

Managing Natural Disaster Risk

What Role Should the Federal Government Play?

Dr L James Valverde, Jr

Director, Economics and Risk Management

Insurance Information Institute

110 William Street

New York, NY 10038

Tel: (212) 346-5522

Fax: (212) 732-1916

jamesv@iii.org www.iii.org

16 May 2006



The Need for a Public Dialogue About Natural Disaster Risk

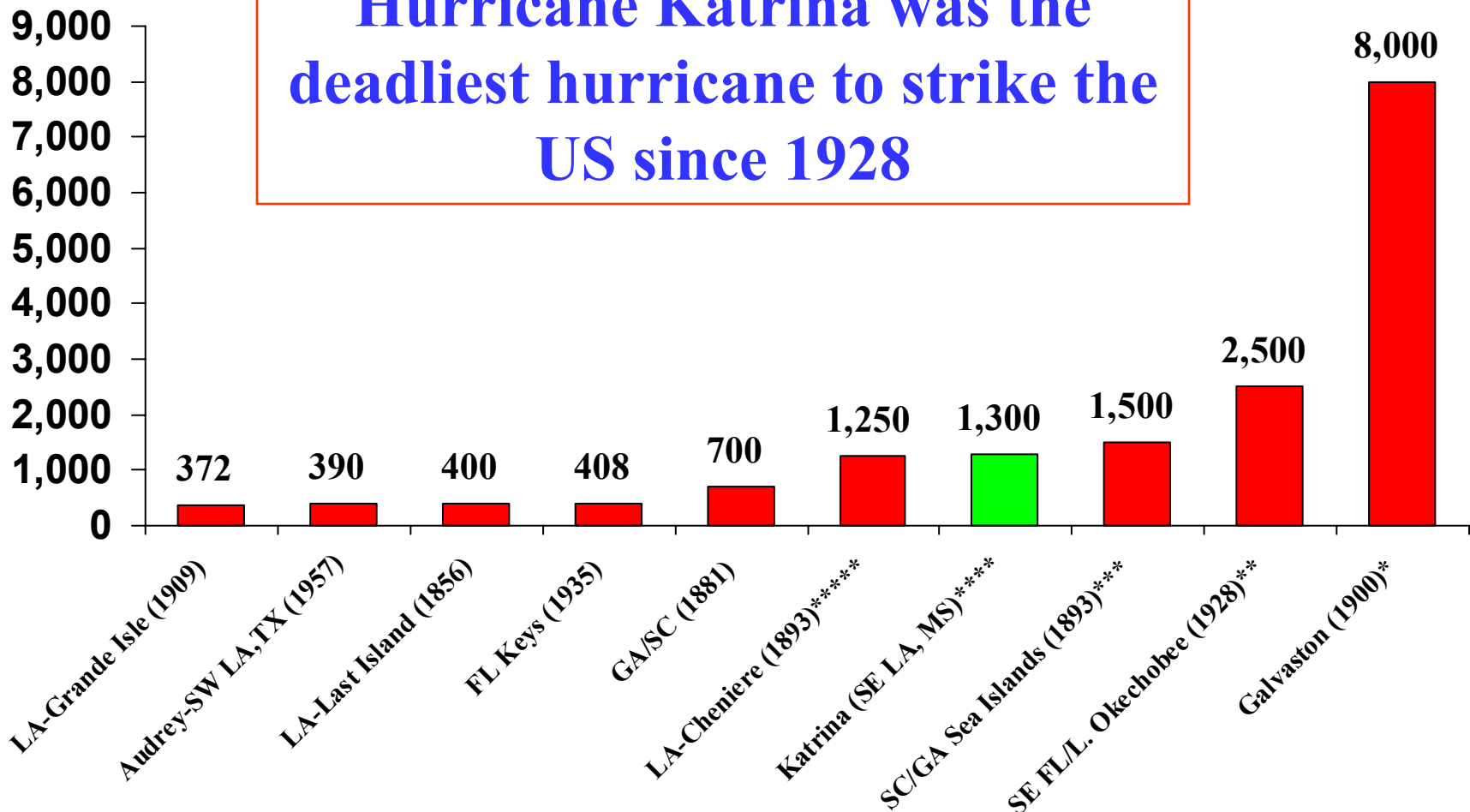
- The hurricane season of 2005 will surely be remembered for decades to come — not just for the human and economic toll that it extracted on those living in the Gulf Coast and Florida, but also for the profound influence it is likely to have in shaping the public dialogue in this country about how large-scale natural catastrophes should be managed in the post-9/11 era
- This dialogue holds the promise of engendering substantive changes in the interconnected web of social, political and economic systems that — through a variety of formal and informal mechanisms — shift, spread, or reduce the myriad risks that pervade life in the 21st century
- This year's hurricane season brought with it a degree of destruction and devastation not seen in this country since the late 1920s
- Moving forward:
 - How should we, from a societal perspective, shape our collective destiny in light of what has tragically come to pass?
 - How might we do things better the next time around, taking into consideration all of the attendant risks and complexities?
 - What role should the federal government play in managing natural disaster risk?

