Welcome

Southwest Actuarial Forum

December 3, 2004

2004 Hurricanes
and
2005 Reinsurance Market

Top 10 Most Costly Hurricanes

(In Billions, Ranked by 2003/2004 Dollars)

			Estimated Insured Losses	
Rank	Year	Hurricane	Dollars When Occurred	In 2003 Dollars
1	1992	Andrew	$15.5	$20.3
2	2004	Charley	6.8	6.8
3	1989	Hugo	4.2	6.2
4	2004	Frances	4.4	4.4
5	2004	Ivan	6.0	6.0
7	2004	Jeanne	3.3	3.3
6	1998	Georges	2.9	3.3
8	1995	Opal	2.1	2.5
9	1999	Floyd	2.0	2.2
10	1992	Iniki	1.6	2.1

Source: Insurance Services Office; Insurance Information Institute and Property Claims Services

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2004 Hurricanes

Line of Business	# Claims	Florida Estimated Wind Losses (PCS)	Percent
Homeowners	1,300,000	$11.0B	63%
Commercial	260,000	5.8B	33%
Auto	127,000	0.7B	4%
	1,700,000	**$17.5B**	**100%**

Largest PCS Events

	2004 Dollars
World Trade Center	$36.0B
Fearsome Foursome	20.5B (A)
Andrew	20.0B

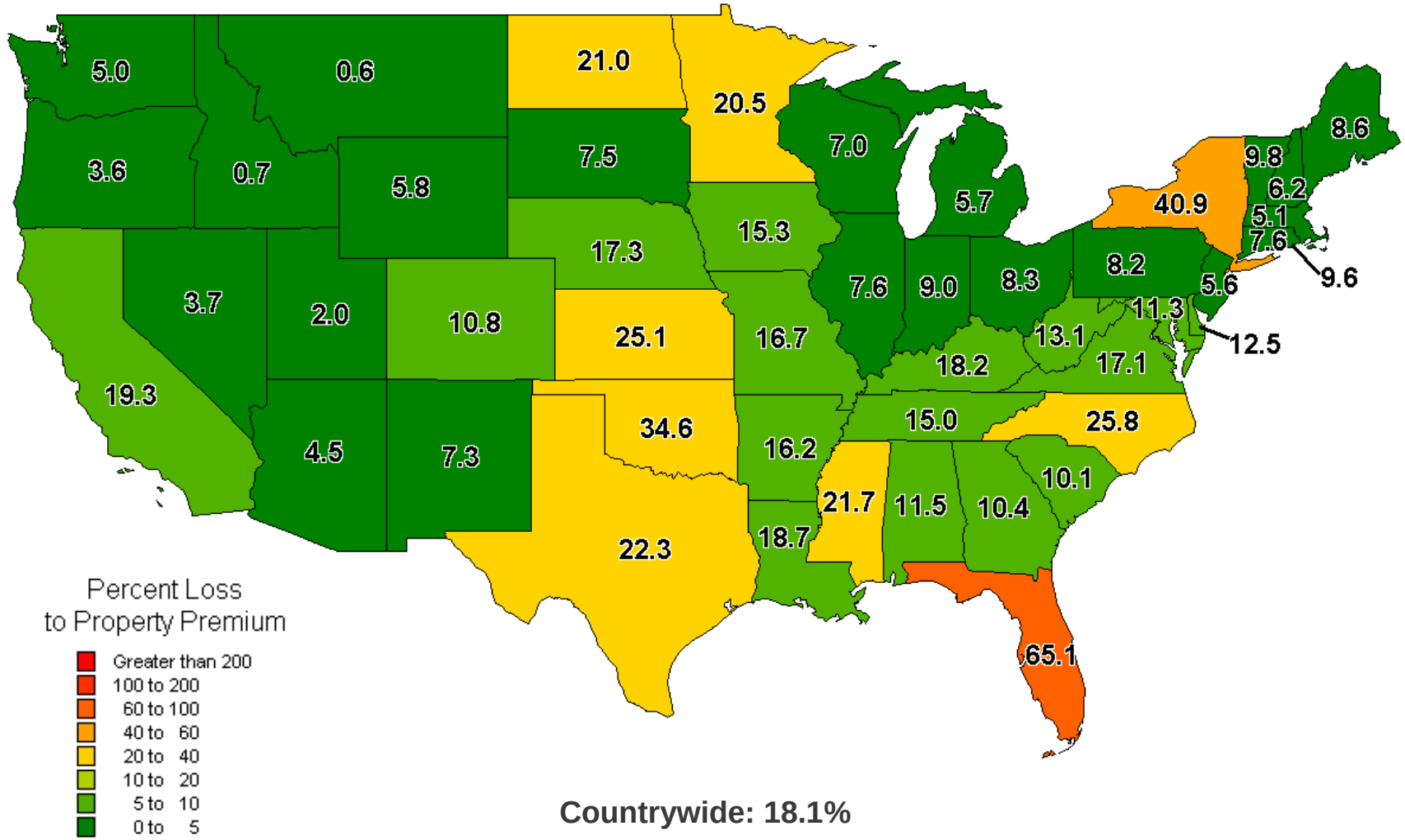
(A) Aggregate losses (all states) from Charley, Frances, Ivan, and Jeanne in 20

Early Estimates of Total of 2004 Hurricanes

	$B		
AIR	20.5	-	34.0
EQE	19.0	-	34.0
RMS	16.0	-	28.0
IF	16.5	-	30.7
Average	**18.0**	**-**	**31.7**

Catastrophe Loss as Percent of Property Premium

1992 - 2003



Countrywide: 18.1%

Catastrophe Loss as Percent of Property Premium

Countrywide Average 1992-2004

Year	Percent Countrywide
2004 (est.)	**23.5**
2003	13.4
2002	6.9
2001	**38.6**
2000	6.9
1999	13.1
1998	13.8
1997	4.5
1996	12.8
1995	13.7
1994	**33.4**
1993	11.3
1992	**48.7**
Average	**18.5**

