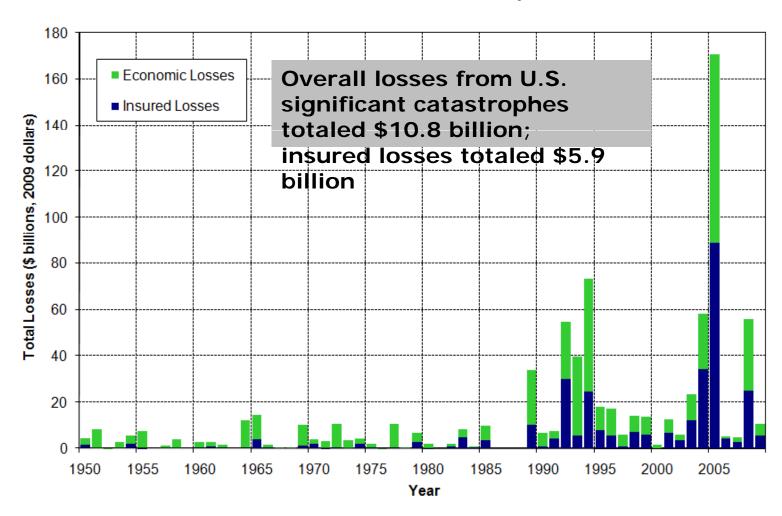


Sources: MR NatCatSERVICE

Losses from U.S. Significant Natural Catastrophes 1950 – 2009



(\$1+ billion economic loss and/or 50+ fatalities)

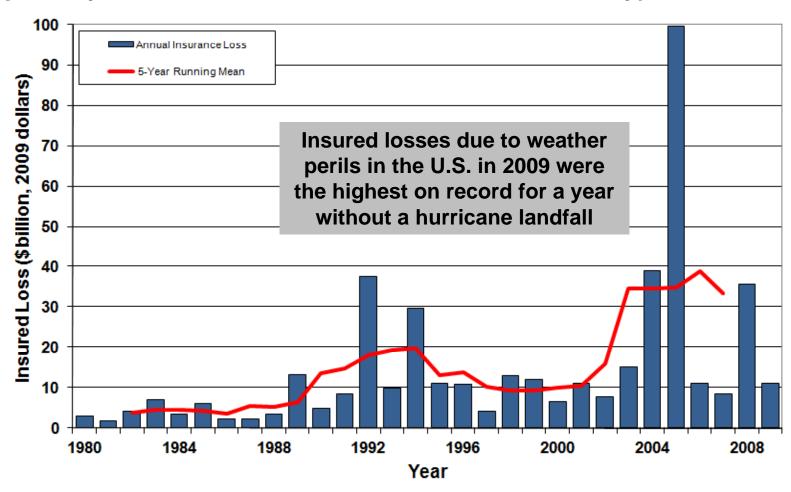


Sources: MR NatCatSERVICE

Insured Losses Due to Weather Perils in the U.S.: 1980 – 2009

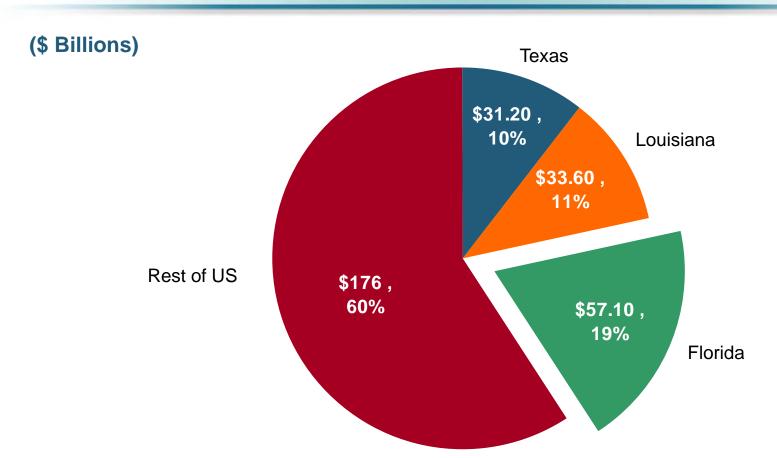


(Tropical Cyclone, Thunderstorm, and Winter Storm only)



Distribution of US Insured CAT Losses: TX, FL, LA vs. US, 1980-2008*





Florida Accounted for 19% of All US Insured CAT Losses from 1980-2008: \$57.1B out of \$297.9B

^{*} All figures (except 2006-2008 loss) have been adjusted to 2005 dollars. Source: PCS division of ISO.



Investment Performance

Investments Were a Principle Source of Declining Profitability, But Are Now Recovering

Property/Casualty Insurance Industry Investment Gain: 1994–2009:Q3¹



(\$ Billions)



Investment Gains Fell by 51% In 2008 Due to Lower Yields, Poor Equity Market Conditions. Through Three Quarters in 2009, Write-downs Were Offset by Unrealized Capital Gains

Sources: ISO; Insurance Information Institute.

¹ Investment gains consist primarily of interest, stock dividends and realized capital gains and losses.

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

P/C Insurer Net Realized Capital Gains, 1990-2009:Q3



-\$19.80



08 09Q3

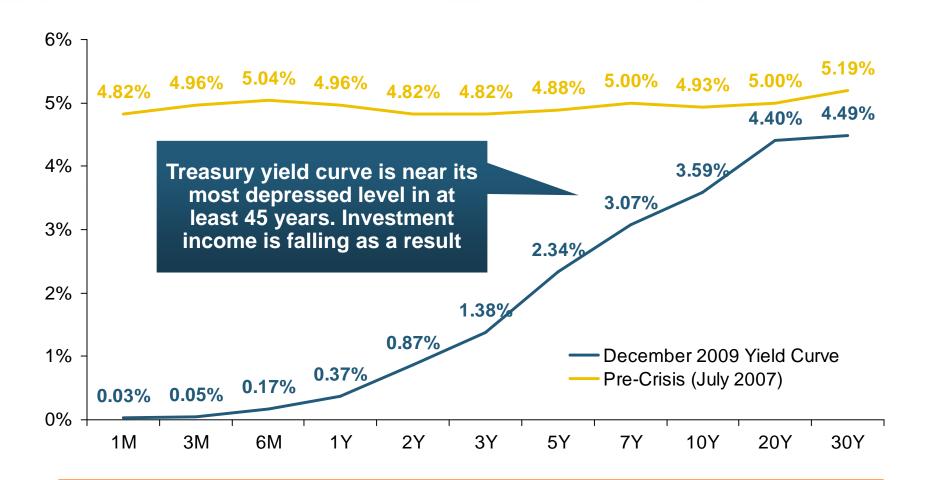
Realized Capital Losses Hit a Record \$19.8 Billion in 2008 Due to Financial Market Turmoil, a \$27.7 Billion Swing From 2007, Followed by an \$3.25B Drop through Q3 2009. This is a Primary Cause of 2008/2009's Large Drop in Profits and ROE

-\$15 -\$20

-\$25

Treasury Yield Curves: Pre-Crisis (July 2007) vs. Dec. 2009





Stock Dividend Cuts Will Further Pressure Investment Income

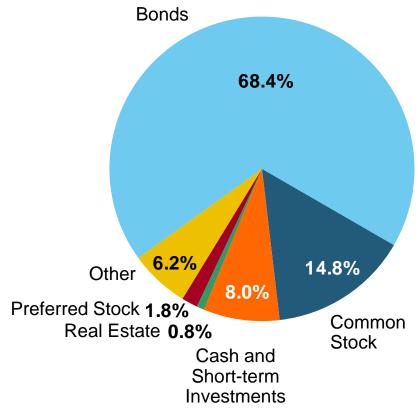
Distribution of P/C Insurance Industry's Investment Portfolio