Focus on Catastrophe Loss Management



Top 10 Deadliest Hurricanes to Strike the US: 1851-2005

Hurricane Katrina was the deadliest hurricane to strike the US since 1928



*Could be as high as 12,000

**Could be as high as 3,000

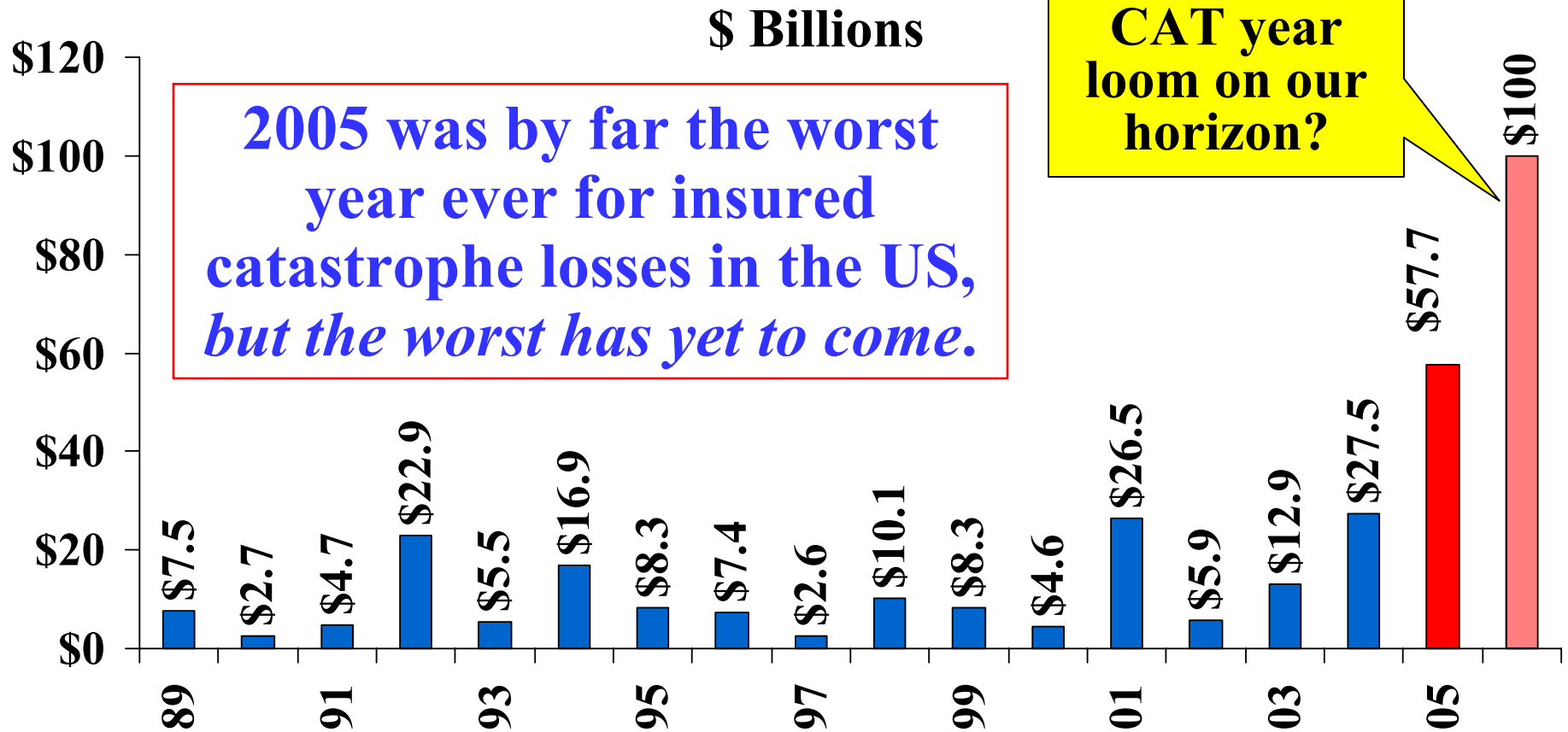
***Midpoint of 1,000 – 2,000 range

****Preliminary as of Oct. 14, 2005 *****Midpoint of 1,100-1,400 range.

Sources: NOAA; Insurance Information Institute.



U.S. Insured Catastrophe Losses (\$ Billions)*



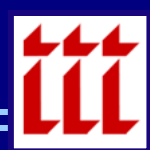
2005 was by far the worst year ever for insured catastrophe losses in the US, but the worst has yet to come.

Does a \$100B CAT year loom on our horizon?

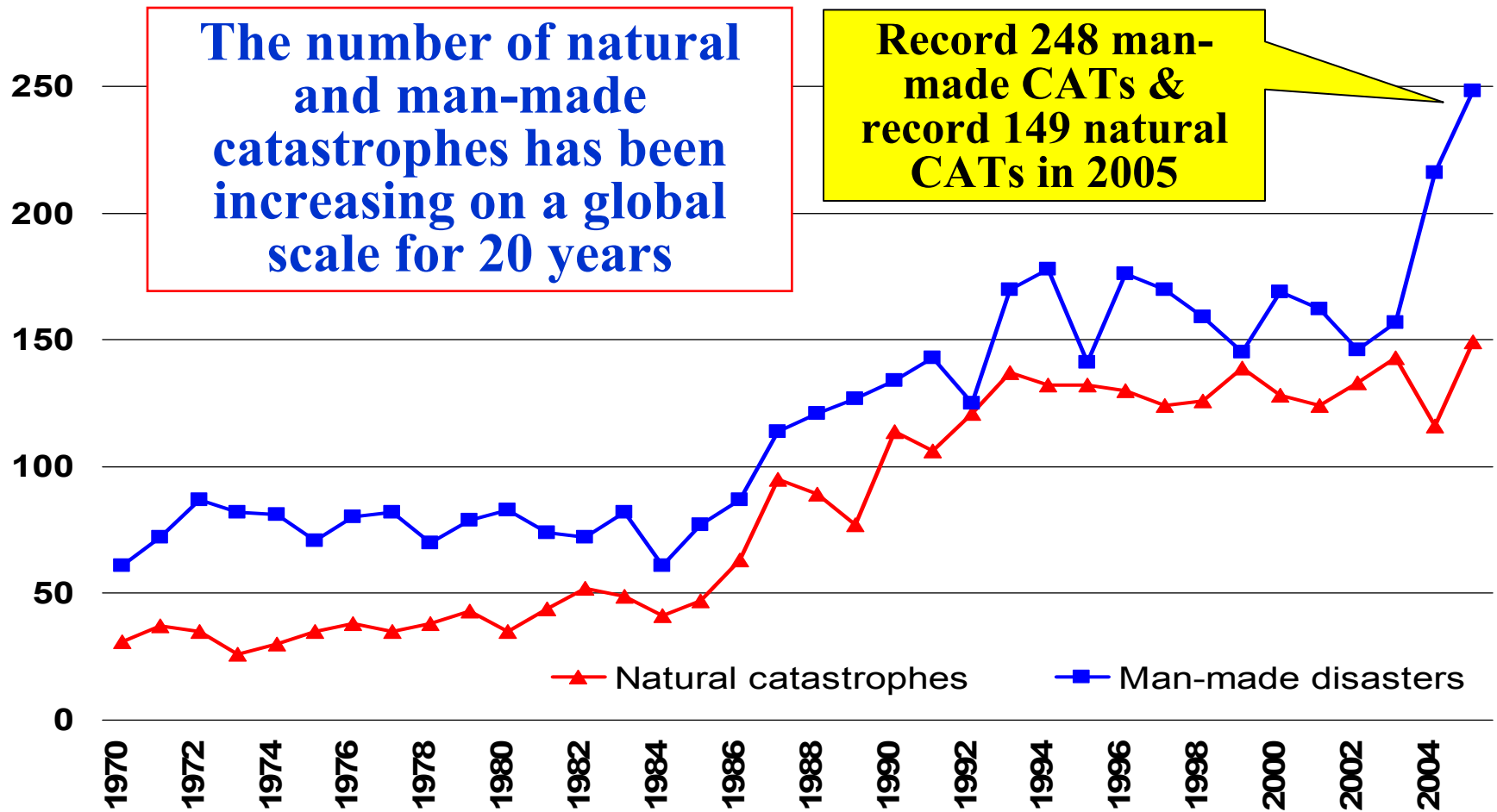
*Excludes \$4B-\$6b offshore energy losses from Hurricanes Katrina & Rita.

