TOWERS PERRIN

Homeowners Insurance: Key Reserving Issues

Casualty Loss Reserve Seminar

Klayton N. Southwood, FCAS, MAAA

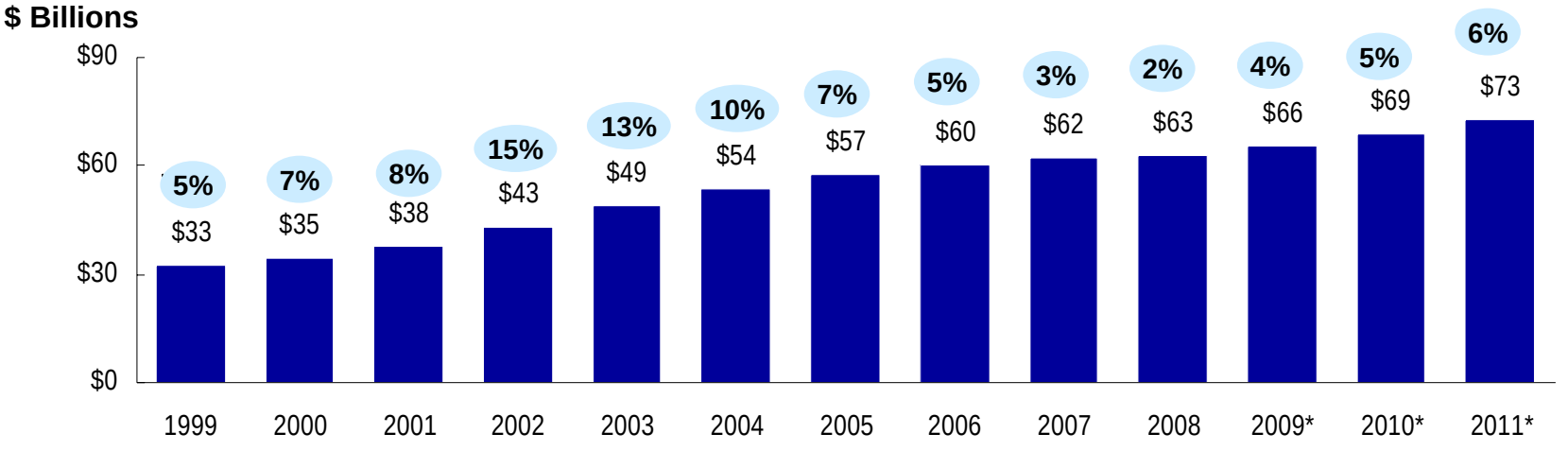
September 15, 2009

Session agenda

- Size of the Homeowners Market
- Recent Underwriting Results
- Loss Development Patterns
- Key Reserving Considerations
  - Understanding Catastrophe Costs
  - Exposure Management and Non-Traditional Causes of Loss
  - Trends in LAE
  - Trends in Claim Frequency and Severity
- Significant Trends/Developments

The U.S. Homeowners market represents approximately $63 billion in 2008 direct written premiums

Direct Written Premiums



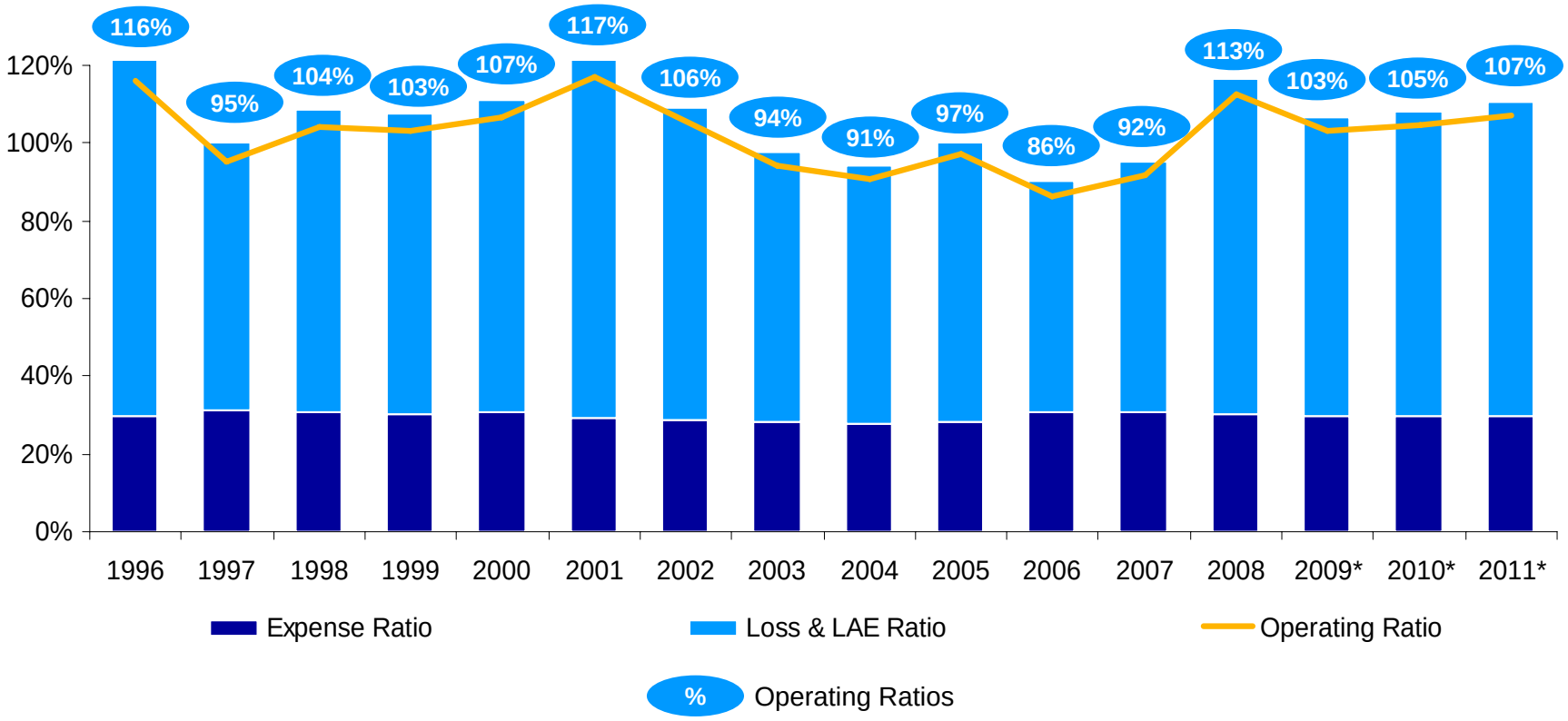
	2004	2005	2006	2007	2008	2009*	2010*	2011*
Estimated Percentage Change in Avg. Premium**:	9.6%	4.5%	4.6%	4.3%	3.9%	4.8%	4.8%	4.9%
Estimated Percentage Change in Exposure**:	0.2%	2.3%	0.4%	-1.1%	-1.9%	-1.0%	0.0%	1.0%

Growth Drivers

- Pricing up in recent years, partially due to reinsurance costs and increasing frequency and severity trends. Increasing premium growth expected
- Population increases in coastal areas will put upward pressure on rates as companies manage catastrophe exposure
- Increase in voluntary exposure as Citizens Property Insurance Corporation and other residual markets depopulate
- Unstable economic conditions may temper increase in premiums as fewer insureds purchase second homes or remodel existing homes. Also, new housing starts are low compared to prior years

*Towers Perrin estimates.
**Average Premium includes increases in the amount of insurance. Exposure base is an earned house year.
Source: A.M. Best's Aggregates and Averages; industry press; Towers Perrin estimates.