Portfolio Facts

- Invested assets totaled \$1.2 trillion as of 12/31/08, down from \$1.3 trillion as of 12/31/07
- Insurers are generally conservatively invested, with 2/3+ of assets invested in bonds as of 12/31/08
- Only about 15% of assets were invested in common stock as of 12/31/08, down from 18% one year earlier
- Even the most conservative of portfolios were hit hard in 2008





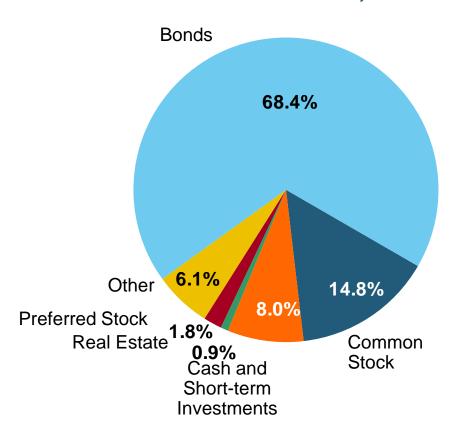
Distribution of P/C Insurance Industry's Investment Portfolio



Portfolio Facts

- Invested assets totaled \$1.214 trillion as of 12/31/08
- Insurers are generally conservatively invested, with more than 2/3 of assets invested in bonds as of 12/31/08
- Only about 15% of assets were invested in common stock as of 12/31/08
- Even the most conservative of portfolios was hit hard in 2008

As of December 31, 2008





Crisis Lesson #1

Capital is the Scarcest Exactly When You Need It the Most

Important Issues & Threats Facing Insurers: 2010–2015





Erosion of Capital

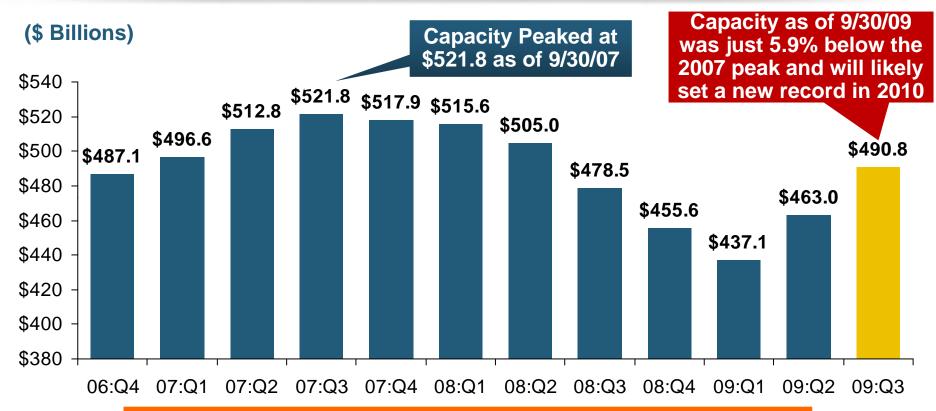
- Losses were larger and occurred more rapidly than was commonly understood or presumed possible
- Max surplus loss at 3/31/09 was 16%=\$85B from 9/30/07 peak
- P/C policyholder surplus could have been much larger
- Some insurers propped up results by reserve releases
- Decline in PHS of 1999–2002 was 15% over 3 years and was entirely made up and them some in 2003. Recent decline was ~16% in 5 quarters
- During the opening years of the Great Depression (1929–1933) PHS fell 37%, Assets fell 28% and Net Written Premiums fell by 35%. It took until 1939–40 before these key measures returned to their 1929 peaks

Bottom Line: Capital and Assets Fall Faster and Farther Than Many Believed Possible. It Will Take Until 2010 to Return to the 2007 Peaks (Without Market Relapse)

Source: Insurance Information Institute.

Policyholder Surplus, 2006:Q4–2009:Q3



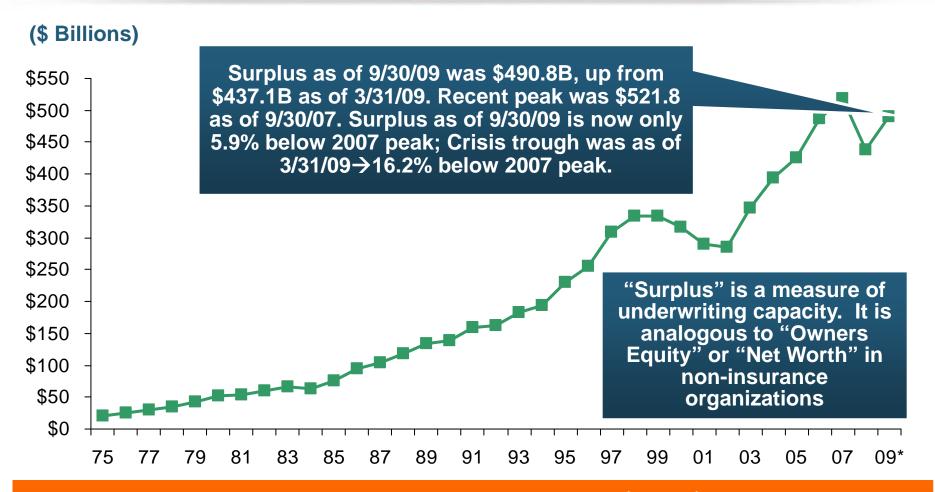


Declines Since 2007:Q3 Peak

Source: ISO, AM Best.

US Policyholder Surplus: 1975–2009:Q3*





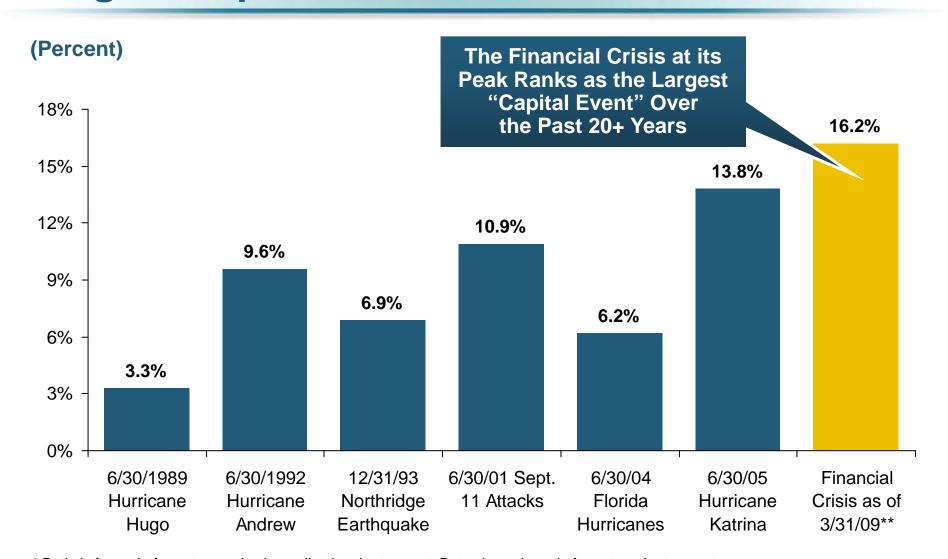
The Premium-to-Surplus Ratio Stood at \$0.87:\$1 as of 9/30/09, Up from Near Record Low of \$0.85:\$1 at Year-End 2007