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

Source: Property Claims Service, ISO; Insurance Information Institute

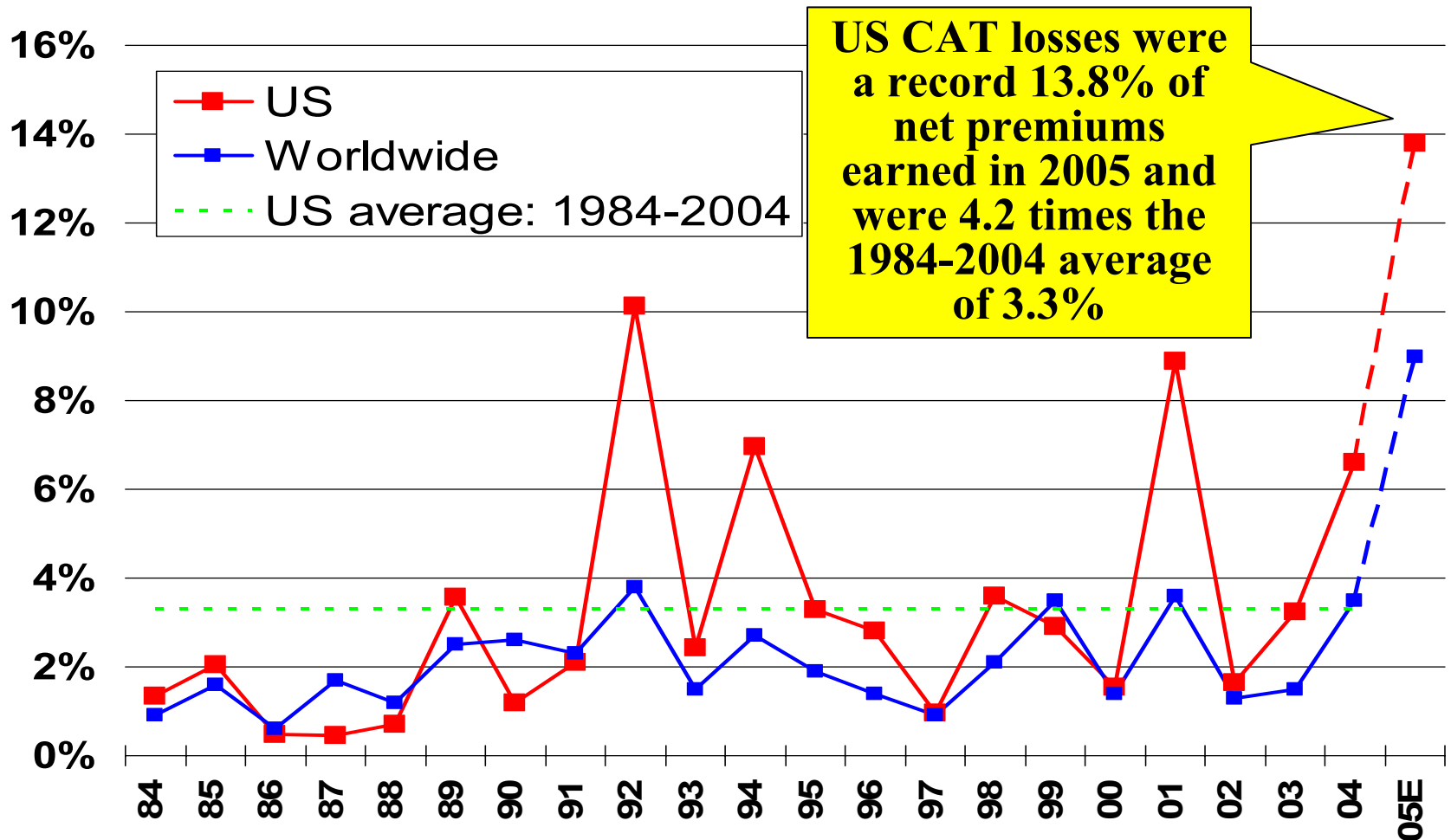


Global Number of Catastrophic Events, 1970–2005





Insured Property Catastrophe Losses as % Net Premiums Earned, 1983-2005E

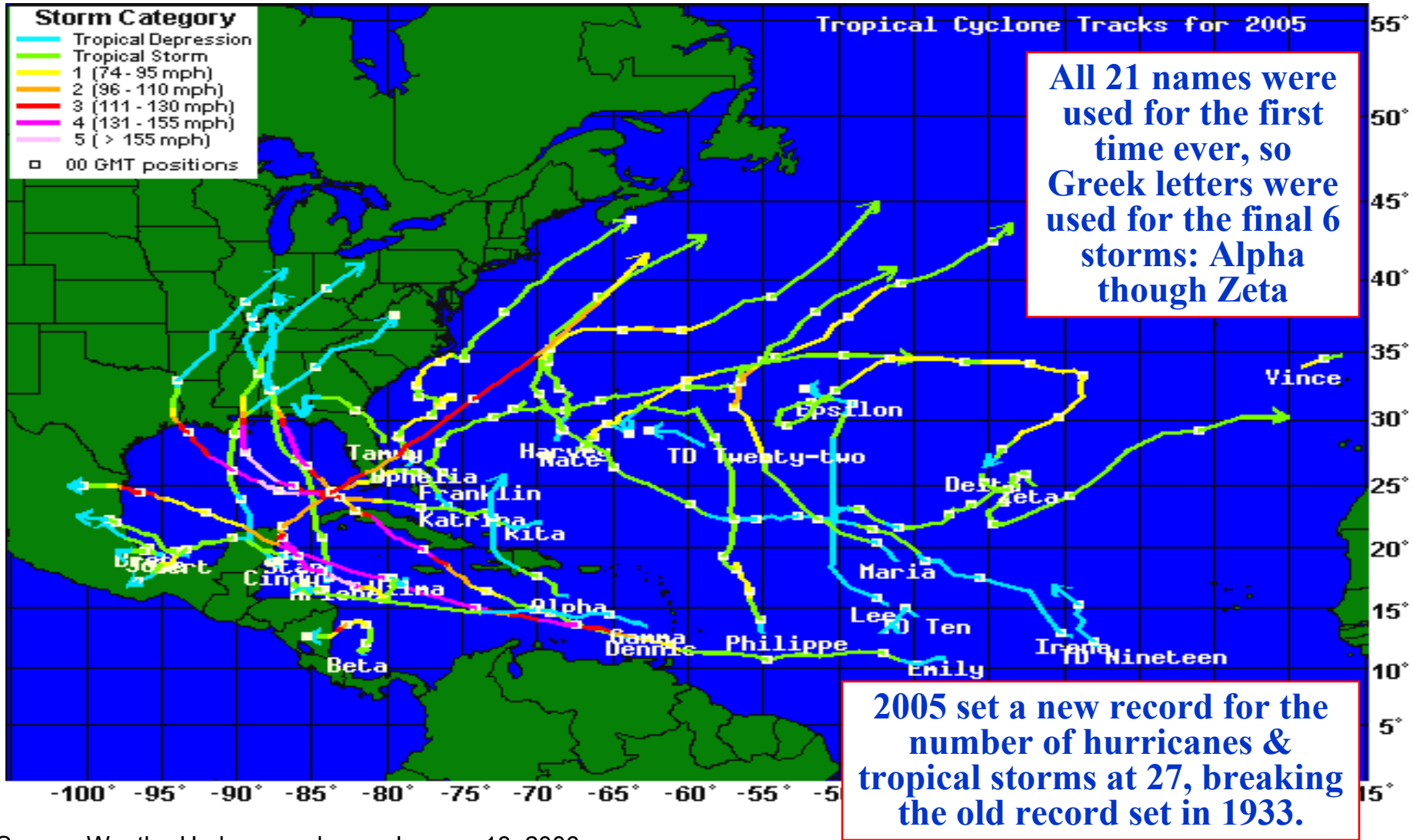


*Insurance Information Institute figure of 13.8% for 2005 based estimated 2005 DPE of \$417.7B and insured CAT losses of \$57.7B.

