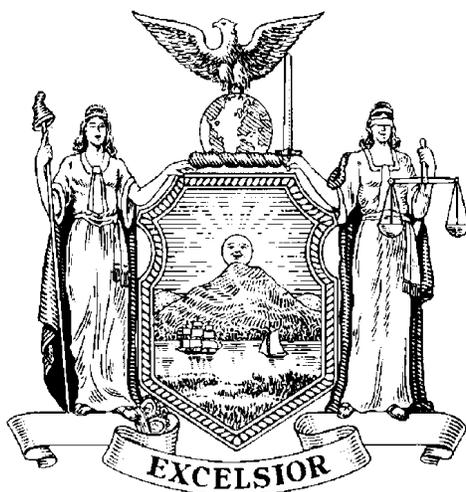


# TEMPORARY PANEL ON HOMEOWNERS' INSURANCE COVERAGE

A Report to Governor Pataki  
and  
Members of the New York State Legislature



February 1, 1998

Superintendent of Insurance  
Neil D. Levin  
Chair, Temporary Panel



STATE OF NEW YORK  
INSURANCE DEPARTMENT  
25 BEAVER STREET  
NEW YORK, NEW YORK 10004

February 1, 1998

To Governor George E. Pataki and Members  
of the New York State Legislature

In accordance with Chapter 66 of the Laws of 1997, I hereby submit the Report of the Temporary Panel on Homeowners' Insurance Coverage.

The first meeting of the panel took place on October 23rd. Subcommittees subsequently met and the panel held full meetings on November 5th, December 4th, January 8th and January 21st. The members are all experienced, knowledgeable insurance people. They were assisted by staff from trade associations, the New York Property Insurance Underwriting Association and the Insurance Department.

I would like to thank the members of the panel for the time and energy they have devoted to assembling this comprehensive report.

Sincerely,

Neil D. Levin  
Chair, Temporary Panel

<http://www.ins.state.ny.us>



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**This report is printed on recycled paper.**



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# Executive Summary

## ***State of the Market Subcommittee***

- The State of the Market Subcommittee was formed to examine historical events and trends relating to homeowners insurance, analyze the current market and offer recommendations to enhance the availability and affordability of homeowners' insurance in New York State.
- Up until the early 1990s, homeowners insurers tended to overlook geographic concentration of risk when writing business in New York State. Fortunately, however, the latter half of this century has been a relatively inactive period for hurricanes in the New York area. As a result, insurers whose risks were overly concentrated in shoreline areas suffered no significant financial penalty.
- The availability of homeowners insurance in coastal communities reached its low point in the mid-1990s and *is now expanding*. The New York Property Insurance Underwriting Association (NYPIUA), New York's insurer of last resort, reports declines in new residential policies in all seven of New York's coastal counties between 1996 and 1997, indicating an increase in writings in the voluntary market.
- Availability problems still affect new business in areas located within 1,500 feet of coastal waters in Long Island and parts of New York City.
- NYPIUA should be made permanent and be authorized to use catastrophe deductibles comparable to those in use in the voluntary market.
- Hurricane deductibles and appropriate "buy-back" options should be approved for every homeowners insurance policy to enhance availability.

## ***Mitigation Subcommittee***

- The Mitigation Subcommittee was formed to evaluate the current status of the mitigation effort and to help identify public and private actions that can help mitigate catastrophe risk in the future.
- New York State needs to establish a uniform building code. *This is a critical step toward a successful mitigation effort.*
- Actions by homeowners to mitigate losses could translate into lower rates, lower deductible options and greater availability.

- At the local and state level, there are incentives--such as exempting the value of any mitigation-related improvements to one's home from property tax increases--that could be used to encourage property owners to mitigate against future loss.
- Insurance companies need to establish and promote mitigation efforts.
- Mitigation efforts should also be recognized by financial institutions providing loans with loss-mitigated properties as collateral.

### ***Capital Markets Subcommittee***

- The Capital Markets Subcommittee was formed to explore various non-traditional methods of funding catastrophic risk. Capital market funding of catastrophic exposures may take many forms, including securitization; options, futures and swaps; capital and surplus notes; and liquidity facilities provided by commercial banks.
- Capital markets funding for catastrophic loss is a developing market. Recent deals involved the transfer of hurricane risk and earthquake risk.
- The liquidity of the market for catastrophe-linked securities will develop as more sizable transactions are completed and a secondary market in such securities develops.
- The U.S. Treasury needs to address several income tax issues to enhance the efficiency of catastrophe-linked debt securities. Most notably, investment returns from such securities should not be subject to a corporate "entity level" tax.
- The capital markets are far more attractive to investors than public sector catastrophe funds, primarily due to the fact that public sector funds tend to concentrate, rather than geographically diversify, risk.
- The Insurance Department is seeking legislation to permit property/casualty insurers to issue capital notes.
- The Insurance Department should work with the insurance, banking and investment banking communities to develop private sector mechanisms for risk transfer and risk management.

## **TEMPORARY PANEL ON HOMEOWNERS' INSURANCE COVERAGE**

## Preface

This report is submitted pursuant to Section 4 of Chapter 66 of the Laws of 1997, which directed the special advisory panel established pursuant to Section 12 of Chapter 42 of the Laws of 1996 to make an additional report to Governor Pataki and the Legislature on the problems affecting the availability and affordability of homeowners insurance in New York State.

In accordance with the Legislative requirements, the Panel consisted of fourteen members, including the Superintendent of Insurance, who chaired the Panel. Pursuant to the originating 1996 statute, Governor Pataki appointed three members, as did the Temporary President of the Senate, and the Speaker of the Assembly. In addition, the Minority Leader of the Senate and the Minority Leader of the Assembly appointed two members each. Within the New York State Insurance Department (the Department), an internal task force was formed to assist and coordinate the Panel's activities. The members of the internal task force, chaired by Deputy Superintendent Mark L. Gardner, were Wayne Cotter, Janet Glover, Elise Liebers, Kathleen McQueen, Maurice Morgenstern, and Michael Moriarty.

The Superintendent wishes to thank the following individual members of the Panel for their participation and generous contribution of time and effort in helping to accomplish the Panel's mission:

|                    |                                                         |
|--------------------|---------------------------------------------------------|
| John R. Cashin     | Willis Faber North American, Inc.                       |
| John P. Ecker      | John Ecker, Inc.                                        |
| Jeffrey Greenfield | NGL Group, LLC                                          |
| Howard I. Honig    | Honig Insurance Agency, Inc.                            |
| John B. Johnson    | Johnson & Johnson Agency, Inc.                          |
| Shelly H. Kozel    | Lezok, Ltd.                                             |
| Mark Kriss, Esq.   | Kriss, Kriss & Brignola (Alliance of American Insurers) |
| Peter Lefkin       | Fireman's Fund Insurance Co.                            |
| David G. Nadig     | Allstate Insurance Co.                                  |
| Daniel Robinson    | New York Central Mutual Fire Insurance Co.              |
| James E. Ryman     | State Farm Insurance Co.                                |
| George D. Yates    | Dayton & Osborne                                        |
| Steven Wietlisbach | Travelers Insurance Co.                                 |

*The following report was prepared by the Temporary Panel on Homeowners' Insurance Coverage. The Temporary Panel is comprised of thirteen members appointed by*

*Governor Pataki and various members of the New York State Legislature. Although this report was prepared pursuant to meetings conducted in the New York Insurance Department's offices, and this report was published by the Department, the report is not an official publication of the New York State Insurance Department. It is the findings and opinions of the thirteen appointed members of the Temporary Panel, and not those of the Insurance Department, which are reflected herein. Thus, this report should be viewed as the work product of the Temporary Panel on Homeowners' Insurance Coverage and not of the Insurance Department.*

In preparing this report, the Panel met in plenary session five times. At the Panel's initial meeting, the Superintendent directed that three subcommittees be formed to study various aspects of the problem in detail: the State of the Market Subcommittee, the Mitigation Subcommittee, and the Capital Markets Subcommittee. The State of the Market Subcommittee addressed market conditions, trends in the marketplace and policy coverage issues. The Mitigation Subcommittee studied means of educating and providing information to consumers on risk management and general insurance topics; means of improving construction standards and building codes to minimize property damage; and other measures that can be taken to prevent or ameliorate damage from natural disasters. The Capital Markets Subcommittee studied means for financing the costs of catastrophes. Expanded reinsurance options, securitization of insurance risks, tax policy, and other legislative options were among the issues to which it addressed its attention.

Members of the Panel served on the subcommittees, which also included non-Panel members. (Subcommittee members are listed in the appropriate sections of this report.) The Panel's report is comprised of the reports prepared by each of the three subcommittees and an analysis of recommendations made in the previous report.

## **OVERVIEW**

Homeowners insurance has been an affordable, readily available, and profitable line of business virtually since its inception. Its roots can be traced to the years immediately following World War II. As an insurance product, it represents a classic example of innovation and of the industry's response to competitive forces and the needs of the market. It was a crucial element in the development of suburban communities throughout the country.

As large numbers of urban apartment dwellers migrated to newly developed housing in rural areas adjacent to major cities, appropriate insurance coverage to protect these new property owners' major investments -- their homes -- became a necessity. Up to that time, the insurance industry was largely organized as monoline companies. Property insurers could not insure casualty lines, and casualty insurers could not insure property. Homeowners needed both property insurance for perils such as fire, and casualty insurance that covered liability for torts. In order to help insurers meet those needs in an economical manner, laws governing the charters of insurers were relaxed

to allow insurance companies to become multi-line carriers. Multi-line insurers developed the homeowners package policy in order to offer coverage against several perils at a lower cost, enabling property owners to purchase all of the coverage to meet their needs more conveniently and less expensively.

Homeowners insurance has remained a profitable line for insurers in New York. The open competitive rating law that was enacted in 1970 has fostered a stable rate environment along with gradual expansion and liberalization of coverage. (For example, guaranteed replacement cost coverage has become a common feature of many homeowners insurance policies as insurers have responded to competitive market forces.) However, the effects of losses elsewhere have been far reaching. Insurers that have experienced extensive losses in other coastal areas have moved to reduce the concentration of their business in New York's coastal areas as well. In addition, the cost of catastrophe reinsurance has increased substantially.

In recent years, natural disasters occurring in various regions of the United States have caused insurers to reassess their homeowners insurance underwriting practices throughout the nation. Though hurricanes Hugo, Andrew, and Iniki, and earthquakes in California, occurred far from New York, they served to draw the insurance industry's attention to the potential havoc a single incident can wreak in any area where policy writing is concentrated. Media attention and advances in meteorological science have turned relatively normal weather phenomena such as *El Niño* into occasions for speculating on their potential effect on insurers' profitability. As a result, though an Andrew-like hurricane has yet to hit New York shores, many insurers have reduced the number of policies they are willing to issue on properties located along New York's coastal areas.

Insurers' actions have followed their analysis of the Probable Maximum Loss, a calculation of the greatest amount of insured losses an insurer would incur if the worst possible storm hit a specified geographical area where it is writing homeowners policies. Some insurers, based upon the concentration of exposure and what they have already experienced in areas hit with large losses, have determined that a severe hurricane in a coastal region of New York would result in losses beyond their capacity to absorb. As a consequence, these companies have reduced their overall writings in Long Island by declining to issue new policies, non-renewing policies on properties located within 1,000 feet of the shore, or by reducing their producer force in some coastal areas.

## **GOVERNMENT RESPONSES**

The states have responded to the homeowners insurance problem in various ways. States such as California and Florida, which have experienced actual catastrophe

losses and are prone to earthquakes and weather-related disasters regularly, have had to address these issues in an acute crisis atmosphere. In contrast, New York has been forced to respond to problems that are due largely to the *anticipation* of potentially disastrous effects that have as yet not materialized. However, that potential is serious, because New York's coastal areas are densely populated and highly developed, with homes that are more costly than those located in inland regions.

Upon assuming office, Governor Pataki reviewed the situation faced by the State's coastal residents. Recognizing that free market initiatives offer the best opportunity to achieve an effective and lasting solution, Governor Pataki stressed the importance of participation of the voluntary insurance market in a coordinated program of response. The State's efforts to address the problem were renewed and strengthened.

New York's response encompasses a combination of regulatory and legislative initiatives. The Department established the Coastal Market Assistance Reference Tables, or C-MART, to provide, via a special telephone hotline, the names and phone numbers of insurance companies that had indicated a willingness to insure risks in proximity to the shore. The Coastal Market Assistance Program (CMAP) was established, consisting of a voluntary network of insurers and producers to assist homeowners residing in coastal areas in obtaining insurance. Special deductibles applicable only to the windstorm peril were approved for some insurers as a means of encouraging them to continue to insure properties along the coast. "Wrap-around" policies consisting of property coverage provided by the New York Property Insurance Underwriting Association (NYPIUA) and liability protection by a voluntary insurer were approved.

In addition, Governor Pataki signed into law legislation permitting insurers to file multi-tier rating programs for homeowners insurance, and to strengthen requirements providing for the minimization of market disruptions when insurers seek to withdraw from the homeowners insurance market.

### **FINDINGS OF THE 1996 TEMPORARY PANEL**

The Temporary Panel's first report, submitted to Governor Pataki and the Legislature on October 1, 1996, studied the measures implemented in response to the problem, along with actions taken by other states; the means of providing for the financing of catastrophes; and other intermediate and long term alternatives. The earlier report's recommendations and analysis of subsequent events are contained in the Appendix to this Report.

### **ADDITIONAL REPORT BY THE SUPERINTENDENT OF INSURANCE**

In addition to the establishment of this Temporary Panel, Chapter 42 of the Laws of 1996 required the Superintendent to study and report upon the market dynamics of homeowners insurance and policies written, non-renewed or canceled in designated

regions of the State, in order to assist Governor Pataki and the Legislature in addressing the problem. The Superintendent's report, which was submitted on February 15, 1997, discussed the causes of the problem and the various measures described above that have been implemented in response to it, and analyzed other relevant issues and possible solutions. Pursuant to Chapter 66 of the Laws of 1997, the Department is currently preparing the next report due on February 15, 1998.



# Recommendations of the Temporary Panel on Homeowners' Insurance Coverage

The Panel makes the following non-prioritized recommendations:

## Recommendations Related to Market Conditions

- **Hurricane deductibles.** The Insurance Department and insurers should promote more consumer education efforts so that policyholders will understand that with higher deductibles they are assuming a greater exposure than before:
  - The nature, amount and triggering events of deductibles should be prominently and clearly presented to the insured.
  - Percentage deductibles should also be expressed in dollar amounts like traditional deductibles, so that consumers are aware of the full extent of their exposure.
  - Where the deductible applies to one or more "coverage parts," these coverages should be explained, not just referred to as "Coverage A," etc.
  - Also, the nature and location of the triggering event should be clearly explained.

The Insurance Department's standards for approving deductibles for hurricane losses should include:

- clear, prominent display of the dollar amount (as well as the percentage) of the deductible on the face of the policy; and
  - clear, prominent explanation of the triggering event.
- **Hurricane deductible triggers.** Panel members (except one) agree that hurricane wind deductible trigger events should be measured solely by:
    - maximum one-minute sustained wind speed at a defined altitude,
    - occurring within a named hurricane, and
    - not by storm surge or barometric pressure measurements.

The Panel members were equally divided on whether triggering events should be named hurricanes with wind speeds in excess of 95 mph (Category 2), thereby assuring that deductibles apply only following catastrophic events.

- **Hurricane deductible buy-backs, new coverage options.** Companies should be encouraged to compete in offering buy-back options to their policyholders who

undertake significant mitigation steps, and in developing new insurance products designed to provide coverage for another insurer's deductible.

- **Joint participation on high value homes.** The Insurance Department should work with the industry to find ways to encourage more than one insurer to participate jointly in insuring high value homes. Also, CMAP should consider awarding CMAP credits for participation on this basis.
- **NYPIUA authorization.** NYPIUA's legislative authority should be made permanent in order for it to facilitate liquidity in the event of a catastrophe.
- **Computer modeling.** The Department should consider permitting modeling to be used by insurers as another acceptable actuarial technique for the development of appropriate rates and deductibles. It should consider permitting specific models to be submitted for examination by the Department in support of rate and deductible filings.

Some Panel members believe the Insurance Department should consider minimum standards for the models used, such as the historical relevance in New York of wind-speed assumptions. Other members feel that a standard of reasonableness is implied in the examination by the Insurance Department of the models and that formal standards should not be set.

- **The Coastal Market Assistance Program (CMAP).** CMAP should extend its consumer education efforts and coordinate with the Insurance Department and CMAP participating companies in a wide-ranging, broadly available information campaign to address the public's understanding of the relationships among availability, affordability and loss exposure. Specifically, public awareness needs to be increased about:
  - \* the increasing prevalence of catastrophe deductibles and the need to be alert to changes in homeowners insurance policies which introduce such deductibles;
  - \* the nature of catastrophe deductibles, what events could trigger such deductibles, and the relationship of these deductibles to availability and affordability of homeowners coverage;
  - \* how a percentage catastrophe deductible translates into dollar terms, and whether the consumer can afford to assume this exposure to loss;
  - \* possible mitigation steps homeowners can take, and how such steps could improve the availability and affordability of their homeowners coverage.

The Panel also recommends that the CMAP Steering Committee should explore ways to encourage its participants to provide the broadest possible coverage form generally available in the industry to consumers.

- **NYPIUA deductibles.** Legislation should be enacted authorizing NYPIUA to use a catastrophe deductible program comparable to those being used in the voluntary market.
- **Hurricane/catastrophe fund.** A majority of the Panel opposes establishing a catastrophe fund. (See "Possible solutions" for the majority/minority position statements.)

## Recommendations Related to Mitigation Activities

- **Building Codes** A critical recommendation of the Panel is adopting and enforcing performance-based building codes and uniform building codes throughout coastal New York and New York State. Enforcement at the local level is essential.
- **Effective Mitigation Incentives** There is a need for a range of public and private incentives to encourage homeowners (of existing homes) and home builders and buyers of new homes to retrofit or purchase homes which offer protection against the exposure of hurricane and high wind loss as well as other exposures related to living in coastal areas.
  - \* Public sector solutions should include tax incentives for mitigation of loss. These should include exemption from real estate tax assessments on improvements and real estate tax reductions to reflect the value of mitigation, sales tax incentives for approved or certified retrofitting of existing homes, and income tax credits for purchasing or retrofitting existing homes.
  - \* Requiring a certain wind resistant performance standard before coverage would be available in the New York Property Insurance Underwriting Association remains a public incentive for mitigation that could be transferred to private sector insurance in terms of encouraging underwriting along the coast or underwriting with varying market deductibles or premium credits.
  - \* An economic strategy should be put into effect by insurers to ensure that mitigation is a reasonable and economical choice for the coastal homeowner, buyer, or builder.
- **Coordination at the State Level** Government activities in the area of mitigation should be coordinated, along with the mitigation resources of insurers, financial institutions and the private sector (e.g., home building suppliers selling materials and products to retrofit existing homes).
- **Research and Development**
  - Access to and support of research and development of building products and techniques should be encouraged.

- A consistent means to evaluate the beneficial impact of mitigation actions and their cost to the consumer needs to be implemented.
  - Development of cost-effective and damage reducing building products and techniques for new construction and retrofitting to existing structures should be tailored to the specific risk's characteristics.
  - A standard means of measurement using computer modeling and expert opinion can determine risk of loss for the individual property and for the community as a whole and the cost/benefit of taking mitigation actions.
- **Awareness** All the stakeholders, beginning with the property owner, need to be made aware of the risk of loss for each location and what can be done to lessen it. Public awareness campaigns to convince property owners that mitigation is the right thing to protect their families, their possessions, and their community can be developed. Pamphlets and other materials should be produced to describe the risk, including a general assessment for the individual and for the community in which they live.
- **Education** In addition to building an awareness of the threat, there is a need for all the stakeholders to know where and how to build structures, given the risk of loss from likely natural hazards. Understanding the reasons for mitigating and the impact of taking action are important parts of the education process.
    - Education should be targeted to the stakeholders, consumers and their children, builders and inspectors, insurers and reinsurers, and regulators and others sworn to uphold the public's trust.
    - Educational material could include "how-to" guides on where to build and how to build new or strengthen existing structures to withstand loss.
    - Educational efforts could also be directed to the benefits and costs of taking alternative mitigation actions, the various methods of financing mitigation action, identifying intangible benefits of mitigation to the owner and occupants, and mitigation's impact on availability and affordability of homeowner insurance in hurricane-exposed regions.

**TEMPORARY PANEL ON HOMEOWNERS'  
INSURANCE COVERAGE**

**State of the Market Subcommittee Report**

**February 1, 1998**



# STATE OF THE MARKET SUBCOMMITTEE REPORT

## Panel Members:

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Jeffrey Greenfield, NGL Insurance Group  
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## I. Purpose of the Subcommittee

The State of the Market Subcommittee of the Temporary Panel on Homeowners Insurance was organized on October 23, 1997 to study the homeowners insurance market in coastal areas of New York State.

The Subcommittee was charged with examining:

- historical events and trends;
- current market status, including any market conditions which currently present problems for consumers, the insurance industry and/or the state's official policymakers; and
- possible solutions to such problems.

Finally, the Subcommittee was charged with formulating recommendations and presenting them to the full Panel for inclusion in the report mandated by Chapter 66 of the Laws of 1997.

It is the consensus of the Subcommittee that, overall, market availability has improved greatly since the first report of the Temporary Panel was issued in October 1996. However, problems remain for certain properties. These problems, possible solutions and recommendations are discussed below.

## **II. History of Homeowners Insurance Market Conditions in New York's Coastal Areas**

### **A. Unprecedented natural disaster losses require reassessment of homeowners insurers' exposure**

**Reassessment of financial exposure.** Starting with Hurricane Andrew, which devastated south Florida in 1992, a process of reevaluation and readjustment began. This process affected coastal homeowners insurance markets from the Gulf of Mexico through New England, including coastal markets in New York.

Hurricane Andrew, with about \$15.5 billion in insured losses, together with a spate of other natural disasters including Hurricane Iniki (1992, \$1.6 billion) and the Northridge, California earthquake (1994, \$12.5 billion), alerted property insurers and their regulators to reexamine traditional assumptions and methods used in calculating insurers' financial exposure from natural disasters.

As insurers undertook their reassessments, many began to realize that their true exposure was greater than previously thought; in some cases, companies found that their exposure was unacceptably high. This realization, which also implied that corrective action was needed, posed problems for insurance company decision-makers, who are accountable to policyholders and investors for sound financial management. A slightly different set of problems faced insurance regulators, who are accountable to the public for protecting insurer solvency; for assuring that premiums are neither inadequate, excessive nor unfairly discriminatory; and for preventing disruptive market conditions.

Throughout this process, New York's insurance regulators have taken the general position that insurers' exposure in New York's coastal areas resulted from a long, gradual build-up of insured value and market share; and that sudden, disruptive market actions would be an unacceptable corrective approach. At the same time, New York policymakers have taken a series of steps designed to help insurance companies adjust their coastal exposures to appropriate levels over time, while maintaining availability and affordability of homeowners insurance coverage.

To understand these steps and how each has contributed to the readjustment process and current market status, a brief look at the nature of homeowners insurance is in order.

**What is homeowners insurance?** "Homeowners insurance" contracts are "package" policies that bundle together several different kinds of insurance protection for a single premium. The major coverage components protect against damage, disappearance or destruction of the policyholder's property ("property coverage"); and provide legal defense and funds to pay claims if the policyholder injures someone or damages their property ("liability coverage").

In recent decades, homeowners insurance coverage has been so widely and economically offered that most property owners have taken its availability for granted. However, prior to the development of the "package" policy as a marketing strategy and policyholder convenience, these separate kinds of insurance were available under separate policies, from separate companies. Property coverage generally was inferior to the levels provided in today's homeowners contracts. For example, fewer hazards or "perils" were insured against, and the policy paid only for the market value of the building and/or contents, not the cost of replacing them. As more enhancements were added to the homeowners package over time, some analysts believe that insurers did not adequately consider the overall exposure they were assuming and price their products accordingly.