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

^{*} As of 9/30/09

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

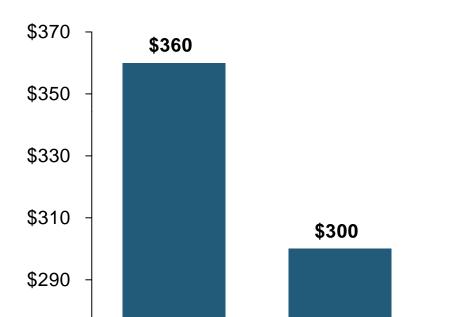
Source: PCS; Insurance Information Institute

^{**} Date of maximum capital erosion; As of 9/30/09 (latest available) ratio = 5.9%

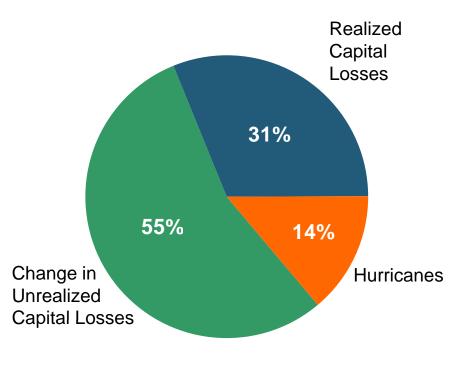
Global Reinsurance Capacity Shrank in 2008, Mostly Due to Investments







Source of Decline



Global Reinsurance Capacity Fell by an Estimated 17% in 2008

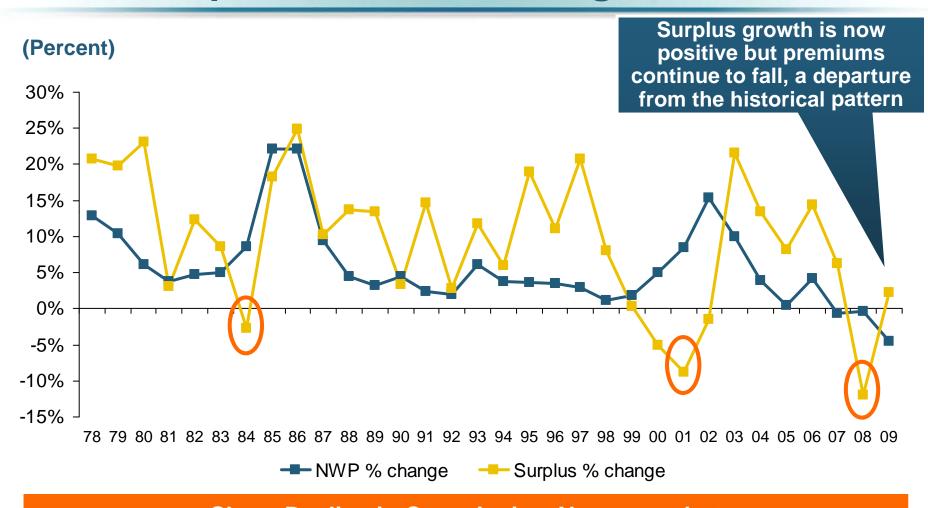
2007

\$270

2008

Historically, Hard Markets Follow When Surplus "Growth" is Negative*





Sharp Decline in Capacity is a Necessary but Not Sufficient Condition for a True Hard Market

^{* 2009} NWP and Surplus figures are YTD % changes as of Q3:09 vs Q3:08 Sources: A.M. Best, ISO, Insurance Information Institute



Crisis Lesson #2

Reloading is a Problem:
ART/Capital Markets May
Not Be Accessible During
a Financial Crisis

Market Seizure: A New Risk

Important Issues & Threats Facing Insurers: 2010–2015



2

Reloading Capital After "Capital Event"

- Continued asset price erosion coupled with major "capital event" would have lead to shortage of capital among some companies
- Possible Consequences: Insolvencies, forced mergers, calls for gov't aid, requests to relax capital requirements
- P/C insurers have come to assume that large amounts of capital can be raised quickly and cheaply after major events (post-9/11, Katrina)
 - This assumption was incorrect during and immediately after the crisis
- Cost of capital can rise sharply (relative "risk-free" rates), reflecting both scarcity, increasing volatility and heightened investor risk aversion

Implications: P/C (re)insurers need to protect capital today and develop detailed contingency plans to raise fresh capital and generate internally.

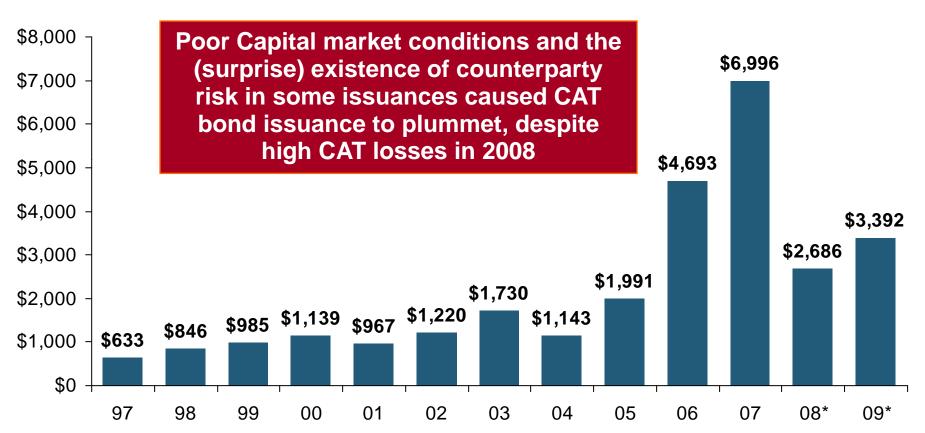
Was a reality for some life insurers.

Source: Insurance Information Institute.

Catastrophe Bonds: Risk Capital Issuance







Catastrophe bond risk capital issuance plunged by 62% when credit market turmoil spread in 2008 but was up 26% in 2009 as markets improved



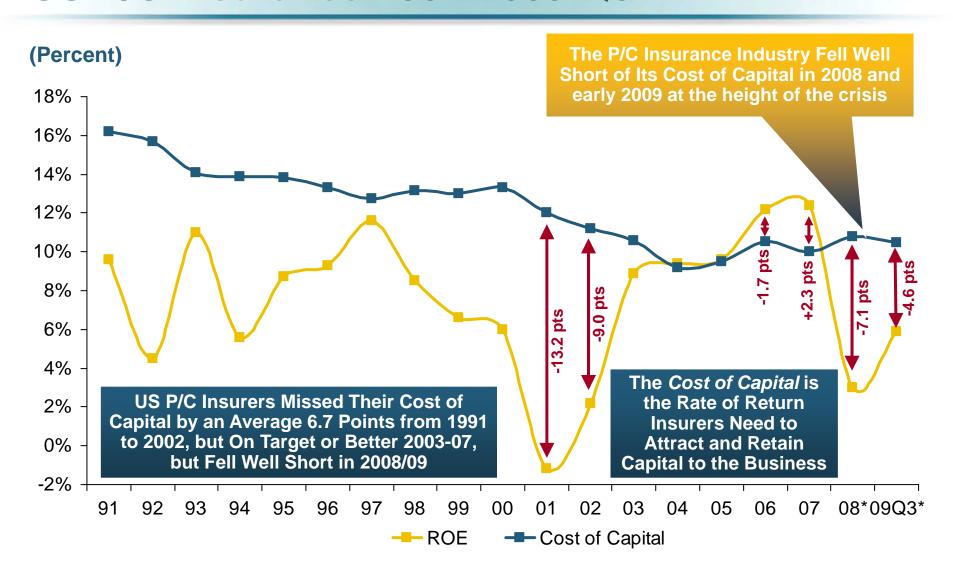
Crisis Lesson #3

Capital Becomes More Expensive in a Crisis

Erosion of Capital Increased Global Demand at Time of Constrained Supply

ROE vs. Equity Cost of Capital: US P/C Insurance:1991-2009:Q3*





^{*} Excludes mortgage and financial guarantee insurers Source: The Geneva Association, Insurance Information Institute