Sources: ISO, A.M. Best, Swiss Re Economic Research & Consulting; Insurance Information Institute.

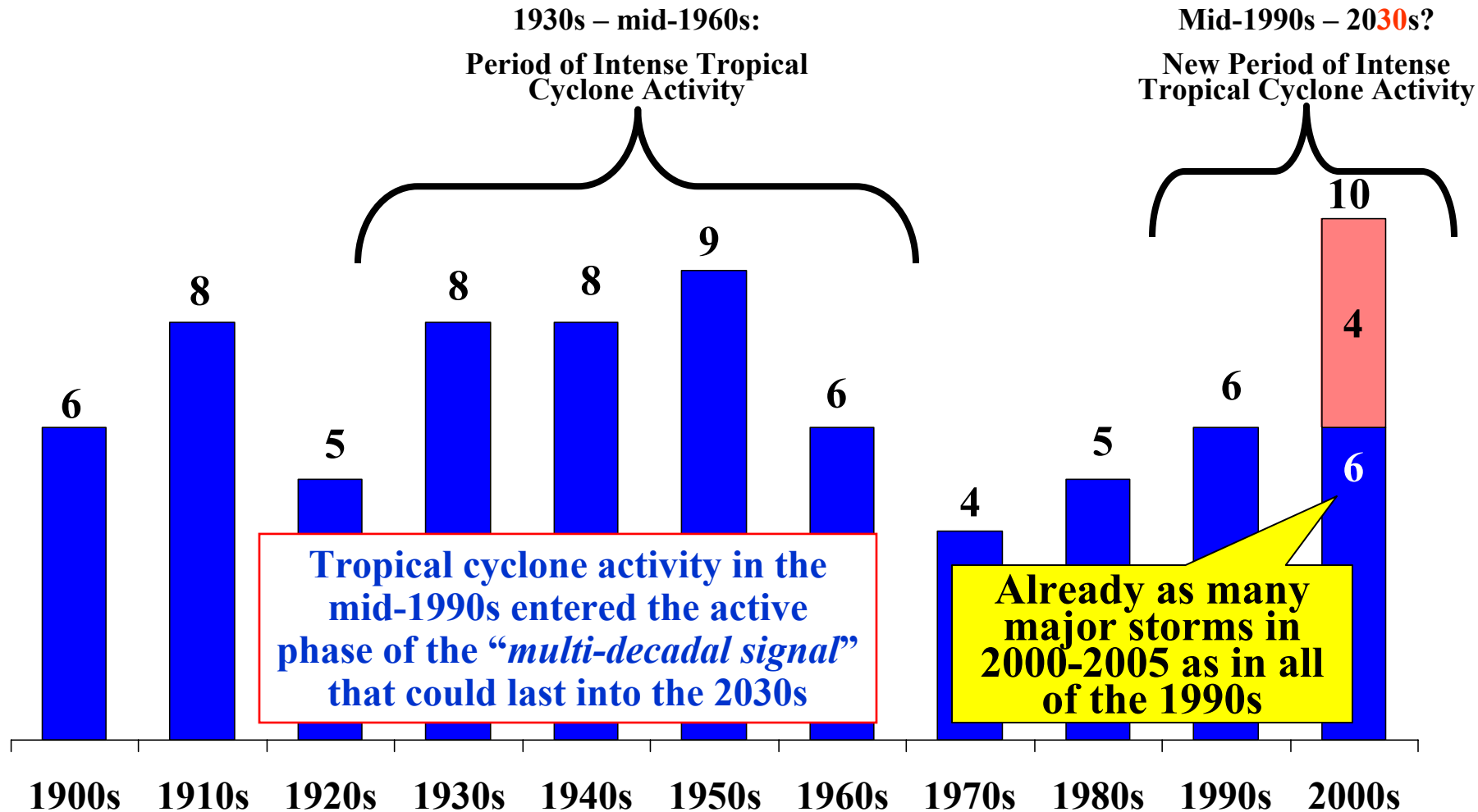


2005 Was a Busy, Destructive, Deadly, and Expensive Hurricane Season





Number of Major (Category 3, 4, 5) Hurricanes Striking the US by Decade



*Figure for 2000s is extrapolated based on data for 2000-2005 (6 major storms: Charley, Ivan, Jeanne (2004) & Katrina, Rita, Wilma (2005)).

Source: Tillinghast from National Hurricane Center: <http://www.nhc.noaa.gov/pastint.shtm>.

The 2006 Hurricane Season:

Preview to Disaster?



Probability of Major Hurricane Landfall (CAT 3, 4, 5) in 2006

	Average*	2006F
Entire US Coast	52%	81%
US East Coast Including Florida Peninsula	31%	64%
Gulf Coast from FL Panhandle to Brownsville, TX	30%	47%

Above-Average Major Hurricane Landfall Risk is also expected in the Caribbean for 2006

*Average over past century.