Catastrophe Loss as Percent of Property Premium

Countrywide Average 1992-2004

Year	Percent	
	Countrywide	Florida
2004 (est.)	**23.5**	**231.7**
2003	13.4	0.7
2002	6.9	0.7
2001	**38.6**	2.3
2000	6.9	3.3
1999	13.1	5.1
1998	13.8	12.6
1997	4.5	3.2
1996	12.8	2.1
1995	13.7	55.3
1994	**33.4**	3.8
1993	11.3	24.1
1992	**48.7**	**668.2**
Average	**18.5**	**77.9**

Catastrophe Loss as Percent of Property Premium

Countrywide Average 1992-2004

	Percent		
Year	**Countrywide**	**Florida**	**Texas**
2004 (est.)	**23.5**	**231.7**	1.3
2003	13.4	0.7	17.6
2002	6.9	0.7	8.7
2001	**38.6**	2.3	45.2
2000	6.9	3.3	22.8
1999	13.1	5.1	10.3
1998	13.8	12.6	6.1
1997	4.5	3.2	3.2
1996	12.8	2.1	8.1
1995	13.7	55.3	53.0
1994	**33.4**	3.8	46.2
1993	11.3	24.1	11.6
1992	**48.7**	**668.2**	34.6
Average	**18.5**	**77.9**	**22.3**

Homeowners ROE Analysis

Effective As Of August 2004

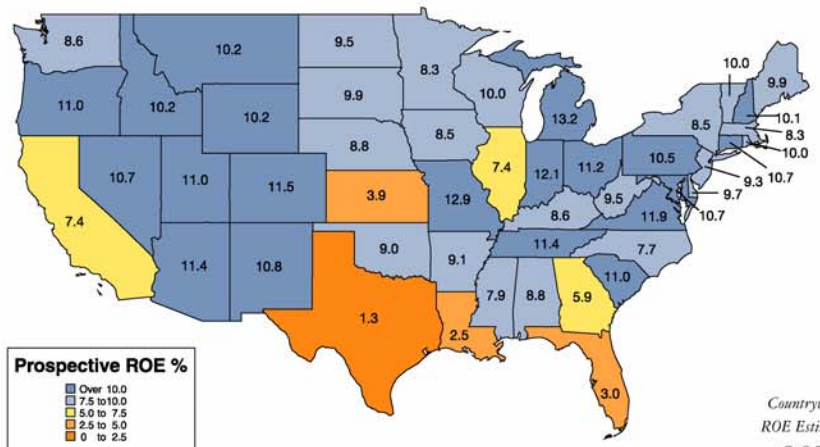
	Rate Change:				ROE %:	
	Effective Date	Indicated Change	Filed Change	Difference	Indicated ROE %	Filed ROE %
State Farm Florida Insurance Co	**Sep-04**	**2.3**	**2.3**	**0.0**	**4.7**	**4.7**
Allstate Floridian Insurance Co	**Jun-02**	**19.8**	**19.8**	**0.0**	**(1.6)**	**(1.6)**
Nationwide Insurance Co of Florida	**Apr-04**	**37.6**	**19.9**	**(17.7)**	**11.4**	**6.8**
United Services Auto Assoc	**Jun-04**	**8.0**	**0.0**	**(8.0)**	**9.4**	**6.0**
Clarendon Select Insurance Co	**May-04**	**21.3**	**17.6**	**(3.7)**	**0.2**	**(1.0)**
					Average	**3.0**

ROE's assume equity capital and catastrophe reinsurance consistent with A.M. Best "A" rating, with state cost allocations by Aon Re Services.

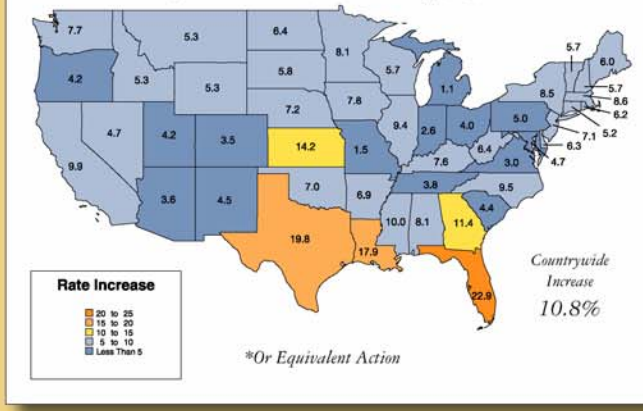
ROE's also include investment income and tax estimate by Aon Re Services

Homeowners ROE Outlook - Improvement Continues

Prospective ROEs at Current Rates

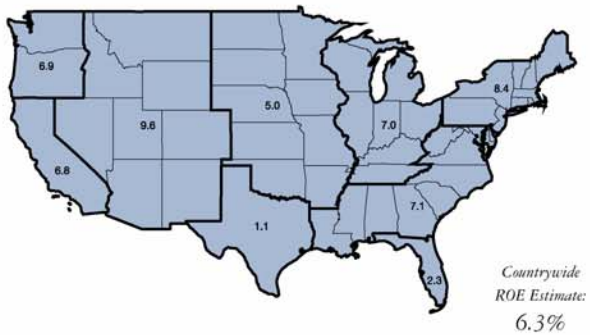


Rate Increases to Achieve 14% ROE*

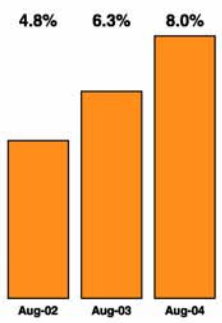


Prospective ROEs at Current Rates and Rate Increases for 14% ROEs are based on analysis of actuarial support for rate filings of the five leading companies in states making up 80% of US population, where publicly available. Estimates reflect rate increases filed by these largest insurers through June, 2004. Smaller states were estimated using combined ROE of reviewed states, credibility adjusted based on state loss ratio data reported in Annual Statements. Estimates include Aon Re analysis of capital requirements and cost of reinsurance by state for a company with an A. M. Best "A" rating. Results are for illustration only, and will vary for individual companies.