**Historical underwriting trends.** Historically, the major peril concerning householders and property insurers was fire. Property insurance underwriters carefully tracked the location of the buildings they insured, avoiding insuring adjacent houses or several structures in the same block, for fear of sustaining large losses from a single conflagration.

As modern heating and lighting methods reduced the frequency of house fires, and as the homeowners package replaced "fire" policies, underwriters shifted away from their former focus on "mapping." Now a return to this underwriting focus on the geographic spread of risk, updated with modern computer technology, has helped homeowners insurers reassess their actual coastal exposure in recent years. However, these techniques, and the corrective actions their findings have implied, have not been without controversy.

In New York State, as elsewhere along the Eastern seaboard, a relatively inactive period for tropical storms throughout the latter half of this century minimized the financial penalty for insurers' inattention to geographic concentration of risk. At the same time, the state experienced unprecedented development in coastal areas and skyrocketing market values for homes built desirably close to the views and recreational opportunities of open water. These trends contributed to an explosion of insured property value located "in harm's way," i.e., in the path of coastal windstorms.

In the absence of actual catastrophic storms, and in view of the historical profitability of the homeowners product, insurers are thought by some to have concentrated more on gaining market share than on maintaining a prudent geographic distribution of risk. At the same time, keen competition drove down profit margins. According to Michael Walters of Tillinghast-Towers Perrin (an actuarial firm), in states that had not experienced much loss in the past 30 years, "insurers had lapsed into storm amnesia or engaged in wishful thinking that current building codes had solved the problem." Hurricane Andrew provided the wake-up call.

**Solvency, financial rating concerns.** It is well known that a property-casualty unit affiliated with one of the country's best-known insurer groups would have failed following Hurricane Andrew without a cash infusion from its parent. Other insurers did in fact go under. These insolvencies resonated not just with other insurance companies

and regulators, but with the organizations that are supposed to predict such problems. As a result, insurers have seen an increasing emphasis on geography by the firms that evaluate and rate the financial strength of insurance companies. (Walters' comment, quoted above, appeared in the weekly publication of a well-known rating firm, A.M. Best.)

One function of rating organizations is to assign an insurer a simple "rating" value (usually expressed as a letter or letters), a value that represents the outcome of a complex analysis of the company's financial picture. Insurance companies zealously protect their ratings, which affect their public image and policyholder/shareholder confidence. The rating firms' scrutiny as well as the financial concerns of insurers' investors and management have caused homeowners insurance companies to undertake market readjustment actions in coastal areas.

**Impact in New York State.** Actions taken by insurance companies to adjust their exposure can take several forms. The major types include:

- insure fewer homes in coastal areas;
- receive premiums which adequately reflect catastrophe risk;
- have property owners share the catastrophe risk;
- find traditional or non-traditional business partners to share catastrophe risks; and
- encourage public and private actions to mitigate catastrophe risk.

These last two areas are the focus of the Panel's Capital Markets and Mitigation Subcommittees, respectively. The Market Condition Subcommittee will focus primarily on the remaining three types of action, each of which can impact the availability and/or affordability of homeowners insurance coverage, which are the "market conditions" that most concern consumers and public policymakers. In addition, the Subcommittee will look at certain risk-funding options which would require state action to establish (see "Possible Solutions," below).

## **B. New York's availability rebounds from mid-decade problems**

There are two basic techniques for insuring fewer properties in coastal areas: cut back or eliminate new business writings (and let attrition reduce exposures over time); or begin to drop existing customers.

Either of these strategies can occasion public concern, by making new coverage harder to find or by requiring people to find a new insurer. In the long run, however, it can be sound public policy to allow insurers to find their comfort level in the marketplace and spread the risk to a greater number of insurers. For example, Florida's Academic Task Force on Hurricane Catastrophe Insurance found that Florida's homeowners market problems have been magnified because of market concentration in a small number of insurers and said that a diverse, unconcentrated market would be more stable. (New York's market never reached the concentration levels experienced in Florida.)

Figures compiled by the New York Insurance Department, (hereinafter "the Insurance Department"), reflecting data from "admitted"--i.e., New York licensed--insurers writing in excess of 95 percent of the statewide homeowners insurance market, suggest that this process is underway in New York State. (See "A Special Report to the Governor and the New York State Legislature on a Study of Market Dynamics of Homeowners Insurance Policies Written, Canceled, or Nonrenewed in Designated Geographic Areas," Feb. 15, 1997; hereinafter "Market Dynamics Report").

The following table compares the numbers of homeowners policies in-force on Long Island for the 10 homeowners insurers writing the most policies there as of year-end 1992, with the number of policies written by these insurers as of June 30, 1996, and as of September 30, 1997:

| <b>Company</b>   | <b>Year-end<br/>'92</b> | <b>6/30/96</b> | <b>9/30/97</b> | <b>% Change<br/>92 to 96**</b> | <b>% Change<br/>96 to 97**</b> |
|------------------|-------------------------|----------------|----------------|--------------------------------|--------------------------------|
| Allstate         | 204,162                 | 151,741        | 145,502        | -26%                           | -4%                            |
| State Farm       | 107,258                 | 126,825        | 133,797        | +18%                           | 5%                             |
| Aetna*           | 54,684                  | 35,698         | 0              | -35%                           | -100%                          |
| Hartford         | 26,093                  | 29,214         | 31,797         | +12%                           | 9%                             |
| Travelers*       | 24,656                  | 14,709         | 49,030         | -40%                           | 233%                           |
| General Accident | 23,956                  | 14,675         | 10,914         | -39%                           | -26%                           |
| Royal            | 21,510                  | 17,892         | 15,033         | -17%                           | -16%                           |
| Metropolitan     | 17,828                  | 19,138         | 20,483         | +7%                            | 7%                             |
| American/Hanover | 17,464                  | 12,033         | 9,199          | -31%                           | -24%                           |
| Prudential       | 13,592                  | 15,311         | 14,360         | +13%                           | -6%                            |
| <b>Total</b>     | <b>511,203</b>          | <b>437,236</b> | <b>430,115</b> | <b>-14%</b>                    | <b>-2%</b>                     |

\* Aetna's homeowners business was acquired by the Travelers. Figures for 1997 are combined with those of the Travelers.

\*\* The exact dates are 12/31/92, 6/30/96 and 9/30/97.

Overall, these 10 insurers covered 81,088 fewer Long Island homes as of September 30, 1997 than they had at year-end 1992. Reductions in homeowners business for these and other homeowners companies resulted from a combination of changes in market posture.

Studies conducted by local agents' associations in Nassau and Suffolk Counties and New York City throughout the 1993-1997 period have repeatedly tracked and updated their members on the details of such changes, including:

- modifications of companies' underwriting guidelines; (for example, rules affecting eligibility of homes located close to the shore or homes with higher values);
- insurance agency quotas or prohibitions on new business writings;

- termination of agents' contracts (for example, the Insurance Department reported that there were 504 fewer voluntary market agents in New York's coastal areas in mid-1995 than there had been at the end of 1993, a 22 percent decrease; see "A Special Report to the Governor and the New York State Legislature on the Need, Feasibility, and Advisability of Expanding Coverage Written by the New York Property Insurance Underwriting Association," Dec. 31, 1995, page 9; hereinafter "NYPIUA Expansion Report").

The results of such actions can be seen in the following table, derived from data reported by insurers to the Insurance Department, which shows homeowners policies in force at year-end, and through September, 1997, for all counties encompassing coastal areas of the State:

| County      | Year-end (000's of homeowners policies) |       |       |       |       |         |
|-------------|-----------------------------------------|-------|-------|-------|-------|---------|
|             | 1992                                    | 1993  | 1994  | 1995  | 1996  | 9/30/97 |
| Bronx       | 86                                      | 90    | 81    | 80    | 76    | 76      |
| Kings       | 227                                     | 227   | 203   | 206   | 185   | 192     |
| Queens      | 321                                     | 316   | 305   | 298   | 281   | 288     |
| Richmond    | 93                                      | 108   | 90    | 102   | 89    | 92      |
| Westch'r    | 203                                     | 200   | 200   | 212   | 217   | 213     |
| Nassau      | 403                                     | 400   | 348   | 348   | 351   | 346     |
| Suffolk     | 384                                     | 385   | 372   | 381   | 379   | 383     |
| Total (000) | 1,717                                   | 1,726 | 1,599 | 1,627 | 1,578 | 1,590   |

These figures show a drop-off in homeowners policies from 1993 to year-end 1994, then a rebound during 1995. The Market Dynamics Report shows that homeowners policies in force on Long Island (Nassau/Suffolk) totaled 728,806 at year-end 1995, and 731,358 after the first half of 1996, indicating a general trend toward stabilization. Data through the third quarter of 1997 appear to support the stabilization trend, as do anecdotal reports from insurance producers to the effect that homeowners markets have indeed begun to improve.

In reaction to the availability problems experienced in prior years, legislation was enacted in 1996 (Chapter 42) which requires an insurer that intends to materially reduce its homeowners policies to submit a plan of orderly reduction for advance approval by the Insurance Department. The plan must detail how the reduction will be accomplished in a manner that minimizes market disruption. The Department's interpretation of this law was set forth in Circular Letter 10 (1996) and in the promulgation of Regulation 154 on June 25, 1996. The regulation also requires quarterly reporting of homeowners policy data to the Insurance Department for designated geographic areas of the state. These provisions were extended through April 30, 1998, by Chapter 66, Laws of 1997.

As of January 29, 1998, the Department had received and approved only four withdrawal plans covering a total of approximately 7,800 insureds, most of whom were offered comparable coverage by other insurers. Although the criteria for actions requiring the filing of a plan are based on *statewide* net policy reductions, it is possible that this provision has helped stabilize the coastal insurance marketplace since its adoption. (An earlier law, Chapter 683, Laws of 1994, which is not subject to "sunset" [expiration] provisions, empowers the Superintendent of Insurance to declare a temporary moratorium on terminations of homeowners policies in any area of the state where a state of emergency has been declared due to disaster or catastrophe.)

**The role of NYPIUA in the state's property insurance market.** The New York Property Insurance Underwriting Association (NYPIUA) was organized in 1968, under Article 54 of the Insurance Law. NYPIUA, like similar organizations in other states, was established at a time when civil unrest had caused market conditions that left urban residents unable to secure basic property insurance.

NYPIUA is a joint underwriting association providing basic property insurance. It is made up of all insurers writing direct fire and extended (property) coverage in New York State. These companies participate in the expenses, profits and losses of NYPIUA in proportion to their statewide market share for these lines. Around two percent of the state's residential properties are insured by NYPIUA (compared to the over 15 percent of personal autos insured in the New York Automobile Insurance Plan).

NYPIUA currently is providing a certain amount of coverage for property owners who have tried, but failed, to secure a homeowners policy. For example, the Department has issued guidelines allowing voluntary market insurers to coordinate their policies with NYPIUA's to approximate the coverage package available in a homeowners contract. (This coordination is known as the "wrap-around" approach; see the Temporary Panel's Oct. 1, 1996 report, page 3 for details.) However, there is not an exact numerical correlation between the decrease in voluntary market homeowners policies written by admitted carriers (as reflected in the Market Dynamics Report) and the increase in dwelling policies written by NYPIUA.

**NYPIUA's legislative authorization.** Currently, NYPIUA's legislative authorization is slated to expire as of April 30, 1998. Periodically, this authorization sunsets, sometimes preventing NYPIUA from accepting new applications until its mandate is renewed. NYPIUA maintains adequate reserves to pay claims in non-catastrophic situations. In the event of a catastrophe causing NYPIUA's losses to exceed its immediately available assets, there could be a delay in paying NYPIUA claims if it needed to use its authority to assess NYPIUA member companies.

A related issue is the ability of NYPIUA to engage in borrowing. Theoretically, NYPIUA could borrow funds to pay its claims more quickly in these circumstances. In practice, NYPIUA is hindered from doing so by its lack of legislative permanence. The Subcommittee determined that this is a significant reason why the Panel should again

recommend that NYPIUA be made a permanent residual market like the New York Automobile Insurance Plan.

**NYPIUA dwelling policy trends.** NYPIUA's original writings peaked in 1971-72 at just over 180,000 policies, then decreased rapidly to around 100,000 policies throughout the period 1976-1988. Then NYPIUA's policy count again fell off, to a low of about 66,000 in 1992. At about this time, NYPIUA began to see a change in the proportion of habitational (dwelling) risks it insured (as compared to its commercial policies), with habitational risks increasing from 68 percent of NYPIUA's total policies in 1990 to 78 percent by the end of July, 1995 ("NYPIUA Expansion" report, p. 5).

Here is a look at NYPIUA's habitational writings (policies in force) for coastal counties (Source: "Trends in Coastal Dwelling Insurance Writings by the New York Property Insurance Underwriting Association," prepared by the NYS Senate Insurance Committee based on data provided by NYPIUA):

| County   | Year-end NYPIUA Habitational Policies In-force |        |        |        |        |
|----------|------------------------------------------------|--------|--------|--------|--------|
|          | 1993                                           | 1994   | 1995   | 1996   | 1997   |
| Bronx    | 2,939                                          | 2,981  | 3,165  | 3,439  | 3,579  |
| Kings    | 15,558                                         | 15,400 | 16,128 | 17,210 | 17,721 |
| Queens   | 4,566                                          | 5,163  | 6,635  | 8,698  | 9,885  |
| Richmond | 618                                            | 761    | 1,064  | 1,440  | 1,674  |
| Westch'r | 428                                            | 442    | 534    | 651    | 711    |
| Nassau   | 1,079                                          | 1,528  | 2,597  | 4,282  | 5,333  |
| Suffolk  | 4,483                                          | 5,360  | 7,152  | 9,477  | 10,953 |
| Total    | 29,671                                         | 31,635 | 37,275 | 45,197 | 49,856 |

A comparison of these figures to those of the Market Dynamics Report (and updated by the Insurance Department through September 30, 1997) suggests that it would be inaccurate to assume that property owners who lose their homeowners insurance all have turned to NYPIUA. For one thing, approximately 136,000 fewer homeowners policies were written by licensed New York companies at the end of the third quarter of 1997 than at year-end 1993 in the seven coastal counties. However, there were only 20,185 more habitational NYPIUA policies in-force in these counties as of September 30, 1997.

The Subcommittee has learned that *new* habitational policies written by NYPIUA in coastal counties reflect a falling demand for NYPIUA's residential coverage in the past year, further reinforcing the evidence of an improving market.

According to figures provided to the Subcommittee by NYPIUA showing new business policies in-force, NYPIUA's new habitational policies in-force declined for all seven coastal counties over the period from 1996 year-end through the end of December 1997. The declines are as shown:

**NYPIUA New Business Habitational Policies In-force**

| <b>County</b> | <b>1996 yr.-end</b> | <b>1997 yr.-end</b> | <b>change</b> |
|---------------|---------------------|---------------------|---------------|
| Bronx         | 777                 | 699                 | -10.0%        |
| Kings         | 3,362               | 2,870               | -14.6%        |
| Queens        | 3,384               | 2,847               | -15.9%        |
| Richmond      | 636                 | 541                 | -14.9%        |
| Westch'r      | 244                 | 209                 | -14.3%        |
| Nassau        | 2,139               | 1,840               | -16.2%        |
| Suffolk       | 3,159               | 2,804               | -11.2%        |
| <b>Total</b>  | <b>13,757</b>       | <b>11,810</b>       | <b>-14.2%</b> |

In analyzing this trend in a memorandum to the Subcommittee, NYPIUA President Joseph A. Calvo said, "While new business dwelling policies at December 31, 1997 are greater than as of December 31, 1995, we believe the numbers show a peaking at December 31, 1996 and are now in a downward trend. It is important to note that the downward trend in new business dwelling policies to our in-force is the first indication of a decline since December 31, 1992. The decline in new business applications presently received by this Association of 8 percent in 1997 will ultimately result in renewals trending downward in 1998. The loss of renewals will be accelerated by replacing of renewals in the voluntary market as policies reach their one-year expiration" (January 12, 1998 update re NYPIUA statistics).

**Other coverage sources: CMAP.** In response to public concerns about homeowners insurance availability, the Insurance Department authorized a Coastal Market Assistance Program (CMAP) and took related steps to help affected property owners. Market assistance programs are temporary voluntary market agreements entered into by insurers, with the approval and oversight of state regulators, to address temporary availability problems for a certain type of coverage.

CMAP, which began operations on March 18, 1996, is administered by NYPIUA. CMAP procedures implemented a commitment by participating insurers to write an additional 5,000 homeowners policies in coastal areas over a three-year period. Commitments by individual insurers are based on market share. CMAP participants agree to waive their existing underwriting rules regarding coastal proximity in providing CMAP coverage. CMAP commitments can be fulfilled either by entertaining applications outside companies' normal distribution methods (the "rotation" procedure) or by writing additional business through normal distribution channels.

According to figures provided to the Subcommittee by NYPIUA, demand for CMAP coverage through the rotation procedure has been minor (about 334 policies as of December 31, 1997). CMAP's overall rate of production, at 2,143 total policies as of December 31, 1997, has remained at only 70 percent of the production commitments provided for in the CMAP plan of operation, thereby reflecting a resurgence of the voluntary market.

Insofar as NYPIUA's and CMAP's new applications and in-force business are an index of availability in the voluntary market, they reflect a recent improvement of availability. However, as more voluntary market companies introduce hurricane deductible programs (see discussion below), one concern is that the NYPIUA/wrap-around approach will become the more attractive option and that NYPIUA applications will begin to increase. In general, sound public policy dictates that a residual market should not offer terms that are more attractive than those of the voluntary market.

Therefore, the Subcommittee believes that NYPIUA should introduce a catastrophe windstorm deductible program comparable to those being used in the voluntary market.

**Other coverage sources: The excess line market.** Throughout this discussion, attention has been focused on New York's licensed homeowners carriers and the joint underwriting association (NYPIUA) they support. There is an additional source of coverage for the exposures presented by home ownership: New York's excess line insurers.

Excess line insurance companies are not licensed by New York State. Placement of business in these companies is strictly regulated. Because they are not directly regulated by New York, these companies have greater flexibility in setting their rates and determining the contract terms they offer. Also, these companies' policyholders are not protected by New York's insolvency guaranty fund; nor are these companies required to support this fund or participate in the experience of NYPIUA.

Information provided to the Subcommittee by the Insurance Department, based on data from the Excess Line Association of New York (ELANY), shows an increasing trend in the placement of homeowners business in excess lines companies, with \$2.4 million (316 policies) in direct homeowners premium written in 1995 and \$3.6 million (673 policies) in 1996.

Historically, excess line insurers have been a resource when admitted markets are scarce. New York's insurance producers are using the excess line market as one more tool to help find coverage. While less convenient and more costly, this process does confirm the availability of homeowners-type coverages for even difficult-to-place risks, which can be accessed by resourceful insurance producers using creative techniques.

**Subcommittee's findings regarding market availability.** The trends illustrated by the Insurance Department's voluntary market surveys and the NYPIUA and CMAP data summarized above support the consensus of the Subcommittee that market conditions reached their low point at about the middle of the decade and are now on the rebound. The effect of the first market adjustment strategy, i.e., restricting the availability of homeowners policies, has turned the corner and market conditions have improved.

The Subcommittee believes there are still availability problems affecting placement of new business in areas located 0 - 1500 ft. from coastal waters in Long Island and the boroughs of New York City. The remainder of this area is not experiencing an

availability problem. Overall, market availability has improved greatly since the first report of the Panel was issued.

Owners of high-value homes (those in excess of \$500,000 - \$750,000) find that many admitted companies which have been traditional providers of high-value homeowners policies have increased underwriting restrictions and deductible requirements. Owners of high-value homes are more likely than others to have insurance through non-traditional sources such as NYPIUA/wrap-around approaches and the non-admitted (excess line) market. Excess line companies writing high-value homeowners business often are non-admitted affiliates of large, financially secure insurance groups.

### **C. Do New York's coastal homeowners premiums adequately protect policyholders?**

The second strategy by which insurers might undertake to adjust their exposure to loss from natural disasters, including severe windstorms, is to make sure that the premiums they collect from policyholders adequately reflect the potential costs of such a catastrophe.

The average person probably believes that insurance companies should "save up" enough money left over from years when there are no catastrophes to pay claims when disaster strikes, much as a household might lay aside money in good times for a "rainy day." Unfortunately, it is not so simple.

**Effect of U.S. tax policy.** As discussed the 1996 Panel report (page 6), U.S. tax code effectively prevents insurance companies from adopting this approach. In Walters' discussion of catastrophe rate-making cited above, (*Best Week PC*, Aug. 12, 1996), he explains the problem this way: "Because a catastrophe-free single year generates too much tax on the catastrophe reserve, a carrier is unable to accumulate the funds to pay for a large event in 100 years on an after-tax basis."

The Subcommittee has identified federal tax policy as one of the single biggest problems contributing to long-term market uncertainty for the homeowners product. While it is beyond the scope of New York state-level policymakers to effect direct change in this area, the Subcommittee urges that this point be kept in the forefront of any further discussion.

**Reinsurance costs.** If insurers cannot lay aside enough money to cover catastrophic losses from infrequent but severe windstorm events, then how do companies currently fund this exposure?

One strategy used by most insurers is to purchase their own "insurance," known as reinsurance. Homeowners insurers enter into contracts with one or more reinsurers, whereby the reinsurance company agrees to pay for a certain portion of the direct insurer's losses. (This process comes under the heading of "finding traditional or non-traditional business partners to share catastrophe risks," described above. While

reinsurance is a traditional approach, other, non-traditional risk transfer strategies were studied and reported upon herein by the Capital Markets Subcommittee.)

Following Hurricane Andrew, reinsurers, like "direct" homeowners insurers, undertook a reassessment of their actual exposure. For a brief time, catastrophe reinsurance became much more expensive and hard to find. Direct insurers' market decisions during this period were, to some extent, driven by the temporary market conditions of their traditional reinsurance partners. (A resource provided to the Panel by the Reinsurance Association of America outlines the rebound of catastrophe reinsurance availability during the 1990's; see "Property Insurance Exposures: Marketplace Responses to Risk Management Challenges," Oct., 1997; hereinafter "Market Responses").

Until comparatively recently, the Insurance Department did not consider the costs posed to direct insurers by the purchase of reinsurance in evaluating homeowners insurance rate filings. According to the Department's Market Dynamics Report (Feb. 15, 1997, page 17), "the Department has recently changed its policy with regard to homeowners rate filings in order to permit insurers to reflect the cost of catastrophe reinsurance. Since February, 1996, when this policy change took place, approximately 12 rate filings which reflect this cost have been acknowledged."

**Homeowners rate changes on Long Island, 1994-97.** The Subcommittee reviewed the impact of coastal exposure on homeowners rates. At the Subcommittee's request, the Insurance Department furnished members a summary entitled, "Homeowners Rate Increase History—for Selected Groups—File Index from 1/1/94 to Present."

In all, the effects of 24 rate filings for nine company groups are summarized in this document. In nearly every case where both the Long Island and statewide average effects of the rate filings are shown, Long Island was affected by larger rate increases. The filings generally are based on "loss experience," although the comment on one filing references "reinsurance load" and "ISO's excess wind procedure, grossed up for hurricane loss potential not reflected in ISO's factor."

**Modeling techniques and rate-setting.** At this point, the Department does not consider the projections generated by "computer simulation modeling" in evaluating rate filings (See the Department's Market Dynamics Report, pages 16-17, for a discussion.) The "modeling" technique is the computer-assisted "mapping" process mentioned above, whereby potential losses arising from the actual distribution of a company's insured properties in a given geographic area are analyzed, using various sets of assumptions about possible occurrences there.

In the wake of Hurricane Andrew, insurance regulators and the public began to hear a lot about companies' "PMLs" or "probable maximum loss." PMLs are projected values generated by modeling.