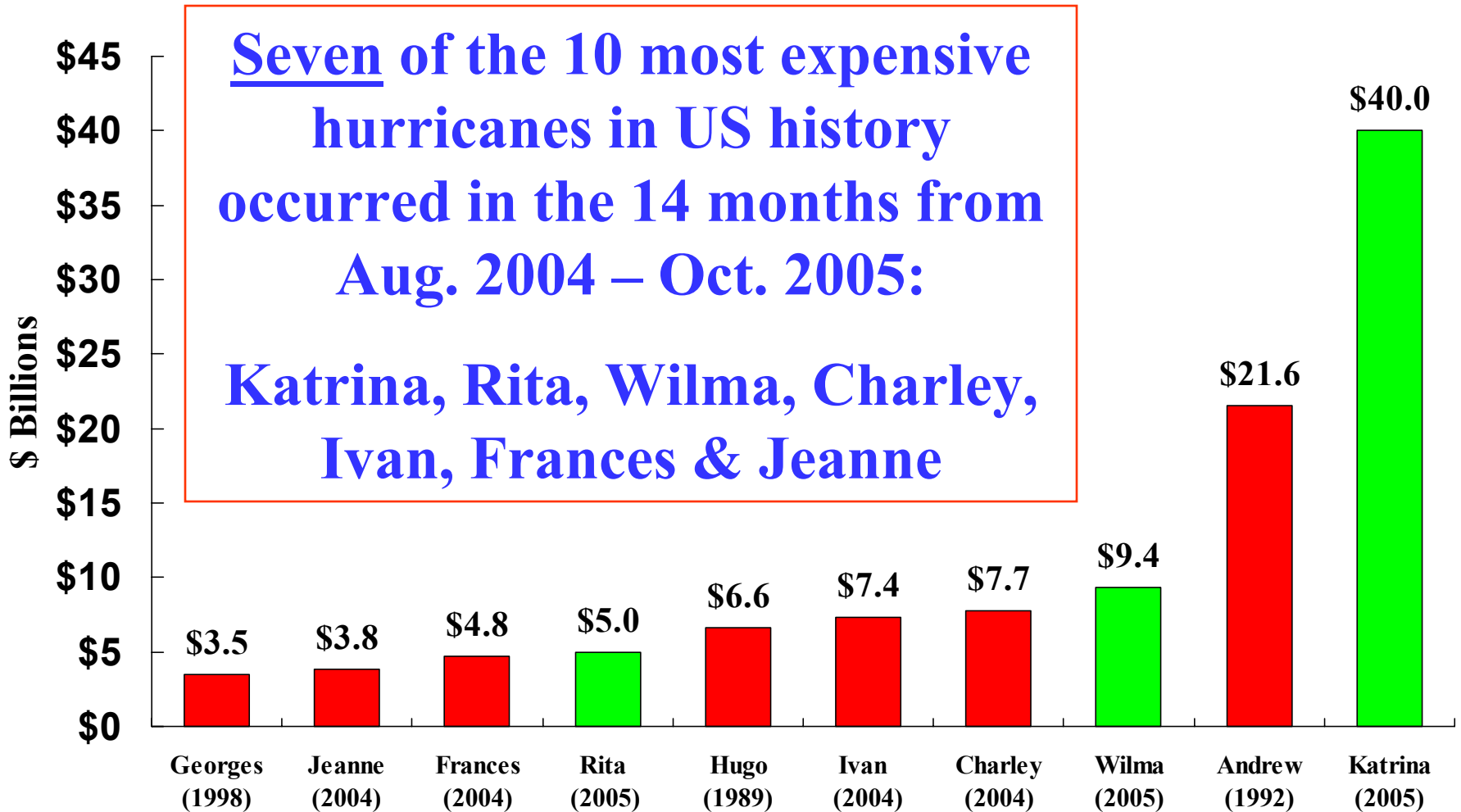
Source: Dr. William Gray, Colorado State University, April 4, 2006.

Hurricanes Katrina, Rita & Wilma:

Their Place in History

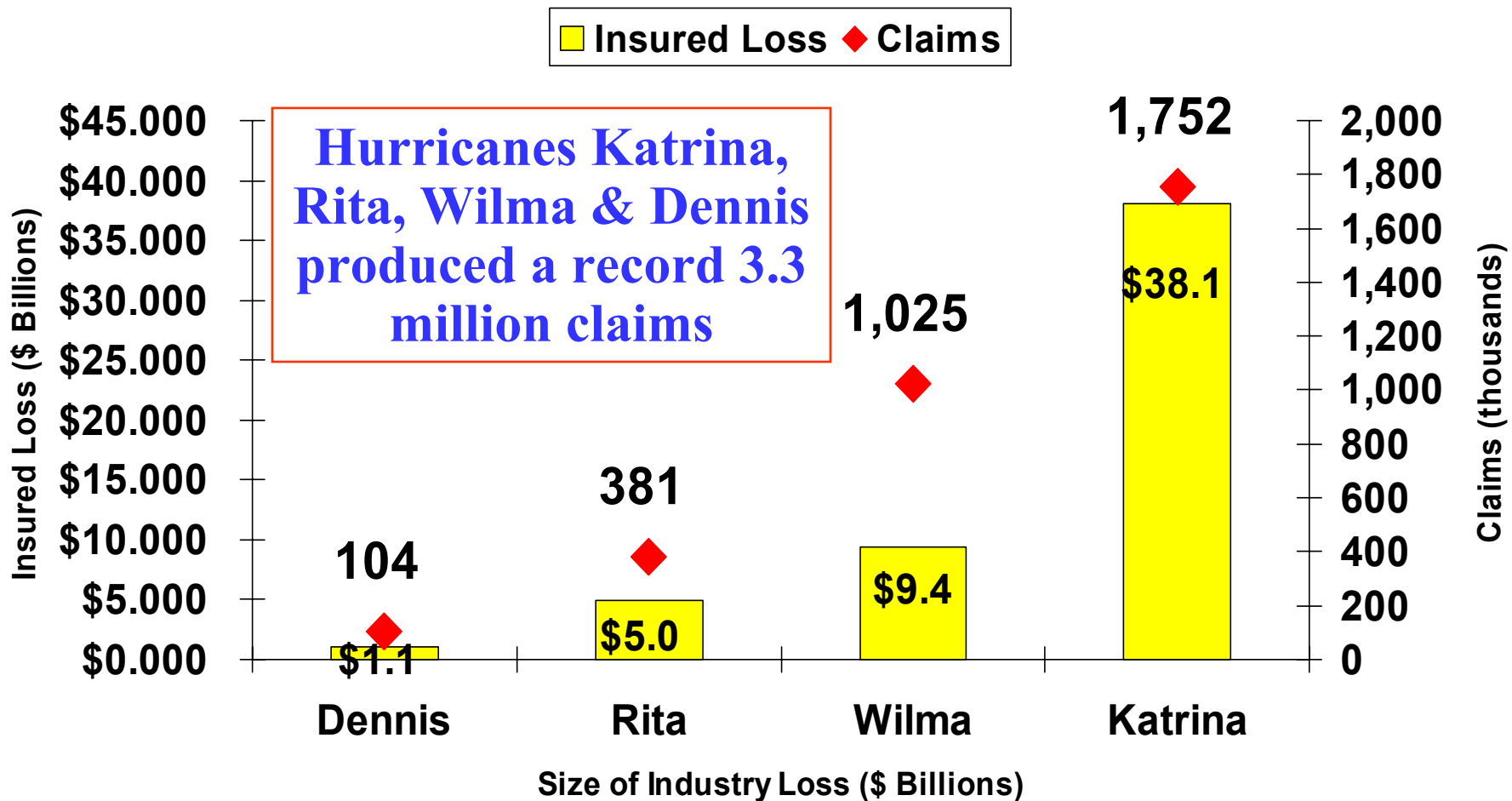


Top 10 Most Costly Hurricanes in US History (Insured Losses, \$2005)