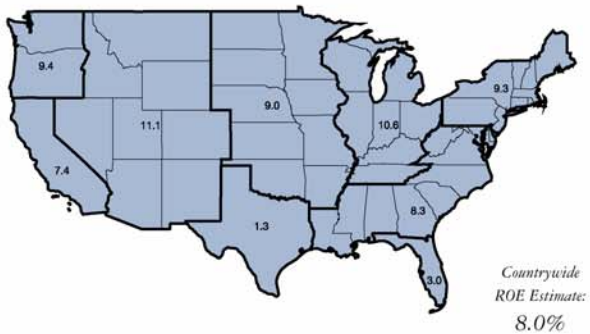
August 2003
Prospective ROEs by Region



History of Countrywide
Prospective ROEs



August 2004
Prospective ROEs by Region



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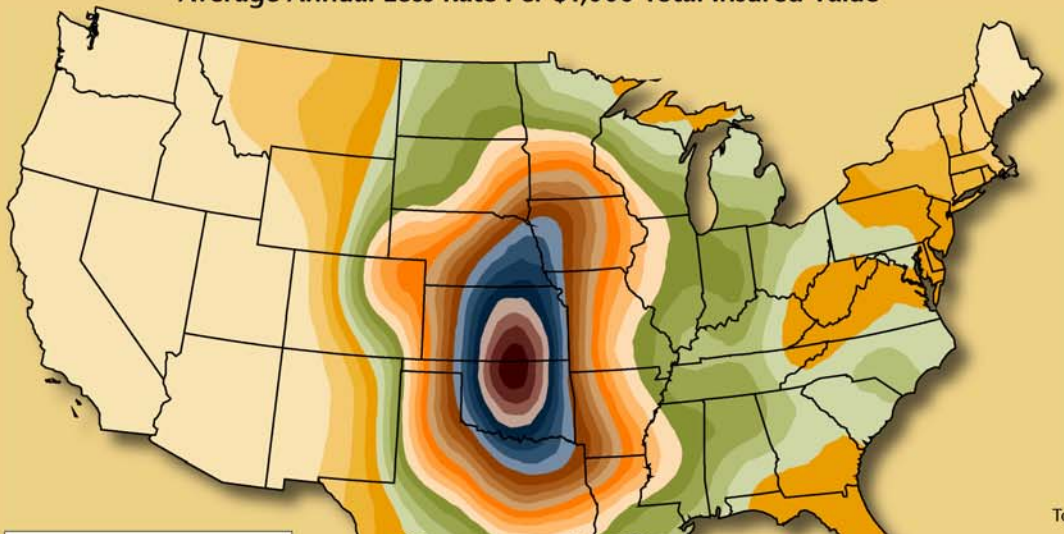
Wind and Thunderstorm Catastrophe Risk Management

U.S. Wind and Thunderstorm
Average Annual Loss Rate Per $1,000 Total Insured Value



Loss Rate Per $1,000
Frame Homeowners Policy, $500 Deductible

Over 1.15	.75 to .80	.35 to .40
1.10 to 1.15	.70 to .75	.30 to .35
1.05 to 1.10	.65 to .70	.25 to .30
1.00 to 1.05	.60 to .65	.20 to .25
.95 to 1.00	.55 to .60	.15 to .20
.90 to .95	.50 to .55	.10 to .15
.85 to .90	.45 to .50	.05 to .10
.80 to .85	.40 to .45	.00 to .05

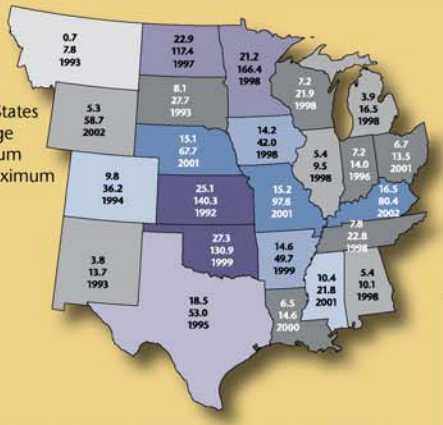
Industry PMLs ($Billions)
Central States Tornado/Hail

Return Period	Single Occurrence	Annual Aggregate
250	6.6	12.4
100	5.1	10.7
50	4.2	9.6
25	3.3	8.5
10	2.4	7.0
5	1.7	5.8

Source: RMS Industry Loss Estimates

Wind and Thunderstorm Loss Ratios
Average, Maximum, and Year of Maximum
1991 - 2002

Total Central States
11.4 Average
17.4 Maximum
1998 Year of Maximum



Catastrophe Loss Ratios: Catastrophe Losses from ISO Property Claim Service divided by Industry Property Premiums from OneSource Information Services, Inc.

Catastrophe Risk Management Plan Items

- Assess and monitor risk/volatility
- Optimize portfolio
- Determine capital/reinsurance requirements
- Acquire capital/reinsurance requirements
- Allocate cost by business unit/area
- Recover cost in rates/pricing