Crisis Lesson #4

Investment Earnings Can Offset Only a Smaller Share of CAT Losses

Low Interest Rates, Shrunken Portfolios & Risk Aversion = Lower Returns

Important Issues & Threats Facing Insurers: 2010–2015





Long-Term Reduction in Investment Earnings

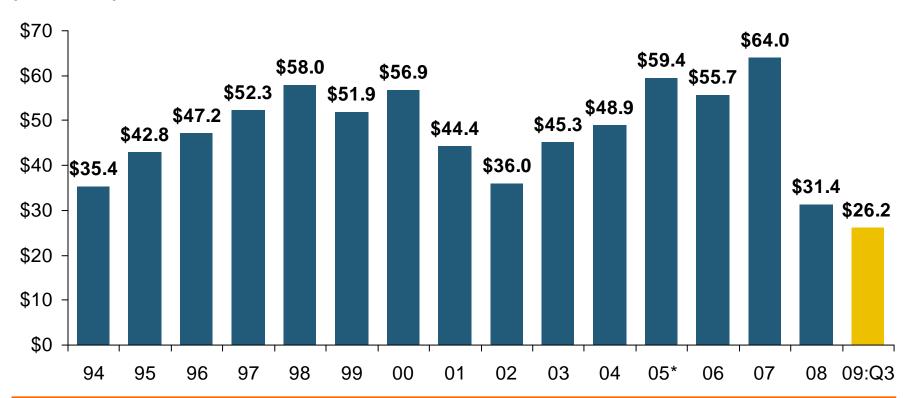
- Low interest rates, risk aversion toward equities and many categories of fixed income securities lock in a multi-year trajectory toward ever lower investment gains
- Fed actions in Treasury markets keep yields low
- Many insurers have not adjusted to this new investment paradigm of a sustained period of low investment gains
- Regulators will <u>not</u> readily accept it; many will reject it
- Implication 1: Industry must be prepared to operate in environment with investment earnings accounting for a smaller fraction of profits
- Implication 2: Implies underwriting discipline of a magnitude not witnessed in this industry in more than 30 years. Yet to manifest itself.
- Lessons from the period 1920–1975 need to be relearned

Source: Insurance Information Institute.

Property/Casualty Insurance Industry Investment Gain: 1994–2009:Q3¹



(\$ Billions)



Investment Gains Fell by 51% In 2008 Due to Lower Yields, Poor Equity Market Conditions. Through Three Quarters in 2009, Write-downs Were Offset by Unrealized Capital Gains

Sources: ISO: Insurance Information Institute.

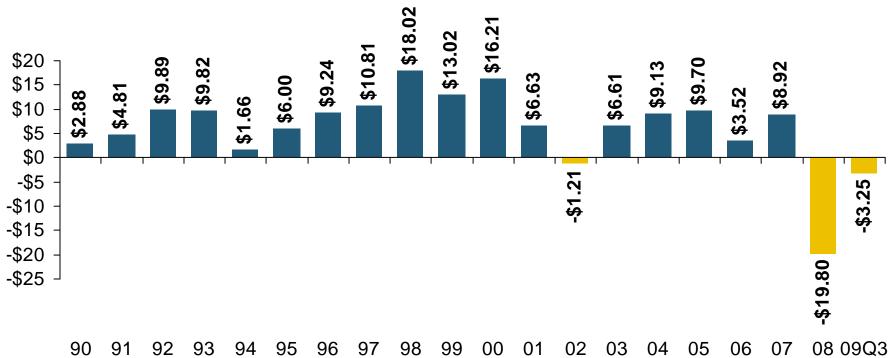
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P/C Insurer Net Realized Capital Gains, 1990-2009:Q3



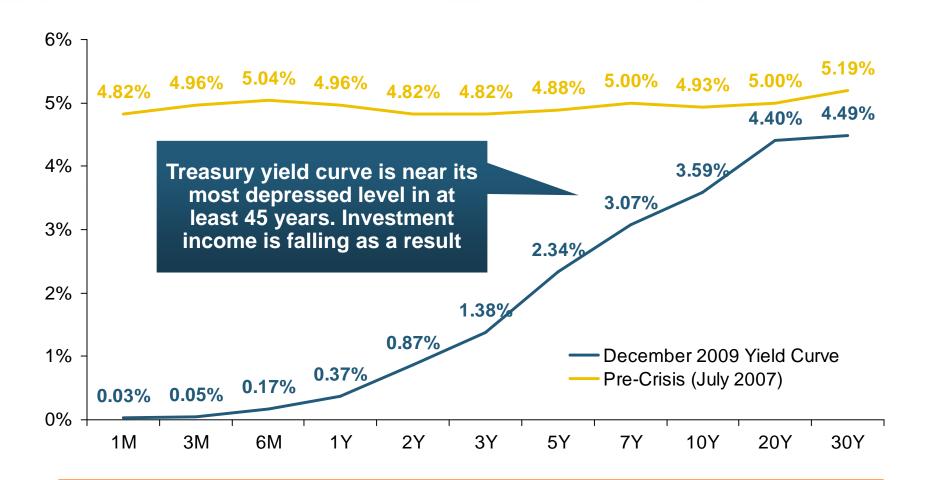




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Treasury Yield Curves: Pre-Crisis (July 2007) vs. Dec. 2009