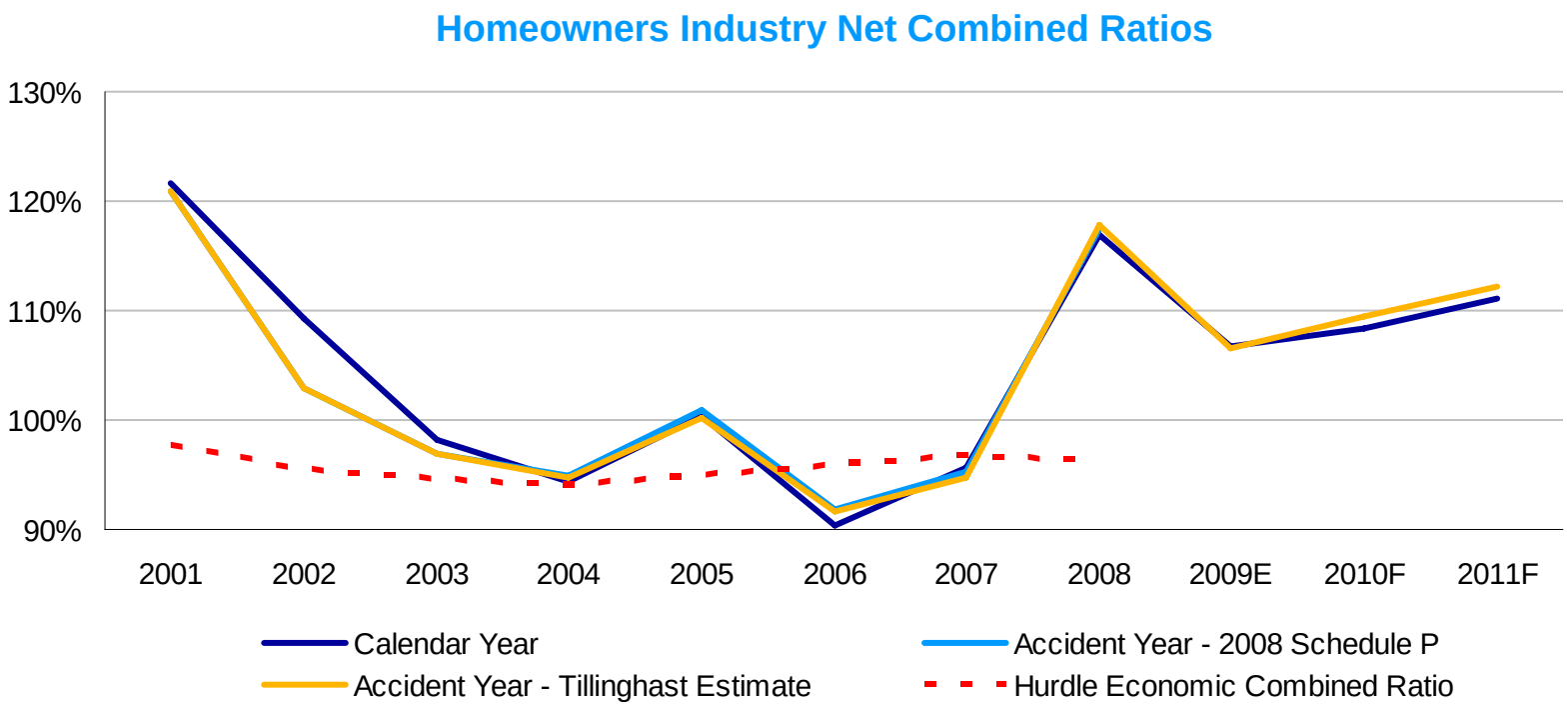
After a period of favorable results in 2006 and 2007, the Homeowners trend has reversed, showing that it is always vulnerable to catastrophes



Notes: Operating ratios are net of dividends, which are not shown (insignificant).
*Projected. Projections assume average level of catastrophe losses for 2009 through 2011.
Source: A.M. Best; Towers Perrin estimates.

Loss development patterns

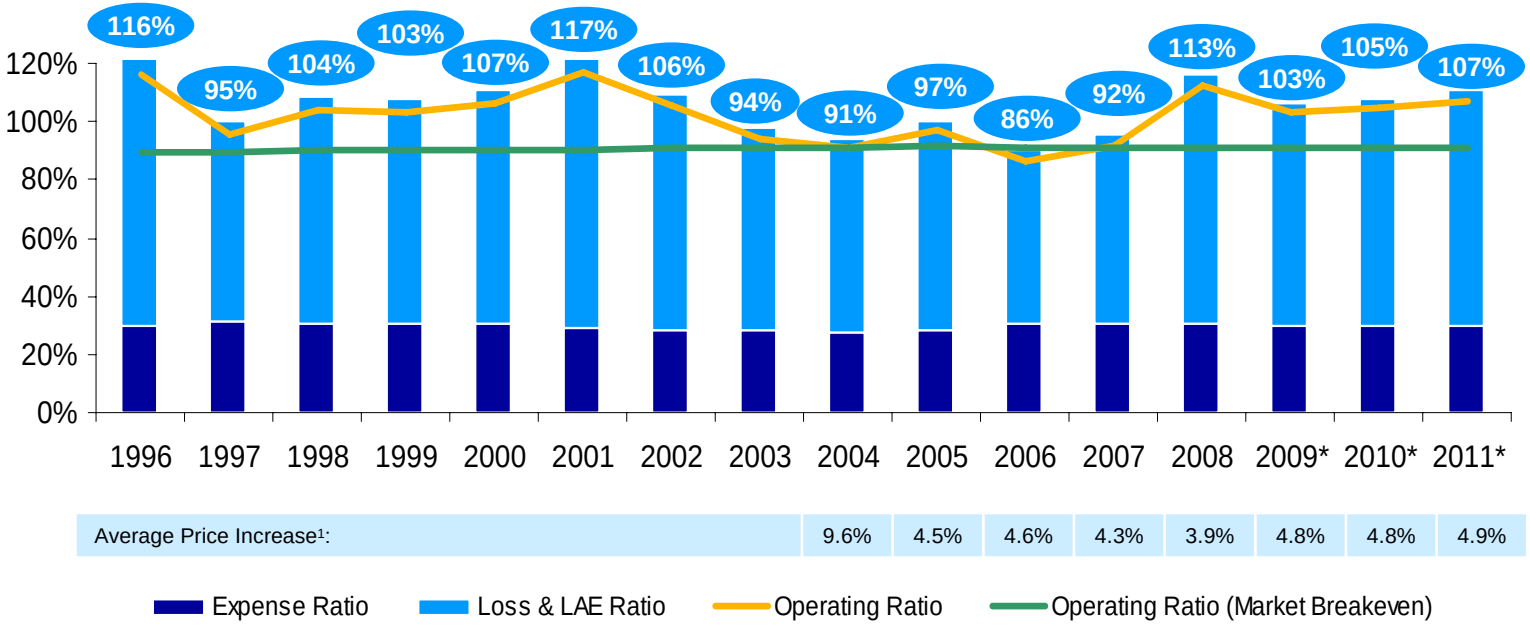
- In terms of reserve adequacy, our latest accident year loss ratio selections for homeowners imply a reserve redundancy of about $669 million, or about 1.1% of annual premium volume, as of December 31, 2008
- We project that reserve redundancy will decrease slightly through 2011



Key reserving considerations

- Understanding catastrophe losses
- Exposure management and non-traditional causes of loss
- Trends in LAE
- Trends in claim frequency and severity