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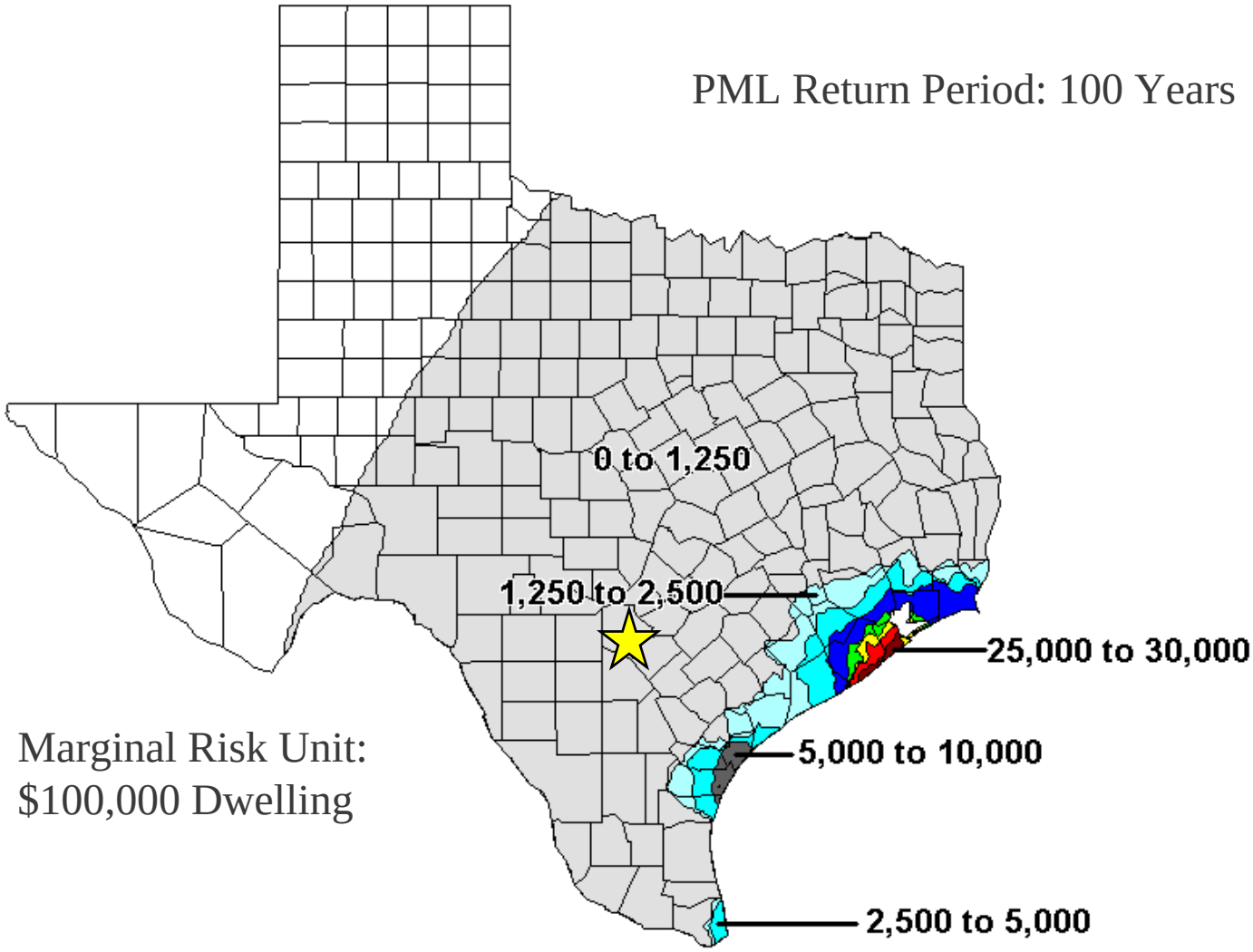
Increase to PML per Marginal Risk Unit

Hurricane Only (Sample Portfolio)

PML Return Period: 100 Years



Marginal Risk Unit:
$100,000 Dwelling

Catastrophe Models

- **Risk Management Solutions: RiskLink DLM**
- **AIR: CLASIC/2, 10k, 50k, 100k event sets**
- **EQECAT: WorldCat Enterprise**
- **Impact Forecasting**
  (an Aon Re proprietary event modeling system accessible to Aon Re clients now includes California Brush Fire)
- **Property Claims Services (PCS)**

Risk Management Solutions R M S™

APPLIED INSURANCE RESEARCH

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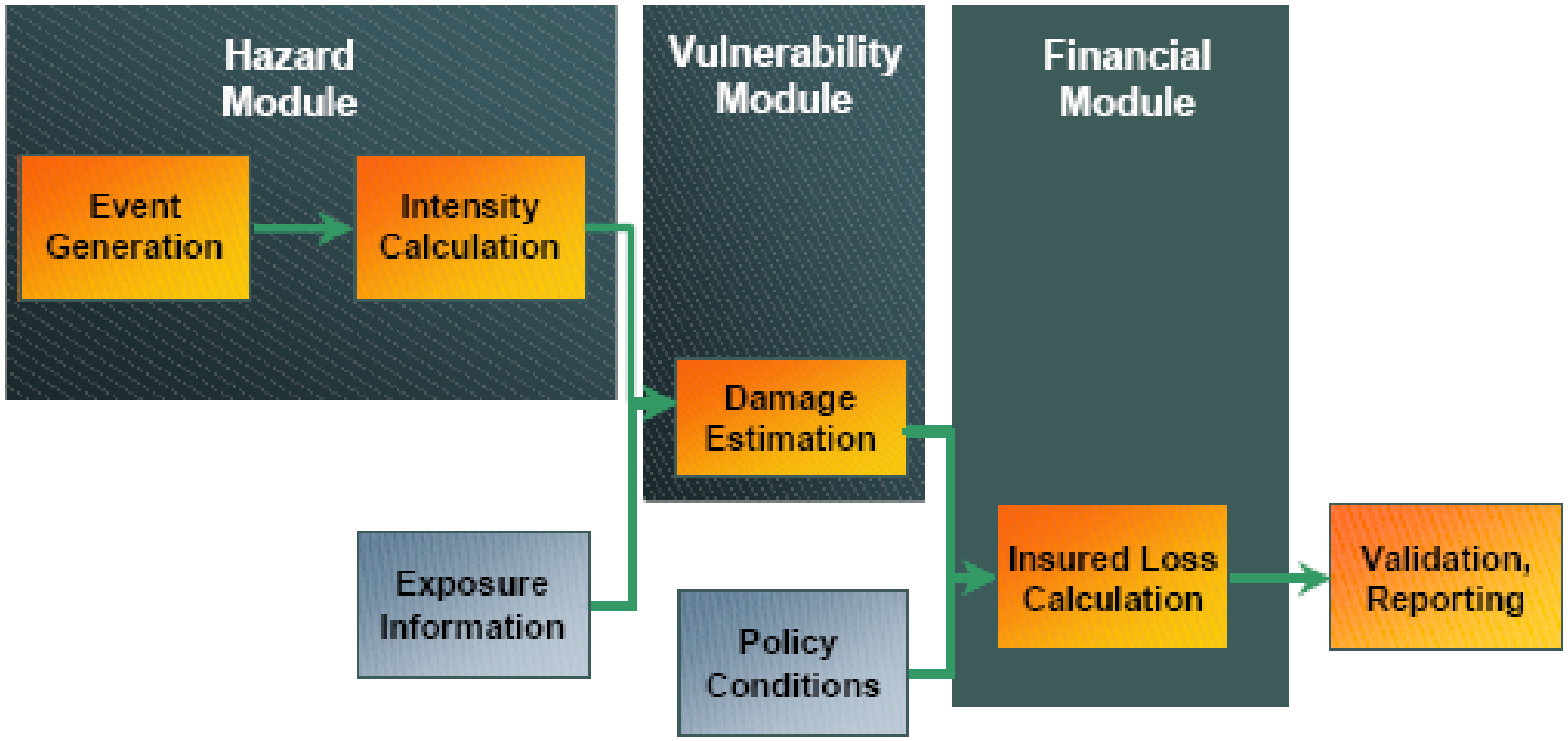
Catastrophe Model Framework