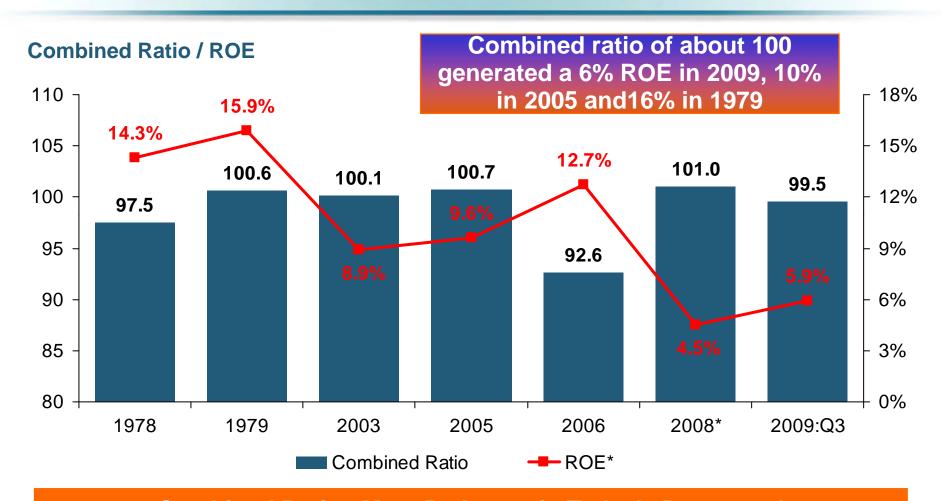




Stock Dividend Cuts Will Further Pressure Investment Income

A 100 Combined Ratio Isn't What It Once Was: 90-95 is Where It's At Now



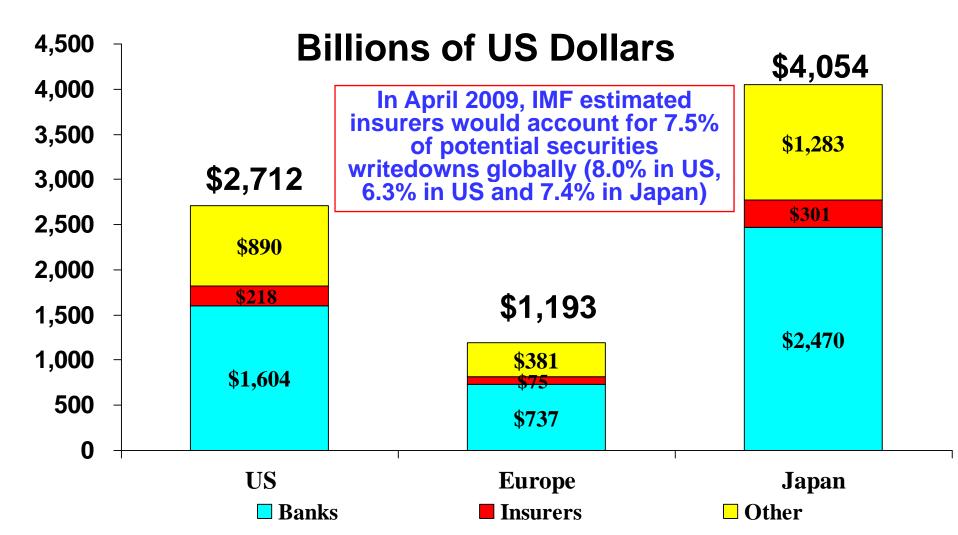


Combined Ratios Must Be Lower in Today's Depressed Investment Environment to Generate Risk Appropriate ROEs

^{* 2009} figure is return on average statutory surplus. 2008 and 2009 figures exclude mortgage and financial guarantee insurers Source: Insurance Information Institute from A.M. Best and ISO data

April 2009: Estimated Writedowns by Segment and Region: 2007-2010*



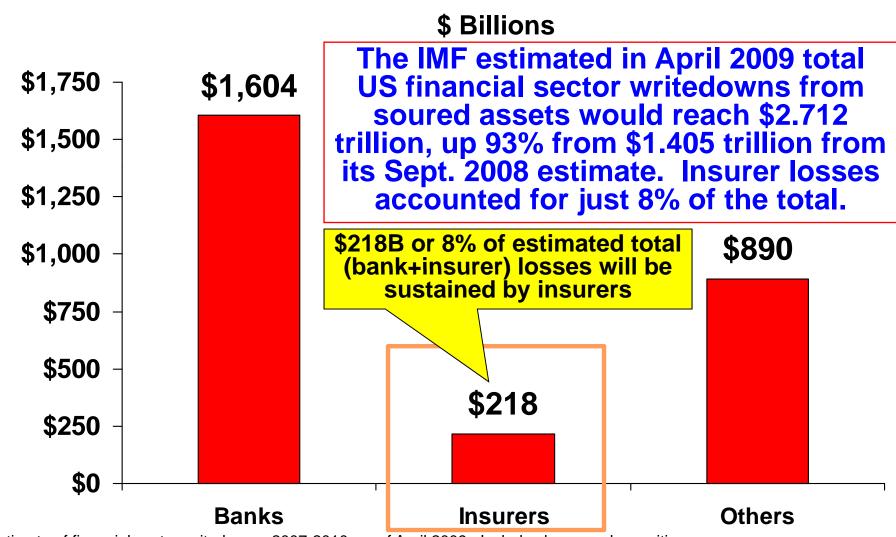


^{*} Includes loans and securities. Europe includes euro countries plus United Kingdom. Insurance category includes life and non-life insurers.

Source: IMF Global Financial Stability Report, April 2009.

April 2009: US Financial Institutions Were Facing Huge Losses from the Credit Crunch*





^{*}Estimate of financial sector writedowns, 2007-2010, as of April 2009. Includes loans and securities. Source: IMF Global Financial Stability Report, April 2009.



Crisis Lesson #5

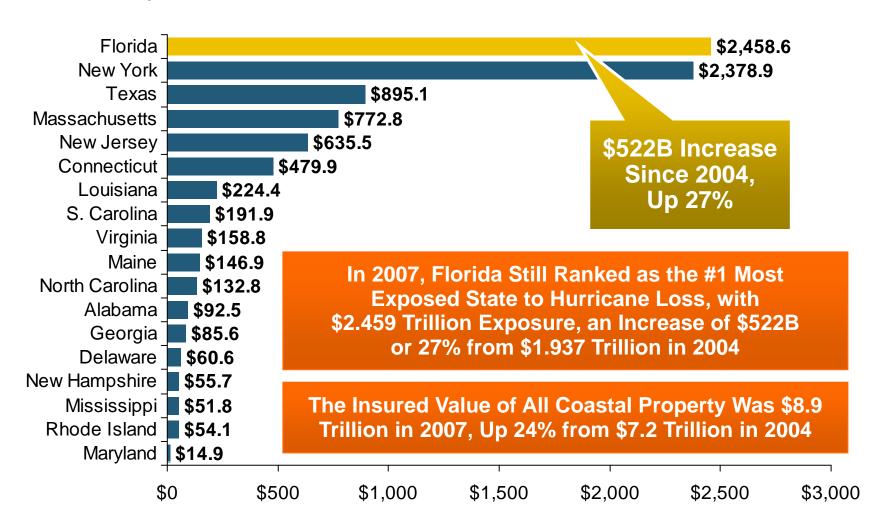
Government-Run Insurers Are Vulnerable to Financial Crises Too

Increased Reliance on Debt Financing Is Dangerous Way to Do Business

Total Value of Insured Coastal Exposure Insurance Insura



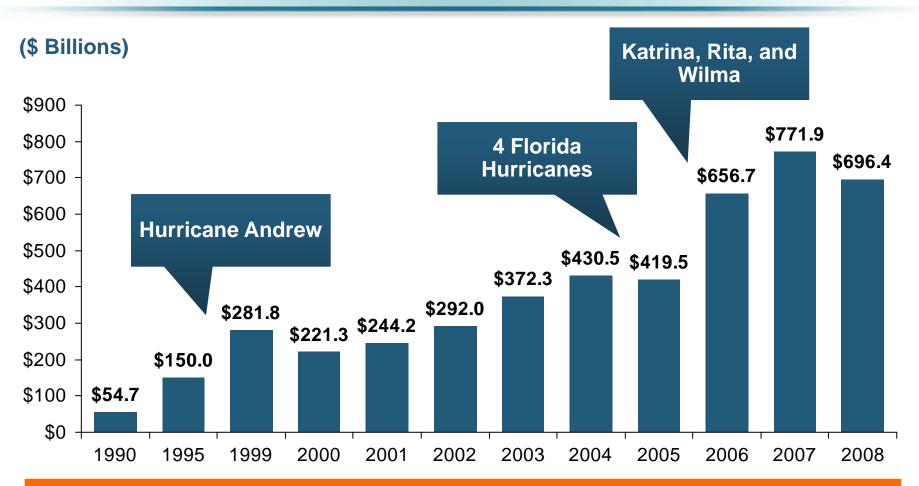
(2007, \$ Billions)



Source: AIR Worldwide

US Residual Market Exposure to Loss





In the 19-year Period Between 1990 and 2008, Total Exposure to Loss in the Residual Market (FAIR & Beach/Windstorm) Plans Has Surged from \$54.7B in 1990 to \$696.4B in 2008