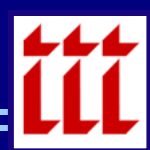


Insured Loss and Claim Count for Major Storms of 2005*

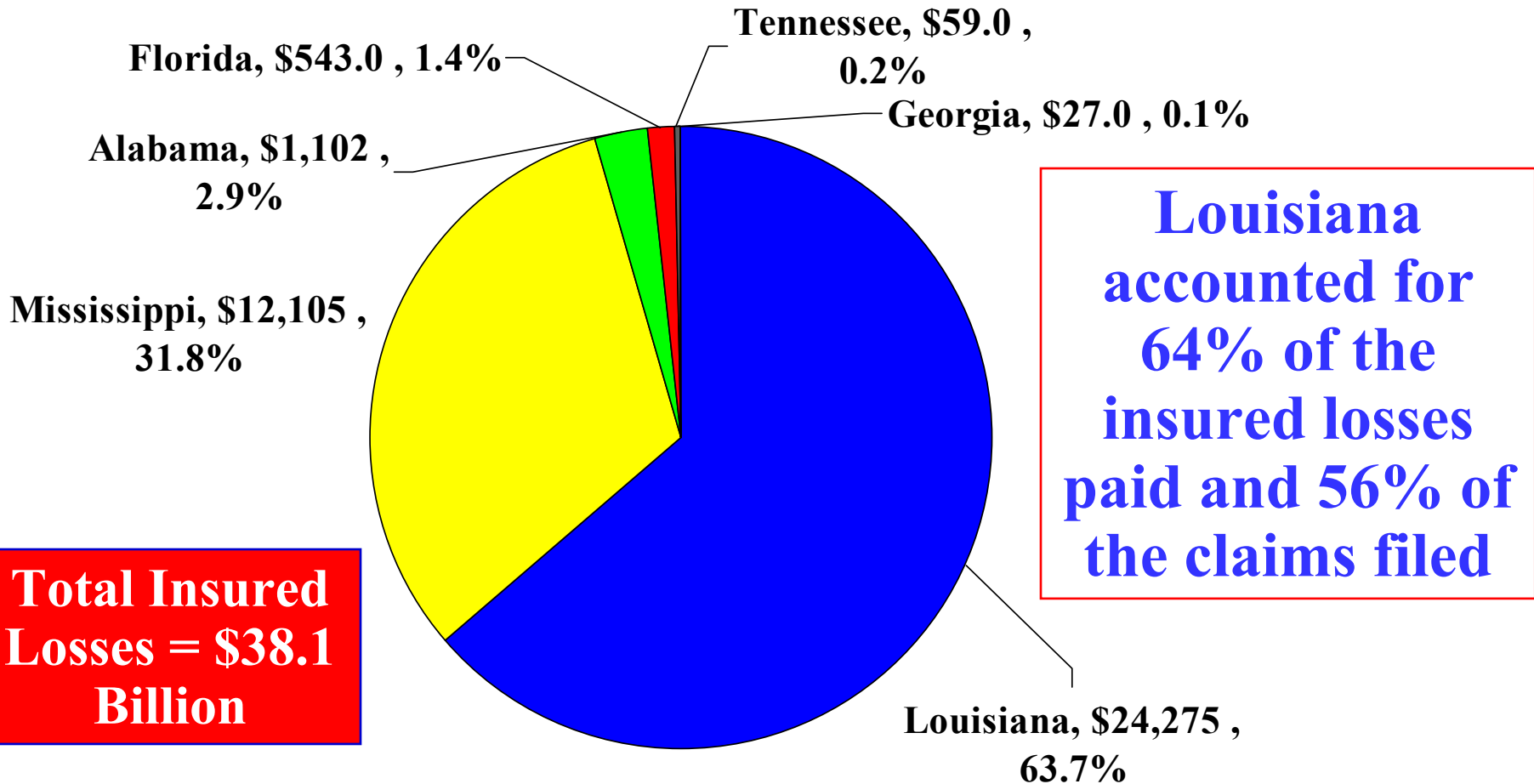


*Property and business interruption losses only. Excludes offshore energy & marine losses.

Source: ISO/PCS as of February 8, 2006 for Dennis, Rita, Katrina and March 27, 2006 for Wilma; Insurance Information



Hurricane Katrina Insured Loss Distribution by State (\$ Millions)*



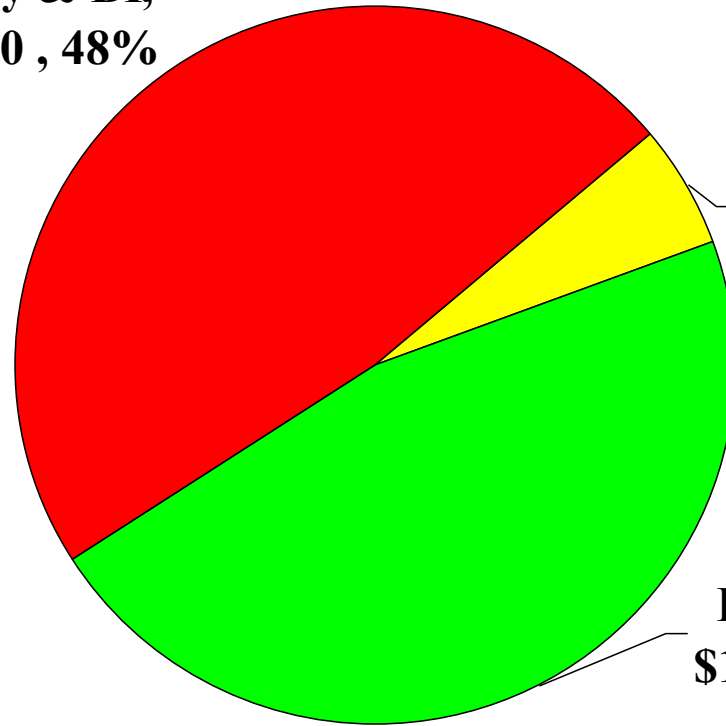
*As of February 8, 2006

Source: PCS division of ISO.