Source: Applied Insurance Research

Why Use Simulation?

- **Catastrophe modeling simulates thousands of years of loss experience, unlike historical loss experience which may not reflect the true long term catastrophe loss potential.**
- **Scientific, engineering and insurance expertise is captured and reflected in the model output.**

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Why Models Are Different?

- Incomplete knowledge
- Myriad of variables
- Very short historical period
- Constantly changing environment
  - Structures
  - Population shifts
- Policy variations
- Insurer practice variations

Source: Kozlowski, Simons and Gardner (2002)

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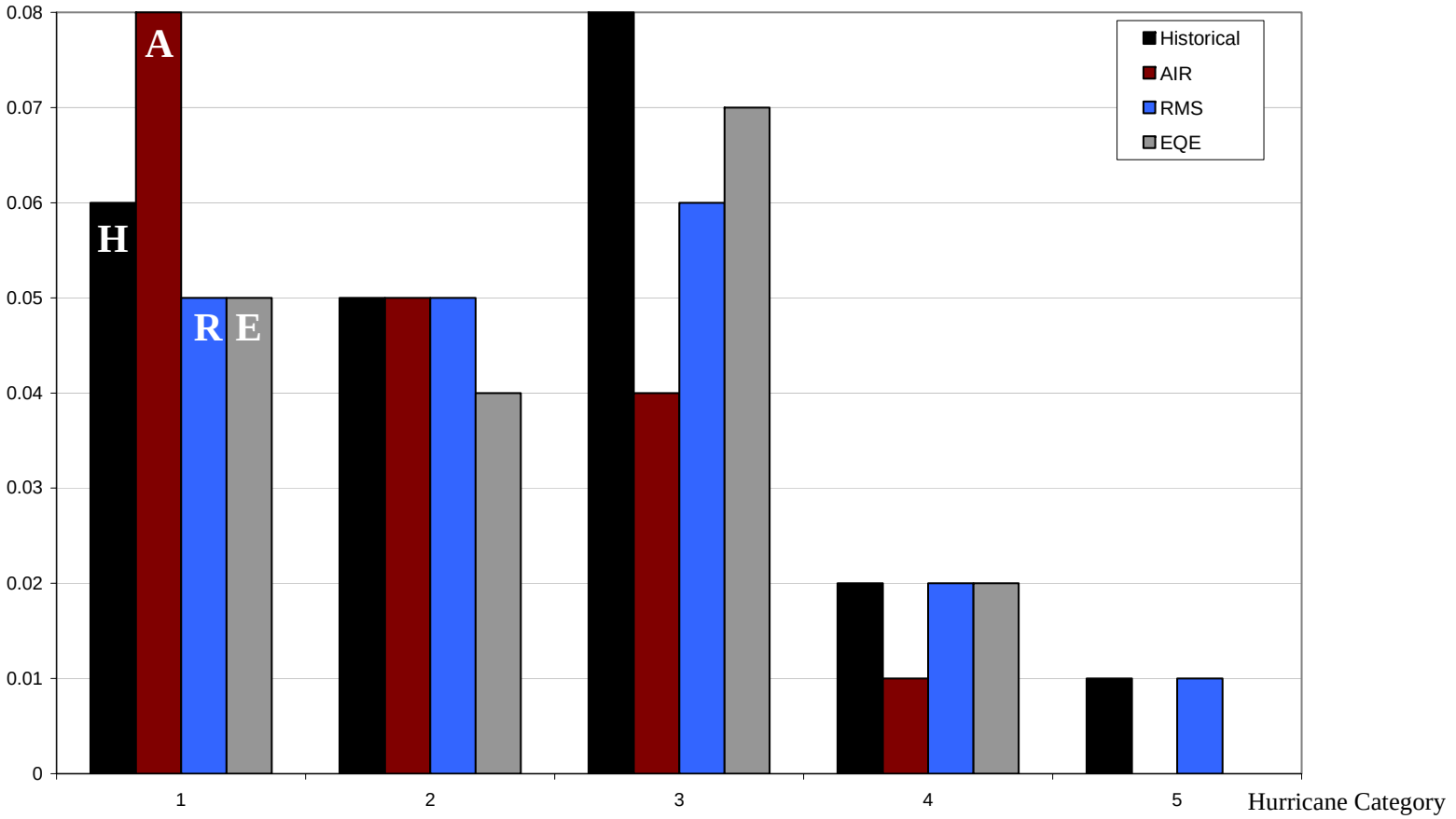
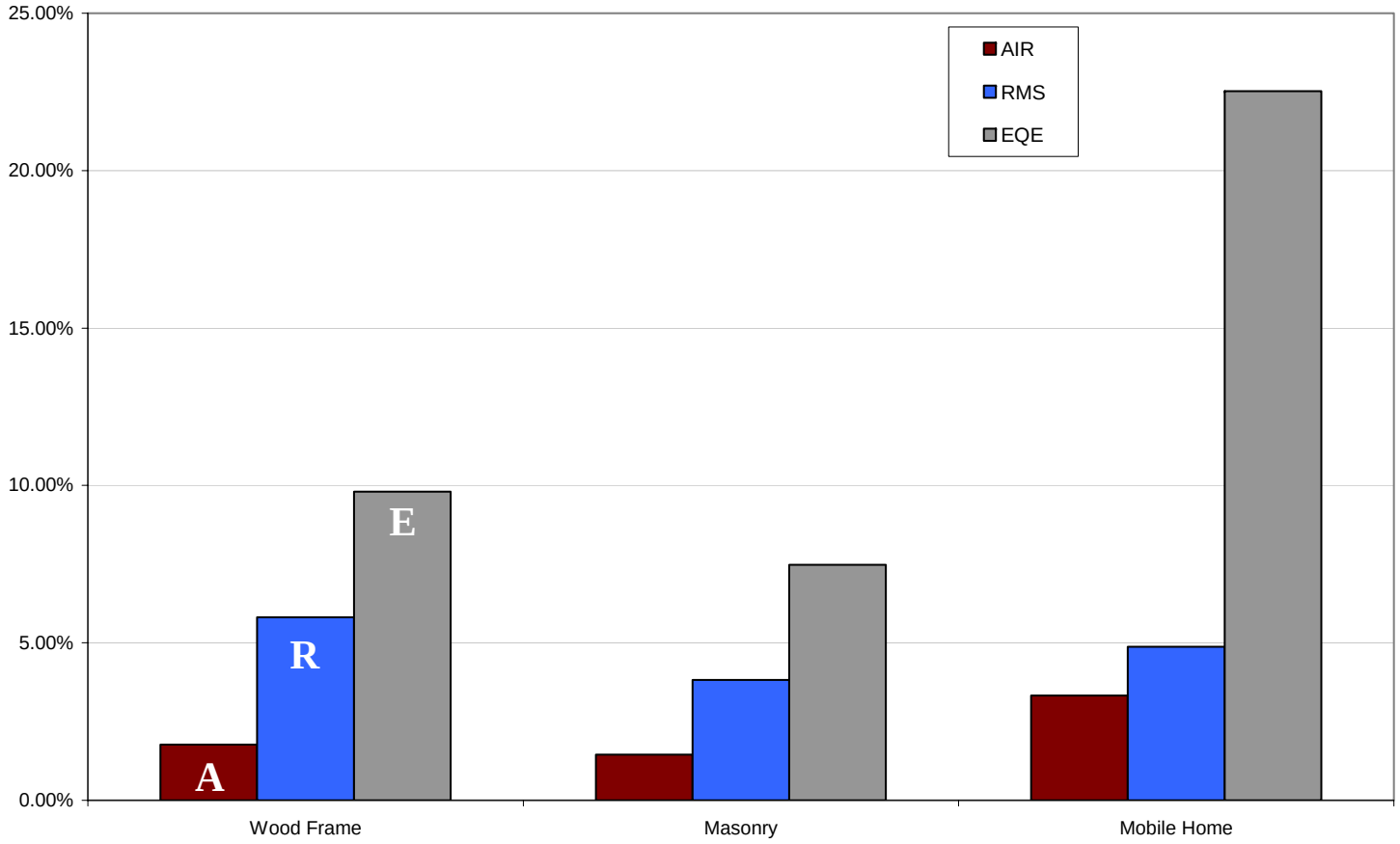
Modeled Annual Occurrence Rates in Florida Southeast



Source: Modeling firm submissions to the Florida Commission on Hurricane Loss Projection Methodology (FCHLPM), 2004

- AIR has more category 1 and 2 hurricanes than RMS and EQE
- RMS has more category 4 and 5 hurricanes than AIR
- EQE has more category 3 hurricanes than AIR or RMS