According to the Insurance Department, "an insurer's probable maximum loss is a calculation of the greatest amount of insured losses an insurer would incur if the worst possible storm hit a specified geographical area where the insurer is writing homeowners policies. The PML is calculated by catastrophe modelers who will isolate a geographical area where the insurer is writing homeowners business, input as much data as is available about the business (number of homes, type of construction, age of homes, distance from the shoreline, etc.) and run up to 6,000 computer variations of a storm against that area. The largest loss amount from a single storm scenario is the insurer's PML" (Market Dynamics Report, p. 12).

The Insurance Department announced at a public hearing on property insurance issues (April 1995) that it was undertaking a study of modeling. A recent presentation by the Department's Anthony C. Yoder, Principal Actuary, describes the difficulties from the regulator's point of view in using modeling information to set rates.

**Current methodologies inadequate.** Yoder opens by citing insured losses resulting from Hurricane Andrew and other natural disasters, noting that from their magnitude and the resulting insurer insolvencies, "it is easy to see how flawed the methodologies used by most insurers to manage and price for catastrophe risk really have been. . . . [O]ne thing most regulators are convinced of is that current or pre-Andrew catastrophe ratemaking methodologies . . . are not entirely appropriate for projecting prospective catastrophe losses . . . ." ("The Regulators' Point of View on Catastrophe Issues," adapted from a July 29, 1997 presentation by Mr. Yoder to the 3rd Annual Catastrophe Protection Summit).

The presentation cites reasons for the inadequacy of current methods: "scarcity of historical hurricane data in both ISO [Insurance Services Office, a statistical service firm] and insurer bases due to below-average catastrophe activity over the last 20 to 30 years, changes in population demographics, changes in coverage and construction practices, etc."

**Difficulties posed by modeling.** Yoder's discussion goes on to describe the difficulties in evaluating the outcome of modeling technologies. One problem has been the fact that modeling companies have been reluctant to make available all the details of their methods. The firms believe that this proprietary information (in which they have invested considerable research and development) could become subject to public disclosure laws (such as New York's Freedom of Information law), and hence to competitors, as a result of disclosing it to state regulators. This legitimate business concern has struck critics of modeling as possibly reflecting some deliberate obfuscation as well, especially in light of the hair-raising PMLs generated by some model scenarios.

While it appears feasible to address modelers' disclosure concerns, other concerns remain. These include the challenges of understanding and evaluating a complex technology, plus the inevitable skepticism caused by the inconsistency of outcomes

generated by various modeling firms looking at the same insurer's homeowners business.

According to Yoder, "the part of the models which require the most attention and review are the model assumptions since they have proven to be the most sensitive aspect. In concept, catastrophe models are simple in design but, in practice, they incorporate countless assumptions. Adding to this is the fact that meteorologists and engineers cannot even reach agreement within their own fields . . . Knowing this should enable regulators to understand why results can vary substantially among modelers. . . . [S]ince there are so many model parameters where assumptions have to be made, *there is a need to determine what are reasonable ranges of assumptions for each parameter. These ranges will vary from state to state.*" [Emphasis added.]

**Subcommittee's finding regarding computer modeling.** The Subcommittee believes the Department should conclude its study on computer modeling. The Department should consider permitting modeling to be used by insurers as another acceptable actuarial technique for the development of appropriate rates and deductibles. It should consider permitting specific models to be submitted for examination by the Department in support of rate and deductible filings.

Some Subcommittee members believe that the Department also should proceed to determine formally what are reasonable ranges of assumptions for use in a New York State context; for example, the historical relevance of wind-speed assumptions used. Other members believe that a standard of "reasonableness" is implicit in the Department's evaluation of the specific assumptions in any given model, and that formal standards should not be set.

#### **D. Hurricane deductibles affect more policyholders**

The third general market action strategy for adjusting catastrophe loss studied by the State of the Market Subcommittee is the increasing use by insurers of special deductibles. These policy provisions that have the effect of leaving a greater level of catastrophe risk with the policyholder.

In its 1996 report, the Panel recommended that the Insurance Department should approve appropriate mandatory deductibles for "hurricane loss." The report noted that "one of the most significant means of reducing probable maximum losses is the use of large deductibles applicable to catastrophe generated losses. By mandating that every policy contain such a deductible, a company will drastically reduce its insurable losses. The panel strongly recommends that companies file and the Insurance Department approve appropriate large deductibles *for hurricane damage*" [emphasis added] (page 5).

The Panel predicted that this step would produce a marked improvement in availability of homeowners insurance.

**Evolution of hurricane deductibles in New York.** Policy deductibles are contract terms stating that an insurer's obligation to pay claims begins at a certain level of loss (the deductible amount). Claims that do not reach this amount, and damage costs below this amount (when the claim exceeds the deductible) are not paid for by the insurer.

Traditional homeowners contract deductibles have been expressed as relatively low dollar amounts (\$250, \$500, \$1,000), applicable to all damage claims submitted under the policy. Policyholders generally have been offered a range of dollar-amount deductible options at various prices, with lower deductibles costing more.

In its Supplement to Circular Letter No. 11 (1993), the Insurance Department finalized a set of guidelines for homeowners insurers to use in filing for mandatory and optional deductibles applicable to claims for windstorm damage in coastal areas. The Department's guidelines provide for both "non-catastrophic" windstorm deductibles (applied whenever winds *do not* attain Category 2 hurricane status (i.e., sustained winds of 96 mph or more), as determined by the National Weather Service at landfall anywhere in New York State; and for "catastrophic" windstorm deductibles activated only in the event that Category 2 status or higher is experienced at landfall anywhere in New York State. The "Non-catastrophic" guideline for a mandatory deductible is no more than \$500.

In addition, the Circular Letter supplement said that "an insurer may, with sufficient support, submit for Insurance Department consideration a windstorm deductible filing that differs from the articulated criteria."

According to the Department, as of Feb. 15, 1997, "20 insurers have received approval from the Insurance Department for their windstorm deductible programs. These programs provide windstorm coverage which is subject to certain mandatory deductibles depending on the geographical location of the risk. The mandatory deductibles range from 1% to 5% of the windstorm loss with optional deductibles available at higher percentages" (Market Dynamics Report, page 14).

**Current deductible terms.** At the Subcommittee's request, the Insurance Department furnished members information summarizing approved windstorm deductibles as of October 27, 1997. The summaries described 25 deductible filings by individual insurers and two by rate service organizations, which may be used by their member companies. (Filings by the rate service organizations appear to adhere to the Department's pre-approved guidelines.)

The Subcommittee studied the provisions, focusing a great deal of its total discussion on the various deductible programs, particularly the "trigger" provisions (the description of an event that activates the deductible).

Policy language appears to differ from company to company, requiring close attention to the effect of each contract term to understand which policyholders would be affected, and to what extent, by their deductibles in any given storm. The main variables include:

- hurricane category/wind speed;
- deductible amount or percentage; and
- location of affected policies.

**Hurricane category/wind speed.** Sixteen of the current deductible filings contain triggers below the level of the Category 2 hurricane. At the other extreme, one company's deductible does not apply unless one-minute sustained wind speeds of 100 mph are reached during a hurricane.

There also are parameters in some policies regarding time of loss, relative to the official recording of the triggering event. Most of these policies specify that the deductible applies to losses occurring within 12 hours before or after the trigger; (one filing says 24 hours).

**Deductible amount or percentage.** The deductibles, ranging from 1% - 7.5%, are expressed as a percentage of the homeowners Coverage A limit, i.e., the value of the insured home (excluding its contents). One company's filing includes a 7.5% hurricane deductible for higher value homes located close to shore. The 7.5% deductible is required for homes having Coverage A (structure) values of \$500,000 or more. This is the highest deductible described on the chart.

A policyholder with a \$500,000 home insured by this company would sustain \$37,500 of loss from a Category 1 hurricane before the insurer would be required to make any payments for the damage.

Seven companies have deductibles of 5%, applicable to some of their policyholders. A 5% deductible for a \$250,000 home would be \$12,500.

**Location of affected policies.** The original guidelines in the Circular Letter supplement said that mandatory percentage deductibles should be graduated on a percentage basis, so that they are highest nearest the shore, fade with distance from shore and disappear beyond a mile from shore. As noted, the supplement permitted insurers to submit filings that differ from those guidelines, and sixteen of the filing summaries appear to indicate that deductibles apply beyond one mile from shore.

**What is an appropriate deductible "trigger"?** It is evident that the contractual language describing the triggering event is extremely important to policyholders, because if this threshold description is met, all policyholders with the deductible provision will be affected, regardless of the amount of their claim or the storm conditions in their specific location.

Since a number of filings reference hurricane "Category" values, the Subcommittee studied the methodology by which an official Category value is assigned to a hurricane. The Category assignment is not dependent upon wind speed alone. Other factors considered include "storm surge," or the degree to which coastal waters exceed normal levels. Since flooding, including damage from wave wash, is not an insured peril under homeowners policies, the Subcommittee agreed that wind speed criteria (and not storm surge) are the correct triggers for the deductibles.

**Subcommittee findings regarding deductibles.** The State of the Market Subcommittee believes that catastrophe deductibles are having a significant favorable impact on availability, except for new applicants wishing to insure more expensive homes or homes close to the shore. Owners of high-value homes (those in excess of \$500,000 - \$700,000) are assuming more of their catastrophe exposure due to increased deductibles.

The Subcommittee agreed that wind deductible trigger events should be measured solely by:

- maximum one-minute sustained wind speed at a defined altitude within New York State;
- occurring within a named hurricane; and
- not by storm surge or barometric pressure measurements.

Despite lengthy discussions, Subcommittee members did not agree among themselves on whether a triggering event for mandatory percentage deductibles should involve, at minimum, a named hurricane having wind speeds at a Category 2 level or higher (i.e., at least 96 mph), as specified in the original guidelines of the Insurance Department. Some Subcommittee members believe that:

- companies should be strongly encouraged to make the amount of their deductibles proportionate to the severity of the triggering event; and that
- triggering events should be named hurricanes with wind speeds in excess of 95 mph (Category 2).

Other Subcommittee members did not agree that the Panel should make these recommendations. Among their concerns is the possible impact of these deductible standards on availability.

As with premium rate filings (discussed above), the Subcommittee believes the Insurance Department should consider permitting computer modeling to be used by insurers in support of their deductible filings.

**Differences between new wind deductibles and traditional deductibles.** New York's Insurance Law provides that significant policy changes such as the introduction of new mandatory deductibles can be made only as a homeowners policy completes its three-year "required policy period" (see §3425). This provision means that

homeowners insurers must phase in their deductibles over a three-year period following their approval, so that an increasing number of coastal area homeowners policies currently are being changed to include new deductible programs.

The information on deductible provisions provided to the Subcommittee by the Insurance Department shows the wide variety of deductible programs in use today, and the number of specific terms included in each deductible provision. As with any legal contract, an understanding of each term, and of the possible interactions among these terms, is required before insureds can accurately anticipate the effect of a deductible that is added to their policy.

As discussed above, the evolution of the homeowners product has accustomed consumers to assume general standardization among homeowners insurance products and to regard homeowners deductibles as requiring them to assume a relatively low *dollar amount* for each claim. Where consumers have encountered "percentage" requirements, it generally has been in the context of their health benefits programs, where they may be required to pay a percentage of each medical claim. Thus, a casual reference to a "five percent deductible" might be interpreted by some consumers as requiring them to pay five percent of any damage claim.

In contrast to the "percentage of claim" formula familiar to many consumers in these medical co-payment requirements, the new homeowners deductible programs express the amount of the deductible as a percentage of the policy's Coverage A limit. One policyholder notice letter explains the company's program this way: "The 5% Windstorm Deductible equals 5% of your Dwelling Limit (Coverage A), namely the value of your home as listed on the policy. To show it another way: Coverage A limit X .05 = Amount of Windstorm Deductible." Since this is a generic policyholder notice, the specific dollar amount for the individual policyholder is not shown.

As discussed above, the 5% deductible would equal \$5,000 for a \$100,000 home; \$12,500 for a \$250,000 home; \$25,000 for a \$500,000 home, etc. While described in terms of a percentage of the Coverage A limit, these deductibles typically apply to the total losses from the trigger event, i.e., damage not only to the dwelling structure (Coverage A), but also to any additional structures located on the premises (Coverage B), and to the contents (Coverage C).

**(Subcommittee findings regarding policyholder understanding of deductible terms.** There was unanimity among Subcommittee members on the subject of consumer education regarding deductible terms. Subcommittee members agreed that more consumer education is needed so that policyholders will understand that they are assuming a greater exposure than before. The Subcommittee believes the Panel should make recommendations designed to improve consumer awareness and understanding of these deductibles. (Deductibles are discussed in the Department's Consumer Guide for Homeowners and Tenants Insurance as well as on its Website-<http://www.ins.state.ny.us>)

**Deductible "buy-back" and supplemental policy options.** Some homeowners insurance companies offer their policyholders an opportunity to "buy back" their hurricane deductible. In other words, policyholders are given a choice, for an additional premium, not to accept the deductible or to accept a lower deductible. This choice may be offered on a one-time basis, rather than continuously over the life of the policy. In view of the dollar amounts involved, this is a choice that consumers need to weigh carefully.

The Subcommittee discussed the availability of buy-back options and the potential that some companies might develop additional insurance products that would be specifically designed to provide coverage for the deductible amount under another company's policy.

**Subcommittee findings regarding buy-backs, new coverage options.** The Subcommittee believes insurance companies should be encouraged to compete in offering buy-back options to their policyholders who undertake significant mitigation steps and/or in developing new insurance products designed to take care of another insurer's deductible.

### **III. Current Status of Coastal Homeowners Insurance Market Conditions in New York State**

As described above, the State of the Market Subcommittee finds that:

- overall market availability has improved greatly since the first report of the Temporary Panel on Homeowners Insurance was issued in October, 1996; there are still availability problems affecting placement of new business in the 0 to 1,500 ft. from shore area of Long Island and the Boroughs of New York City, and for homes with values in excess of \$500,000 - \$750,000;
- the remainder of this area is not experiencing an availability problem;
- the use of mandatory hurricane deductibles is increasing;
- more consumer education is needed so that policyholders with these deductibles will understand that they are assuming a greater exposure than before;
- many admitted companies that have been traditional providers of high-value homeowners policies (insuring homes valued in excess of \$500,000 - \$750,000) have increased underwriting restrictions and deductible requirements;
- owners of high-value homes are assuming more of their catastrophe exposure due to increased deductibles;
- owners of high-value homes are more likely than others to have insurance through non-traditional sources such as NYPIUA/wrap-around approaches and the non-admitted (excess line) market; and

- excess line companies writing high-value business often are non-admitted affiliates of large, financially secure insurance groups.

#### **IV. Possible Solutions to Assure Continued Market Availability of Homeowners Insurance in the Future**

No discussion of current market conditions should ignore the fact that New York has not recently experienced a severe hurricane.

According to a presentation to the Panel by a modeling expert, over time New York can expect to sustain some degree of hurricane loss every four years. The model used for this presentation projects that New York can expect, on average, a hurricane causing \$100 million in insured damage here every 10 years; \$700 million every 20 years; \$1.6 billion every 33 years; and \$3.2 billion every 67 years. Once a century, New York faces insured hurricane damage of \$3.9 billion.

Naturally, a hurricane causing this level of damage in New York could be expected to have caused additional devastation elsewhere, further impacting the surplus of New York homeowners insurers writing in multiple states.

The difficulties of providing for enough money to pay claims from catastrophic storms were discussed above. For example, U.S. tax policy allows insurers tax deductions only for losses that have already occurred. As a result, insurers have traditionally relied on surplus to fund natural disaster losses. For some insurers, reliance on surplus is their preferred approach. Others may choose to use reinsurance. Most homeowners insurers today use reinsurance to manage their exposure.

Some of the largest U.S. homeowners insurers, however, have not found it feasible to purchase much reinsurance. For example, in 1995 presentations to the Florida Academic Task Force on Hurricane Catastrophe Insurance, Florida's leading personal lines carriers noted that, at that time, they could not find reinsurance in the large \$1 billion and higher amounts (for a single event) which they would need to manage natural disaster risk. According to the Reinsurance Association of America, during this decade's reassessment of risk "some leading personal lines insurers continued -- then and today -- to express concerns about their overexposure in certain geographic areas. Insurers continued to review external and internal means of financing for natural disaster risk; most insurers realigned their risk exposure and reevaluated their reinsurance programs, while some looked for alternatives to traditional reinsurance, particularly those who believed the price of catastrophe reinsurance was equivalent to or higher than their potential cost of capital" (see the RAA's "Marketplace Response" report, pages 1, 3).

The Capital Markets Subcommittee report will review non-traditional options involving private capital transactions. The State of the Market Subcommittee agreed to review the option of establishing some type of catastrophe reinsurance fund through state action, a step that could affect homeowners market conditions if taken.

In some states (Florida, California, Hawaii), in part due to severe market restrictions, legislative action has established a mechanism to fund catastrophe loss (see the Panel's Oct. 1, 1996 report, Appendix A). The Subcommittee considered the pros and cons of recommending that New York consider taking a similar step.

This issue proved irreconcilable for the Subcommittee. A strong majority of the Subcommittee opposes establishing a catastrophe fund, while a minority thinks this topic should be explored further. The Subcommittee agreed to let proponents of these opposing points of view draft position statements for inclusion in its report, and for proposed inclusion in the report and recommendations of the full Panel.

### **Majority Report of the State of the Market Subcommittee Regarding a Hurricane Reinsurance Fund**

The State of the Market Subcommittee has examined the creation of a state-operated hurricane reinsurance catastrophe fund. A super-majority of the subcommittee opposes the creation of a reinsurance fund because it would disrupt the New York homeowners' insurance market and significantly increase the cost of insurance for homeowners. In addition, recent improvement in the Long Island homeowners' insurance market and the private reinsurance market makes a state fund unnecessary.

In lieu of creating a reinsurance catastrophe fund, the Legislature and the Insurance Department should use simple solutions designed to address New York's unique circumstances. Minor repairs to the present system can enhance the industry's ability to provide coverage in catastrophe-prone areas, and can be undertaken quickly with immediate benefits to citizens in localities exposed to hurricanes. Further, they free the majority of the state's citizens from suffering costs they will eventually bear through such a reinsurance fund.

**Description of a Reinsurance Fund.** Presently, New York insurers purchase reinsurance protection from the private market and only Florida has created a state hurricane reinsurance fund. According to a major investment banking firm, which made a presentation to the Panel, the Florida Hurricane Catastrophe Fund would reimburse \$5.6 billion to homeowners' insurers in the event of a 1-in-100 year hurricane striking Florida. Such a hurricane is expected to produce \$30 billion in insured losses.

Annually, the Florida Hurricane Catastrophe Fund collects roughly \$400 million from insurers based upon their homeowners' writings and commercial-residential writings exposed to the hurricane peril. Insurers automatically pass these costs on to

consumers through higher homeowners' insurance rates throughout the state. Over a period of time, money accumulates in the fund. Before a significant amount can accumulate, the fund relies heavily on a level of debt to pay bonds. The major investment banking firm (mentioned above) estimates that the fund has bonding capacity of \$5.5 billion which would be financed by an annual 2%-4% emergency assessment levied on all lines of property-casualty insurance (except workers' compensation) in the state for a ten year period. In the event of a \$30 billion hurricane, the emergency assessment would increase the cost of homeowners' insurance by \$60 per \$1,000 in pre-event homeowners' insurance premiums. The Florida fund is not backed by the full faith and credit of the state.

Due to the Florida fund's assessment authority and the huge liability of the residual markets, the major investment banking firm's analysis highlighted that the "day after" a 1-in-100-year Florida hurricane, the hypothetical policyholder would experience a premium increase of 53.5% in the first year and 33.4% from years two to ten. The same firm stressed that state funds are not a panacea and that public policymakers must confront whether to "pay now" or "pay later."

A similar reinsurance fund in New York would reimburse insurers for some of their hurricane losses -- depending upon the amount of money in the fund, the level of the insurer's participation, and the money generated by the annual 2%-4% emergency assessment. If the fund's assets are insufficient to reimburse insurers, the fund would levy an emergency assessment on all New York property-casualty insurers to meet its obligations. This assessment would be automatically passed on to policyholders of New York.

**Reinsurance market has expanded; capital markets provide new options.** The Subcommittee believes that a reinsurance fund is unnecessary because the private reinsurance market has expanded and the capital markets have begun to offer new financing mechanisms (e.g., securitization of hurricane risk, surplus notes, lines of credit). In the last seven years, the industry's surplus has increased 75% to \$280 billion. Similarly, the private reinsurance market has significantly increased its capacity. For example, the Bermuda market created \$5 billion in new reinsurance capacity and Lloyd's is once again competitive in the private market. Presently, the cost of reinsurance is back to pre-Hurricane Andrew days and the availability is at a record high of \$1 billion per program.

Over the past several years, there has been growing interest in the role of the capital markets in spreading or financing catastrophe risk. According to the major investment banking firm, the sheer size of the capital markets (\$13 trillion in U.S. stocks and bonds) should enable the market to withstand the losses associated with a severe hurricane that could cripple one or more individual insurers. In addition, some financial intermediaries maintain that moderate amounts of catastrophe risk in a diversified portfolio can improve overall returns while decreasing portfolio risk. Depending upon an insurer's needs, the securitization of catastrophe risk can supplement an insurer's reinsurance program.

Virtually every major investment bank in the U.S. has formed a group to work on the development of securitized insurance products, and a number of transactions involving individual companies have been completed. For example, the Subcommittee received a report from USAA about its recent securitization of \$477 million in Eastern hurricane exposure. Other insurers, such as St. Paul, Swiss Re, and Winterthur, have used similar financial vehicles. It is the major investment banking firm's opinion that the insurance industry will continue to turn to the capital markets and investors are becoming more comfortable with such securitization.

At the very same time insurers are turning to new methods, a state reinsurance fund would force insurers to pay millions into a fund whether or not an insurer needs such reinsurance protection. The proposed fund would impact all insurers -- even those homeowners' insurers that write predominantly in upstate New York.

**A fund would promote cross-subsidization among consumers.** The Subcommittee believes that a reinsurance fund would have a statewide impact on the market and promote cross-subsidization between policyholders in the state. First, homeowners' insurers would be annually assessed reimbursement premiums by the fund. These fund payments by insurers would be passed on to all New York consumers, including those upstate, as insurers seek significant premium rate increases.

Second, if the fund is forced to levy an emergency assessment, almost all insurance policyholders in the state would be assessed. Because only a limited geographical area in New York is exposed to hurricanes, a statewide 2%-4% emergency assessment on all property-casualty insurers means that policyholders for all lines of property-casualty insurance (e.g., commercial multi-peril, farmowners, auto, surety, etc., except workers' compensation) would bear some of the burden for hurricane losses. This emergency assessment would be annual until covered losses are reimbursed.

A fund would not immediately improve insurance availability. Advocates for a reinsurance fund contend that a fund would have a beneficial impact on the availability of homeowners' insurance. However, the Subcommittee is not convinced that such a fund would improve availability. A fund would be financed by reimbursement premiums collected by insurers and these premiums would accumulate over a period of time. However, it would take a decade before the fund could be considered a "backstop" or have a beneficial impact on the behavior of insurers. In the interim, the fund would rely almost exclusively on a level of debt to pay bonds. Testament to this fact is that Florida consumers continue to experience difficulty obtaining homeowners' insurance even with a hurricane reinsurance fund. Waiting a decade for money to accumulate does not address the immediate needs of coastal New York homeowners.

In addition, in the early years of the fund, insurers would lack confidence in the fund's ability to meet its obligations because of the limited amount of money collected by the fund. The fund would also be viewed as an untested entity. As a result, prudent insurers would still purchase duplicative reinsurance from the private market. Thus,

insurers would pay twice for the same reinsurance coverage -- once to the state and once to the private market. Purchasing duplicative reinsurance and the levy of a new charge on insurers could mean the difference of a profitable or unprofitable year.

**Conclusion.** The Subcommittee believes that a state hurricane reinsurance fund is unnecessary. In addition, state intervention into the reinsurance market is premature. The private reinsurance market has expanded and new financing mechanisms from the capital markets have provided additional alternatives.