Recently rates have included an insufficient catastrophe margin

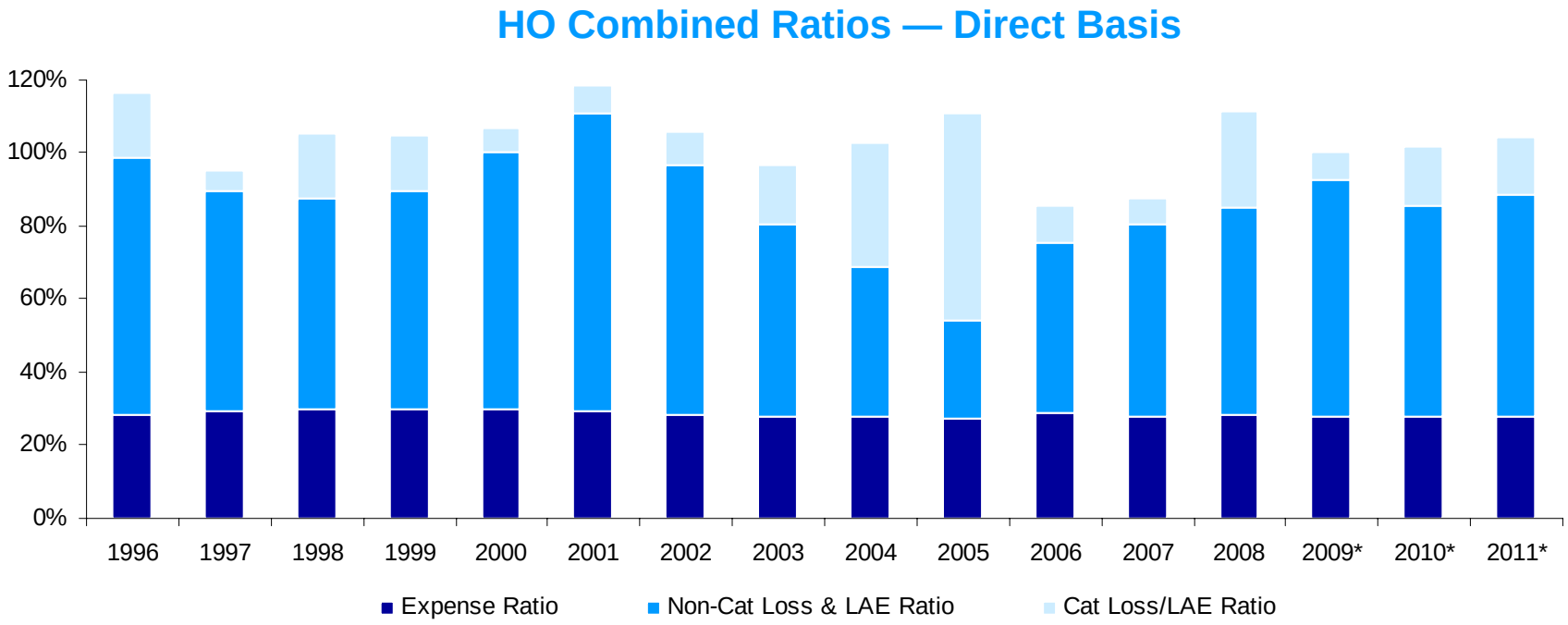


Key Trends

- Expense Ratios increased slightly in 2006 through 2008 over prior years, driven up by fixed expenses and ULAE/AOE
- The HO industry has failed to break even in all but one year in the short-term history and is not projected to break even in the near future

Notes: Operating ratios are net of dividends, which are not shown (insignificant).
*Projected. Projections assume average level of catastrophe losses for 2009 through 2011.
[1]Average Premium includes increases in the amount of insurance. Exposure base is an earned house year.
[2]The Market Breakeven Operating Ratio is equal to the Hurdle Economic Combined Ratio less investment income, where the Hurdle Economic Combined Ratio is the result equivalent to the expected return in the equities market.
Source: A.M. Best; Towers Perrin estimates.

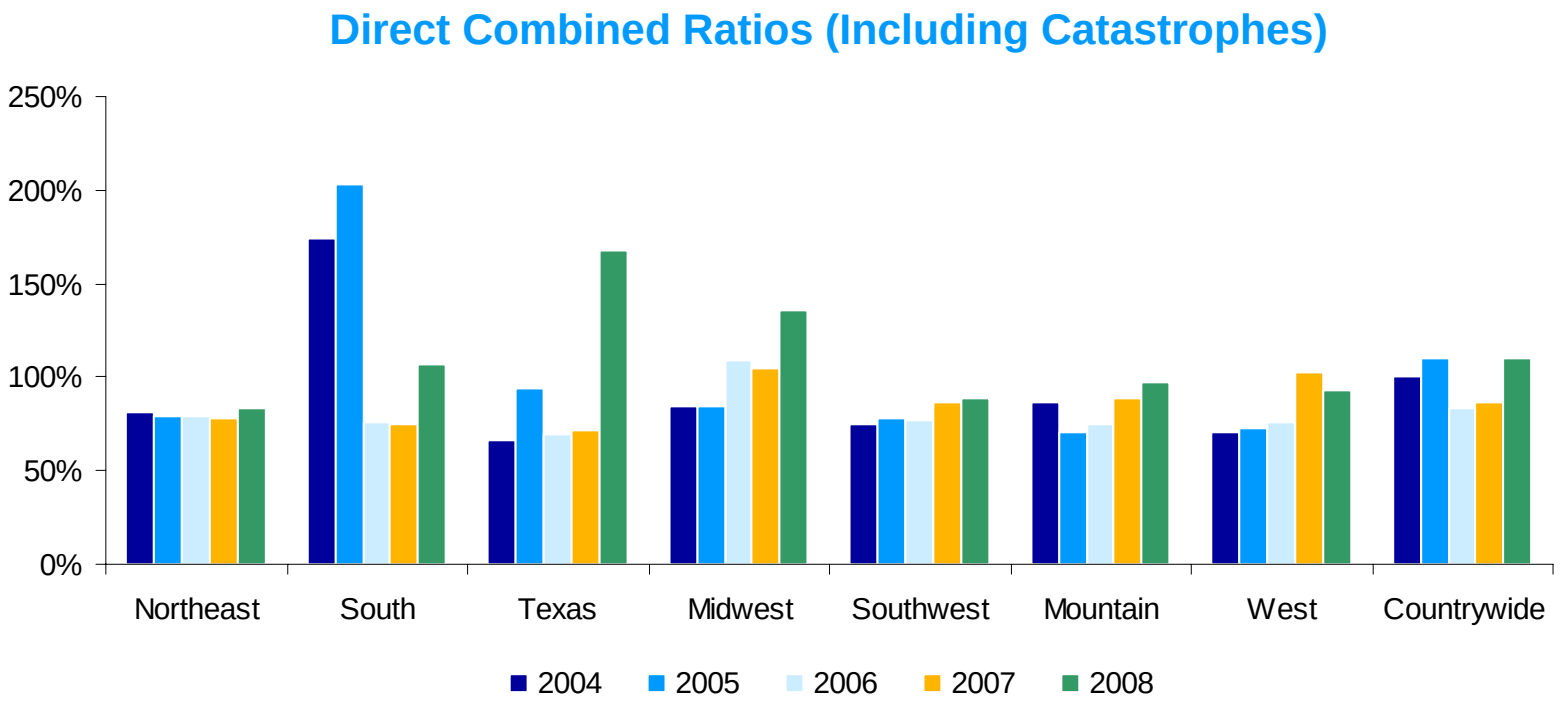
Catastrophes change the combined ratio pattern significantly



- With Catastrophes, the best and worst years have been 2006 and 2001, respectively
- Without Catastrophes, the best is 2005 and worst is 2001, with deterioration in the non-cat loss and LAE ratio from 2005 to 2008

*Projected. Projections assume an average level of catastrophe losses for 2009 through 2011.
Source: A.M. Best; PCS catastrophe estimates 1993 – October 2008; Towers Perrin estimates.

The South has experienced the greatest volatility in Homeowners combined ratios over the past five years



Regional Segment Trends

- The South shows the worst experience for 2004 and 2005, caused by hurricane activity
- Recently, Texas and the Midwest show higher combined ratios due to hurricane activity (Ike) and tornadoes, respectively

Source: A.M. Best; Towers Perrin analysis.