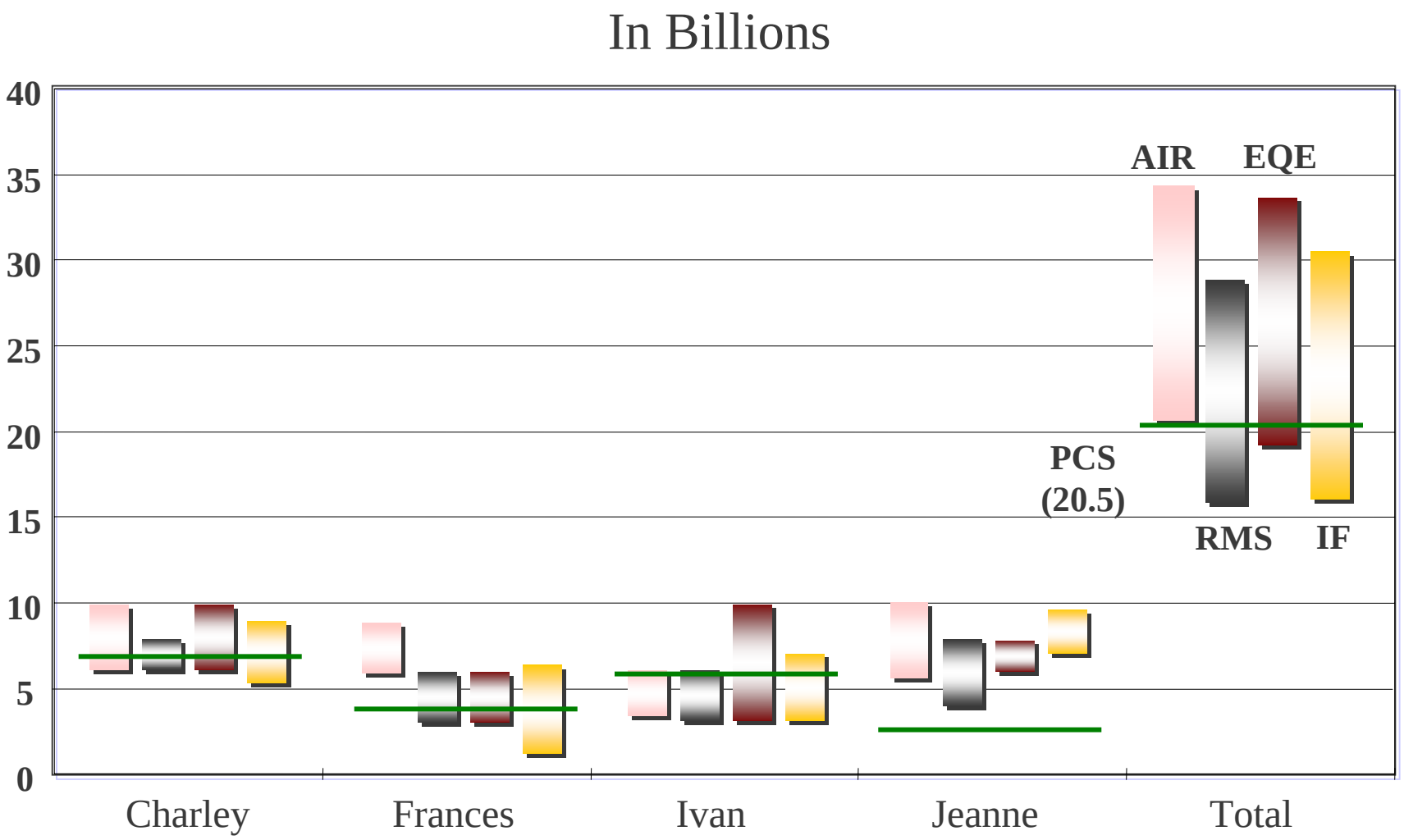
Estimated Damage/Subjected Exposure



Source: Modeling firm submissions to the Florida Commission on Hurricane Loss Projection Methodology (FCHLPM), 2004

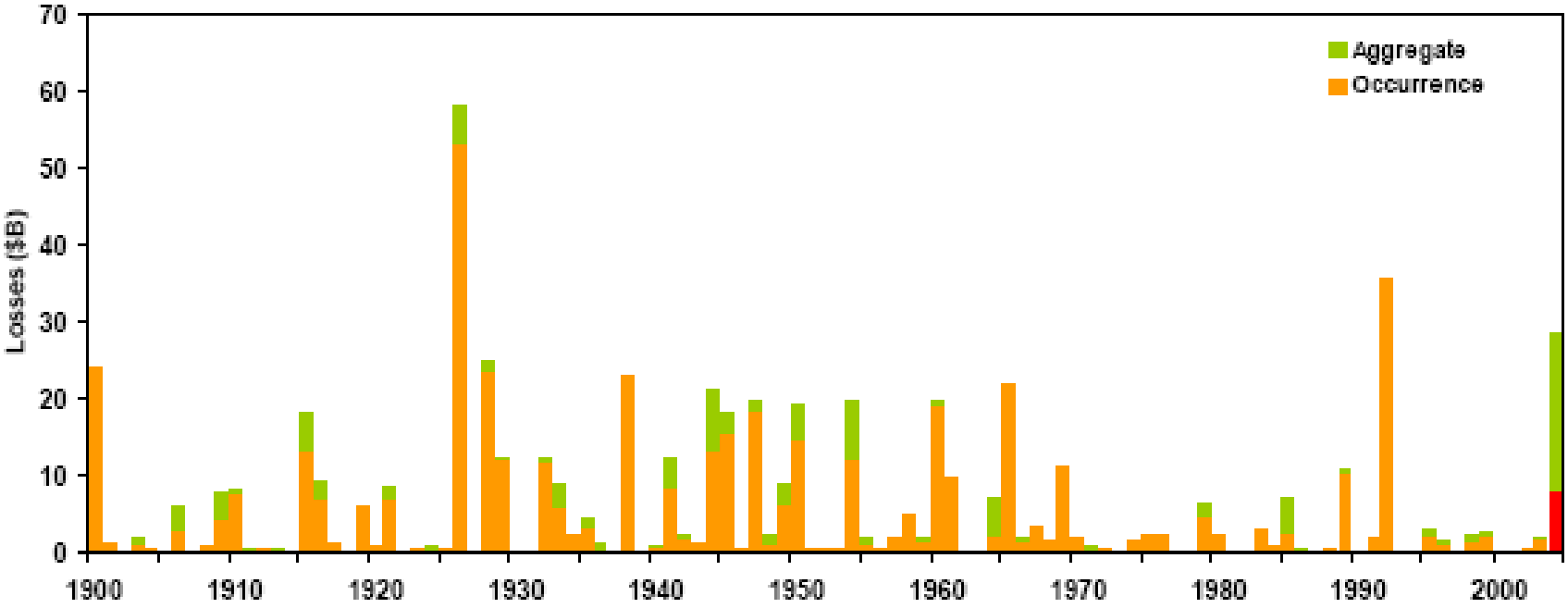
- Same event track and wind speeds used by all three models.