Considering the recent improvement in the availability of homeowners' insurance in coastal areas, the creation of a state reinsurance fund is unlikely to improve present availability and it may actually exacerbate the situation. Rather than pursue a state fund, we believe that minor repairs to the present system are the best alternative for quickly addressing the needs of coastal New York.

#### **Minority Report of the State of the Market Subcommittee Regarding a Catastrophe Fund**

The State of the Market Subcommittee recommended against further study of a catastrophe fund for New York. Following is the minority's (Allstate Insurance Company) contrary view:

It might be premature to recommend the establishment of a catastrophe fund for New York, but it is short-sighted to reject further investigation of the concept. A catastrophe fund is a state-administered, tax-exempt trust fund that would reimburse private insurers for a certain percentage of losses incurred in a large catastrophic event. Such a fund could add considerably to the stability of the New York property insurance market.

The creation of a catastrophe fund is a complex and delicate calculus requiring significant actuarial and financial analysis. After careful study, Florida successfully developed a formula for a catastrophe fund that helped restore some normalcy to the most dysfunctional property insurance market of all time. In light of the success of a catastrophe fund in Florida, the Subcommittee should not cavalierly dismiss a catastrophe fund for New York without more in-depth study.

**The Florida experience.** In August of 1992, Hurricane Andrew destroyed much of south Florida. It caused \$10 billion of insured residential property losses and \$16 billion of total insured losses. In all, eleven insurance companies were declared insolvent. Some insurers filed petitions with the Department of Insurance to stop writing property insurance. Many more started to reduce their exposure to large catastrophes by engaging in mass nonrenewals of existing customers. Virtually no one could purchase a homeowners policy in the private market.

In 1993, the state created the Florida Hurricane Catastrophe Fund, a state-administered reinsurance program for residential property. Today the fund has a claims-paying capacity of \$7 billion, the equivalent of 70 percent of the residential

losses from Hurricane Andrew. After Hurricane Andrew, insurers were fleeing the state. Within a few years of establishing a catastrophe fund in Florida, most insurers stopped their nonrenewal programs and new companies started applying for licenses to write homeowners insurance. The Florida market still has problems, particularly in southeast Florida, but the state sponsored Academic Task Force on Hurricane Catastrophe Insurance concluded that the fund was "a significant contributor to the stability of the private insurance market in Florida because of its unique ability to accumulate reserves on a tax-free basis and to leverage those reserves into sources of cash for paying claims."

The New York market never disintegrated like the Florida market. It has not experienced a major catastrophe like Hurricane Andrew or the Northridge Earthquake in California. But the experts agree that the potential is there. Let us not lapse into complacency over *El Niño*. Prior to 1989, no catastrophes ever caused insured losses above \$1 billion. Since then, multi-billion dollar losses have become common throughout the world: Hurricane Andrew (\$16 billion in 1992); Northridge Earthquake (\$10 billion in 1994); Hurricane Hugo (\$4.2 billion in 1989); Hurricane Iniki (\$1.6 billion in 1992). In Europe, Typhoon Mireille caused \$5.2 billion of insured losses and the winter storms in Continental Europe were responsible for \$4.6 billion of insured losses.

The prudent course of action is to prevent a market meltdown after a major catastrophe. A catastrophe reinsurance fund could do just that.

**The opponents.** Opponents of a catastrophe fund argue that it is a bail-out for large insurance companies. No one is asking for a hand-out. Insurance companies would be required to pay an actuarially sound premium to the state-administered fund. These premiums would be exempt from federal income tax as they accumulate and earn interest. The fund, therefore, would be able to build surplus to pay claims much more rapidly than would a private insurance company, which is required to pay federal income tax on the same dollars.

In the early stages of a catastrophe fund, the bulk of the claims-paying capacity is achieved through the issuance of bonds after a catastrophic event. The bonds are paid for by adding a small surcharge to insurance premiums. In Florida, the surcharge ranges from two to four percent on all property and casualty insurance premiums, excluding workers' compensation insurance. Opponents argue such a surcharge is tantamount to a tax increase, resulting in upper New York subsidizing the metropolitan area.

A surcharge may be a tax, but every tax must be evaluated on its own merits. The catastrophe fund surcharge would go into effect only after a major catastrophic event causes large insured losses. The money is being used to help people rebuild their homes and repair or replace their personal property. Is this an inappropriate use of public funds?

The subsidy argument is premature. The bulk of New York's population is concentrated in metropolitan New York and Long Island, where the catastrophic risk is obviously the greatest. The size of the metropolitan area could adequately support a bonding program without impacting the residents of upper New York. Additional actuarial and financial analysis should be done to determine whether it would be necessary to subject the residents of upper New York to any surcharges. It may be possible to construct a bonding program without affecting those lines of business. But the Subcommittee would prefer not to engage in this inquiry. What do they have to fear?

**Lower reinsurance costs.** Perhaps the private reinsurers fear losing business.

A catastrophe fund is remarkably cost efficient. In Florida, most private reinsurers charge a "mark up" of two to three times the rates being charged by the catastrophe fund. Those higher reinsurance costs get built into the rates of any homeowners insurer which relies on reinsurance. A catastrophe fund introduces more competition to the reinsurance marketplace.

A catastrophe fund does not replace traditional reinsurance, but augments it. Many companies will still need to rely heavily on the reinsurers to provide reinsurance coverage that "wraps around" the coverage provided by a catastrophe fund. In general, however, homeowners insurers can rely less heavily on the more expensive private reinsurers. It's not surprising, therefore, that most of the opponents to a catastrophe fund are reinsurers or those companies that are closely affiliated with reinsurers.

**Conclusion.** A catastrophe fund would provide a cost-efficient way for the tax-free accumulation of surplus to pay claims to property owners in the event of a major hurricane in New York. Such a fund could provide billions of dollars of additional capacity to the New York property insurance market. Any additional capacity would improve competition, ultimately resulting in improved availability of homeowners insurance.

The potential benefits of a catastrophe fund are too great not to study them in more detail.

## **V. Recommendations of the State of the Market Subcommittee**

- **Hurricane deductibles.** The Insurance Department and insurers should promote more consumer education efforts so that policyholders will understand that with higher deductibles they are assuming a greater exposure than before:
  - The nature, amount and triggering events of deductibles should be prominently and clearly presented to the insured.

- Percentage deductibles should also be expressed in dollar amounts like traditional deductibles, so that consumers are aware of the full extent of their exposure.
- Where the deductible applies to one or more "coverage parts," these coverages should be explained, not just referred to as "Coverage A," etc.
- Also, the nature and location of the triggering event should be clearly explained.

The Insurance Department's standards for approving deductibles for hurricane losses should include:

- clear, prominent display of the dollar amount (as well as the percentage) of the deductible on the face of the policy; and
  - clear, prominent explanation of the triggering event.
- **Hurricane deductible triggers.** Panel members (except one) agree that hurricane wind deductible trigger events should be measured solely by:
    - maximum one-minute sustained wind speed at a defined altitude,
    - occurring within a named hurricane, and
    - not by storm surge or barometric pressure measurements.

The Panel members were equally divided on whether triggering events should be named hurricanes with wind speeds in excess of 95 mph (Category 2), thereby assuring that deductibles apply only following catastrophic events.

- **Hurricane deductible buy-backs, new coverage options.** Companies should be encouraged to compete in offering buy-back options to their policyholders who undertake significant mitigation steps, and in developing new insurance products designed to provide coverage for another insurer's deductible.
- **Joint participation on high value homes.** The Insurance Department should work with the industry to find ways to encourage more than one insurer to participate jointly in insuring high value homes. Also, CMAP should consider awarding CMAP credits for participation on this basis.
- **NYPIUA authorization.** NYPIUA's legislative authority should be made permanent in order for it to facilitate liquidity in the event of a catastrophe.
- **Computer modeling.** The Department should consider permitting modeling to be used by insurers as another acceptable actuarial technique for the development of appropriate rates and deductibles. It should consider permitting specific models to be submitted for examination by the Department in support of rate and deductible filings.

Some Panel members believe the Insurance Department should consider minimum standards for the models used, such as the historical relevance in New York of wind-speed assumptions. Other members feel that a standard of reasonableness is implied in the examination by the Insurance Department of the models and that formal standards should not be set.

- **The Coastal Market Assistance Program (CMAP).** CMAP should extend its consumer education efforts and coordinate with the Insurance Department and CMAP participating companies in a wide-ranging, broadly available information campaign to address the public's understanding of the relationships among availability, affordability and loss exposure. Specifically, public awareness needs to be increased about:
  - \* the increasing prevalence of catastrophe deductibles and the need to be alert to changes in homeowners insurance policies which introduce such deductibles;
  - \* the nature of catastrophe deductibles, what events could trigger such deductibles, and the relationship of these deductibles to availability and affordability of homeowners coverage;
  - \* how a percentage catastrophe deductible translates into dollar terms, and whether the consumer can afford to assume this exposure to loss;
  - \* possible mitigation steps homeowners can take, and how such steps could improve the availability and affordability of their homeowners coverage.

The Panel also recommends that the CMAP Steering Committee should explore ways to encourage its participants to provide the broadest possible coverage form generally available in the industry to consumers.

- **NYPIUA deductibles.** Legislation should be enacted authorizing NYPIUA to use a catastrophe deductible program comparable to those being used in the voluntary market.
- **Hurricane/catastrophe fund.** A majority of the Panel opposes establishing a catastrophe fund. (See "Possible solutions" for the majority/minority position statements.)



**TEMPORARY PANEL ON HOMEOWNERS'  
INSURANCE COVERAGE**

**Mitigation Subcommittee Report**

**February 1, 1998**



# MITIGATION SUBCOMMITTEE REPORT

The members of the Mitigation Subcommittee are:

|                    |                                 |
|--------------------|---------------------------------|
| Jim Ryman*         | State Farm Ins. Co., Chairman   |
| Jim Tuite          | State Farm Ins. Co.             |
| John Ecker*        | John Ecker, Inc.                |
| David Nadig*       | Allstate Ins. Co.               |
| Dan Robinson*      | NY Central Mutual Fire Ins. Co. |
| Steve Wietlisbach* | Travelers Ins. Cos.             |
| Peter Lefkin*      | Fireman's Fund Ins. Cos.        |
| Mary Lanning       | ML & G Associates               |
| Howard Honig*      | Honig Insurance Agency, Inc.    |
| Joe Calvo          | NYPIUA                          |

\*Panel member

## I. Purpose of the Subcommittee

### A. Introduction

The purpose of this report is to define the potential application of mitigation as it relates to the mission of the Temporary Panel on Homeowners' Insurance Coverage (the Panel). The Mitigation Subcommittee recognizes that the subject of "mitigation" needs to be defined in terms that the home owning public will understand. If the issue is presented in a manner homeowners can appreciate, it is hoped they will be more likely to act on the recommendations of the Subcommittee.

While this report is intended to address the overall goal of the Temporary Panel on Homeowners' Insurance, which is making coastal property insurance available and affordable, the topic of mitigation, we believe, is much broader and should relate to the entire populace which is affected by wind, storm, surge and flooding in terms of "protecting both home and family."

### B. Mitigation, a Definition

Mitigation should be stated in terms of positive value. Any action taken to "protect our homes and families" is the starting point for a definition of mitigation. Mitigation is a broader concept than simply taking precautions to anticipate or reduce loss. We would note that the project being undertaken at the State University of New York Maritime College involving the building and retrofitting of homes in coastal New York is by definition a mitigation project designed to educate and promote community awareness of the beneficial aspects of loss mitigation.

Management of the risk of loss in the event of a natural hazard by building stronger and safer homes in the coastal environment is a coastal definition of mitigation. This SUNY

program has as its name the definition we propose for mitigation - "Protecting Home and Family." It suggests that mitigation protects the family, home and other possessions from the risk of future loss.

This Subcommittee believes the concept of protection should be the starting point for any mitigation project.

### **C. Challenge**

Beyond defining mitigation in the broad sense of protecting lives and property, we need to address the current challenges for all stakeholders in any integrated mitigation project.

The primary challenge is apathy. This is typified in North Dakota's or upstate New York's failure to purchase federal flood insurance. Few homeowners, even when confronted with imminent harm, see the need to spend the dollars to protect their homes from catastrophic risk. There is a need to introduce them to the reality of the full measure of the risk and consequences they face, and to convince them of their responsibility to take action to protect themselves, their family and possessions. One way to do that is to encourage incentives which prompt mitigation activity and disincentives for not taking such action.

A practical starting point for overcoming apathy is a cost-benefit analysis showing what mitigation can provide for the individual homeowner. When this comes to life safety, the equation of life benefit is certainly skewed toward protection. At this writing, we have materials from the federal government (FEMA) and the Institute for Business and Home Safety that identify practical starting points for retrofitting homes in the area of roofs, openings, and attachments.

The alternative mitigation actions have not been prioritized in terms of their relative benefit-to-cost ratio. The insurance industry, building industry and academia are, at this time, trying to identify alternative mitigation strategies and to formulate cost-benefit standards. Applied Research Associates, Inc. from Raleigh, NC seems to be the pioneer in using the sciences of structural and wind load engineering to measure the efficacy of differing mitigation actions on individual structures. Further study of their work is needed to determine if it has potential to prioritize mitigation measures in a way that furthers the mitigation strategy we suggest for use in New York.

The Subcommittee recognizes that legislators in New York have already added an insurance credit incentive for those homes that have been retrofitted or been built with hurricane shutters and laminated glass. It must still be determined how to establish actuarially justifiable incentives or premium reductions for mitigation measures. To date, most of the rate incentives have followed the Insurance Services Office approach that relies on product testing done by the manufacturers or on their behalf. It is the Subcommittee's belief that a better incentive result could be achieved by:

1. starting with an adequate rate level which reflects a proper evaluation of risk of future losses from hurricanes, including simulation modeling by the rate regulator;
2. using consistent benefit-to-cost analyses when prioritizing mitigation alternatives selected by a property owner or other stakeholder; and
3. reflecting the impact on the adequate rate level of the mitigation action taken through one or more of the following means: lower rate, a lower deductible option, or greater availability.

The end result to be encouraged would be an actuarially sound rate, reflective of the action taken.

Stakeholders, in addition to insurers, should be asked to consider providing their own incentives to the property owner who takes mitigation action. The incentives selected should create a package that would stimulate action by the property owner, since a rate discount or lower deductible option alone may not be a sufficient incentive.

Meeting these challenges requires addressing the perceived benefit of taking action to mitigate versus the cost of doing so. That decision is obviously impacted by the affordability and availability of windstorm insurance coverage. The affordability of such coverage will partially depend on the answers to the following insurance-related questions:

1. To what extent will mitigation efforts improve the homeowner insurance market so property insurers are more willing to bear risk or assume greater probable maximum loss in coastal areas?
2. To what extent will these mitigation efforts be translated into reduced premiums or reduced deductibles for those homeowners living in coastal areas so the cost of retrofit or new construction will be more desirable in terms of a more affordable homeowner insurance premium?

#### **D. Why Should the Individual Property Owner Undertake Mitigation?**

- Mitigation begins with an awareness that there is a potential danger to one's personal safety and that of loved ones. Such danger could also result in partial or total loss of an individual's possessions.
- Mitigation involves raising the property owner's awareness to a level that will encourage the homeowner to take action to reduce potential damages resulting from such natural threats. Action may be prompted by the homeowner:
  - Realizing the life safety and health benefits of mitigation
  - Avoiding the loss of irreplaceable items

- Avoiding the trauma involved when an individual/family loses their home and has extensive disruption of their lifestyle
- Reducing or eliminating issues effecting personal recovery or restoration while the commercial situations are also likely to be in turmoil
- Accepting the financial responsibility of property insurance deductibles or other cost sharing aspects of one's homeowner insurance policy
- Correlating insurance affordability directly with the loss costs so that it is reasonable to assume that through mitigation, rates would be favorably impacted
- Relating availability of insurance to the hurricane or windstorm capacity of home insurers for taking on insurance risks
- Realizing an insured can assume a higher deductible for homeowner's insurance where mitigation has taken place (or an insurer may be willing to underwrite with a lower deductible)

## **II. History of Mitigation Efforts**

### **A. Protection of Life and Human Resources**

We have documentation of emergency preparedness for the protection of life and human resources in Long Island and coastal New York. Clearly these life safety issues are in the forefront of the federal, state, and local governments' emergency preparedness. The experience in Long Island appears to be substantially well advanced. The U.S. Government (FEMA) along with the New York State Office of Emergency Management and local communities currently have coordinated, comprehensive programs in place for coastal catastrophic emergencies. These include evacuation routes, emergency centers, and requirements for schools, day care centers, hospitals, nursing homes, and other care facilities to file their emergency preparedness plans with the state or political subdivisions. Since they are convinced that a complete evacuation of locations like Long Island would be impossible, given the limited capacity of the escape routes, they have even discussed the use of more substantial structures as safe harbors for those who cannot or will not get out of a major hurricane's destructive fury.

Training meetings are required regularly from local emergency preparedness communities, the Office of Emergency Management, and Red Cross personnel. These programs are functioning and in place. National seminars are also available for training emergency personnel. An example is a prototype plan for a Hurricane/Coastal Storm Emergency from the town of East Hampton (contact Mr. Richard McGowan at 516-324-1736 for a copy).

In contrast, mitigation efforts for property preservation in coastal New York have principally involved action by the New York Property Insurance Underwriting Association. The New York Property Insurance Underwriting Association provides some practical benchmarks for applying eligibility requirements for homeowners insurance by using required engineering inspection and retrofitting. These benchmarks require active mitigation standards by New York homeowners. In 1987, the New York Property Insurance Underwriting Association began to assess the need for mitigation as a result of Hurricane Gloria. "Gloria" was a substantial storm which struck only a glancing blow on Long Island. This near miss was a wake-up call to the New York Property Insurance Underwriting Association to establish mitigation standards in the underwriting of coastal property. Those efforts require prospective homeowners to meet minimum underwriting criteria as a consideration for eligibility for windstorm coverage.

The New York Property Insurance Underwriting Association has created "Eligibility Requirements for Windstorm Coverage." This document is available from NYPIUA (call 212-208-9700 for a copy). (Note: the New York Property Insurance Underwriting Association indicates the program of underwriting eligibility initially met with resistance from policyholders and insurance producers and community leaders. It was only after a series of educational forums sponsored by the New York Property Insurance Underwriting Association that policyholders and others began to understand the critical need for coastal home inspections and repairs to meet minimal windstorm criteria designated by architectural engineers.) Typical expenses for the improvements required by the New York Property Insurance Underwriting Association's underwriting guidelines range from \$450 to \$1250 dollars. Typical engineering inspection reports cost between \$175 and \$400 for coastal property.

The Certification Guidelines for Windstorm Coverage prepared by the New York Property Insurance Underwriting Association (also available from NYPIUA), have been tested only by the Category I ("nor'easter") Hurricane Bob which impacted coastal Long Island in 1991. No major hurricane has affected the residents of the State of New York since 1938, at which time there were significantly fewer inhabitants and property values were dramatically lower.

## **B. Protection of Property**

From agent and insurance producer experience, we know that merchants are keenly aware of risk mitigation in the event of a disaster. In anticipation of a storm, merchants generally take necessary and prudent emergency action to protect their business property. However, residential property owners are not as cognizant of the need to board up windows and doors, tape windows, take in outdoor furniture, etc. Most people appear unable to comprehend the true risk. Past experience indicates individuals are unwilling to take preventative steps, especially if it means spending money to avoid an unappreciated threat.

## **III. Current Status of Mitigation Efforts**

## **A. Models**

The Mitigation Subcommittee finds that computer modeling of the overall assessment of risk of loss for geographic areas as small as Postal ZIP Codes is available from the hurricane simulation modelers currently used by insurers and reinsurers, including:

1. Applied Insurance Research, Inc. located in Boston, MA;
2. EQECAT, Inc., a joint venture of EQE International, Ltd. located in San Francisco, CA, and Guy Carpenter, Inc., located in New York City, NY; and
3. Risk Management Solutions, Inc., located in Menlo Park, CA.

In addition, there are other hurricane simulation models, like TOPCAT for Tillinghast, a Towers Perrin company, and CATALYST for E.W. Blanch, which have been developed, or are in the process of being developed, that will simulate likely hurricanes and their impact on the built environment.

The Federal Emergency Management Agency has already completed work on an earthquake model, HAZUS, which will provide the risk assessment for individual communities as part of their "Project Impact, Building Damage Resistant Communities," and is currently accepting bids on a similar effort for hurricanes. These efforts are in addition to research and development work ongoing in the National Hurricane Center and elsewhere to better understand and model hurricanes and their impact on society.

We find that some jurisdictions, like southeastern Florida, have recently experienced devastating hurricanes and now encourage builders to utilize mitigation measures to build stronger and safer structures which will be better able to withstand catastrophic events. The Subcommittee believes a closer review of their efforts may identify modeling and evaluation tools available for use in New York. Risk assessment or cost/benefit analysis for individual properties, communities, and the state of New York as a whole should reflect the localized risks and conditions. It should educate the various stakeholders about their risk and what can and should be done about it.

Applied Research Associates, Inc., is doing some promising work in evaluating the threat to individual structures and determining how effective alternative mitigation actions might be in conjunction with its modeling work in Florida and with the Federal Emergency Management Agency's hurricane version of the HAZUS model. Although a thorough review and analysis of Applied Research's work is outside the scope of this report, it is the Subcommittee's suggestion that further contact with that organization be made to determine its potential to fill the need for benefit/cost information at the individual structure level in New York.

Other than the promising possibilities that Applied Research's work may hold for individual structure evaluations, the Subcommittee finds that the work completed to date by public and private sectors is relatively insufficient to adequately quantify what kinds of property loss mitigation will be most cost effective to significantly reduce loss.

## **B. Current Consumer Information on Mitigation**

We do believe that there are some rather informative consumer guides currently available, such as, “A Homeowner’s Guide to Protecting Home and Family,” available from the Institute for Business and Home Safety (73 Tremont Street, Suite 510, Boston, Massachusetts 02108, Tel. No. 617-722-0200). Such easy reading how-to booklets could help consumers learn what can be done to effectively strengthen and protect their families and their possessions from loss.

The Subcommittee believes that it is critical for consumers to be made aware of their own risk of loss from natural hazards and educated on how to take effective action in protecting their families and possessions. Homeowners need to know how to get the best value for each mitigation dollar spent to make their homes more resilient.

The Mitigation Subcommittee also believes that there is a need to “model” expected losses for natural hazard events before the occurrence of a hurricane. That modeling should help both insurers and homeowners gauge the dollar exposure to loss from natural hazard events and provide an estimate of expected savings produced by different mitigation actions which could be taken. The Subcommittee believes mitigation modeling can provide greater affordability and greater availability for consumers. The pre-event mitigation modeling will also allow insurers to measure their exposure to loss and evaluate their capacity to absorb such losses and their tolerance to the resultant volatility of earnings.

By avoiding some of the market constrictions that can occur when losses from natural hazards exceed the risk tolerance of primary home insurers and reinsurers, mitigation strategies can have the following favorable impacts:

1. lower homeowner insurance premium;
2. reduce or offset windstorm or hurricane deductibles; and
3. influence (increase) overall market availability.

Mitigation strategies are the only means to effectively remove expected losses from the system. All other catastrophe exposure management schemes including reinsurance, catastrophe-based securities, deductibles, and market limitations merely transfer risk from one stakeholder to another.

## **C. SUNY Maritime Project on Mitigation**

The Subcommittee believes the current program at SUNY Maritime is an excellent opportunity for expansive studies in estimating mitigation alternatives and providing information derived from the study to New York consumers and others. The Subcommittee, in making its recommendations, fully recognizes that these proposals are beyond the current charge or direction of the SUNY Maritime private public partnership known as “Protecting Home and Family.”

## **D. Building Codes - Today**

Finally, the Subcommittee believes the lack of an effective New York State performance-based building code needs to be addressed legislatively. We believe that it will be difficult to quantify the dollar savings from such a building code and the enforcement of such a code. Nonetheless, a comprehensive building code and effective code enforcement is a critical component in attaining significant loss mitigation in coastal New York.