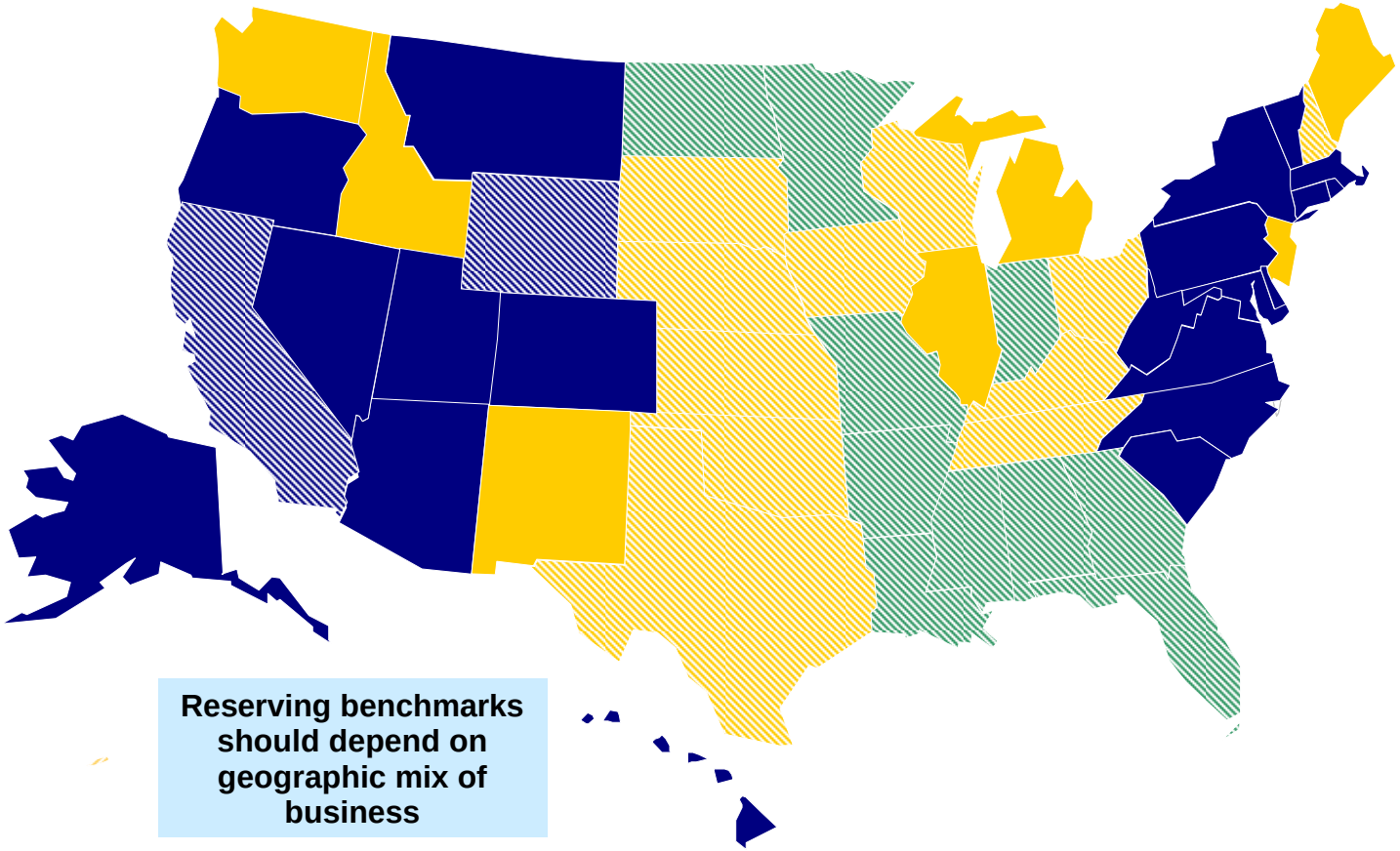
Eight states comprise approximately half of the Homeowners premiums written — with very mixed results

State		Written Premium ($ Millions)*	National Total*	Loss Ratio**	Average Premium†
1.	Florida	$6,407	10.0%	85%	$1,279
2.	California	6,373	9.9%	45%	855
3.	Texas	5,329	8.3%	58%	1,284
4.	New York	4,069	6.3%	43%	763
5.	Illinois	2,428	3.8%	59%	621
6.	Pennsylvania	2,353	3.7%	46%	581
7.	Michigan	2,094	3.3%	56%	667
8.	Ohio	1,935	3.0%	69%	485
9.	New Jersey	1,877	2.9%	52%	662
10.	Georgia	1,863	2.9%	74%	656
11.	North Carolina	1,710	2.7%	45%	611
12.	Massachusetts	1,661	2.6%	38%	840
13.	Virginia	1,502	2.3%	41%	585
14.	Louisiana	1,279	2.0%	201%	1,192
15.	Minnesota	1,277	2.0%	97%	697
All Other		$21,967	34.3%	60%	$616
Total		**$64,123**	**100.0%**	**62%**	**$733**

- Florida's #1 spot does not include Citizens Property Insurance Corporation, Florida's state-run residual market insurer and the state's largest homeowners writer

*2008 only.
**Total CY loss ratios (incurred loss/direct written premiums), 2004 – 2008.
†2006 only.
Source: A.M. Best; Towers Perrin calculations, Insurance Information Institute.

Homeowners experience has been both worst and most volatile along the Gulf of Mexico. Experience has typically been both good and stable in the West and Northeast



States in Each Category	
Solid Blue	25
Striped Blue	4
Solid Gold	10
Striped Gold	11
Solid Green	0
Striped Green	10

Color for Loss Ratio*	
Blue	0% – 50%
Gold	50% – 70%
Green	over 70%

Intensity for Volatility (Std Dev of Annual LR)	
Solid	under 15%
Striped	over 15%

Reserving benchmarks should depend on geographic mix of business

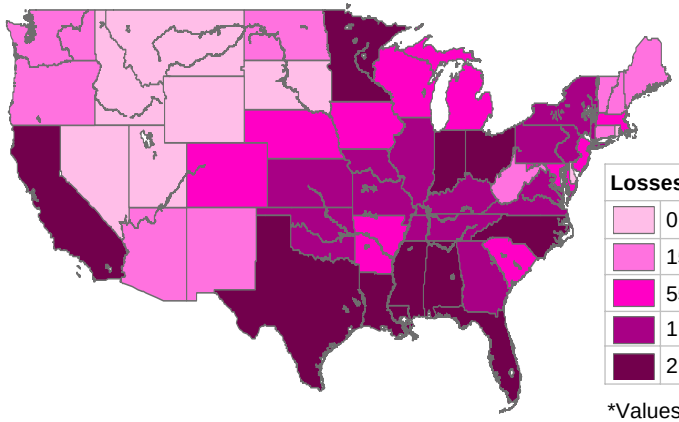
31% of the 2004 – 2008 direct written premium volume has been in states with low loss ratios and low volatility (Solid Blue)

26% has been in states with high loss ratios and high volatility (Striped Green)

*Based on calendar year incurred loss ratios (excluding LAE) from 2004 to 2008 (including catastrophes), A.M. Best.

Catastrophes for Homeowners have great geographic concentration

Catastrophe Losses*

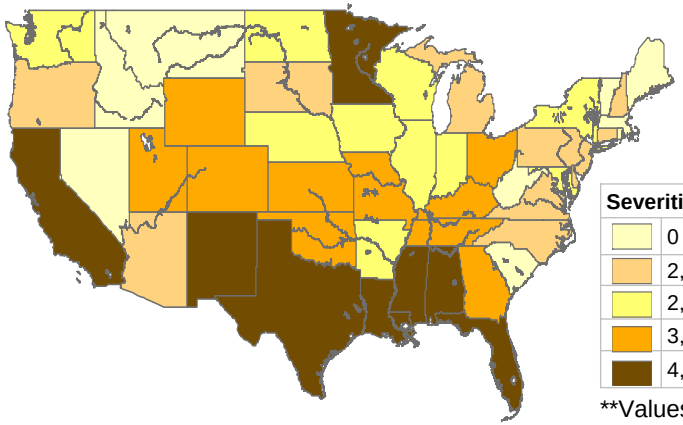


Losses	Count
0 – 150	11
151 – 550	10
551 – 1,450	10
1,451 – 2,600	10
2,601 +	10

*Values in Millions.