Wind Loss Estimates
(All States)



Historical Hurricane Losses

In Today's Property Values



Source: Applied Insurance Research

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Model A Losses

Model A

	Actual Incurred	Company 1 Mean	Company 1 Mean +1 SD	Company 1 Mean +2 SD	Company 2 Mean	Company 2 Mean +1 SD	Company 2 Mean +2 SD	Company 3 Mean	Company 3 Mean +1 SD	Company 3 Mean +2 SD
Charley	100%	67%	80%	94%	67%	84%	101%	49%	56%	63%
Frances	100%	26%	40%	53%	75%	126%	177%	21%	37%	54%
Ivan	100%	32%	42%	52%	44%	64%	84%	18%	28%	38%
Jeanne	100%	58%	85%	113%	76%	119%	163%	39%	65%	92%
Total	100%	46%			63%			31%		

Model A

	Actual Incurred	Company 4 Mean	Company 4 Mean +1 SD	Company 4 Mean +2 SD	Company 5 Mean	Company 5 Mean +1 SD	Company 5 Mean +2 SD
Charley	100%	78%	103%	128%	76%	96%	116%
Frances	100%	54%	90%	125%	169%	278%	388%
Ivan	100%	58%	87%	116%	156%	213%	270%
Jeanne	100%	77%	126%	175%	158%	255%	351%
Total	100%	69%			108%		

Model B Losses

Model B

	Actual Incurred	Company 1 Midpoint	Company 1 Low End of Range	Company 1 High End of Range	Company 2 Midpoint	Company 2 Low End of Range	Company 2 High End of Range	Company 3 Midpoint	Company 3 Low End of Range	Company 3 High End of Range
Charley	100%	79%	71%	92%	54%	33%	70%	51%	43%	60%
Frances	100%	33%	30%	48%	96%	68%	139%	63%	35%	167%
Ivan	100%	56%	34%	73%	65%	36%	71%	23%	16%	28%
Jeanne	100%	97%	78%	106%	112%	86%	176%	49%	39%	56%
Total	100%	65%			71%			44%		

Model B

	Actual Incurred	Company 4 Midpoint	Company 4 Low End of Range	Company 4 High End of Range	Company 5 Midpoint	Company 5 Low End of Range	Company 5 High End of Range
Charley	100%	86%	74%	103%	78%	53%	99%
Frances	100%	88%	68%	102%	432%	329%	440%
Ivan	100%	149%	114%	183%	274%	213%	341%
Jeanne	100%	144%	115%	168%	347%	236%	490%
Total	100%	108%			188%		

Initial Estimates Are Low?

- Demand surge
  - Modeled based on the size of single occurrence
  - Actual is more in line with aggregation of all four hurricanes
- Regulatory pressure
  - Deadlines to settle claims and avoid fines could drive losses
- Deductibles
  - Waived for second or third events.
- Actual value of exposures
  - Modeled losses will be less than actual if actual values are more than input into models
- Business interruption
  - cumulative effect of hurricanes on restoration of normal economic activity

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First Line of Defense

- Embrace multi-modeling philosophy
- Some model assumptions are only suitable for large portfolio analysis
- Know what is included and what is excluded from a modeled estimate
  - Demand surge, rain and flood damage, storm surge sequential storm damage, exclusion of certain lines of business, insurance payout practice (regulatory surge)

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Garbage In Garbage Out

- Key data items
  - Limits, deductibles, location, construction, occupancy, year built, height
- Common data input issues
  - Missing policies
  - Wrong limits
  - Wrong or missing deductibles
  - P.O. Box addresses; Billing addresses; No street address – only ZIPcode
  - Unknown or wrong construction and occupancy
- Review data before it is modeled

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Estimates Are Subject to Uncertainty

- Hurricane footprint loss estimates are subject to
  - Uncertainty in hazard parameters
    - Radius of maximum wind
    - Wind speed
  - Uncertainty in damage parameters
    - Construction quality
    - Mitigation measures

- What did you present to top-management?
  - Single estimate of losses?
  - Range?
  - Mean/Median and standard deviation?
  - Confidence interval?

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New Looks at Important Issues

- Catastrophe modeling
- Deductibles (annual vs. event; Aon study)
- Recovering cat loads in primary rates
- Reinsurance contract terms
  - Co-participations
  - Interaction with state funds
  - Reinstatement provisions
  - Hours clause (next page)

Hours Clause

Most reinsurance contracts have an “hours” limitation in the definition of “occurrence”

- **“Wind” is typically limited to a 72 hour period**

Hours Clause

Most reinsurance contracts have an "hours" limitation in the definition of "occurrence"

- **"Wind" is typically limited to a 72 hour period**

How do the 2004 hurricanes fit?

- **Time from landfall to < 50 mph winds**

Charley	**27 hrs**
Frances	**39 hrs**
Ivan	**19 hrs**
Jeanne	**18 hrs**

Hours Clause

Most reinsurance contracts have an "hours" limitation in the definition of "occurrence"

- **"Wind" is typically limited to a 72 hour period**

How do the 2004 hurricanes fit?

- **Time from landfall to < 50 mph winds**

Charley	**27 hrs**
Frances	**39 hrs**
Ivan	**19 hrs**
Jeanne	**18 hrs**

How about events in prior years?

Donna (1960)	**78 hrs**
1935 Hurricane	**162 hrs**
Andrew	**61 hrs**

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New Looks at Important Issues

- Greater focus on annual aggregate PML's
  - Horizontal covers
  - Aggregate covers
- Reinsurance security
  - Industry loss at top end of covers
  - Collateralization of recoverables
  - Pricing which reflects security quality
  - Special termination provisions
  - Rating agency focus on stress tests

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New Looks at Important Issues

- Terrorism
  - Commercial lines
  - Personal lines
- Reinsurance pricing

New Looks at Important Issues

Capital Required to Support Volatility

- **Considered in pricing by quoting reinsurers**
- **Gradually making its way into**
  - **Primary rate making**
  - **Rating agency considerations**

Thank You!