It should also be noted that because an effective building code and its enforcement will only impact new construction, an effective mitigation strategy must include action that reduces the expected losses for existing structures.

## **IV. Possible Solutions**

### **A. Who Should be Involved?**

The answer to the question “Who should be involved?” is easier when we consider that all stakeholders stand to win from implementing a comprehensive and strategic mitigation program. Those who have a recognizable stake in mitigation include the insured consumer, insurers, reinsurers, investors, financial institutions, local, state, and federal governments, realtors, developers, and many others. The process of mitigation will require the involvement of outside experts in fields such as natural sciences (including the scientific fields of climatology, meteorology, and geology), structural engineers, and those who can provide natural hazard simulation models to translate empirical knowledge into measurable benefit-to-cost analyses.

Principally, however, it may be the individual property owner’s ultimate responsibility to take action. He/she can be encouraged to take mitigative action by the offering of incentives so that he/she will realize their own beneficial consequences of mitigation.

The logical linkage and inducement for all parties are reduction of costs, including insurance costs, and the potential benefits of greater affordability and availability of windstorm coverage and other coverage options. It is not possible for the authors of this report to reflect on any individual company’s pre-mitigation rate level nor to predict potential loss savings expected from an individual property owner’s mitigation action. These statistics have as yet not been quantified.

Reinsurers and investors in catastrophe bonds and other secured investment instruments should ultimately be expected to reflect the impact of mitigation action taken by property owners in their pricing of portfolios. Such actions should also result in additional capacity in the New York insurance marketplace.

Financial institutions should also consider the mitigation efforts of property owners as providing a more secure risk. To date the financial community does not differentiate

between loan applicants providing loss-mitigated and non-loss-mitigated properties as collateral when evaluating the application.

The federal government continues to maintain that mitigation is a local concern because it must be encouraged at the local and state level and is the individual owner's choice whether or not to take mitigation steps on his/her property. In order for a mitigation program to succeed, it is necessary to connect the resources of the federal government with outside experts and resources. At the local and state level, there are incentives that could be created or utilized to encourage individual property owners to mitigate against future damage. These incentives include zoning, land use planning, and enforcement of a performance based building code.

It should be noted that, while the various stakeholders have some commonality of interest in mitigation, there are different factors that will motivate them to action. Likewise, individual companies within each represented industry are prone to act independently and not as an industry. This must be understood by the designers of the overall mitigation process for New York to ensure that education and awareness programs are tailored to meet the information needs of the greatest number of mitigation supporters so that the greatest level of effective mitigation is accomplished.

## **B. Awareness and Education**

The individual property owners are not the only ones needing a fuller understanding of the risk of loss. An awareness campaign should be directed towards consumers, policymakers, legislators, government, the media, and design professionals. The campaign might begin with proactive programs in elementary and secondary schools explaining the dangers presented by windstorms and the need for mitigation and loss reduction to protect lives and property.

This education effort could include public service announcements and the distribution of brochures currently available through entities such as FEMA and the Institute for Business and Home Safety. Public/private partnerships of organizations and governmental agencies coming together with a goal to support mitigation should be encouraged.

It is the Subcommittee's recommendation that we initiate a broad awareness campaign through public/private partnerships which will highlight the need for mitigation. A prototype of such a program is found in the partnership of the Institute for Business and Home Safety and the federal government's Subcommittee for Natural Disaster Reduction, which is called Public Private Partnership 2000, (PPP2000). Local examples include the SUNY Maritime "Protecting Home and Family" program and The New York State "Joint Loss Reduction Partnership Project."

## **C. Mitigating Loss Exposure**

In proceeding with any mitigation program, a question that needs to be raised is, “What can be done to mitigate loss exposure?”

### ***Land Use Planning***

Land Use Planning is a critical step in mitigation for future construction. In reality there is little land use planning opportunity in the densely populated areas of Long Island, including Nassau, Suffolk, and Queens. Any land use planning currently in existence is derived from the Federal Flood Insurance Program and the various maps designating flood hazard areas. We will not provide extensive comments on the flood susceptible areas and the designated flood plains, although there is extensive research that has been done by FEMA and the National Hurricane Center on flooding from the storm surge that accompanies hurricanes. The theory behind federal land use planning has been to discourage building in high risk zones by not offering federal flood insurance.

New York also has the coastal barrier zones created by the Coastal Barrier Improvement Acts of 1982 and 1990. Moreover, New York State has an Environmental Conservation Law at Article 34 and implementing regulations that require that no new construction be undertaken in coastal erosion hazard areas. The regulations also limit reconstruction, alteration or improvement within the variance zone if property is totaled by a storm. In point of fact, the land use planning aspect of mitigation would only be practical after the catastrophic loss event.

### ***Building Codes - Cost Benefits***

The second recommendation to accomplish mitigation is enacting and enforcing building codes. While a building code cost analysis is addressed later in this report in the section entitled, “Modeling and Mitigation,” we would reference a paper presented by Howard Kunsreuther of the Wharton School, “Managing Catastrophic Risks Through Insurance and Mitigation.” The paper addresses research methodology “for assessing the role insurance and other policy tools can play in encouraging property owners to take steps to reduce loss from natural hazards. ...Experimental data suggests that property owners are reluctant to incur the up-front costs of risk mitigation measures...”

At this time, New York State lacks a comprehensive performance-based statewide building code. Building codes exist, but they tend to be prescriptive. Present building codes are neither dynamic nor responsive to functional or design needs. Hence, properties with unique architecture and engineering standards are not required to meet dynamic wind resistance standards, e.g. withstanding a wind load of 150 m.p.h. At a minimum, New York should adopt a performance-based building code such as that known as BOCA, commonly adopted in most of the Middle Atlantic states.

This is not to say that the BOCA code has specifically adapted to the windstorm exposure by requiring anchoring or shuttering. However, it would be a baseline standard for new construction or reconstruction. The BOCA standards allow retrofitting and remodeling to be judged in terms of wind resistance performance.

In the final analysis, the homeowner needs practical advice on constructing a new home or retrofitting an existing property to make it stronger and safer from hurricane winds. Another publication by the Institute for Business and Home Safety entitled, "Is Your Home Protected From Hurricane Disaster," is an example of what a homeowner can use, as an interim step until better information and analysis can be accomplished as to the efficacy of different mitigation alternatives, to provide some practical precautions which result in minimizing the home's exposure to wind loss. The pamphlet discusses engineering systems that withstand wind loss, and the brochure discusses the roof, points of wind entry, windows, doors, and garages, and the anchoring of roofs to the home and the home to the foundation. The report also provides practical guidance for home inspections.

As previously noted, mitigation measures have not been prioritized based on cost/benefit analysis. The scientific and the insurance and business communities are in the process of trying to quantify what strategies of retrofit and construction will provide the most effective dollar benefit. These efforts should be encouraged by every person with an interest in mitigation activities. Such efforts are necessary to gain facts that would replace judgment necessarily relied upon today in determining what mitigation steps to take. It is to be noted in authoring this report that cost-benefit prioritization of fixes is a particularly critical step that must be accomplished as an incentive for homeowners to begin taking mitigation precautions. Prioritization provides a rational basis for property owners to undertake mitigative steps and for other stakeholders to offer incentives to encourage the owner to take such steps.

### ***Modeling and Mitigation***

There are two different sets of models to be discussed that would affect mitigation for the purposes of this report:

1. **simulation modeling** of hurricanes and the expected loss impact for different portfolios of insured structures in the current built environment; and
2. **"what if?" modeling** of the impact on an individual structure for different substantive mitigation actions that could be taken with output that consistently measures the benefit to the various stakeholders and the cost to the individual property owner.

These models are described below:

#### **1. Simulation Models**

There are a number of sophisticated simulation models available today from companies like Applied Insurance Research, Inc., EQECAT, Inc., and Risk Management Solutions, Inc., that are already in use by insurers, reinsurers, capital markets, rating agencies like

A.M. Best, and others to assess the risk of loss for large blocks of their insured risks. Their focus is on the identification of expected future hurricane losses for ratemaking and catastrophe exposure management purposes.

In order to gain an appreciation for the input, the general internal workings, and the output of these models, we will attempt to generalize how they go about yielding expected future hurricane losses.

### **Input data and information**

The following represent the kinds of data and information used by most modelers if it is available.

- a) Historical data on the known hurricanes from the historical record, including any information on such components as the air pressure or strength of the storm, the size of the eye wall, the shape of the storm and the radius of maximum winds, the wind speeds generated in the affected areas, the landfall location, the forward speed and direction at landfall.
- b) Meteorological expertise that helps define different components in any given hurricane and the resultant impact to various segments of the coastline and the interior. These data will be used to simulate the hurricanes that are likely for possible locations of landfall.
- c) Wind engineering expertise that can be used to simulate the resulting wind fields generated for simulated likely events.
- d) Coastline definition.
- e) Type of man-made and natural terrain over which any hurricane would necessarily have to traverse and the terrain's impact on the storm's energy and winds.
- f) Structural engineering expertise to calculate the likely vulnerability to the wind loads generated by the simulated storms of differently constructed structures.
- g) Information on the built environment, usually including the number of risks, their value, the structure's age, a description of types of construction and number of stories, and geographic location from an individual insurer's book of business. Sometimes this data may be extracted from the modeling company's proprietary data bases that include data on structures and their value derived from a variety of government or private data bases.
- h) Coverage provided under the policy for structures, the contents, and the time-related coverage for additional living expense or business interruption expense, any deductibles and limits that may apply.
- i) Historical hurricane claims histories from insurer and reinsurer clients to calibrate their theoretical damage curves.
- j) Visits to disaster sites (or studies done by experts who have visited such sites) to get data to check expected components of the model against actual events.

### **Hurricane Simulation**

This, the most guarded and proprietary section of the models, has received considerable scrutiny by the Florida Commission on Hurricane Loss Projection Methodology and its professional team of experts during on-site visits to each of the major modelers to delve into the internal details of the models. To date, three models have been certified by that commission: Applied Insurance Research, Inc.; EQECAT, Inc.; and Risk Management Solutions, Inc.

Individual insurers and reinsurers have also scrutinized these models in considerable detail as well. At least one major insurer has sponsored modeling symposiums for groups of regulators to let them meet the modelers, see how their respective models were built, ask whatever questions were important to them, and increase their level of comfort in those models. Such continuing dialogues are to be encouraged, especially between New York State regulators and the modelers.

This portion of the models yield both the frequency and severity information on each modeled storm. For each storm simulated, the following types of information are generated from the simulation:

- a) energy level of the storm, either based on air pressure or maximum wind speeds at the eye wall;
- b) radius of maximum winds, denoting the diameter of the eye wall for the storm;
- c) the size and shape of the storm, both at landfall and as it leaves its footprint across the landscape;
- d) the landfall location, the forward speed and its direction at landfall, which will affect its simulated track over land; and
- e) the frictional effects of natural and man-made terrain.

In the case of a Monte Carlo simulation, all storms are simulated for an assumed number of simulations, say 100,000 possible storm scenarios for any given year; whereas those modelers using stratified random sampling techniques will run a smaller number of simulations and associate the relative probability of such a storm with it.

### **Estimating the vulnerability, or damageability, for structural types and ages**

- a) For each geographic location and for each simulated hurricane, vulnerability of the modeled structural types and ages of structure is simulated based on the simulated wind speed at that location.
- b) "Ground up" damage (assuming no deductible or limits on insurance coverage) is calculated for that structure in the model.

### **Output from the models**

The modelers determine the aggregated insured portions of the losses from the simulated storms for their clients based on the insured portfolio, the coverage

limitations and deductibles for the respective insured properties, and what level of expected loss detail is required for the particular intended usage of the data.

- a) Based on the limit of coverage and deductible carried on the policy, an insured portion of the damage is determined for each policy or groupings of policies supplied by the insurer.
- b) For reporting back to the insurer or reinsurer, the modeler would accumulate the simulated losses for the insured book of business into report detail required under their contract, which would likely include:
  - 1) accumulated losses for all simulated hurricanes by ZIP Code or other geographic grouping for territorial rate making use;
  - 2) accumulated losses for the “tail” of the distribution for catastrophe exposure management use, with the “tail” being defined like that required for reporting to the A.M. Best and other rating agencies in terms of events equal or larger than that with a 1/100 or 1/250 frequency of occurrence, which data are also used by management to measure against their benchmark for tolerance for risk of loss of capital or for a certain level of acceptability of variability of expected annual earnings; and
  - 3) for the reinsurer, there is an interest in the expected losses in the book, the ceded layer, and for the time period of the contract with their reinsured company.

## **2. “What if?” Models**

A second model is necessary to make the full leap from expected losses for an insured portfolio of risks to identification of the expected losses for an individual structure. Without accounting for the effects of mitigation, models assume classes of structures behave the same when subjected to different wind loads from the simulated hurricanes. In order to appropriately measure mitigation alternatives for an individual structure, modeling of the structure’s expected damage due to the wind loads for each simulated hurricane must be done to get the appropriate benchmark against which to measure the impact of alternative mitigation action scenarios. The structural engineering underpinning for this type of model requires more structure details than simulation models that are used primarily for portfolio analysis.

Applied Research Associates, Inc., of Raleigh, NC, claims its modeling program can make use of an on-site engineering inspection of a structure to run “what-if” analyses that vary the mitigation action for an individual structure and then measure the respective benefit-to-cost ratio for such action. Its model incorporates the following components:

- a) Facility Selection - specific structures are selected for an on-site inspection and the simulation model.
- b) Building-Site Audit Data Collection - data on the specific structural components of the structure are collected.

- c) Site-Specific Hurricane Hazard Risks - simulations are run to identify the wind loads and missiles to which the structure would be subjected.
- d) Vulnerability-Loss Analysis for Each Building - vulnerability of the individual structure to the wind loads, tree blow-down risks, and missiles are determined and the expected losses identified for ratemaking and catastrophe exposure management purposes.
- e) Outputs of the Model -
  - 1) Hurricane Hazard Risk
  - 2) Building-Site Audit Report
  - 3) Facility Vulnerabilities - to direct wind action and wind-borne debris/missiles, identifying failures of roof components, of window and door openings, of wall components, of structural frame and roof/wall connections, and of foundations
  - 4) Mitigation Analysis and Cost Effectiveness - the capability to handle optimal design, mitigation "what-if?" analysis, and benefit-cost analysis is of greater relative interest
  - 5) Integrated Protection/Preparedness Plan
  - 6) Insurance and Deductible Analysis

## **V. Findings and Recommendations**

### **A. Findings**

The Mitigation Subcommittee concludes that any solution must be of value to all the parties impacted. That value should be a direct benefit to the insured and the homeowner. Other stakeholders will benefit indirectly.

At this time, the Mitigation Subcommittee urges that a comprehensive and coordinated mitigation plan be developed and implemented in New York with the following additional resources being identified as integral to successful mitigation of expected future losses:

1. Modeling to assess and define what mitigation strategy(s) will work to promote homeowner insurance availability and affordability.
2. Summarizing the various building materials, products, and engineering reports which have proven to provide additional home safety/security.
3. Using the fundamental principles outlined in FEMA's Project Impact-Building Disaster Resistant Communities mitigation program as a consideration for any New York mitigation program:
  - a) Communities must build a partnership among all elements of the community that can work together towards the common goal of saving lives and protecting property.

- b) Communities must undertake a program of risk identification so they clearly know the magnitude and types of threats they face.
- c) Communities must identify what they are going to do to mitigate against and prepare for these threats and lay out a program to address these issues.
- d) Communities must get support to initiate these programs from all segments of their population, including the business community.

U.S. Government (FEMA) mitigation materials reviewed should be distributed to residential coastal and other hurricane-exposed homeowners in New York as well as to lending institutions, realtors, builders, etc. (*Note:* The Web site for FEMA is located at <http://www.fema.gov>.)

1. One recommended publication is entitled, “National Mitigation Strategy: Partnerships for Building Safer Communities.”
2. A second recommended publication entitled “Report on Costs and Benefits of Natural Hazard Mitigation” (published March 1997).

We believe the subject of mitigation addresses the need to protect home and family against catastrophic exposure of windstorm in the most fundamental sense by providing individuals with the means to protect property and lives. While land use planning is not a practical answer to most of coastal New York and Long Island, it is certainly a topic that cannot be ignored. We have found that communities of Long Island have functioning emergency preparedness plans. We have found there is experience in the role of certification and inspection and eligibility for windstorm coverage through the past experience of the New York Property Insurance Underwriting Association. We have not been able to assess dollar values of mitigation on homeowner policy deductibles, CAT premiums, and the overall affordability of homeowner insurance. We can intuitively suggest that in every instance the result of an effective mitigation strategy would be beneficial to the consumer and all stakeholders.

It is critical in a coastal market with risk transferred through deductibles to homeowners that the public and private sector allow for programs of mitigation which can reduce the risk borne by homeowners.

## **B. Recommendations**

- **Building Codes** A critical recommendation of the Panel is adopting and enforcing performance-based building codes and uniform building codes throughout coastal New York and New York State. Enforcement at the local level is essential.
- **Effective Mitigation Incentives** There is a need for a range of public and private incentives to encourage homeowners (of existing homes) and home builders and buyers of new homes to retrofit or purchase homes which offer protection against the exposure of hurricane and high wind loss as well as other exposures related to living in coastal areas.

- \* Public sector solutions should include tax incentives for mitigation of loss. These should include exemption from real estate tax assessments on improvements and real estate tax reductions to reflect the value of mitigation, sales tax incentives for approved or certified retrofitting of existing homes, and income tax credits for purchasing or retrofitting existing homes.
  - \* Requiring a certain wind resistant performance standard before coverage would be available in the New York Property Insurance Underwriting Association remains a public incentive for mitigation that could be transferred to private sector insurance in terms of encouraging underwriting along the coast or underwriting with varying market deductibles or premium credits.
  - \* An economic strategy should be put into effect by insurers to ensure that mitigation is a reasonable and economical choice for the coastal homeowner, buyer, or builder.
- **Coordination at the State Level** Government activities in the area of mitigation should be coordinated, along with the mitigation resources of insurers, financial institutions and the private sector (e.g., home building suppliers selling materials and products to retrofit existing homes).
  - **Research and Development**
    - Access to and support of research and development of building products and techniques should be encouraged.
    - A consistent means to evaluate the beneficial impact of mitigation actions and their cost to the consumer needs to be implemented.
    - Development of cost-effective and damage reducing building products and techniques for new construction and retrofitting to existing structures should be tailored to the specific risk's characteristics.
    - A standard means of measurement using computer modeling and expert opinion can determine risk of loss for the individual property and for the community as a whole and the cost/benefit of taking mitigation actions.
  - **Awareness** All the stakeholders, beginning with the property owner, need to be made aware of the risk of loss for each location and what can be done to lessen it. Public awareness campaigns to convince property owners that mitigation is the right thing to protect their families, their possessions, and their community can be developed. Pamphlets and other materials should be produced to describe the risk, including a general assessment for the individual and for the community in which they live.
  - **Education** In addition to building an awareness of the threat, there is a need for all the stakeholders to know where and how to build structures, given the risk of loss from likely natural hazards. Understanding the reasons for mitigating and the impact of taking action are important parts of the education process.

- Education should be targeted to the stakeholders, consumers and their children, builders and inspectors, insurers and reinsurers, and regulators and others sworn to uphold the public's trust.
- Educational material could include "how-to" guides on where to build and how to build new or strengthen existing structures to withstand loss.
- Educational efforts could also be directed to the benefits and costs of taking alternative mitigation actions, the various methods of financing mitigation action, identifying intangible benefits of mitigation to the owner and occupants, and mitigation's impact on availability and affordability of homeowner insurance in hurricane-exposed regions.

**TEMPORARY PANEL ON HOMEOWNERS'  
INSURANCE COVERAGE**

**Capital Markets Subcommittee Report**

**February 1, 1998**



# CAPITAL MARKETS SUBCOMMITTEE REPORT

The members of the Capital Markets Subcommittee are:

|                   |                                    |
|-------------------|------------------------------------|
| John Cashin       | Willis Faber North American, Inc.  |
| John Freedman     | USAA                               |
| Marsha Cohen      | Reinsurance Association of America |
| Mary Lanning      | ML & G Associates                  |
| Steve Wietlisbach | Travelers Insurance Company        |
| Ross Davidson     | USAA                               |

## I. What is a Capital Markets Solution?

Traditionally, the insurance markets (primary insurers and reinsurers) have provided financial capacity through contractual obligations to pay policyholder claims and claim adjustment expenses related to catastrophic events. Providers of capital for such capacity have included investors in common and preferred equity instruments issued by insurers, and “investors” who dedicate capital to support reinsurance contracts entered into directly or through brokers or various insurance exchanges. Risk diversification has been accomplished through various pooling arrangements among insurers, reinsurers and direct investors which allow spreading of risk concentrations so that no one insurer need be overly exposed to a single risk or group of risks. Nonetheless, however effective in spreading risk and improving the use of insurance capital, these pooling arrangements still rely on the capital available from traditional insurance sources.

Insurance has long been thought of as a specialized area of investment reserved for insurance professionals. The gulf between investors who were comfortable with insurance risk and those inclined to the more straightforward fixed-income and equity markets was wide and infrequently bridged. Catastrophe exposures have increased dramatically over the past decade raising concerns that additional capital beyond that available from traditional insurance sources is needed to effectively deal with mega-events. Fortunately, over the past two decades, several developments laid the groundwork to narrow the gap between the insurance and traditional capital markets. This has resulted in traditional debt and equity investors being more amenable to committing a portion of their portfolios to direct coverage of catastrophe exposures. These developments include:

- Principles of mathematics, statistics and finance have merged to develop techniques to measure risk and to structure optimal risk-adjusted return “portfolios” of assets and liabilities with dissimilar or complementary risk profiles.

- The application to financial securities of traditional risk management instruments and techniques used for centuries in the commodities and currency markets gave rise to modern financial engineering. Financial engineering allows any economic interest to be dissected into discrete elements and regroups the resulting pieces to form new instruments that fit particular investment characteristics to an investor's unique need.
- The ensuing ability to measure and price options, futures and swaps imbedded in financial securities has also played a major role in this financial market evolution.
- The scientific measurement and documentation of the dimensions of natural disasters and the accumulation of large volumes and time series of related information regarding natural disasters has made possible the simulation of loss experience in various natural disaster scenarios.
- The advent of more powerful computers has allowed the development of more sophisticated simulation software for modeling natural disaster exposures on a grand scale. This allows investors to step above individual events and gauge the return and risk characteristics of classes of financial assets and liabilities as they apply to funding natural disaster exposures.
- Techniques have been developed to measure and categorize economic interests with similar risk characteristics, and package the rights to the cash flows related to those interests into standardized financial instruments that can be traded. Notable examples are mortgage backed securities, various derivative securities and other asset backed securities.
- Independent rating agencies, market makers, sellers and buyers of securities have acquired these skills so that all elements of a viable market are aligned.

Using these techniques, any contract or group of contracts that convey economic benefit or incur economic obligation (such as insurance contracts) can be quantified and dealt with in fundamental, common terms. Further, the risk, or the variability or uncertainty of future economic performance, can be quantified and managed, regardless of the source of that risk.

Insurance regulators have begun to acquire the above-mentioned skills and are beginning to recognize and accommodate financially engineered instruments used to manage catastrophe exposures in the laws and regulations that govern insurance solvency and investment.

## **A. Current Approaches to Capital Markets Support of Insurance Risks**

Capital market approaches to funding catastrophe exposure vary broadly and are described by many terms that are proprietary and unique to their inventors. However, they each have fundamental characteristics by which they can be described and evaluated. These include:

- function (risk transfer or financing);
- timing (pre- or post-event funding);
- the market segment providing capital (investment, insurance);
- the manner in which the covered risk is measured (index, indemnification);
- the legal structure (security, private placement or insurance contract); and
- the manner of offering, distribution or sale of the securities (private or public).

These characteristics, along with various “deal” features can be combined in unlimited ways to produce a variety of catastrophe funding instruments. Basic categories of capital markets catastrophe funding instruments are described below. Each may be structured differently to meet the varied needs of the cedant, investors, and regulators.