Overall Loss: Concentration in CA (earthquakes and wildfires); the Gulf Coast (hurricanes); NC (wind); MN, IN and OH (winter storms)

Catastrophe Severities**

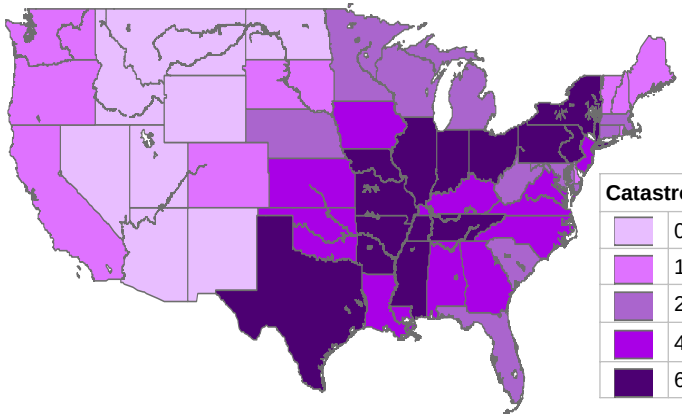


Severities	Count
0 – 2,150	10
2,151 – 2,600	11
2,601 – 3,150	10
3,151 – 4,000	10
4,001 +	10

**Values in Thousands.

Severity: High losses from less frequent earthquakes, hurricanes, wildfires, winter storms

Number of Catastrophes

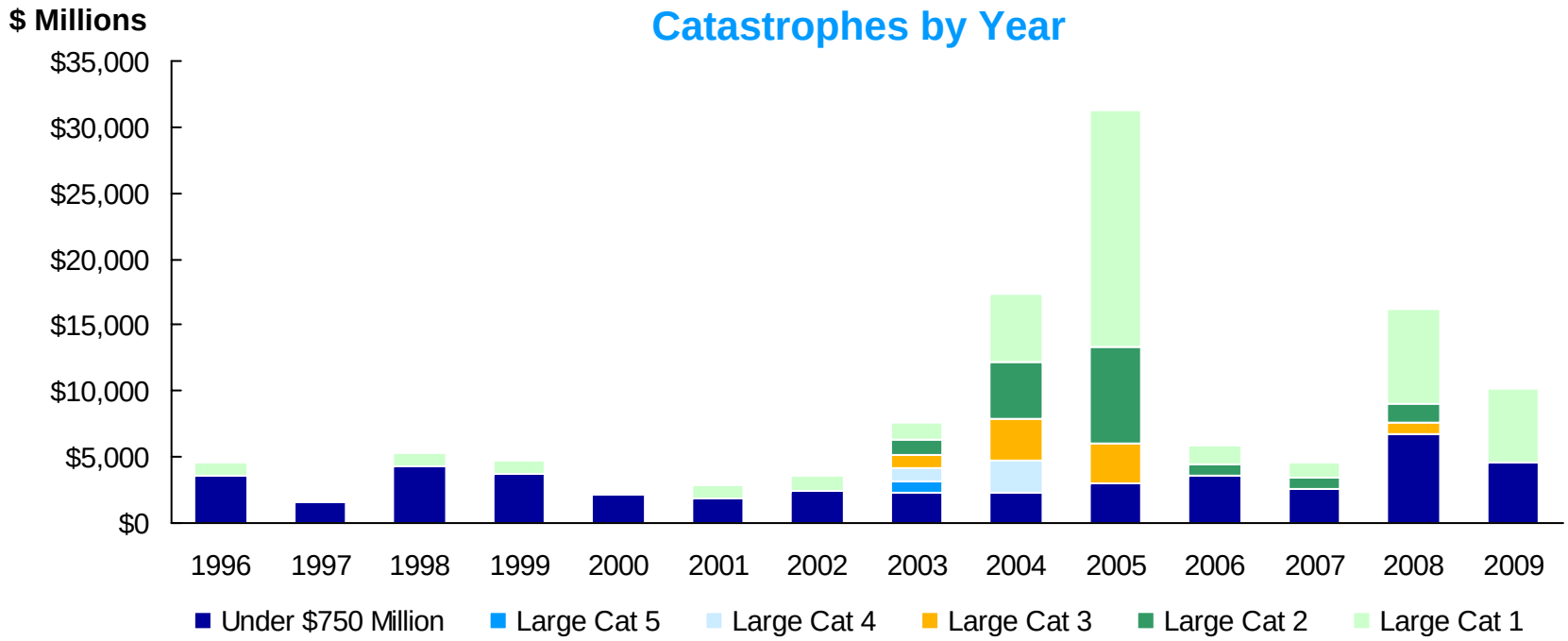


Catastrophes	Count
0 – 9	11
10 – 25	10
26 – 50	10
41 – 60	10
61 +	10

Frequency: Belt of hail and windstorms from Texas to New York

Source: PCS 1996 – August 2009.

Over the past 14 years, Homeowners catastrophe losses have been concentrated in a few years



1996: Fran
1998: Tornadoes, Wind & Hail
1999: Tornadoes, Wind & Hail
2001: Tornadoes, Wind, Hail and Flooding
2002: Tornadoes, Wind, Hail and Flooding
2003: Isabel, Tornadoes, Wind, Hail, Flooding, CA Wildfires, Winter Storm
2004: Charley, Ivan, Frances, Jeanne
2005: Katrina, Rita and Wilma
2006: Tornadoes, Wind and Hail
2007: Wildland Fires, Tornadoes, Wind, Hail and Flooding
2008: Gustav, Ike, Tornadoes, Hail and Winds
2009: Tornadoes, Wind, Hail and Flooding

Note: September 11, 2001, did not have a significant effect on Homeowners.
Source: PCS Data 1996 – August 2009; Towers Perrin calculations.

Homeowners losses are dominated by fire/lightning, wind/hail and water damage/freezing claims

Distribution of Homeowners Losses by Peril*

Cause of Loss	2003	2004	2005	2006	2007
Property Damage					
Fire, lightning and debris removal	31.7%	20.5%	23.0%	33.2%	42.1%
Wind and hail	25.3%	50.1%	46.6%	29.0%	17.4%
Water damage and freezing	21.1%	15.3%	15.5%	18.8%	22.4%
Theft	3.2%	2.2%	2.4%	3.5%	3.5%
All other property damage	11.7%	6.9%	7.3%	9.4%	9.3%
Liability					
Bodily injury and property damage	6.4%	4.6%	4.7%	5.4%	4.5%
Medical payments and other	0.6%	0.4%	0.5%	0.8%	0.9%
Credit card and other**	0.0%	0.0%	0.0%	0.0%	0.0%

*Percent of incurred losses.
**Includes coverage for unauthorized use of fund transfer cards, forgery and counterfeit currency. Distribution is 0.01% or less each year.
Source: Insurance Information Institute.

Exposure management is not just about hurricanes

- Need to monitor the geographic distribution of exposures since exposure concentrations play a large role in the high severity/low frequency losses
  - Because of the size of potential losses, the occurrence or non-occurrence of catastrophes has a large impact on the profitability in a given year, as evidenced by 2005 and 2006
  - Natural perils (straight line winds, winter storms, some hail storms or tornadoes) that do not generate losses large enough to qualify as a catastrophe still add significant uncertainty to annual results for individual companies
  - Events that do qualify as a catastrophe using the PCS definition but that are not large enough to trigger reinsurance also create uncertainty, as evidenced by 2008
- New or expanding types of losses
  - Identity theft
  - Non-hurricane weather-related losses
    - Mudslides
    - Wildfires
  - Chinese drywall
- Man-made catastrophes
  - Terrorism
  - Pollution (e.g., underground storage tanks)

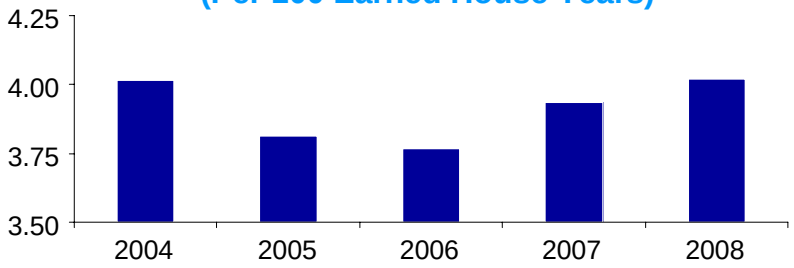
Homeowners underwriting expense ratios are generally stable; LAE ratios are impacted by claim activity