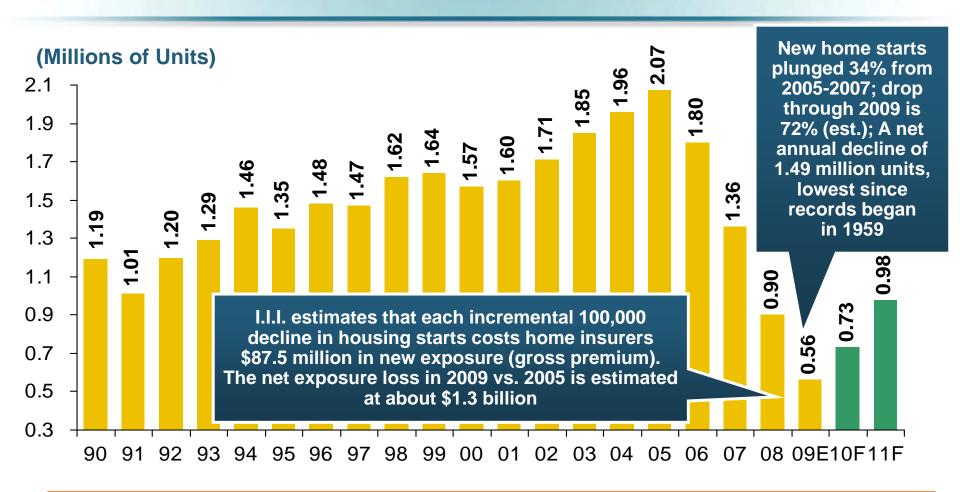


Crisis Lesson #6

Exposure Growth Suffers *Restoration of Exposure Takes Years*

New Private Housing Starts, 1990-2011F

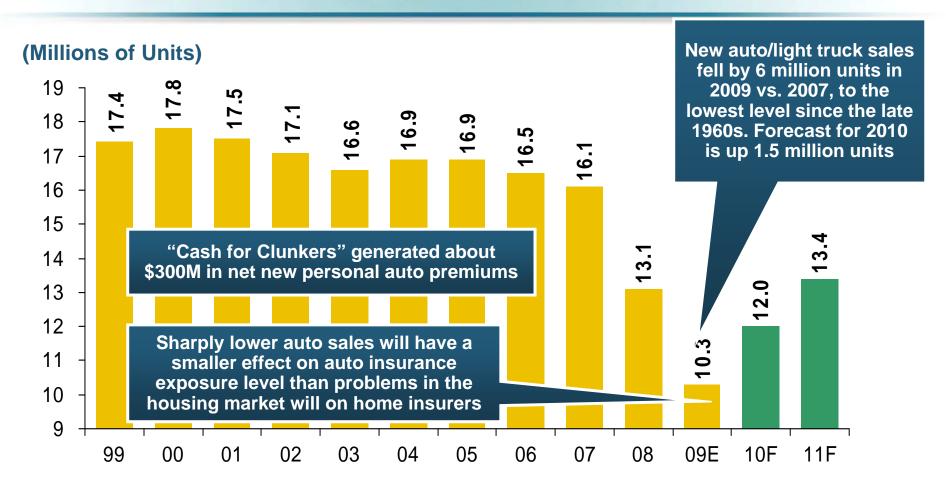




Little Exposure Growth Likely for Homeowners Insurers Due to Weak Home Construction Forecast for 2010-2011. Also Affects Commercial Insurers with Construction Risk Exposure, Surety

Auto/Light Truck Sales, 1999-2011F

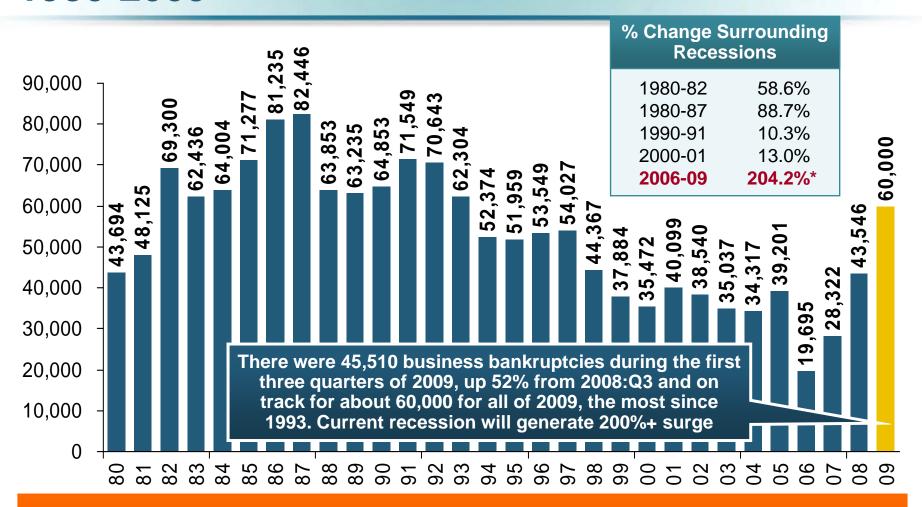




Car & Truck Sales Will Begin to Recover but Weak Economy,
Credit Woes Are Still Restraining Sales;
Gas Prices Could Remain a Factor Too

Business Bankruptcy Filings, 1980-2009*





Significant Implications for Bond & Surety Lines

*2009 is annualized estimate based on actual business bankruptcies in first three quarters of 2009

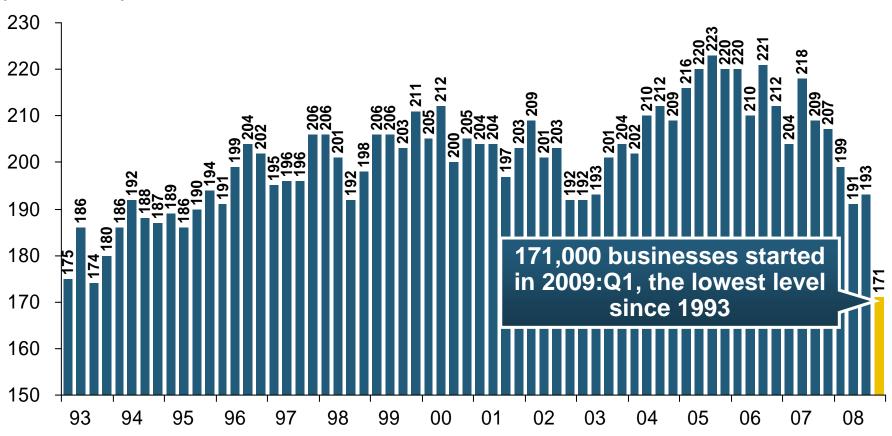
Source: American Bankruptcy Institute,

http://www.abiworld.org/AM/Template.cfm?Section=Business Bankruptcy Filings1&Template=/TaggedPage/T

Private Sector Business Starts, 1993:Q2 – 2009:Q1*





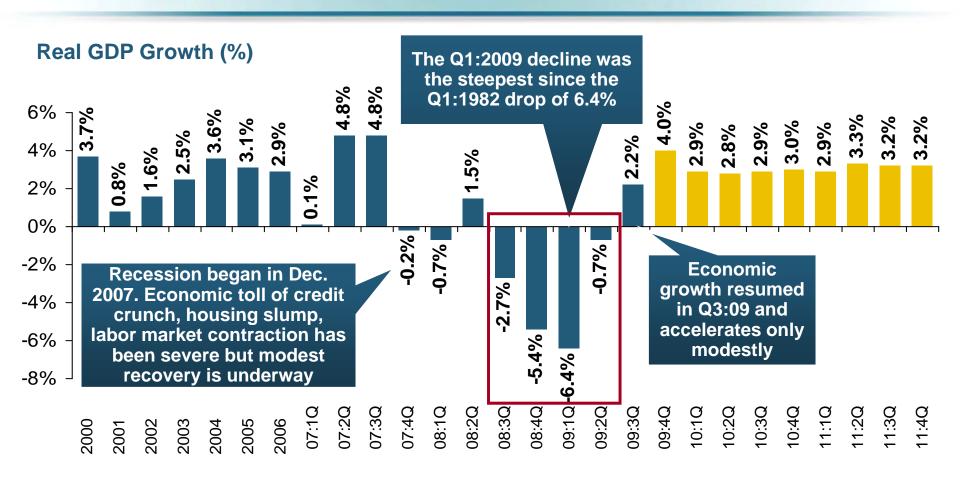


Business Starts Are Down 18% in the Current Downturn, Holding Back Most Types of Commercial Insurance Exposure

^{*}Latest available as of Jan. 2010, seasonally adjusted Source: Bureau of Labor Statistics, http://www.bls.gov/news.release/cewbd.t07.htm.