1. **Liquidity Facility:** These instruments provide cash to pay claims and expenses related to catastrophes. By their nature, they are a form of financing, to be repaid within a defined period with interest. These facilities may or may not be secured, but generally they rely on the creditworthiness of the borrower for repayment. Commercial banks typically provide such facilities. They may be committed (with dedicated capital backup—for a fee) or uncommitted (as available) facilities. Funds are distributed upon specified occurrences, which may include the nature and magnitude of the event and whether a material adverse change (MAC) has occurred to the party obligated to repay.
2. **Securitization:** In general, this is a method of combining ownership of assets or rights to economic value from individual contracts into an investment contract. The underlying asset or contractual right is the source and collateral for repayment. As such, the economic risks and rewards of ownership flow through to the ultimate investor in the security. Assets or contracts are typically held in trust for the benefit of investors and cashflow therefrom is disbursed under contractual terms for payment of investment obligations.

A typical structure used to apply principles of securitization to the funding of catastrophe exposure includes granting to investors certain rights to cashflow (premiums) from a reinsurance contract between one or more primary insurers and a special purpose reinsurance company (SPRC). This SPRC is formed for the sole purpose of reinsuring the exposure to be funded by capital provided by traditional capital markets investors. Investors purchase securities from this SPRC, the proceeds from which are held in trust and invested in high-grade securities. The funds held in trust may be released to cover costs related to catastrophes per the terms of the reinsurance contract. To the extent not used under the terms of the reinsurance contract, funds may be used to pay obligations to investors. Interest from the assets held in trust and premiums from

the reinsurance contract are sufficient to provide a return to the investors in the SPRC for the repayment risk assumed in the transaction. Through financial re-engineering, rights to the cashflows from the reinsurance contract and the interest from assets held in trust may be stratified and prioritized such that the terms of some of the securities include a full contractual obligation to repay principal and interest and other securities may carry only a contingent obligation. Based on current U.S. tax law, the economics of these transactions require that the SPRC be incorporated and operate in a non-U.S., tax-advantaged jurisdiction.

Nationally recognized credit rating agencies have begun to evaluate the risks attendant to some of these structures and have awarded investment or non-investment grade debt ratings to the related securities. With some few exceptions, state insurance regulators generally view the securities related to these structures as investments and not as insurance contracts. The NAIC recently decided to award risk-based capital bond classification status to such securities that receive a fixed-income rating from a Nationally Recognized Statistical Rating Organization (NRSRO). This will cause investments of this sort to be more attractive to insurers because they will have to hold less capital to support them.

3. **Options, Futures and Swaps:** These structures, generally known as derivatives and used for centuries in the commodities, insurance and currency markets, have been increasingly applied to financial instruments of various forms over the past two decades.
  - **An “option”** is the right to acquire from, or transfer to, another party economic control of an asset or obligation upon the occurrence of some future event. Catastrophe options can be traded directly (e.g. catastrophe options traded on the Chicago Board of Trade) or they can be integrated into other instruments (e.g. a contingent surplus note includes a put option that is exercised only upon the happening of a specified event). Options to fund catastrophe risk may operate with reference to indexes of loss or can be based on the loss experience of an individual insurer or reinsurer.
  - **A “future”** is the right to acquire an asset or assume an obligation or stream of cashflows at stated values at some future date. Futures are implicit in various forms of pre-funding of catastrophe exposures. For example, the agreement of a SPRC to fund a stated percentage of an insurer’s losses upon the occurrence of a catastrophe is a form of future. Futures contracts can also be traded based upon a catastrophe index allowing for hedging of future risks.
  - **A “swap”** is an agreement to exchange one basis of value of, or income from, an asset or obligation for a different basis related to another asset or obligation. As applied to funding catastrophe exposures, swaps can be used

to exchange the value of one regional catastrophe index for the value of another regional catastrophe index, thus allowing for diversification of risk without having to enter into the underlying insurance contracts directly.

- 4. Surplus and Capital Notes:** These are special forms of debt instruments which, due to restrictions on their repayment terms are accorded certain degrees of equity treatment for insurance solvency regulation purposes. The rules governing these instruments are included in state insurance law and regulations which generally conform to model laws, risk-based capital formulae and accounting treatment adopted by the National Association of Insurance Commissioners. To qualify as a Surplus Note or a Capital Note, debt instruments must meet certain criteria as to maturity, amount outstanding and the financial condition of the issuing insurer. Repayment of principal and interest on Surplus Notes requires advance approval, subject to specified criteria, of the chief insurance regulatory official of the state in which the insurer is domiciled. Capital Notes do not require advance regulator approval for payments of principal and interest as long as certain conditions are maintained.

Qualifying Surplus Notes are listed in the insurer's capital account and are deemed as Surplus for various regulatory solvency ratios, including minimum legal capital calculations. Qualifying Capital Notes are listed as debt on the insurer's balance sheet, but are added to surplus in determination of an insurer's risk-based capital calculation for minimum regulatory capital purposes.

Issuance of Surplus Notes is commonly provided for under many state laws. The regulatory parameters governing the issuance of Capital Notes have only recently been adopted by the NAIC. Enabling legislation or regulations may be required to allow issuance of Capital Notes in a particular state.

These instruments can be issued by an insurer in advance of a catastrophe to pre-fund exposures or an insurer can enter an agreement to issue these instruments on a contingent funding basis as a post event funding mechanism. In either case they represent important tools for accessing the capital markets for catastrophe exposure funding.

- 5. Non-Traditional, Expanded Reinsurance:** Variations on traditional forms of reinsurance have emerged in response to the need for insurers to meet regulatory requirements, qualify for favorable accounting treatment and attract additional investors to fund catastrophe exposures. To the extent that these variations actually expand existing or attract new sources of capital to funding catastrophe exposures or facilitate more efficient deployment of existing capital they may also be viewed as capital market solutions.

Using the above techniques and instruments, cedants and investors now enjoy a continuum of opportunities to access and employ investment capital. Capital can be accessed by cedants and employed by investors on a contingent, debt capital, equity capital and pure risk basis, with gradations between each of these points on the

continuum to allow specific tailoring of transactions to unique needs. Investors and cedants have become very sophisticated in the structuring of portfolios of assets and exposures with various complementary risk characteristics. Cedants have become comfortable with capital markets instruments and investors have begun to accept natural disaster catastrophe-linked securities as a valuable part of their portfolios.

## **B. Sources of Capital**

### **Introduction/Background**

Traditionally, insurers providing personal lines coverage in New York State have relied on a combination of their own financial resources and/or the resources of the international reinsurance market to absorb potential hurricane losses. The \$16 billion in insured loss caused by Hurricane Andrew provided a wake up call to insurers nationwide. The mounting insurance exposures due to sustained coastal development and rising real estate values drove potential losses beyond the capacity of traditional insurance and reinsurance markets to absorb.

New York State's coastal exposures have been steadily increasing over 60 years since the 1938 hurricane. Losses from the potential one-in-86-year storm would be in excess of New York premium, i.e., loss of \$3.6 billion. It would take 86 years to recover at a constant premium level. Alternatives are: 1. raise rates; 2. buy reinsurance to reduce the retained loss; 3. develop new capital markets products; 4. continue present trend to develop new multi-year financial products with reinsurance and capital markets features. With total U.S. insurance capacity of an estimated \$268 billion, the insurance industry has begun to look to the U.S. capital markets for alternative capacity. Insurance securitization offers insurers access to the estimated \$17 trillion in capital markets capacity as a supplement or alternative to traditional capacity for risk transfer.

### **The Range of Risk Capital Sources**

The general investment capital markets are the main source for capital markets insurance products. Catastrophe insurance exposures primarily are securitized by the approximately \$300 billion of insurance company stockholders' surplus. The capital markets initiative proposes that a portion of the catastrophe market exposures - those with the lowest likelihood of loss at least - can be securitized by the \$16 trillion of the general investment capital markets. The initiative is to supplement the insurance securitization for low frequency, high severity events.

The investment capital markets themselves are segmented. All segments of the markets have been facing the problem of finding a sufficient supply of investment vehicles to service the yield requirements of their capital. Some of the investors are willing to look outside of traditional vehicles to find new avenues of investment. They are willing to trade off higher yield not only for higher risk, but also for innovation risk - particularly for non-correlative investments. Catastrophe insurance capital markets instruments provide attractive investment opportunities to this segment of the general

investment capital markets. This segment sees appropriately rated instruments with attractive yields and zero beta correlation.

The insurance entities placing these instruments are securing long term strategic price and capacity stability.

### **C. Benefits to Cedants**

Expansion of capital markets funding alternatives for catastrophe exposures has proceeded rapidly, as investors have become more comfortable with assessing the catastrophe risk of particular cedants. At the same time cedants have developed the ability to assess the benefits and preferred structural characteristics of alternative funding proposals. The benefits to cedants can be categorized into the following broad groups. These benefits may be present to a greater or lesser degree, or may not pertain at all to a specific structure, depending on the terms and conditions of the particular deal.

1. **Diversification of Sources:** Additional sources of risk capital have been generated by these transactions over and above the traditional sources of insurance risk capital. This benefits cedants by providing greater stability of funding sources and greater security that cedant programs can continue through strong and weak markets.
2. **Reduction or Elimination of Credit Risk:** Several of the above structures are designed to be bankruptcy remote or, due to their pre-funding of capital at risk, are not subject to credit risk at all. Accordingly, the funds to pay for claims will be available regardless of the financial condition of the original investor or the cedant, thus eliminating payment or credit risk inherent in traditional post funded transactions.
3. **Additional Capacity:** The ability of cedants to attract other risk capital to support catastrophe exposures frees up existing capital to support additional business. Depending on the cost of the new capital and the ability of the cedant to recover that cost in the rates charged for coverage, this can increase the appetite or capacity of the cedant to write more business, including business in catastrophe prone areas.
4. **Multi-Year Coverage:** Traditional insurance and reinsurance contracts tend to be single year. On the other hand, traditional capital markets instruments have maturities ranging from days to decades. As capital markets become more amenable to funding natural disaster exposures, multi-year contracts will become more common. This will reduce costs and complexity to cedants of issuing these instruments and will allow greater flexibility and stability in structuring catastrophe management funding programs. The availability of multi-year funding may in time influence development of longer-term coverages that could further stabilize the market.

5. **Clean and Definable Trigger:** Capital market investors require relatively simple terms. The conditions under which funds are released from the trust in a securitized transaction must be clearly defined to minimize confusion and differences in interpretation. This could reduce contract disputes and related legal uncertainty and administrative delays.
6. **Prompt Claims Payment:** Traditional insurance arrangements can experience administrative and legal delays in payment, which could result in defaults that can impact the rest of the market. These structures tend to be less subject to interpretation and delay. As such, cedants are paid more quickly.
7. **Stable, Transparent Pricing:** Traditional capital markets tend towards being efficient. This results from the fact that securities and derivatives markets are characterized by relatively standardized contracts, with broad participation and are very competitive in their pricing. As the capital markets evolve in their ability to assess natural disaster exposures, they will tend to eliminate information barriers to entry and resolve irrational pricing. Rating agencies assist in this process by evaluating the investment and claims paying risks associated with various structures, thus allowing for more consistent, efficient and stable pricing of risks. Cedants will benefit over traditional insurance markets from this more open and competitive environment for risk capital.

#### **D. Benefits to Policyholders**

Policyholders of primary insurers benefit from capital markets funding of exposures to the extent that additional capacity and efficient pricing translate into:

1. improved availability and affordability of catastrophe insurance,
2. greater solvency of the insurer, and
3. enhanced stability of the market for primary insurance.

The willingness and continuing ability of primary insurers to provide catastrophe insurance, and, therefore, the ability of policyholders to obtain and afford such coverage, can be enhanced if these market efficiencies can be transferred to the policyholder. This presumes that pricing of capital markets instruments will be seen as acceptable to regulators in the rate making process. If insurers are required to bear a portion of such costs and are not able to pass them to policyholders in pricing, availability will not be improved. Solvency of insurers will be enhanced to the extent that capital markets can truly bear some of the risks that are currently wholly borne by the insurance industry's capital base. Insurers will also tend to be more solvent due to the transparency of pricing of the risk capital employed to cover catastrophic exposures. This should force more consistent, rational pricing of such risks, to the extent the regulatory process allows. Diversification of capital funding sources, multi-year coverages, and more stable and rational pricing should work to stabilize the market for primary catastrophic coverage, which will directly benefit policyholders.

## **E. Benefits to Regulators**

Regulators represent the interests of policyholders. As such, they focus on the often-conflicting goals of affordability and availability of insurance and the solvency of insurers. Thus the benefits ascribed to cedants and policyholders will also accrue to regulators. Concern about the solvency of insurers should make the risk-transfer features of capital markets solutions and the additional source of risk capital offered thereby especially interesting to regulators. Regulators may also benefit from the efficient pricing of natural disaster exposures in their ratemaking processes. Over time, capital markets tend to price risks rather dispassionately and efficiently. Such an impartial pricing mechanism can provide an additional benchmark for rates for catastrophe coverages.

## **F. Reasons for Investment**

Capital markets investors are attracted by the yield/value, portfolio diversification benefits and liquidity of catastrophe funding instruments. Although individual deals may be structured as risk transfers, capital markets participants will require portfolios of insurance risk to yield a fair return on, and eventual return of, capital over the long run. Investment practice has evolved from an individual transaction orientation to a long-term, risk-adjusted, portfolio yield orientation over the past two decades. Risk profiles of catastrophe-linked securities are generally perceived as not being correlated to risk profiles of more traditional capital markets investments. As such, they provide important diversification benefits when combined in a broadly diversified portfolio of fixed income and other equity investments. In addition, as more capital markets deals are done, the ability to diversify portfolios of natural disaster exposures across a broad range of geographies, perils and structures will allow greater diversification within this asset class. Investors are also interested in the liquidity of their investments. The liquidity of the market for catastrophe linked securities will develop as more transactions of size are completed and Wall Street firms begin making a secondary market in these securities.

## **G. Investment Criteria**

For the instruments to be attractive to investors they must meet four criteria:

- Adequate reward
- Low risk
- Fungibility
- Low correlation to other investment vehicles.

The underlying assessment of the physical risk has been the key to establishing the risk reward character of these instruments. In the example of the USAA bond offering, analysis of hurricane probabilities conducted by Applied Insurance Research (AIR) showed that the probability of loss was less than 1%. This research was reviewed by the rating agencies, which applied it in turn from a credit rating perspective - i.e. they

used the AIR evaluation to underpin their assessment of the likelihood of the bonds to perform for investors. In this context, the USAA bond offering itself was engineered to respond to differing investors' appetites. It was split into two parts: a tranche that was substantially at risk and was rated accordingly (Moody's Ba2), and a tranche whose return was virtually guaranteed (Moody's Aaa), with returns that reflected the relative risks.

Catastrophe bond instruments at present are not highly fungible - in large part because of the paucity of supply. The USAA placement - and others - has shown an increasing appetite on the part of investors. The yields on the USAA instruments are somewhat higher than those of other instruments which are technically similar - as well as being somewhat more expensive than the cost of traditional reinsurance - in part because of their low fungibility at present. Please note that mortgage-backed securities underwent a similar transition after they were introduced to the markets in the 1970's. It took nearly a decade for the market to develop - both from a supply and investment perspective - and become liquid.

The structure of the transactions placed to date has been key to their acceptance by the rating agencies and by the capital markets. Generally speaking, they have been structured to compartmentalize the deals into low risk, lower return portions and high risk, high return portions. The high risk elements are first to respond to loss and are exposed in some cases to loss of principal. The lower risk elements usually hold the portion of capital that provides investment flow for the transaction and are subject to investment rate return risk.

## **H. Legal Impediments**

As promising as securitization of insurance risk has been in accessing the capital markets for catastrophe exposures, there are significant unresolved legal barriers to expanding this market and making it generally available to insurers. Existing federal tax and insurance regulatory issues (discussed below) require complex structures to make these transactions economic. This has retarded the proliferation of an otherwise promising market. As a result, many securitization transactions are private, highly structured and involve only a few sophisticated investors. Recent large transactions, which have been structured to successfully navigate a path through complicated state regulatory issues and have avoided federal tax issues, are encouraging exceptions to this pattern. Legal and regulatory processes have begun to address these issues, but significant barriers and uncertainties remain.

In the capital markets, investors tend to shy away from very complicated structures. At a minimum, they charge a premium for doing a complicated deal because the risks are so difficult to assess. In addition, the number of sophisticated investors who have the resources to undertake such transactions and the underlying risks they fund is very limited. Complicating these transactions further is the specialized legal and tax advice needed to structure these deals. All of these factors add to the cost and reduce the potential success of any particular transaction. If federal tax and state regulatory

uncertainties and impediments are removed these transactions will become simpler and less costly. This will allow a greater number of insurers, including smaller insurers, access to the capital markets to cover their catastrophe exposures.

Some investors rely on public ratings to validate their own internal risk assessments. Some are required by law to invest in securities with such ratings. The fact that rating agencies can now rate catastrophe exposure funding transactions adds immeasurably to the willingness and ability of investors to dedicate a portion of their portfolios to natural disaster risk funding. Moreover, rating agencies can give impetus for regulatory comfort with these transactions. For example, recently the NAIC awarded bond risk-based capital status (versus equity status which carries a much higher capital requirement) to principal and/or interest at risk catastrophe-linked securities held for investment by insurers as long as those securities have acceptable debt ratings from public rating agencies. This will be an important factor in the ongoing ability and willingness of life insurers to invest in these transactions.

1. **Federal Tax Issues:** From a federal tax viewpoint there are several issues that result in catastrophe-linked securities being extremely complicated and costly to structure, market and administer. Most of these complications and costs derive from issues that need to be resolved to achieve the basic tax goal of these structures—to avoid an entity level tax on the investors' return on the securities. Some additional issues arise out of whether the SPRC, the marketers of the securities and the investors in the securities issued by the SPRC are conducting insurance business and therefore are subject to state insurance licensing and other insurance regulatory requirements. Suggestions are presented below.

The federal tax issues revolve around three basic uncertainties:

- whether the issuer of the securities (the SPRC) is an insurance company under state insurance codes,
- whether the SPRC is in the trade or business of writing insurance, and
- whether the securities are debt instruments or “something else” for federal income tax purposes.

If the insurer is formed in the United States and is considered to be an insurance company, it may be a “per se” corporation. In that case, at a minimum, the return earned by equity investors in the SPRC would be subject to an entity level tax. Compounding the problem is uncertainty about whether event risk debt instruments issued by the SPRC are debt for federal income tax purposes. If they were considered equity in the SPRC, the SPRC would not be entitled to a deduction for interest paid thereon. This would make the securitization uneconomic.

For these reasons, the SPRC in recent transactions has been formed in a foreign jurisdiction. If it is considered to be in the insurance business, the corporation receives fixed, determinable, annual or periodical (“FDAP”) income or it is engaged in a U.S. trade or business. The Contract Payment is treated as FDAP and the SPRC pays U.S. tax on it. The SPRC’s activities are structured so that it does virtually nothing in the U.S., except possibly selling its securities. Accordingly, it would not be engaged in a U.S. trade or business.

The problem with this structure is that it brings substantial inefficiencies to the transaction. Since great care must be taken to avoid U.S. trade or business issues, meetings and communications all take place outside the U.S. This is cumbersome for the sponsor. From the investor’s standpoint the Event Risk Debt Instruments may be considered equity in a passive foreign investment company (“PFIC”). As such, the investor will be subject to PFIC’s anti-deferral regime or be required to make a qualified electing fund (“QEF”) election. Either possibility departs from the normal federal income tax treatment of a debt instrument. This, in turn, reduces the economic efficiency of the structure.

**Suggestions:** The U.S. Treasury should be encouraged to address the following federal income tax issues so catastrophe-linked debt securities can be efficiently structured to permit U.S. insurance companies and other SPRCs to use the capital markets to fund natural catastrophe exposures. The intent of these changes would be to designate SPRC’s as pass-through entities that would not be taxed as a separate corporation.

- **Entity Classification:** The Treasury should provide, through regulations or a published ruling, that an entity that enters into a single contract to insure risk is not a per se corporation. This change is warranted because such activity should not rise to the level of a “trade or business” (see below). Nor should it be considered an “insurance company” because there are none of the normal indicia of an insurance company. The SPRC does not write insurance policies other than the single contract. It is not regulated as an insurance company under state law. It has no insurance agents or employees. Accordingly, the per se classification of insurance companies should not extend to such one time securitization vehicles. As a corollary, the Treasury should provide, through regulations or a published ruling, that an individual or entity that purchases an Event Risk Debt Instrument does not become a per se corporation or other entity merely by holding such an instrument.
- **Trade or Business Issues:** The Treasury should provide, through ruling or regulation, that a corporation, other than a per se corporation, organized outside of the United States that enters into a single contract to assume the risk borne by another party should not be treated as being engaged in a trade or business in the United States. The rationale here is simply that a sole act, performed in connection with a corporation’s formation, should not give rise to a trade or business. In other words, the mere act of writing the contract is not sufficiently “regular or continuous” to attract U.S. tax.

- **Stock or Securities Safe Harbor:** The Treasury should, through regulations, clarify that Event Risk Debt Instruments, are “securities” under section 864(b)(2) of the Internal Revenue Code (the “Code”). As such, a foreign corporation or partnership that “effects transactions” in such instruments would not be treated as being engaged in a U.S. trade or business. This change is important to permit an SPRC that is a U.S. person to issue Event Risk Debt Instruments to a foreign corporation or partnership that, in turn, sells securities backed by such instruments to the public. Such a clarification would be very helpful in persuading state insurance departments that Event Risk Debt Investments are not the business of insurance, an area of sufficient uncertainty that the marketing of those securities in certain states has been avoided.
  
  - **Nature of the Event Risk Debt Instrument:** The Treasury should provide, through regulation or a published ruling, that interest payments on Event Risk Debt Instruments are not excluded from the portfolio interest exemption from U.S. federal withholding tax by virtue of section 871(h)(4) or 881©(4) of the Code. Although there is no single definition of debt for U.S. federal income tax purposes, it is often described as an unconditional promise to pay on demand or on a specified date a sum certain in return for an adequate consideration in money or money’s worth. Accordingly, when it is uncertain how much of the principal amount on a security will be repaid because repayment of the security is dependent upon a contingency outside of the control of the SPRC, as here, it is not entirely clear under current law that what one has is debt. Nevertheless, there seems to be no policy reason to treat interest on Event Risk Debt Instruments as contingent or to not treat such amounts as interest. Instead, efficient securitization of event risks should be facilitated by clarifying the treatment of interest on Event Risk Debt Instruments.
  
  - **Nature of Premium Payments:** The Treasury should clarify, through regulation or a proposed ruling, that payments received by entities that enter into a one time contract to insure a third party against a specified risk are treated as insurance premiums on a single insurance contract, that are subject to U.S. tax as insurance premiums. This would provide further indicia that the SPRC has not engaged in a trade or business in the U.S. on a continuing basis.
2. **State Regulatory Issues:** Securitization transactions result in the sale of securities under the various state laws. Due to their linkage to the insurance business, several insurance regulatory issues have had to be addressed in structuring these transactions.
- **Insurance Department Approvals:** Recent large event risk securitizations have required state insurance department approvals or opinions on a number of items to ensure a positive federal income tax outcome and to avoid potentially costly and complicated licensing and registration requirements for the SPRC. These items include:

- \* The securities would not be deemed insurance contracts, insurance policies or reinsurance contracts.
- \* The holders of the securities would not be deemed to be doing an insurance business or to be insurers or reinsurers by virtue of the securityholders' purchase, ownership or holding of the securities.
- \* Accordingly, the securityholders would not be required to be licensed as insurers or reinsurers by virtue of the securityholders' purchase, ownership or holding of the securities.
- \* There is no basis under the insurance code why the securities are not enforceable in accordance with their terms.

Most, but not all state departments agreed with these statements via private rulings or opinions. The securities were not marketed in those states that did not confirm these statements.