	2004	2005	2006	2007	2008
Average Industry Expense — Ratios to Written and Earned Premiums*					
Commission and Brokerage	14.1%	13.9%	13.9%	13.9%	13.4%
Other Acquisition	7.4%	6.8%	7.7%	7.6%	8.0%
General Expenses	4.6%	4.5%	5.4%	4.3%	4.6%
Taxes, Licenses, Fees	2.4%	2.5%	2.2%	2.3%	2.3%
Loss Adjustment Expense — Ratios to Incurred Losses					
ALAE (DCC)	3.0%	2.1%**	2.6%	2.9%	2.5%
ULAE (AOE)	11.9%	12.7%	14.9%†	13.3%†	12.0%

*Commission and Brokerage and Taxes, Licenses, Fees to written premium; Other Acquisition and General Expenses to earned premium.
**2005 ALAE (DCC) ratios may be low compared to previous years as a result of high catastrophe losses (denominator) and relatively low adjustment expenses to settle catastrophe claims.
†2006 and 2007 ULAE (AOE) ratio may be high as a result of lower incurred losses compared to previous years.
Source: IEE direct homeowners total, calendar years 2003 – 2008; Best's Aggregates & Averages.

Annual frequency and severity trends show one picture...

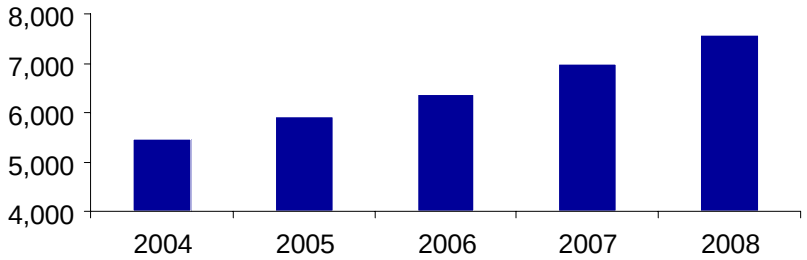
Annual Homeowners Frequency, 2004 – 2008
(Per 100 Earned House Years)



Frequency:

Following a period of decreasing trends, the frequency has turned and is now steadily increasing

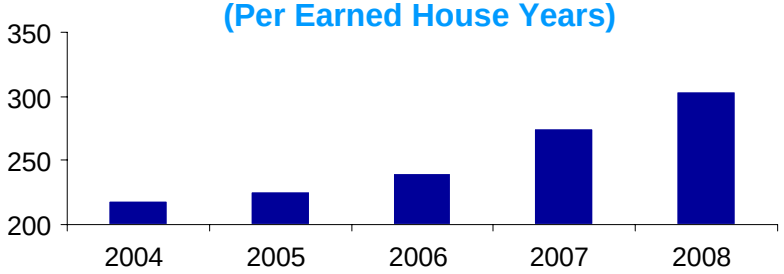
Annual Homeowners Severity, 2004 – 2008



Severity:

Averaging approximately 8% increase per year over the past few years

Annual Homeowners Pure Premium, 2004 – 2008
(Per Earned House Years)



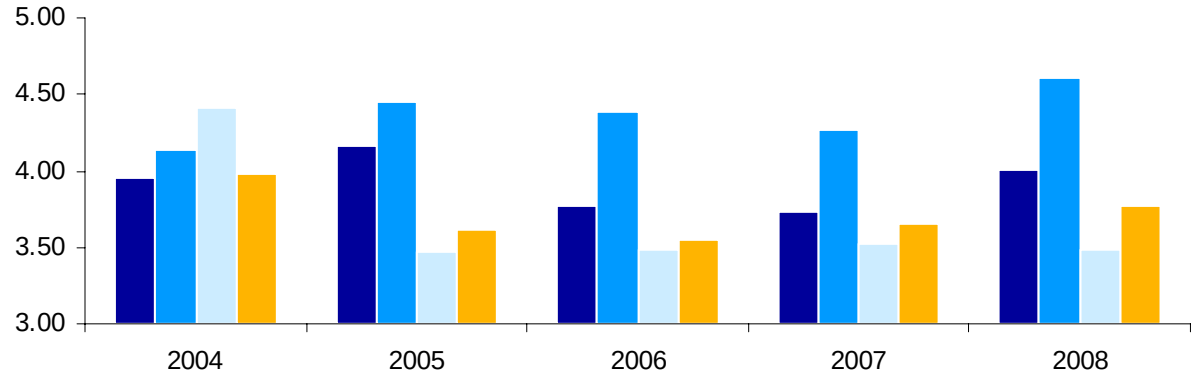
Pure Premiums:

Increasing trend as both frequency and severity increase

Source: Fast Track, losses and claim counts exclude catastrophes.

...while a quarterly perspective shows another

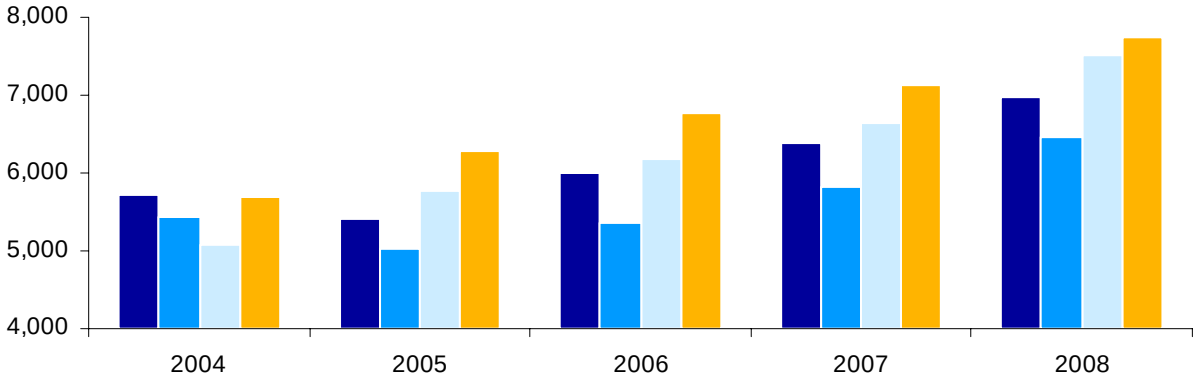
Quarterly Homeowners Frequency, 2004 – 2008 (Per 100 Earned House Years)



Frequency:

More losses in Quarters 1 and 2

Quarterly Homeowners Severity, 2004 – 2008



Severity:

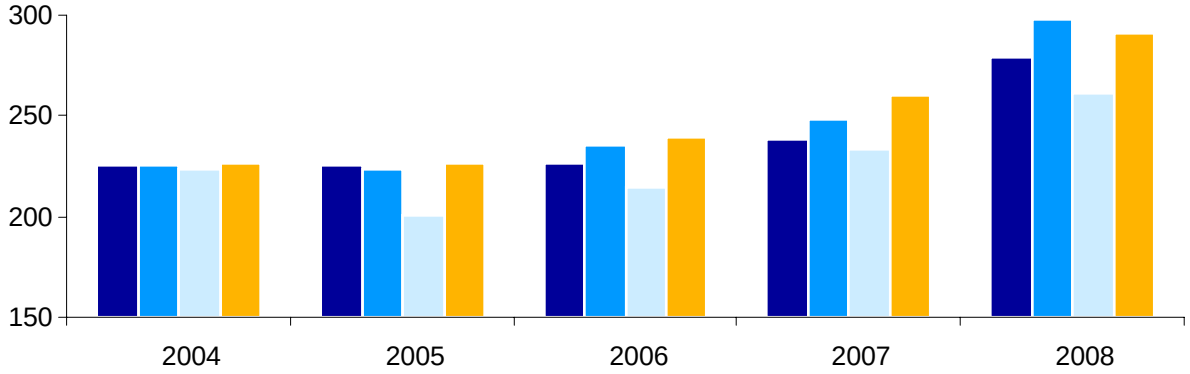
Quarter 2 tends to be lowest, and Quarter 4 highest

Continued…

Source: Fast Track, losses and claim counts exclude catastrophes.