Real GDP Growth*





Personal and Commercial Lines Exposure Base Have Been Hit Hard and Will Be Slow to Come Back

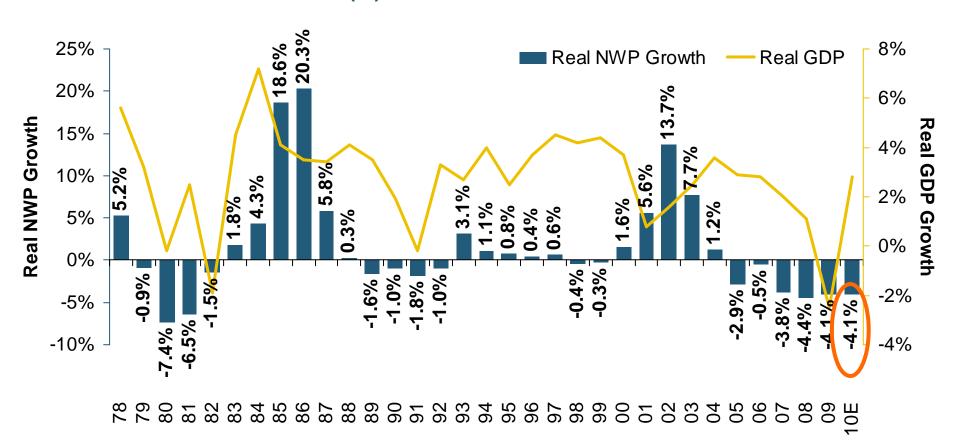
^{*} Estimates/Forecasts from Blue Chip Economic Indicators.

Source: US Department of Commerce, Blue Economic Indicators 1/10; Insurance Information Institute.

Real GDP Growth vs. Real P/C Premium Growth: Modest Association



Real GDP Growth vs. Real P/C (%)



P/C Insurance Industry's Growth is Influenced Modestly by Growth in the Overall Economy



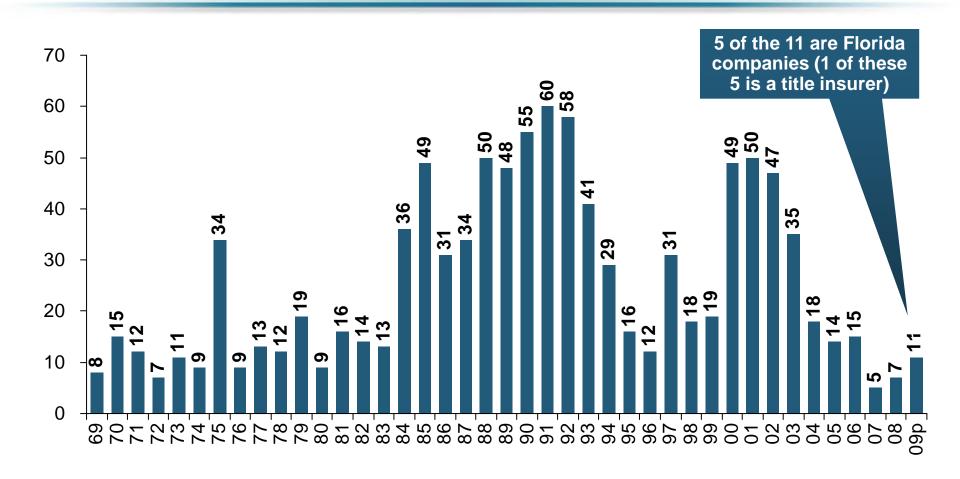
Crisis Lesson #7

P/C Insurance and Reinsurance Industries Are Resilient

But There Are Limits

P/C Insurer Impairments, 1969–2009p

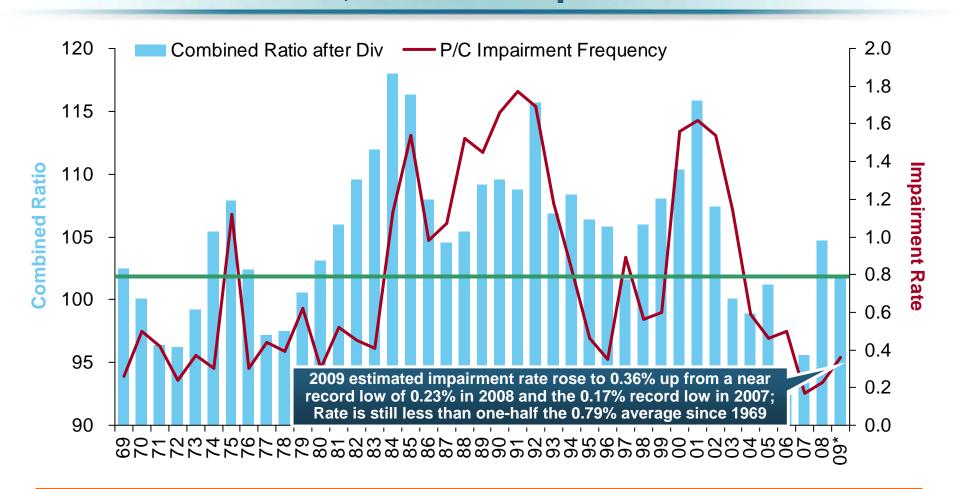




The Number of Impairments Varies Significantly Over the P/C Insurance Cycle, With Peaks Occurring Well into Hard Markets

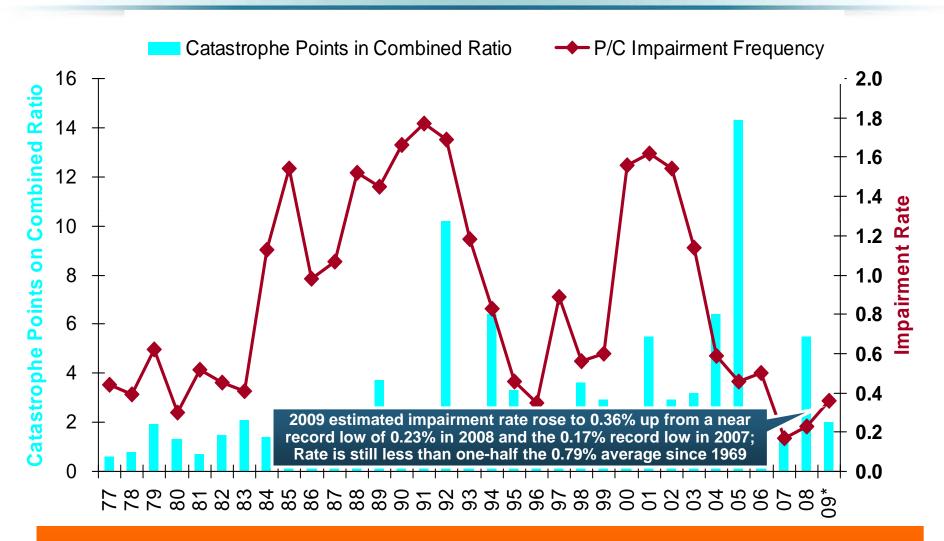
P/C Insurer Impairment Frequency vs. Combined Ratio, 1969-2009p