**Suggestion:** Codification of the above positions would remove any uncertainty as to future treatment of these types of securities, would reduce the administrative delay and cost associated with obtaining state-by-state approvals for future deals and would create a favorable climate for the evolution of this important market. New York may also be a positive influence to other states to do this either through the National Conference of Insurance Legislators or the National Association of Insurance Commissioners.

- **New York Risk-based Capital treatment:** Governor Pataki has submitted a Governor's Program Bill for risk based capital (RBC) standards for property/casualty insurers. The treatment of catastrophe-linked debt securities in the determination of risk-based capital of an insurer that invests in these securities has been addressed by the NAIC. The result was that such securities rated by a nationally recognized rating agency as debt would be accorded favorable bond treatment. This removes significant barriers to Life and P&C insurers acting as investors in these securities. New York may need to specifically address this issue in its own minimum capital requirements.

**Suggestion:** Since New York has not yet adopted the NAIC risk-based capital regime, it would be helpful to ensure that any adverse treatment in determining minimum regulatory capital under New York RBC would be likewise removed.

- **Future State Regulatory Issues:** If the Treasury Department agrees to accommodate the formation of SPRC's in onshore U.S. on a tax-advantaged (pass-through) basis, there may be issues of how those entities are dealt with under state regulation and taxation. Any effort to impose new state and local taxes on these entities would have similar chilling effect on their economic viability, as do federal taxes now.

**Suggestion:** When and if SPRC's are granted pass-through domestic tax status at the federal level, states should also recognize SPRC's as pass-through entities for premium taxes and other state corporate taxes. New York can again provide leadership for such an effort through regulatory and legislative trade associations.

## II. Survey of Transactions Involving Capital Markets

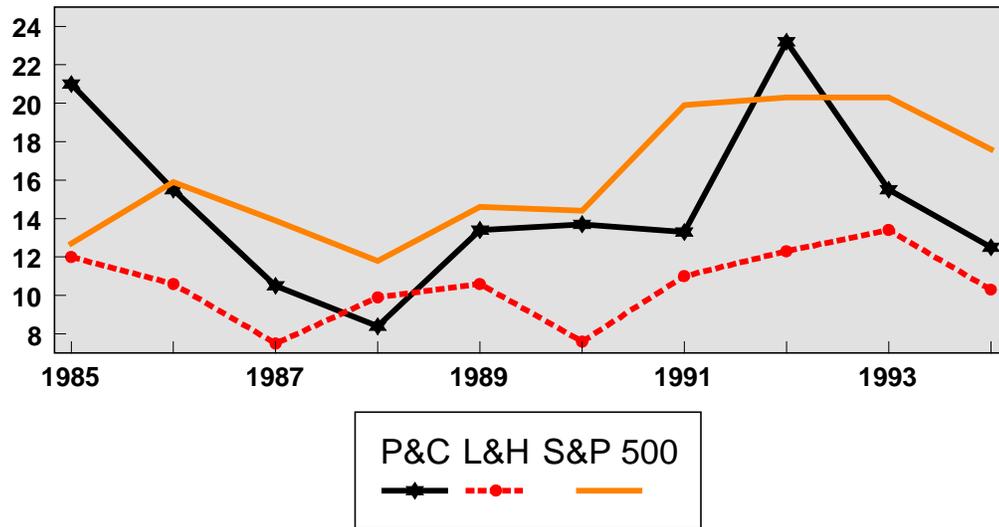
### A. Private Capital Market Initiatives

#### Background

Both the private market and government-created funds use capital markets in order to distribute catastrophic risk. Capital market involvement in providing capital to the insurance marketplace has existed for decades in the form of publicly traded insurance companies. It is only in recent years, after the dramatic rise in catastrophe loss occurrences, that innovative market professionals have sought to satisfy investors' demand for greater returns by developing catastrophe risk as a new asset class. Applying sophisticated techniques, they are bringing to the marketplace instruments bearing characteristics widely used in financial markets. A broader base of investors providing risk capital in highly specialized circumstances is a likely outcome of this innovation.

Insurers' return on equity traditionally has lagged other industries. The graph, *Average P/Es for Publicly Traded Insurers*, compares property-casualty insurers' P/E ratios to life and health insurers and to the S&P 500.

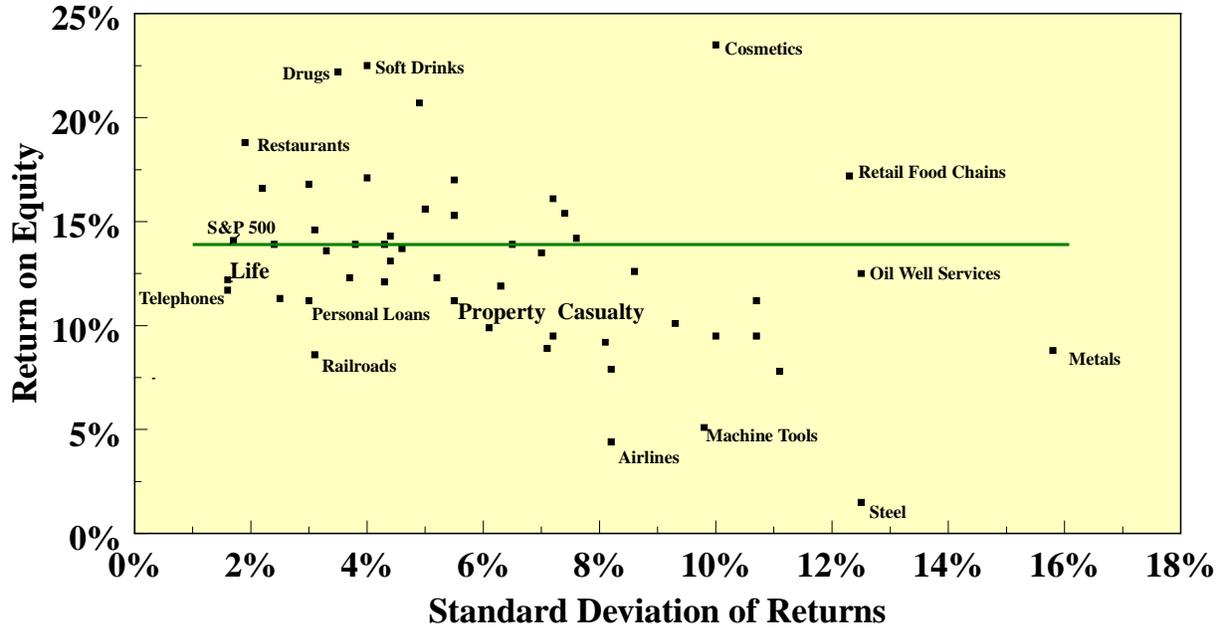
### Average P/E's for Publicly Traded Insurers



The graph on the following page, *Context for Insurer Returns*, compares average returns on equity (RoE) to standard deviation of returns (a reasonable proxy for risk) amongst various industries.

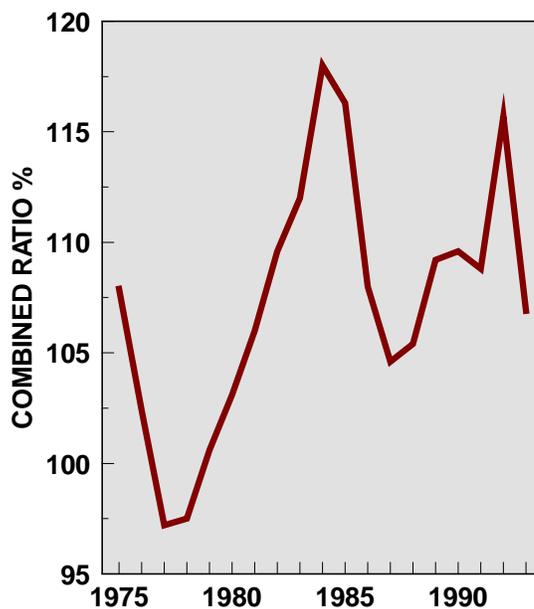
# Context for Insurer Returns

Average RoE vs. Standard Deviation of Returns for Various Industries



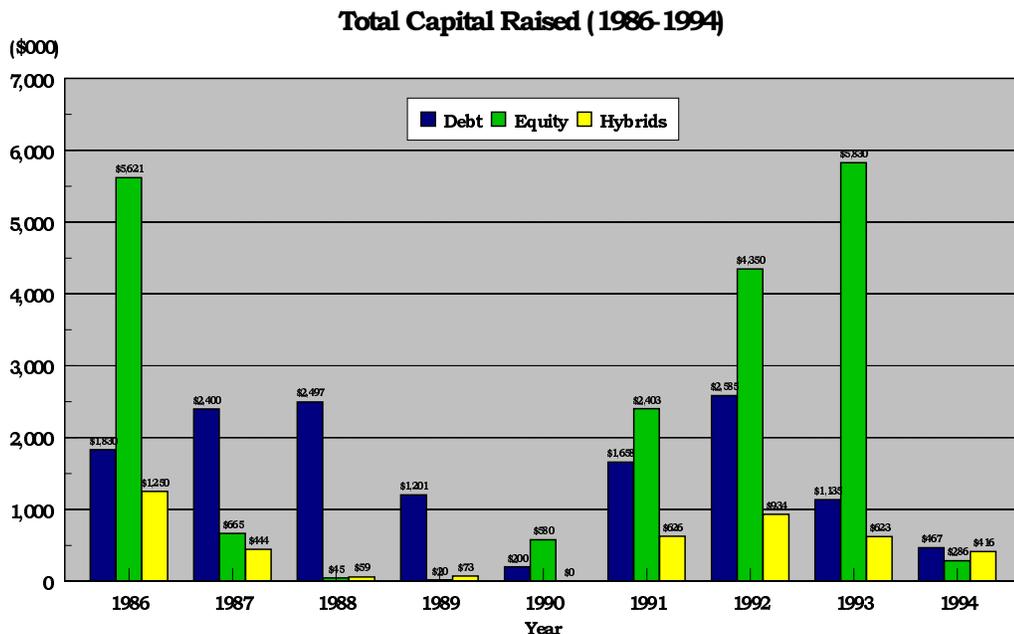
Historically, the property/casualty industry is particularly volatile. Using combined ratios as a measure of profitability, the graph, *P&C: A Highly Cyclical Industry*, points to traditional cycles as experienced between 1975 and 1993, before significant development of catastrophe risk-based securities.

**P&C: A Highly Cyclical Industry**



To the extent that pure catastrophe risk provides a truly non-correlated asset (i.e., one that is not tied to fluctuations in the stock market), potential RoE on this asset class rises dramatically. Its attractiveness to investors is enhanced.

Capital market investors first participated in the catastrophe market through the funding of over \$5 billion in seven companies in just two short years to create the Bermuda catastrophe reinsurance market. In this instance, investors opted to provide capital behind professional underwriting talent. Sophisticated catastrophe models fostered expectations of optimized returns based on a geographic spread of risk. The graph on the following page, *Total Capital Raised*, illustrates the diversity of investment instruments that proved so attractive to investors between 1986 and 1994.



Encouraged by the apparent emergence of new competitive opportunities, 14 major risk securitization initiatives were brought to market with great success in 1995 through 1997. The following exhibit, *Securitizing Natural Disaster Risk*, lists and briefly describes these initiatives, and illustrates the diversity of these innovations that are designed to expand and strengthen insurer capacity, liquidity, and competitiveness.

## **Securitizing Natural Disaster Risk**

(Prepared by RAA, January 1998)

**Nationwide** - Nationwide has the option to issue up to \$400 million of 9.222% surplus notes to fund new business opportunities or as reimbursement to catastrophic losses. Contract with Morgan Guaranty Trust Company. (1995)

**State Farm** - A \$3 billion revolving credit facility has been set up for State Farm to cover catastrophe losses. The deal was arranged by J. P. Morgan Securities, Inc. (1995)

**Arkwright** - Arkwright has set up a trust to issue \$100 million in trust notes to private investors. New proceeds of the notes will be used to buy government securities held by the trust. (1996)

**AIG Combined Risks/Benfield** - Placed 5 catastrophe-linked bonds with an investment fund managed by Mercury Asset Management. Bonds will pay out if a catastrophe exceeding an agreed trigger occurs in: U.S., Japan, Australia, Caribbean, Europe or Japan. (1996)

**Hannover Re** - Sold \$100 million worth of catastrophe cover. The portfolio-linked swap is comprised of the following: Japanese earthquakes, U.S. natural catastrophes, Canadian natural catastrophes, North European storms, North European other catastrophes, Australia - all catastrophes and aviation excess of loss. (1996).

**St. Paul Re** - \$68.5 million deal through Goldman Sachs & Co. to increase capacity. St. Paul Re will cede reinsurance business from five classes under a 10 year reinsurance treaty. Investors participate in excess-of-loss underwriting by investing in bonds or preference shares. Enables St. Paul to increase capacity in 5 excess-of-loss classes: U.S./Caribbean property-casualty, European property-casualty, other property-casualty, retrocessional/Lloyd's short-tail and marine and aviation. (1997)

**Winterthur Swiss Insurance Group** - Placed \$282 million of catastrophe bonds in private capital market. The bonds cover Winterthur exposure to auto claims stemming from domestic summer hailstorms. Transaction managed by Credit-Suisse First Boston. (1997)

**Swiss Re** - Placed \$137 million in two-year bonds tied to reinsurance losses from a potential California earthquake. Swiss Re and Credit Suisse First Boston were the placement agents for the notes. (1997)

**Horace Mann Educators Corporation:** Agreement allows Horace Mann to receive up to \$100 million from Center Re, the transactions underwriter, in exchange for an equivalent value of its convertible preferred shared in the event of a mega-catastrophe. (1997)

**RLI Corporation** - Aon Re Services developed a \$50 million catastrophe equity put (CatEPut) for the RLI Corporation. The deal was underwritten by Centre Re. In the event of a catastrophe that exhausts RLI's traditional reinsurance coverage, the CatEPut program allows RLI to sell up to \$50 million in preferred shares to Centre Re. (1997)

**USAA** - Placed \$400 million of hurricane bonds in the private placement market. The bonds will provide USAA with an excess-of-loss cover tied to a single hurricane producing losses of more than \$1 billion during a one-year reinsurance period. The syndicate managers were Merrill Lynch & Co., Goldman Sachs & Co. and Lehman Bros. (1997).

**LaSalle Re** - Aon Re, Inc. and Aon Securities Corporation developed a \$100 million multi-year Catastrophe Equity Put (CatEPut) option program for LaSalle Re. The option program allows LaSalle to issue up to \$100 million in convertible preferred shares in the event of a major catastrophe or series of large catastrophes that result in substantial losses to LaSalle Re. (1997).

**Reliance National Insurance Company** - Completed a \$40 million securitization of non-catastrophe coverage for its property, aviation, marine drilling and satellite launch exposure. The placement ties bond payment trigger points to a catastrophe index established by Swiss Re. Sedwick Lane Financial structured the deal (1997).

**Tokio Marine & Fire Insurance Co., Ltd** - Tokio Marine has acquired earthquake risk coverage of \$90 million purchased from capital markets investors through Parametric Re, Ltd. Parametric Re issued 10-year fixed income securities with principal reduction contingent on the occurrence and severity of earthquakes within an area centered on Tokyo. Goldman, Sachs & Co. and Swiss Re Capital Markets Corporation were co-leaders for the transaction.

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It was widely believed that the ability of capital markets to sustain this momentum in light of the increasing oversupply of traditional reinsurance capacity would hinge on the occurrence of a "defining event." The awaited catalyst would, investment experts and insurers agreed, most likely be either a large loss that would trigger a significant contraction in capacity, or a single entity going to market with a large catastrophe bond offering. Experts now believe that 1997's USAA transaction (see *Securitizing Natural Disaster Risk*) could be the defining event.

### **Impact on Cost and Availability of Homeowners Insurance**

Capital markets provide the tools that allow the marketplace to assume greater risk. In each of the 14 private industry deals completed to date, the participating companies

negotiated risk protection specifically tailored to their financial needs. Capital market arrangements provide the extra protection that allows companies to feel comfortable with the risks they have or will assume. The New York homeowners insurance marketplace is realigning around this more comfortable capacity. New entrants, and the return of some insurers that had imposed a freeze on New York coastal underwriting, should continue as catastrophe risk investment becomes more popularized.

Since Hurricane Andrew, the private marketplace has increased its ability to address its catastrophic exposures. In fact, a lot has happened since that storm touched down 5 years ago, reflecting the industry's ability to absorb large losses. The property-casualty insurance industry's surplus has increased over 70%, from approximately \$163 billion in 1992 to approximately \$280 billion in 1997.

Insurers and investment professionals use advanced forms of risk modeling to assess accurately their exposures to natural catastrophes, including coastal events. Individual companies have restructured their operations to reflect the unique exposures they face in different regions of the country. States are addressing rate and coverage flexibility, including deductibles. Reinsurance capacity has increased. Capital markets continue to develop innovative securitization techniques aimed at tapping a massive new source of private sector capacity.

Together, these developments have resulted in an insurance marketplace that is more reflective of actual risk, more responsible to policyholders, and more responsive to market opportunities. As evidence of this emerging strength, companies have expanded their writings in exposed areas such as Long Island. Some of these positive market indications are the result of insurers feeling more confident about their retained exposures. Some also are the result of new companies being formed to serve particular segments of the marketplace. Many are directly related to significant new reinsurance and capital markets arrangements. They reflect a renewed private marketplace that, through the combination of better data, new capital, and flexible regulation, is addressing the market dislocation problem successfully.

## **B. Public Sector Programs**

### **Integration of Capital Market Products In Claims Paying Ability of Public Entities**

During the same period in which primary insurers instituted catastrophe management plans in response to rating agency and investor concerns, public residual market facilities grew dramatically, compared to historical patterns. Hurricanes Andrew and Iniki, and the Northridge Earthquake, led existing and newly created residual markets in Florida, Hawaii, and California to look to enhance their claims paying resources.

In the private sector, capital markets provide dedicated capital to expand writing in particular lines of insurance (such as coastal exposures) within a diversified portfolio, across a geographic spread of risk. Public sector catastrophe funds, on the other hand,

offer none of the benefits of diversification. They continue the concentration of the risk. Consequently, these state funds have been and will be less attractive to capital providers (investors) because of the higher likelihood of loss.

To date, public entities' access to capital has been at the debt end of the market, primarily syndication of loans. These residual markets accessed the *loan syndication market* to the tune of \$4.75 billion, with the expectation that up to another \$8-10 billion will be available after a large loss occurrence.

Following is a description of several public sector programs that in varying degrees integrate the private capital markets responses with public entity funding needs.

## FLORIDA

### Residential Joint Underwriting Association

**State Action** - The FRPCJUA was created in January 1993 in response to an insurance availability crisis caused by Hurricane Andrew. FRPCJUA is not a state agency. It provides coverage in all 67 counties of Florida, but will not write wind coverage in areas covered by Florida Wind Underwriting Association (FWUA). FRPCJUA provides both residential and commercial residential coverages. Successful depopulation plans have removed over 400,000 policies from FRPCJUA. Adverse selection and new policies written, however, have thus far prevented proportionate reduction in probable maximum loss.

**Claims Paying Capacity**, in likely order of pay out (bottom up):

|               |                                                                   |
|---------------|-------------------------------------------------------------------|
| \$ ?          | <b>Post-Event Notes</b> (Issued after catastrophe)                |
| \$1.4billion  | <b>Credit Facility</b> (Global bank syndication led by JP Morgan) |
| \$450million  | <b>Pre Event Notes</b> (Led by JP Morgan)                         |
| \$1.38billion | <b>Reinsurance CAT Fund</b> (90% Participation)                   |
| \$377million  | <b>Regular Assessments</b> (On servicing insurers)                |
| \$150million  | <b>Estimated GAAP Surplus</b> (Total assets \$135 million)        |

**Sources of Financing** - FRPCJUA can make regular assessments on insurers, based on prior year market share, up to the greater of 10% of statewide premium for covered policies or 10% of deficit. If this is not sufficient to pay claims, emergency assessments can be levied annually according to the same formula. Additional emergency assessments have been pledged as collateral for credit facilities. This assessment amount can be increased to repay costs and fees of post-event bonds. No estimates available for post-event bonding capacity. FRPCJUA assessed insurers in 1996 for \$40.5million deficit.

### Florida Windstorm Underwriting Association

**State Action** - FWUA was created in 1970. It is not a state agency. FWUA provides

coverage for perils of wind and hail in 29 of 35 coastal counties, and issues both residential and commercial policies.

### **Claims Paying Capacity:**

|                |                                                                   |
|----------------|-------------------------------------------------------------------|
| \$ ?           | <b>Post Event Notes</b> (Issued after catastrophe)                |
| \$1.75billion  | <b>Credit Facility</b> (Global bank syndication led by JP Morgan) |
| \$750million   | <b>Pre Event Notes</b> (Led by JP Morgan)                         |
| \$300million   | <b>Traditional Reinsurance</b>                                    |
| \$1.225billion | <b>Reinsurance CAT Fund</b> (90% Participation)                   |
| \$322million   | <b>Regular Assessments</b> (On servicing insurers)                |
| \$90million    | <b>Estimated GAAP Surplus</b>                                     |

**Sources of Financing** - FWUA can make regular assessments on insurers, based on prior year market share, up to the greater of 10% of statewide premium for covered policies or 10% of deficit. If this is not sufficient to pay claims, emergency assessments can be levied annually according to the same formula. Additional emergency assessments have been pledged as collateral for credit facilities. This assessment amount can be increased to repay costs and fees of post-event bonds. There are no estimates available for post event bonding capacity.

### **Hurricane Catastrophe Trust Fund**

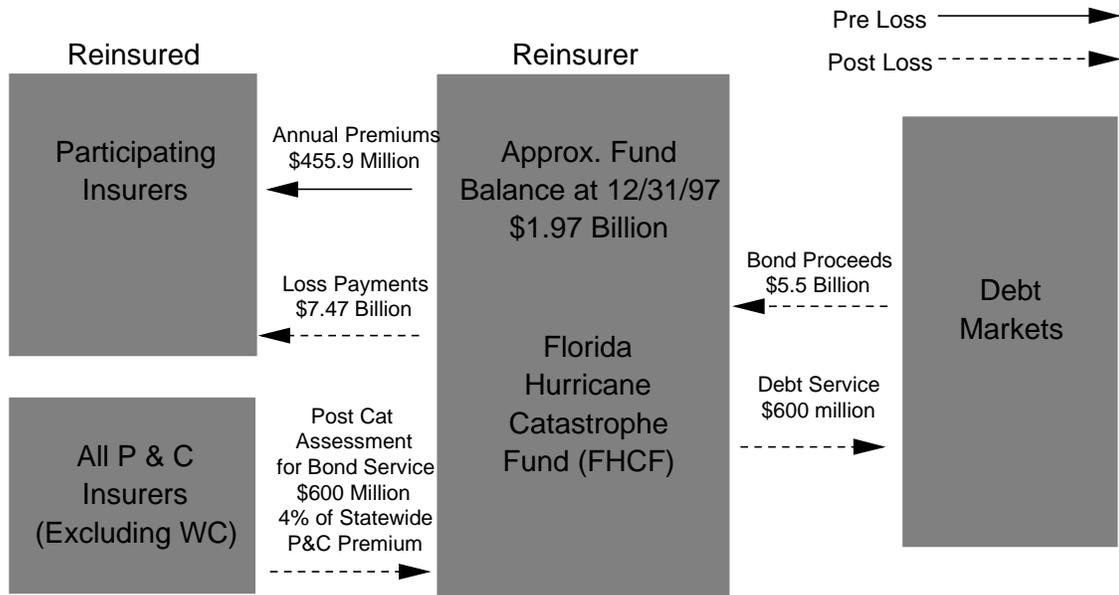
**State Action** - The CAT Trust Fund was created to provide affordable reinsurance capacity to insurers after Hurricane Andrew. The CAT Fund is a public entity, operating with the State Board of Administration. The CAT Fund collects approximately \$456 million in premium annually. Insurers writing residential property business in Florida must participate. Options are 45%, 75%, and 90%. Participation is based on a catastrophe model that develops an actuarially adequate rate. The CAT Fund has accumulated \$1.97 billion in capital. The IRS has ruled that the Florida Hurricane Catastrophe Trust Fund is exempt from federal income tax.