...while a quarterly perspective shows another

Quarterly Homeowners Pure Premium, 2004 – 2008
(Per 100 Earned House Years)

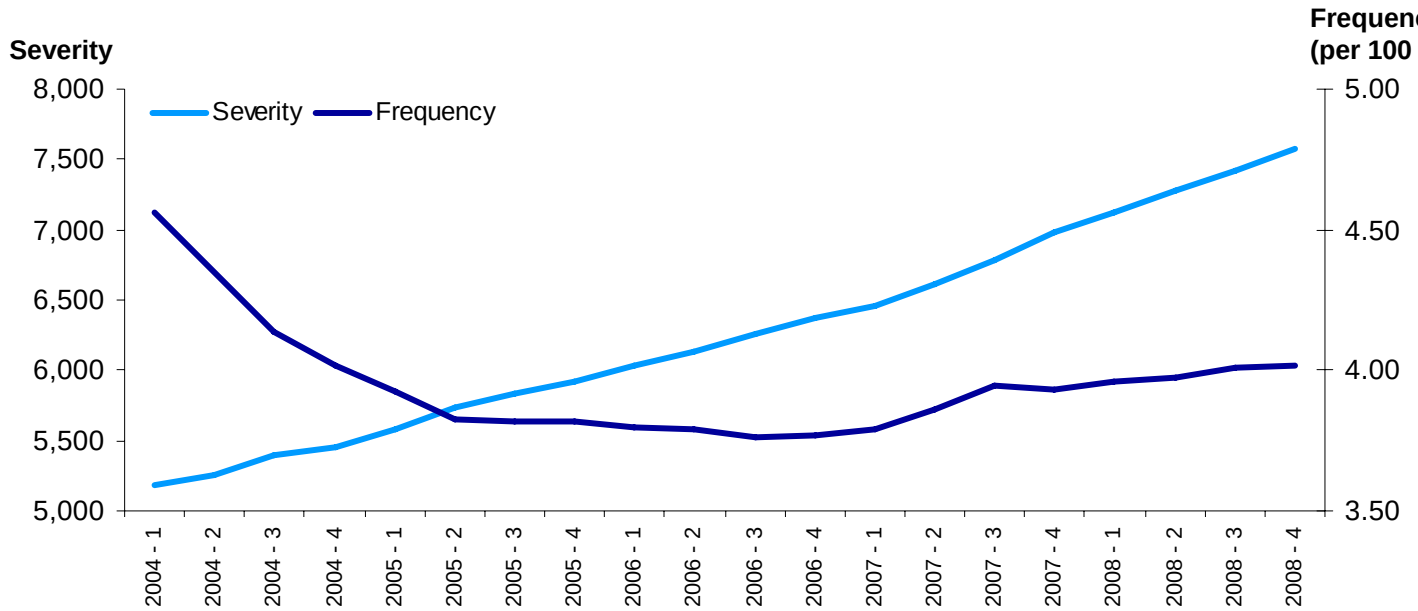


Pure Premium:

Quarter 4 tends to be high, and Quarter 3 low

Source: Fast Track, losses and claim counts exclude catastrophes.

Annual Homeowners trends show stabilizing frequency and increasing severity



As frequency levels and severity continue to increase, expect pure premiums to increase

For pricing purposes, state-specific Fast Track or other trends should be considered

	Trends	Frequency	Severity	Pure Premium
Linear	1-Year	3.0%	7.7%	10.7%
	2-Year	3.0%	8.8%	11.8%
	3-Year	2.9%	8.4%	11.2%

	Trends	Frequency	Severity	Pure Premium
Exponential	1-Year	3.0%	8.0%	11.2%
	3-Year	3.1%	9.2%	12.6%
	5-Year	2.8%	8.8%	11.9%

*Rolling 12-month frequency and severity.
Source: Fast Track, Towers Perrin calculations; losses and claim counts exclude catastrophes.

Homeowners market financial trends have been mixed

Category	Trends and Market Implications

Capital	■ Some major carriers reducing books, stopping or limiting new business writings, especially in the Gulf Coast and Northeast
	  ■ Demand for policies will keep upward pressure on rates
	■ Many new startup companies entering the market
	  ■ Many new Florida homeowners companies entered the market over the past few years with a focus on taking business from Citizens
	  ■ Many Florida writers expanding to other states to diversity exposure
	■ A.M. Best relaxing its capital requirements within its cat-stressed BCAR calculation first established after large storms of 2004 and 2005
	  ■ Requirements remain stringent for startups and cat-prone insurers exhibiting weak risk management capabilities
	  ■ Heightened scrutiny on data quality and validation procedures related to catastrophe modeling data
	  ■ Rating criteria change not expected to alter company growth strategies and reinsurance purchasing habits
	■ Companies facing downgrades may have trouble raising capital and attracting new business
	■ Strong profits in 2006 and 2007 bolstered policyholder surplus, a result of low catastrophe activity
	■ Volatile investment markets affect returns, especially interest rate-sensitive bonds in response to Federal Reserve rate cuts

Source: Towers Perrin analysis; Insurance Information Institute; industry press.

Homeowners reinsurance rates have increased, but the market is expected to soften

Category	Trends and Market Implications
Reinsurance/ Financial Markets	■ Reinsurance more expensive with rates 5% to 30% higher in 2009 ■ Reinsurers reactive to Hurricane Ike, accelerating payback period ■ Primary insurers likely to retain current reinsurance coverage, especially aggregate excess coverage. Many insurers without aggregate excess coverage looking for such coverage in response to high frequency of weather-related events in 2008; many also looking to lower excess of loss retentions, but pricing may make this difficult ■ In Florida, insurers looking to replace coverage previously provided by the state-run Hurricane Catastrophe Fund ■ Increased use of capital markets ■ Increased interest in alternative risk transfer mechanisms, such as catastrophe bonds and side-cars ■ Primary insurers tend to issue the majority of cat bonds, while side-cars have largely been confined to reinsurer sponsors ■ Cat bond and side-car activity cooled considerably in 2009 amidst the financial crisis that widened credit spreads ■ Industry's capital base restored by profits in 2006 and 2007, as a result of low catastrophe activity ■ Expect market to soften ■ Some state entities (TX, FL) did not purchase as much reinsurance coverage, freeing up capital in the private market ■ Expectation of light catastrophe year in 2009

Source: Towers Perrin analysis; Insurance Information Institute; industry press.

Homeowners results are sensitive to catastrophes

Category	Trends and Market Implications
Weather/ Catastrophes	■ Hurricane/wind ■ Expectation of light year for hurricanes/named storms ■ Catastrophe models not expected to change until 2011 — Continued debate over use of short-term vs. long-term frequency (RMS vs. AIR) — Short-term predictions have not materialized ■ Higher deductibles mandated by statute in some states. Insurers now offering percentage deductibles up to 20% of home's value ■ Market disruption in catastrophe exposed regions continues as several large insurers limit new business, non-renew existing business (e.g. Allstate) or file for large rate increases ■ Earthquake ■ The potential cost of earthquakes is growing due to increasing urban development in seismically active areas and the vulnerability of older buildings, which may not have been built or upgraded to current building codes ■ In April 2008, experts from the U.S. Geological Survey released an earthquake forecast for the next 30 years — There is a 97% chance of a 6.7 magnitude earthquake, equal to the Northridge quake, to hit southern California and a 93% chance in northern California ■ Earthquakes have occurred in 39 states and caused damage in all 50 states since 1900 ■ Modeled loss estimates decreasing, but insurers are unlikely to change reinsurance

Source: Towers Perrin analysis; Insurance Information Institute; industry press.