Hurricane Katrina Loss Distribution by Line (\$ Billions)*

**Commercial
Property & BI,
\$18,278.0 , 48%**

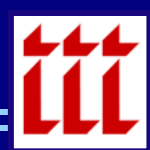


**Vehicle, \$2,139.0 ,
6%**

**Homeowners,
\$17,694.0 , 46%**

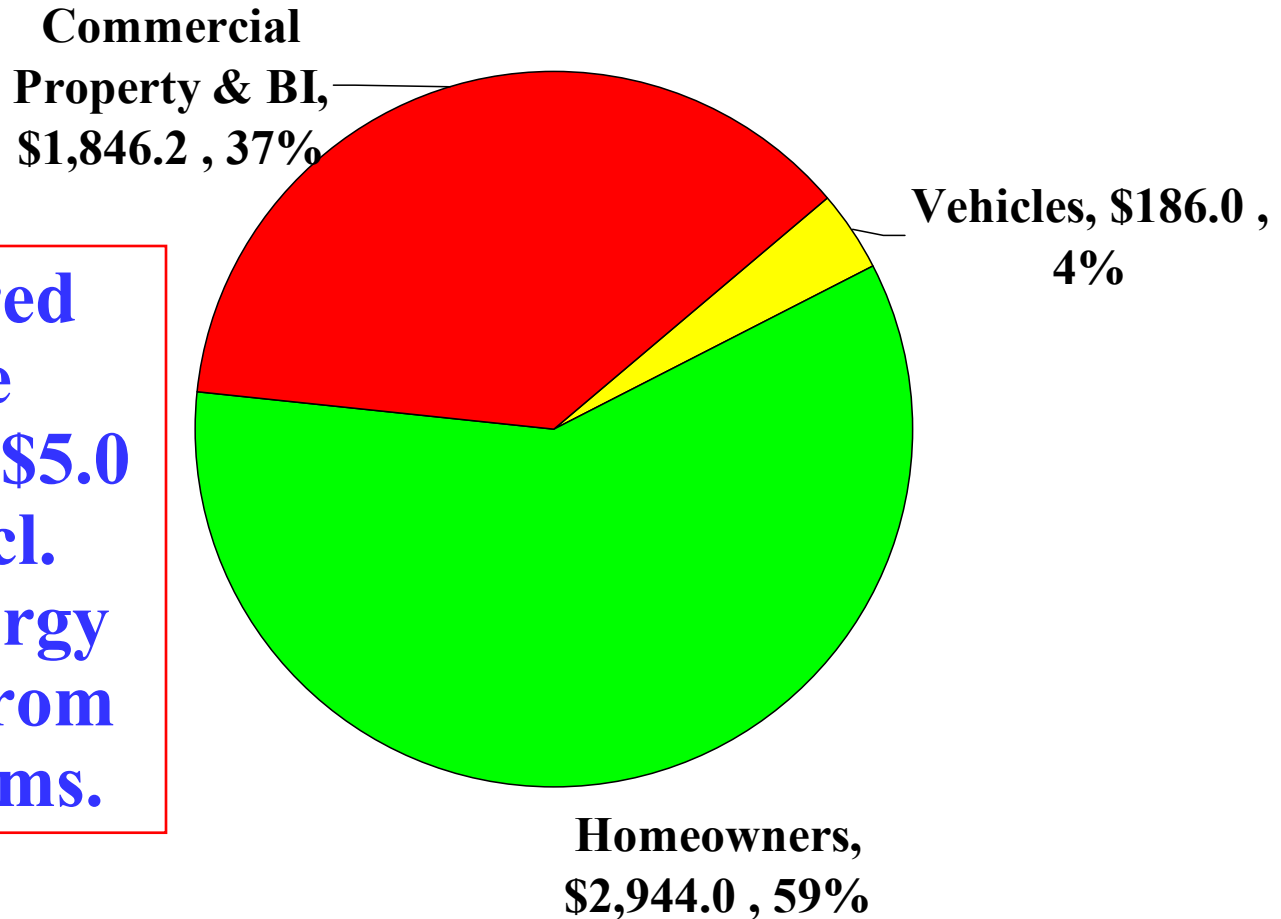
Total insured losses are estimated at \$38.1 billion from 1.7518 million claims. Excludes \$2-\$3B in offshore energy losses

*As of February 8, 2006
Source: PCS division of ISO.



Hurricane Rita Loss Distribution, by Line (\$ Millions)*

Total insured losses are estimated at \$5.0 billion (excl. offshore energy of \$2-\$3B) from 381,000 claims.

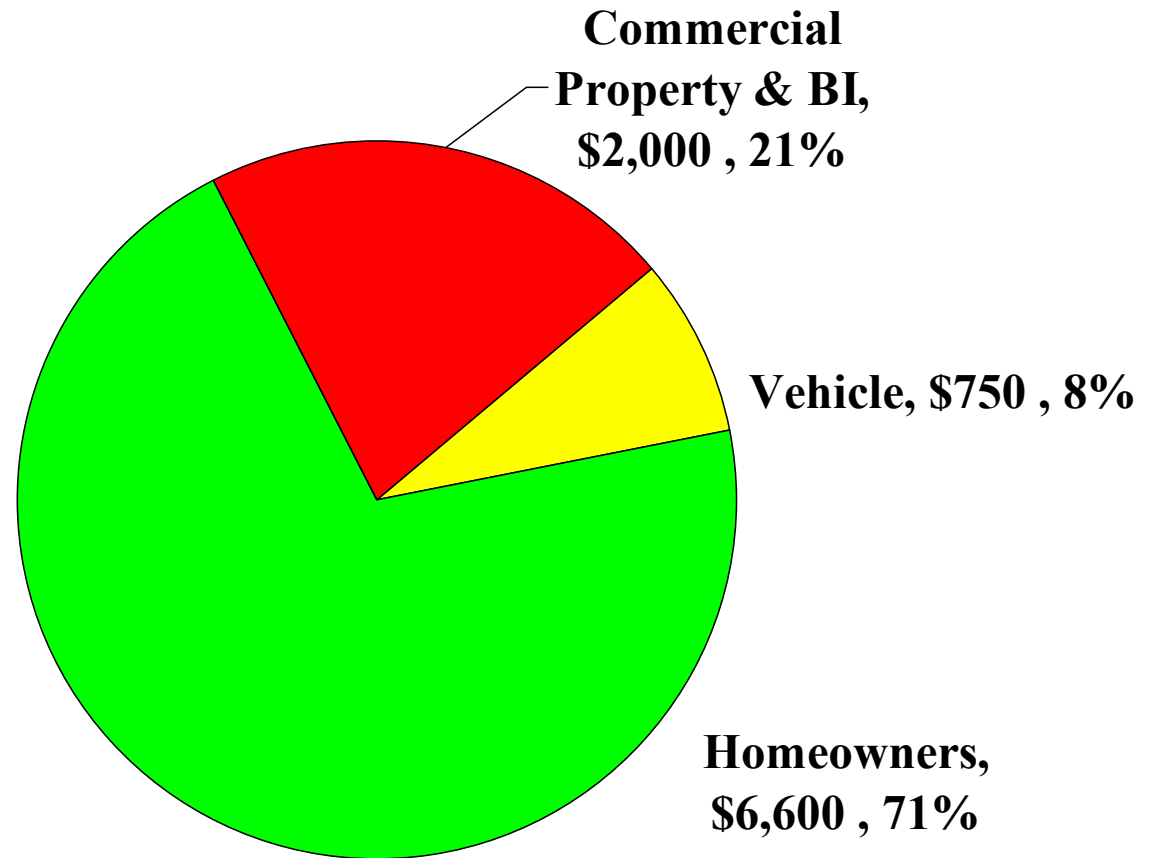


*As of February 8, 2006
Source: PCS division of ISO.



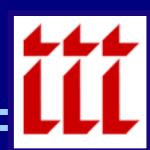
Hurricane Wilma Loss Distribution by Line (\$ Millions)*

Total insured losses are estimated at \$9.35 billion from 1.025 million claims



*As of March 27, 2006. All losses are in FL.
Source: PCS division of ISO.

What Role Should the Federal Government Play?



Two Countervailing Viewpoints

- In the vigorous public dialogue that has ensued in the wake of Hurricane Katrina, two countervailing viewpoints have emerged concerning how society should pay for mega-catastrophes
- Each of these viewpoints proceeds from a particular vantage point and set of beliefs about the role of government in managing and financing natural catastrophe risk
- On the one hand, there are those who believe that natural catastrophes are—for reasons outlined below—*fundamentally uninsurable* and that the federal government should serve as the ultimate risk manager in these instances
 - Key assumption: the federal government is in the best position to mitigate large losses (economic and otherwise), in economically efficient ways
- On the other hand, there are stakeholders in the debate that believe that the private sector and the *free-markets* are in the best position to adjudicate and manage these risks for those who choose to insure privately
 - According to this view, the solution to the insurance dimension of this problem is not more government involvement and regulation, but rather, less
 - Relaxing regulatory constraints and stringent tax policies will, they argue, stimulate markets to craft creative solutions to the problem of “who pays?” for mega-catastrophes.