Impairment Rates Are Highly Correlated With Underwriting Performance and Reached Record Lows in 2007/08

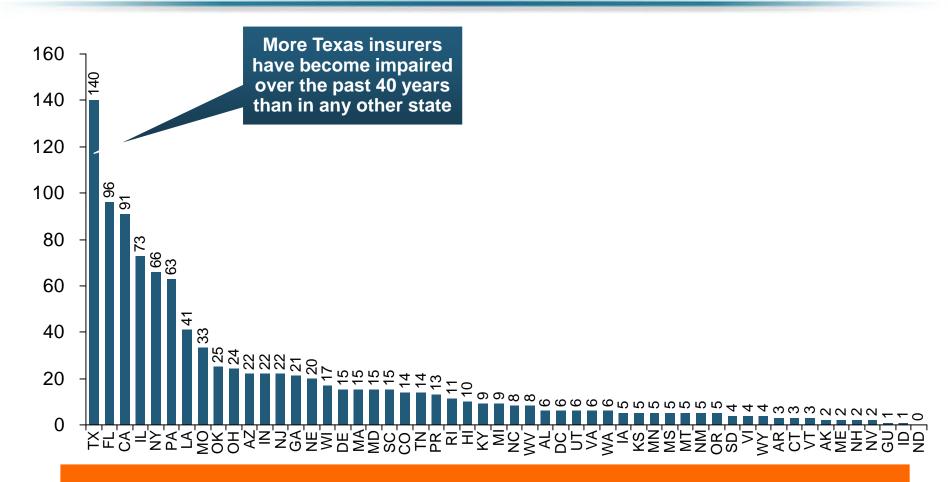
P/C Impairment Frequency vs. Catastrophe Points in Combined Ratio, 1977-2009p



P/C Impairment Rates Are Not Strongly Correlated With Catastrophe Losses

P/C Insurer Impairments by State, 1969–2008

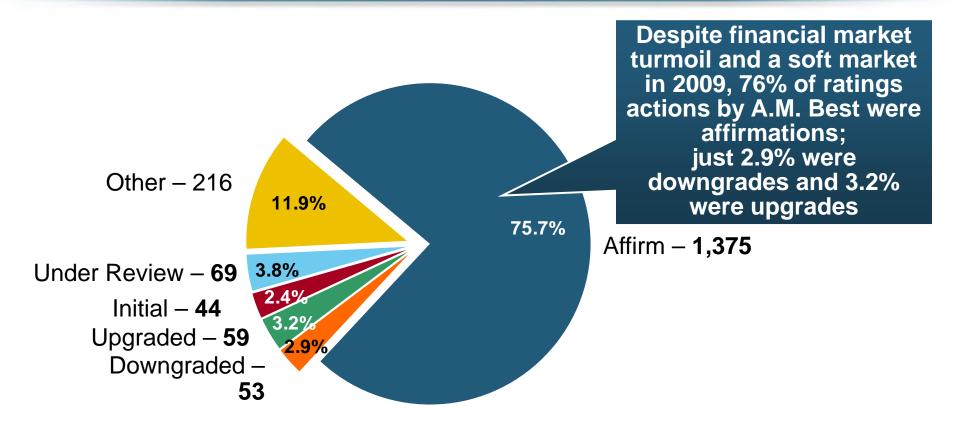




TX, FL and CA have the largest number of impairments. Catastrophe risk plays a big role in these states. Other factors influencing impairments include the political environment and business mix

Summary of A.M. Best's P/C Insurer Ratings Actions in 2009





P/C Insurance is by Design a Resilient Business.

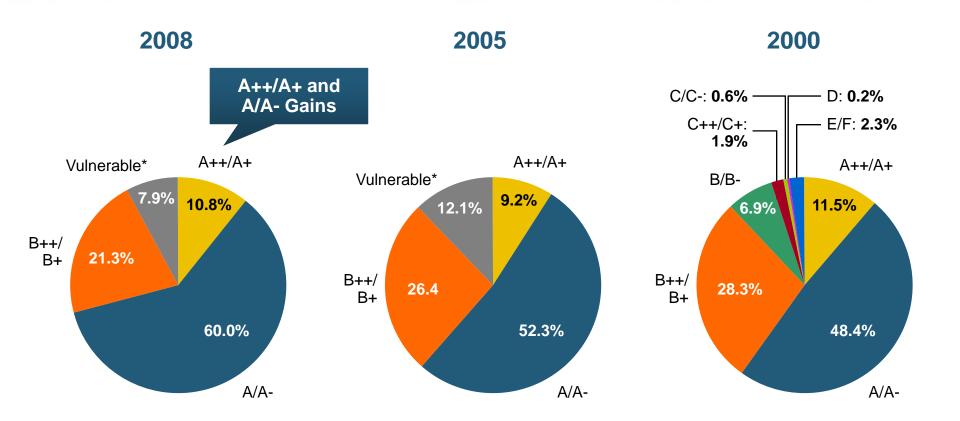
The Dual Threat of Financial Disasters and Catastrophic Losses

Are Anticipated in the Industry's Risk Management Strategy

Source: A.M. Best.

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





P/C Insurer Financial Strength Has Improved Since 2005
Despite Financial Crisis

Five Deadliest Sins for P/C Insurance Companies



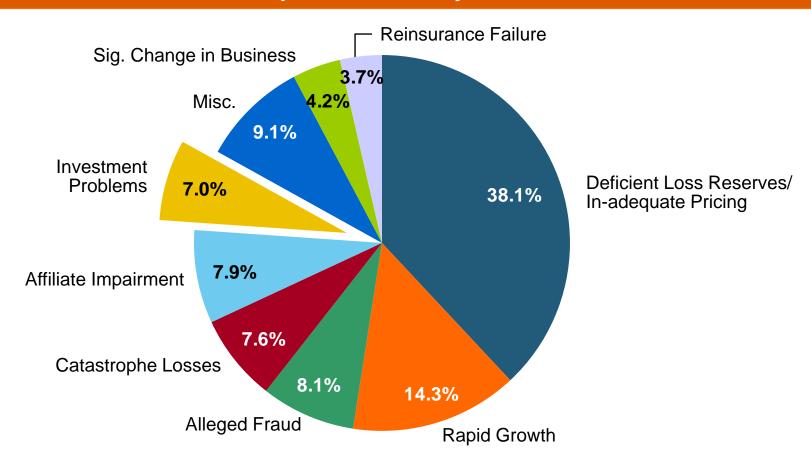
- OPERATIONAL ISSUES
- 1. Underpricing/Underreserving (~38% of failures)
 - Leading cause of p/c insurer death according to A.M. Best
- 2. Excessive Growth (~14%)
 - Too much growth too fast (organically or via M&A) can be fatal
- 3. Excessive Catastrophe Exposure (~8%)
 - Too much underpriced exposure, too little reinsurance, insufficient diversification
- 4. Investment Problems (~7%)
 - Investments are too risky, too illiquid or insufficiently understood
- 5. Affiliate Problems (~8%)
 - Non-core operations can cause problems for parent (e.g., AIG)

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 Catastrophe Losses Play a Much Smaller Role



Insurance Information Institute Online:

www.iii.org

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