Continued…

Homeowners results are sensitive to catastrophes

Category	Trends and Market Implications
Weather/ Catastrophes	■ Tornado ■ 2008 was a record year for tornados with both the number of occurrences and severity at record highs — One of the deadliest tornado seasons in decades — Average 1,000 tornados per year with 1,685 in 2008 — Tornado season similar to 2008 expected to occur every four to five years on average ■ Wildfire ■ 38 states have wildfire risk, with greatest risk in California, Arizona, New Mexico and Washington ■ Home construction in wildland areas pose an increasing threat ■ New types of catastrophes pose an increasing threat ■ Man-made catastrophes from pollution ■ Defective materials, such as Chinese drywall ■ Companies spending more time analyzing catastrophe exposures ■ Extensive use of modeling for underwriting and rating ■ Manage exposures and spread risk

Source: Towers Perrin analysis; Insurance Information Institute; industry press.

Increasing population in areas prone to catastrophes increases potential catastrophe losses

Category	Trends and Market Implications
Demographics	■ Increasing population density in coastal areas ■ A September 2005 AIR Worldwide study indicates that 38% of the total exposure in Gulf and East Coast states is located in coastal counties, which accounts for 16% of the total value of properties in the U.S. ($3 trillion of residential exposure) ■ Increasing overall population will put upward pressure on both number of residences and average value of residences ■ Problems in mortgage market have tempered increases in home values, but insurers offset by increasing relative insured values ■ Cost estimators used extensively
Coverage	■ Although most homeowners purchase insurance coverage under a standard homeowners policy (as required by a mortgage lender), there is a growing trend to forgo optional coverages such as earthquake and flood ■ The portion of property owners purchasing earthquake coverage decreases with time since last major earthquake ■ Approximately 12% of California homeowners purchased earthquake coverage in 2008, compared to 33% in 1996, following the 1994 Northridge earthquake ■ Nationally, only 40%-60% of those required to purchase flood insurance actually have policies in force ■ Only about 1% of homeowners in areas not designated as special flood hazard areas purchase coverage ■ Homeowners are willing to go without coverage for several reasons ■ High cost of premiums ■ Little home equity ■ Greatest threat after an earthquake is fire, which is covered by traditional homeowners policies ■ Potential government aide after a major catastrophe

Source: Towers Perrin analysis; Insurance Information Institute; industry press.

Companies are becoming more sophisticated at pricing and risk selection

Category	Trends and Market Implications

Underwriting/ Rating	■ Underwriting may be restricted (e.g., Florida homeowners after 2004 and 2005 hurricane seasons, Texas non-renewals after mold/water damage claims)
	■ Focus is increasing on underwriting/rating both
	  ■ The home (historical losses from CLUE)
	  ■ The owner (credit scoring)
	■ Increasing rating sophistication
	  ■ Increasing number of variables used in rating algorithms
	  ■ Use of predictive modeling
	  ■ May result in decreasing total industry premiums as better risks find a lower rate with sophisticated insurers and worse risks move to less sophisticated insurers
	■ Better integration of modeling
	  ■ Using models more extensively and running the models more frequently
	  ■ Desk-top modeling tools used by underwriters, especially in catastrophe-exposed areas
	  ■ Looking for real time results
	  ■ Focus on data quality used in models
	■ The use of insurance/credit scoring is a controversial topic
	  ■ Several states have proposed bans on the use of credit information in underwriting and rating
	  ■ Many studies have been completed showing the correlation between credit and loss propensity, but the debate continues
	  ■ The Federal Trade Commission is studying the use of credit in homeowner insurance with expected conclusions in 2009
	■ Insurers trying to grow, but struggling to do so
	  ■ Intense competition in areas less prone to catastrophes
	  ■ More mergers and acquisitions likely

Source: Towers Perrin analysis; Insurance Information Institute; industry press.

The regulatory and legislative environments have broad impacts on the Homeowners market

Category	Trends and Market Implications
Regulation/ Legislation	■ Rates may be suppressed due to availability/affordability issues ■ Building codes are becoming more stringent, which may reduce severities. At the same time, more stringent building codes will increase both replacement costs and premiums ■ Several states are considering or have implemented tax credits or mandatory premium discounts for homeowners who improve the wind resistance of their homes ■ A few states offer incentives to insurers in an effort to depopulate the state funds ■ Florida ■ Florida's Citizens Property Insurance Corporation is the largest property insurer in Florida and the 11th largest property insurer in the nation — Depopulation process is ongoing with "take-out" companies, but bonus to assume policies has ended — Insurers must retain policies previously insured with Citizens for three years ■ Legislation signed to end rate freeze and allow rate increase of up to 10% per year for the next five years ■ Florida's Hurricane Catastrophe Fund decreasing catastrophe coverage available to private insurers and increasing premiums for the next several years — Currently in poor financial condition and could face a deficit in the event of a large catastrophe due to the current credit crisis and its impact on the municipal bond market — Insurers will seek reinsurance coverage in the private market — Rate increases of 10% statewide and 12% for an individual to compensate for higher reinsurance costs allowed

Source: Towers Perrin analysis; Insurance Information Institute; industry press.

Continued…

The regulatory and legislative environments have broad impacts on the Homeowners market

Category	Trends and Market Implications
Residual Market	■ State funds providing windstorm coverage ■ Explosive growth in state-run property insurers as coastal development and property values rose and private insurers limit coastal exposure through 2007 ■ Reprieve resulting from relatively calm 2006 and 2007 storm season and legislative efforts to reduce the size of state-run property insurers ■ Recently many states attempting to reduce residual markets through: — Rate increases — Incentives for private insurers to write policies — Reduced coverage offered (both changes in policy forms and implementation of hurricane deductibles) — Incentives to policyholder to improve hurricane resistance ■ Many state-run insurers operate at substantial deficits — The 2004 and 2005 hurricanes left many states with deficits, with approximately 75% of the national deficit attributable to Florida — Attempt to regain financial stability through policyholder surcharges and insurer assessments ■ Requirement of wind pool policyholder to also purchase flood insurance — Avoids coverage disputes on damage resulting from wind or water ■ Shift of exposure from private to state insurers places risk on state residents ■ Companies looking for ways to reduce exposure to residual markets

Source: Towers Perrin analysis; Insurance Information Institute; industry press.

States and companies are looking to the federal government for assistance

Category	Trends and Market Implications
Federal Support	■ National Flood Insurance Program under review ■ The program is running at a deficit of $19 billion — Deficit was $17 billion after Hurricane Katrina in 2005 — Estimate that 25% of policies have subsidized rates — Concern that increasing rates will force policyholders to drop coverage ■ The House and Senate agreed to extend the existing flood program to 2010 ■ Proposals for expansion of the plan include — Making coverage provisions closer to a homeowners policy — Adding wind coverage, aimed at avoiding coverage disputes after a hurricane — Requiring private insurers to offer an “all-perils” policy, including flood, with a federal reinsurance backstop for flood losses ■ Legislation proposed to create Office of National Insurance (ONI) to provide federal oversight ■ The ONI would gather information, develop expertise, negotiate international agreements and coordinate policy in the insurance sector ■ The ONI would have offices in every state and work with liaisons from every insurance company ■ Bill would create a national guaranty fund, but companies still required to pay state guaranty assessments

Source: Towers Perrin analysis; Insurance Information Institute; industry press.

Companies have increased efforts to detect and prevent fraud

Category	Trends and Market Implications

Fraud	■ Outsourcing of fraud investigation
	■ Use of technology to identify fraud
	  ■ ClaimSearch, by ISO, is the world's largest comprehensive claims database
	  ■ Data mining to identify potential fraud cases
	■ Use of technology to prevent fraud
	  ■ Software to pre-fill insurance applications
	  ■ Potentially eliminate fraud at point of underwriting
	■ Insurers watching to see if sub-prime mortgage crisis will spur arson by homeowners facing foreclosure
	  ■ Causes leading to a potential increase in arson include:
	  — Expiration of low introductory loan rates
	  — Falling home values
	  — Stricter lending practices, which reduces possibility of restructuring loans
	  — Increased national foreclosure rates

Loss Prevention	■ Insurers partnered with other organizations to educate urban homeowners on loss prevention techniques ■ May become more common technique to improve affordability of homeowners coverage in urban areas

Source: Towers Perrin analysis; Insurance Information Institute; industry press.