What the Future May Bring: Work in Progress

- In the coming years, these two opposing viewpoints will take center stage in numerous public policy debates seeking workable solutions to how we, as a country, move forward in light of the difficult lessons of Hurricane Katrina
- For its part, the U.S. Congress is likely to consider a broad range of proposals. For example:
 - Look for ways in which specific federal insurance programs like the National Flood Insurance Program can be improved
 - Potentially sweeping changes in how the nation deals (both *ex ante* and *ex post*) with mega-catastrophes, both natural and man-made
- While it is early to speculate as to what this process will yield by way of specific mandates, statutes and potential reorganizations of government, it is clear that change will be an inevitable feature of the institutional arrangements, mechanisms and conceptual schemes that have traditionally governed our thinking about how disaster policy should be formulated and implemented in this country

- Arguments in favor of a substantive federal role in the financing of natural disaster risk almost invariably proceed from a rather basic premise:
 - some risks are simply too large or unpredictable to be insurable within the current institutional, financial and regulatory frameworks that govern private insurance markets in this country
- At the heart of these debates is the view that mega-catastrophes may soon exceed the ability and capacity of private insurance markets to deal effectively with incidents of this magnitude
- In the wake of Hurricane Katrina, some insurers and other relevant stakeholders are openly questioning whether natural catastrophes of this magnitude are insurable via the private markets



Three-Layer Plan

- Most of the proposals envisage a three-layer plan:
 1. Policies sold by individual insurance companies
 2. State or regional catastrophe pools that provide reinsurance
 3. A national mega-catastrophe fund that provides a federal backstop for large-scale insured losses
- A meeting of numerous state insurance commissioners, lawmakers, insurance industry representatives and public policy specialists was recently held in San Francisco to discuss such a proposal
- For its part, the U.S. House of Representatives has introduced two bills, the Homeowners Insurance Availability Act of 2005 (H.R.846) and the Homeowners Insurance Protection Act of 2005 (H.R. 4366), both of which would create federal catastrophe reinsurance programs
 - Under H.R. 846, the Treasury would auction so-called excess-of-loss reinsurance contracts—a type of reinsurance that provides coverage above specified levels of loss
 - Under H.R. 4366 the Treasury would be authorized to sell reinsurance contracts directly to eligible state catastrophe funds



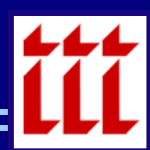
Existing Federal Insurance Programs

- Another reason that is often cited for expanding and enhancing the role of the federal government in financing natural catastrophe risk is that the federal government is, of course, already involved in numerous federal insurance programs, two of which deal specifically with natural disasters:
 - The Federal Crop Insurance Program
 - The National Flood Insurance Program
- These two programs are subsidized by the terms stipulated in their authorizing statutes and, at present, participation in the programs is voluntary
- Programs such as these are often criticized for the inherent difficulties in assessing the government's true risk exposure and in setting premiums commensurate with that exposure
- Moreover, organizations such as the National Association of Insurance Commissioners have argued that requiring homeowners to purchase multiple insurance contracts to protect their property is both cumbersome and inefficient



Complicating Factors Going Forward

- Going forward, *regulatory constraints* may not allow insurers to charge actuarially sound rates that reflect the increased levels of risk
- Moreover, the *price* and *availability* of private reinsurance is volatile
- For these and a host of other reasons, the 2005 hurricane season has given risk managers within the property/casualty insurance and reinsurance industries much to consider
 - For example, with many of the exposure predictions and projected loss estimates made prior to this year's hurricane season proving, in hindsight, to be grossly in error, catastrophe models have come under considerable criticism and scrutiny
 - Many insurers and reinsurers are openly questioning their confidence in these models. As one exasperated insurance CEO recently exclaimed, "They just don't know what they're talking about; they say these events are 1-in-100, 1-in-250, 1-in-1000, or maybe it's 1-in-1,000,000, but they have no idea"
- Many within the industry fear that the risk assessment component of the insurance underwriting process may grow increasingly complex and unmanageable, as the coming decades may be marked by hurricane activity levels that well exceed recent historical baselines
- Difficult questions and complex scientific debates concerning the manner and degree to which global climate change is responsible for these emerging weather patterns will surely complicate matters even further



The Case Against a Federal Natural Catastrophe Program

- Most of the reticence on the part of insurers to back the idea of a federal backstop for large natural catastrophes stems, at a basic level, from a firmly-rooted *laissez-faire mindset* as to how insurance markets should operate in the global economy
- They believe that increased federal involvement and regulatory authority in these markets is something to be avoided, because such actions hold the potential to, in effect, *crowd out* private insurance and reinsurance markets, and to *stifle innovation* within these markets
- In this context, it is often argued that the relationship between *price* and *risk assumed* is diminished, as federal insurance programs are rarely actuarially sound
- With regard, then, to natural catastrophe risk, the fundamental belief is that this class of risk is, indeed, insurable in the free markets



Does the Evidence Support the Free Market View?

- Perhaps the truest measure of the veracity of this claim is that the free markets have, thus far, performed well under especially trying conditions
- The global insurance industry has experienced unprecedented disasters over the past four years:
 - The tragedy of September 11th, at that time the most significant insurance catastrophe in history
 - Record tornadoes and wildfires in 2003
 - Four major hurricanes in Florida in 2004
- Hurricane Katrina will cost the insurance industry in excess of \$40 billion, according to estimates by ISO's Property Claims Services, but more of the cost will be borne by reinsurers than in previous years



- Wall Street analysts expect the insurance industry to be able to pay Katrina claims without any significant weakening of its overall financial strength
- Standard & Poor's has stated that, for most of the companies that the ratings agency follows, Katrina will depress earnings for several years
- Catastrophe reinsurers will be the most severely impacted segment of the industry, and prices for property catastrophe reinsurance will likely increase significantly due to heightened expectations concerning the frequency and severity of natural disasters worldwide
- Clearly, the industry has responded well during this unprecedented period, demonstrating both its financial resilience and its commitment to individual and corporate customers



Concluding Remarks: Moving Beyond the Potential Impasse

- Regardless of where specific industry stakeholders stand on the continuum of viewpoints outlined above, there are areas where they may find some basis for agreement and common ground
 - Most stakeholders will agree, for example, that a key responsibility for P/C insurers is to play their important and substantial role in the overall risk mitigation process
 - In the case of large-scale natural disasters, it is important for federal, state and local officials to understand and appreciate the role that insurance plays in both minimizing loss and expediting recovery
- In order to move beyond the potential impasse in which the industry could find itself with regard to these issues, what is needed is an earnest attempt on the part of the public and private spheres to look for areas where government can facilitate market-enhancing opportunities and more efficient private-sector coordination
- Practical proposals to this end will include such activities as the encouragement of various loss mitigation strategies, including strong building codes and improved land-use planning
- Going forward, the challenge remains one of finding workable means and mechanisms by which to align incentives in ways that jointly enhance social welfare and the market

The two activities do not necessarily need to be viewed
as being mutually exclusive



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