**Claims Paying Capacity** - The CAT Trust Fund is required to advise all companies of its estimated maximum claims paying ability annually. The estimated capacity is based on the CAT Trust Fund's estimated post-loss bonding capacity, which in turn is based on the Fund's assessment authority. For 1997, the estimated bonding capacity was \$5.5 billion. Combined with the current balance, the total estimated claims paying capacity is \$7.47 billion. Insurers are advised that the CAT Trust Fund will pay proportionately to its actual available funds.

**Sources of Financing** - The CAT Trust Fund can assess up to 4% of the statewide premium for all property and casualty business, excluding workers' compensation. The anticipated annual debt service, based on a \$4% assessment charge, is \$600 million. A flow chart, below, (*Florida Hurricane Catastrophe Fund*) illustrates revenue flow for the 1997-98 contract year.

# Florida Hurricane Catastrophe

## Flow Chart: 1997/8 Contract



## HAWAII

### Hurricane Relief Fund

**State Action** - HHRF was organized after Hurricane Iniki caused \$1.6 billion in damage. HHRF is a state agency operating within the Department of Consumer Affairs. The facility offers hurricane coverage to all homeowners in the state of Hawaii. Insurers writing business in the state who choose not to write hurricane peril act as servicing entities and issue policies on behalf of HHRF. Insurers are subject to assessment, based on market share. The assessment is capped at \$500 million. The IRS has ruled that the HHRF is exempt from federal income tax.

### Claims Paying Capacity:

\$750 million **Credit Facility** (Administered by Bank of Hawaii)  
 \$600 million **Reinsurance** (Traditional and Finite Risk)  
 \$500 million **Assessments** (On servicing insurers)  
 \$90 million **Paid-In-Capital** (Total Assets \$135 million)

**Sources of Financing** - Credit facility and a portion of reinsurance are supported by current premium income. Additional revenue is generated from a special mortgage

recordation fee. There also is a quarterly assessment of 3.5% on all property-casualty premiums, excluding auto, health, and workers' compensation.

## CALIFORNIA

### California Earthquake Authority

**State Action** - The CEA was formed after the Northridge Earthquake in 1994. It is an agency of the State of California. All property-casualty insurers within California are members. Members produce and service the earthquake policies. The state manages the CEA facility that pools the risk. Coverage consists of earthquake policies for personal lines only, including Homeowners, MHOs, Condominium Owners, Renters, and Tenants. Coverages offered for Structure (replacement costs, same limit as insured's fire policy, 15% deductible); Contents (\$5K limit, per replacement costs); Loss of Usage (capped at \$1.5K).

#### Claims Paying Capacity:

|                |                                                                      |
|----------------|----------------------------------------------------------------------|
| \$2 billion    | <b>Assessments</b> (Additional, on CEA member insurers)              |
| \$1.5 billion  | <b>Reinsurance</b> (Reinsurance Agreement)                           |
| \$1 billion    | <b>Revenue Bond</b> (Financed through premiums and assessments)      |
| \$2 billion    | <b>Traditional Reinsurance</b>                                       |
| \$3 billion    | <b>Assessments</b> (On member insurers and retained earnings of CEA) |
| \$1 billion    | <b>Initial Capital</b> (From CEA member insurers, by market share)   |
| \$10.5 billion | Total                                                                |

**Sources of Financing** - Using a combination of assessments, reinsurance, and debt financing, the CEA can mobilize \$10.5 billion of claims payments. It is important to note that, because of the substantial deductible (15%), this capital will provide claims payments for losses well in excess of a Northridge size loss. Northridge was estimated at only \$4.3 billion loss to the CEA during the 1996 renewal versus actual insured loss amounts of about \$12.5 billion.

### C. Implications of Securitization on Private and Public Entities

Some experts hailed the success of recent capital markets initiatives as the beginning of the eventual securitization of all insurance risk. Many compared this evolution to early (and enormously successful) efforts to securitize mortgage pools. Others believe that any utilization of capital markets could not be competitive with the ample, excellently priced capacity available from the traditional reinsurance marketplace.

The oversubscribed Residential Re hurricane catastrophe bond, designed to transfer risk from USAA to investors, may have changed some minds. Investors, in significant numbers, clearly were willing to take on catastrophe risk in fixed income securities.

Capacity generated but not used by the USAA deal (over \$200 million) was offered to both residual market insurers in Florida. Both these public entities already had accessed debt markets to a significant degree (see *Securitizing Natural Disaster Risk* above). However, budgetary constraints and insufficient time left the new capacity untapped.

### **Pre-Pay vs. Post-Pay**

With either traditional private sector insurance/reinsurance, or private capital market products, the cost of any loss event is calculated into the current premium. Therefore, there is no retroactive assessment upon policyholders or taxpayers at the time of loss. In contrast, the capital made available to public entity CAT funds is, in substance, a loan that must be repaid after the loss. This repayment generally triggers retroactive assessments on policyholders directly, and may trigger further assessments upon insurers writing in the state (which ultimately spill back onto policyholders as a further cost increase).

### **Prognosis**

The appetite for risk-based investment appears strong. The market continues to innovate in response to investor interest. A growing number of over-the-counter contracts and hedge instruments have found acceptance. The Chicago Board of Trade continues to develop trading in catastrophe options and other derivatives. The Bermuda Commodities Exchange, which uses the Guy Carpenter Catastrophe Index as a basis for its catastrophe options, further expands the capital base available to finance catastrophe risk. Collectively, these innovations in transferring catastrophe risk to third party investors will help provide greater price stability to hedgers while improving portfolio diversification for both hedgers and investors.

The jury is still out as to how the market for insurance securitization will develop. No one product or structure has yet gained preeminence for either hedgers or investors. Insurance securitization, like other capital markets, will likely develop many different kinds of product choices designed to meet the disparate needs of the broad spectrum of insurers, reinsurers, and investors. One thing is certain: the capital markets component of risk transfer will take on increasing importance as insurance professionals develop a greater degree of comfort with the new products. A sophisticated, dynamic RoE-based model of risk transfer and financing will become commonplace.

### **Conclusion**

The threshold question for public entities and private security transactions is not whether securitization is viable for public entities. Capital markets professionals and reinsurance innovators will continue to evolve new products to bring needed capacity to the marketplace. In light of the abundant and affordable risk capital available, the core question should be, *Should public entities be structured and financed by government to compete with the voluntary markets?* -- a question addressed elsewhere in this Report. (See p. 22.)

### **III. New York Insurance Department Initiatives to Facilitate Capital Market Development of Catastrophe Risk Financing**

The New York Insurance Department has been at the forefront of developing and encouraging innovative approaches to the financing of natural catastrophe insurance exposures. In recognition of the fact that traditional insurance and reinsurance mechanisms may not provide necessary capacity to absorb major catastrophe events (e.g. Class 4 hurricane on Long Island, New Madrid Earthquake), these approaches involve accessing the capital markets as well as developing new approaches to more

efficiently spread the risk within the insurance and reinsurance industry. The Department's initiatives include: encouraging proposals that access capital markets through the use of catastrophe bonds and similar instruments; authorizing the use of the Chicago Board of Trade (CBOT) derivatives; authorizing CATEX as a reinsurance intermediary; proposing legislation that permits the issuance of Capital Notes; considering legislation to permit structured reinsurance companies; and developing a model for a tax deductible pre-event catastrophe reserve on a national level. Some of the following initiatives are, *prima facie*, capital market approaches while the remaining ones have the potential to be integrated with capital market approaches in the financing of natural catastrophe risk.

### **Legal Interpretation of Capital Market Activities as Outside of the Scope of “Doing an Insurance Business”**

In 1995, the New York Insurance Department was asked to provide confirmation that specific transactions that facilitated insurers' access to the capital markets would not be construed as doing an insurance business. These transactions involved the sale of securities by insurers that had variable interest payment and principal repayment obligations, the specific mechanics of which depended on the risk alleviation objectives of the issuing insurer. New York provided an appropriate and enlightened legal opinion that sellers and buyers of these securities would not be deemed to be doing an insurance business and they would not be required to be licensed as insurers under the insurance law. This opinion facilitated development of the sale of variable market debt securities as a way to finance catastrophe risk. Investment bankers and underwriters, armed with New York's opinion, have approached other states on these transactions and have secured from most of these states opinions or rulings consistent with New York's confirmation.

### **New York Insurance Law Authorization of Exchange-Traded Derivatives—Chicago Board of Trade**

The Chicago Board of Trade (CBOT), the major market in the development of futures and options for the hedging of risk, has developed a derivative intended to assist insurers and reinsurers manage their underwriting exposure. The CBOT has begun the trading of PCS Catastrophe Insurance Options.

Under legislation enacted in 1993, New York insurers were authorized to engage in CBOT derivatives to hedge their insurance risks. That legislation was effective for a three year period and expired at year-end 1996. It was not extended mainly due to the

sparse use of the derivatives by the insurance industry. However, consideration will be given to re-enacting this authority if there is industry interest in such authority.

An option of this type is a standardized exchange-traded contract whose price is based upon one of nine underlying catastrophe loss indices. These indices track losses on a national, regional and select state basis. As with other financial and commodity options, a buyer of this option has a right, but not an obligation, to exercise the option at a specific index value. Upon exercise, the buyer receives a cash payment equal to the amount that the settlement value of the underlying index is above or below the option strike value. An insurer engaging in these catastrophe options can effectively establish layers of protection against losses due to catastrophes, provided the insurer's book of business is correlated to the index underlying the options chosen. If that correlation exists, as the insurer's losses go up, the settlement price of the option increases in a similar fashion.

With these exchange-traded derivatives, non-insurers can use their capital to absorb catastrophic risk. The CBOT uses the Board of Trade Clearing Corporation (BOTCC) to ensure the integrity of the market. The BOTCC is a separate entity owned and funded by clearing member firms. BOTCC plays an integral role in all of the CBOT transactions, such as performing the daily matching of trades, collecting and holding performance bond margin funds, monitoring the open-position risk of members and traders, settling accounts daily, and reporting trade data. BOTCC is a third-party guarantor to all futures and options traded on the CBOT. For every transaction, BOTCC acts as buyer to the clearing member seller or as seller to the clearing member buyer. As a party to every trade, the BOTCC assumes the responsibility of guarantor. In the event a margin call cannot be made, the BOTCC uses its own capital and credit facilities to prevent contract default.

Although trading of PCS Catastrophe Insurance Options has generally been sparse, the CBOT has been working to develop the market and improve the product. As a result of this effort the volume of transactions has been increasing. This marketplace is an evolving one and, if it develops sufficient depth and liquidity, it could provide a viable alternate market for insures to spread their risk and for outside capital to more fluidly enter the insurance market.

#### **New York Insurance Department Approval of the Catastrophe Risk Exchange, Inc.**

Early in 1995, a proposal to provide a new method of distributing catastrophe risk among insurers was brought to the New York Insurance Department for review and approval. In the spring of that year, the Catastrophe Risk Exchange, Inc. (CATEX) was licensed as a New York reinsurance intermediary.

CATEX is designed to help insurers spread their catastrophic-related risks by creating an electronic marketplace for the posting, selling and exchanging of such risks among insurers. CATEX is the idea of former New Jersey Insurance Commissioner Samuel Fortunato.

Mr. Fortunato and the other principals of CATEX have established a facility whereby insurers and reinsurers sell or exchange exposures in a manner fundamentally similar to the trading of stock or commodities on the New York Stock Exchange, NASDAQ and various other regional stock or commodity exchanges. Using an open “bid and asked” market, or an exchange, risk-bearers will be able to diversify their potential liabilities by gaining access to wider distributions at minimal cost.

CATEX operates as a computer-based trading exchange, with CATEX subscribers gaining access to the trading system on a global scale. CATEX maintains a highly secure, yet flexible, electronic system, enabling interested subscribers to place and advertise risks they seek to place with other risk-bearing entities. Rates for individual trades are established by underwriters in response to real time market dynamics. Using a sophisticated, secure electronic mailbox system, risk-bearers and their brokers negotiate and complete trades. Trades are registered with CATEX and risk trading information is then published to CATEX subscribers.

What CATEX hopes to provide is a more effective means to distribute catastrophe risk. The use of an electronic distribution system will allow increased flexibility and cost saving in spreading risk. While this marketplace is being geared toward catastrophe risk, it can conceivably be extended to other insurance products.

It is important to note that CATEX itself will not function as a risk bearing entity, but will provide the mechanism and procedures to effectuate the exchange of risks. Since CATEX is providing the means for such exchange, it is acting in the capacity of a reinsurance intermediary. However, unlike traditional reinsurance intermediaries, which represent the interests of either the ceding insurer or the assuming reinsurer, CATEX will serve as a neutral party, whose sole function in the transaction is providing a medium in which the parties to the reinsurance agreement may get together.

Although transactions on CATEX are limited to risk-bearing entities (i.e. insurers) and, as such does not access capital from the non-insurance capital marketplace, there may be potential for the capital markets to eventually tie into the concept, as the risks marketed on the CATEX system are presented in a relatively standardized format, which lends them to open transfer in an exchange-type setting. Indeed, CATEX plans to open a joint venture in Bermuda with the Bermuda Stock Exchange to establish a CATEX Bermuda. This venture would operate in the same fashion as the licensed New York CATEX, except it would permit non-insurers to accept risks, which cannot be done directly in New York and in most other states due to existing insurance laws. CATEX could act as a model for a more direct access to the capital markets in the future. It can also provide an electronic barometer of the price of risk assumption for non-insurers.

## **Proposed Legislation**

### **A. Permit the Issuance of Capital Notes**

In its 1998 Legislative Agenda, the Department has proposed reintroducing 1997 legislation that would expand the means by which property/casualty insurance companies can raise capital by authorizing the issuance of capital notes. This legislation is the property/casualty analogue of Section 1323 of the New York Insurance Law, which was enacted in 1996 and made applicable to life insurers. Currently, mutual property/casualty insurance companies can only raise capital from investors by issuing surplus notes pursuant to Section 1307 of the New York Insurance Law. Surplus notes have characteristics of debt instruments, but their attraction results from the fact that they are treated as surplus (not as a liability) on an insurer's financial statement and thus included in total adjusted capital for risk based capital purposes. However, due to the regulatory restrictions on the payment of interest and repayment of principal on these debt instruments, this method of raising capital can be costly. Capital notes are constructed as a debt instrument that is carried as a liability on an insurer's balance sheet, but which may be added to total adjusted capital for purposes of calculating risk based capital. An additional feature of capital notes is that they contain automatic thresholds for payment of interest or repayment of principal. Thus, potential investors may require lower rates of return for capital notes than for surplus notes.

It is hoped that the existence of capital notes will widen access to the capital markets at a lower cost of capital. Capital notes could be used by both mutual and stock companies to finance their catastrophe risk. This could be accomplished, for example, in a structure similar to the 1995 Nationwide\* arrangement to secure contingent capital, but by using capital notes instead of surplus notes. Alternatively, insurers could issue the capital notes directly to investors.

**B. Authorize the Formation of Structured Reinsurance Companies (Which are Entities Formed to Market Securitized Reinsurance Agreements)**

The Department is considering legislation that would facilitate and permit the licensing and operation of structured reinsurance companies in New York State. Structured reinsurance companies are an essential component in the securitization of insurance risk. These companies are formed to assume insurance risk under single or multiple structured reinsurance agreements from ceding insurance companies. Funding of the structured reinsurance company's potential obligations under the reinsurance agreement is financed by the issuance or sale of securities in the capital markets. Investors in such securities risk loss of principal or interest in the event the losses (or other triggering points) specified in the reinsurance contract are realized.

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\* Under this arrangement, Nationwide was authorized, on a contingent basis, to issue surplus notes to Morgan Stanley if Nationwide needed access to capital due to a catastrophe or another operating need. Morgan Stanley signed a contract to sell the surplus notes (if issued) to a newly formed trust. The trust was funded by private investors and the proceeds were invested in \$400 million of US Treasury securities. If Nationwide exercised its contingency financing option, those surplus notes would be substituted for an equivalent amount of Treasury securities held by the trust.

This proposal would facilitate ceding insurers' access to the capital markets as an alternative to traditional reinsurance protection, especially where capacity for such protection is not available in the traditional market. The nature of a structured reinsurance company, fully or largely funded by the capital markets, offers the potential for lowering cost to ceding insurers. Such cost savings can be passed on to policyholders of the ceding insurer, including New York policyholders.

The State of New York will benefit by encouraging the establishment and licensing of entities seeking to engage in structured reinsurance transactions. Under the proposal, New York's statutory, regulatory and licensing requirements for these vehicles would be more comparable to those of Bermuda and the Cayman Islands—jurisdictions in which structured reinsurance vehicles are often domiciled—making this state an attractive alternative to locating offshore. In addition, companies licensed in New York would not be subject to the 1% Federal Excise Tax to which entities licensed in Bermuda or the Cayman Islands are subject. The bill will promote the growth of the state economy by permitting structured reinsurance companies to form and locate in New York.

It is important to note that in order for this proposal to be feasible, a “cut-through” federal tax treatment to the investors in the structured reinsurance company, rather than taxation of the reinsurance company itself, is essential. Other tax issues also require clarification. To date, the IRS has not been approached by the New York Insurance Department on these issues.

## **Conclusion**

The property and casualty insurance industry's surplus base is approximately \$260 billion at the end of 1996. It is clear that a major catastrophe or a series of catastrophes could significantly impact available surplus. The New York Insurance Department believes that the initiatives described above will better enable the insurance industry to meet the challenges posed by natural catastrophes. These initiatives encompass a wide range of private sector solutions to addressing catastrophic risk. Capital market solutions provide a means of transferring a portion of the risk of natural catastrophes to the much larger and more diverse capital base than is currently available in the insurance industry.

The more effectively insurers securitize their catastrophic risk, the greater their capacity and willingness to write insurance in areas where there is a concentration of significant catastrophe risk exposures, such as areas on Long Island. Availability of insurance coverage is an essential part of the economic development of New York State.



# Appendix

## Review of Recommendations by the 1996 Temporary Panel on Homeowners' Insurance

**The 1996 Temporary Panel on Homeowners' Insurance offered the recommendations enumerated below. Following each recommendation is a description of the current status of the proposal and the assessment of it by this year's Temporary Panel:**

1. **CMAP participation/monitoring.** The Superintendent should seek broader participation in CMAP, especially in the NYPIUA rotation process, and should closely monitor the growth of exposure in both CMAP and NYPIUA.

**Current Status:** Since the 1996 report, the Superintendent has been seeking broader participation in CMAP and has monitored the growth of exposures. This will continue.

The 1998 State of the Market Subcommittee recommends that:

efforts continue to encourage insurer participation. In addition, as more voluntary insurers introduce hurricane deductibles, it is important that NYPIUA introduce a catastrophe windstorm deductible program comparable to those in use in the voluntary market.

2. **CMAP standardization/outreach.** The CMAP steering committee should make improvements in the application process and explore the development of a standard form of wrap-around coverage. They should increase efforts to inform and educate agents, companies, consumers and real estate professionals and ask that participating companies distribute detailed explanations of their CMAP procedures to their agents writing in CMAP eligible areas.

**Current Status:** In response to last year's recommendations, the CMAP steering committee considered but did not adopt a standard form. The steering committee did undertake a public information campaign which resulted in the production and distribution of a consumer information brochure about the availability of coverage through CMAP.

**The 1998 State of the Market Subcommittee recommends that:**

**CMAP extend its consumer education efforts and coordinate with the Insurance Department and its "member" companies a wide-ranging, broadly available information campaign to address the public's understanding of the relationships among availability, affordability, and loss exposure. Specifically, public awareness needs to be increased about:**

- **the increasing prevalence of catastrophe deductibles and the need to be alert to changes in homeowners insurance policies which introduce such deductibles;**
  - **the nature of catastrophe deductibles, what events could trigger such deductibles, and the relationship of these deductibles to availability and affordability of homeowners coverage;**
  - **how a percentage catastrophe deductible translates into dollar terms, and whether the consumer can afford to assume this exposure to loss; and**
  - **possible mitigation steps homeowners can take, and how such steps could improve the availability and/or affordability of their homeowners coverage.**
3. **NYPIUA permanency/deductibles.** Legislation be enacted amending Section 5411 and Section 5412(g) of the Insurance Law to make NYPIUA permanent. NYPIUA should be given the authority to use hurricane deductibles similar to any which are approved in the voluntary market.

**Current Status:** NYPIUA is still not permanent nor does it have the authority to use hurricane deductibles.

**The 1998 State of the Market Subcommittee recommends that:**

these two recommendations not be linked in the 1998 report since they are separate and distinct. Therefore, recommendations to make NYPIUA permanent and to provide it with the authority to use hurricane deductibles are offered as separate recommendations in the 1998 report.

4. **Hurricane deductibles.** The Insurance Department should approve appropriate mandatory deductibles for hurricane losses.

Current Status: The Department has approved filings for deductibles for individual insurers that would be applicable to all of those insurers' policies in affected areas. There are no uniform standard deductibles applicable to all companies.

The 1998 State of the Market Subcommittee recommends that:

appropriate deductibles for hurricane losses be approved. The Department's standards for approval of hurricane deductibles should include a clear, prominent display of the dollar amount (as well as the percentage) of the deductible on the face of the policy and a clear, prominent explanation of the triggering event.

In addition, the Subcommittee believes that wind deductible trigger events should be measured solely by wind speed (not by storm surge or barometric pressure measurements) and should occur within a named hurricane.

Lastly, the Insurance Department should undertake a consumer education effort so that homeowners understand and remain alert for key policy provisions relating to hurricanes.

5. **Section 3425 amendments.** Legislation should be enacted amending Section 3425 of the Insurance Law to facilitate prompt use of approved mandatory deductibles.

Current Status: This item is becoming a moot point as companies phase in their deductibles over the three-year renewal cycle.

The 1998 State of the Market Subcommittee recommends that:

this recommendation be deleted from the 1998 report.

6. **Computer modeling.** The Insurance Department should explore the use and credibility of computer models.

Current Status: The Department continues to explore the suitability of computer modeling for determining rates and deductibles.

The 1998 State of the Market Subcommittee recommends that:

the Department conclude its study of computer modeling and consider permitting modeling to be used by insurers as another acceptable actuarial technique for the development of appropriate rates and deductibles.

7. **Catastrophe reserves.** Legislation should be enacted authorizing insurers to establish catastrophe reserves.

**Current Status:** This recommendation is in need of clarification. The recommendation related to *state* legislation, while recommendation #8 related to *federal* tax policy. Since the 1996 report, no legislation has been enacted, on either a state or a federal level, that would allow insurers to receive appropriate tax benefits for establishing catastrophe reserves.

The 1998 State of the Market Subcommittee recommends that:

(See Recommendation #8 below.)

8. **Federal tax changes.** The Legislature should adopt a resolution calling on Congress to enact a natural disaster plan, including tax exempt accumulation of catastrophe reserves.

**Current Status:** Since the 1996 report, no legislation has been enacted, on either a state or federal level, that would allow insurers to receive appropriate tax benefits for establishing catastrophe reserves. This recommendation should be included in the 1998 report.

The 1998 State of the Market Subcommittee recommends that:

The Subcommittee has identified federal tax policy as one of the single biggest problems contributing to long-term market uncertainty for the homeowners product. While it is beyond the scope of New York State policymakers to effect direct change in this area, the Subcommittee urges that this point be kept in the forefront of any further discussion.

9. **NYPIUA Take-Out/Keep-Out program.** Legislation should be enacted amending Section 5405 of the Insurance Law to authorize NYPIUA to establish a hurricane exposure-related Take Out/Keep Out credit provision.

**Current Status:** This recommendation left many unanswered questions regarding the types of incentives that could be provided to insurers to encourage them to voluntarily take out NYPIUA risks located in hurricane-prone areas. Perhaps due to these unanswered questions, no Take-Out legislation has been enacted in New York since the 1996 report was issued.

The 1998 State of the Market Subcommittee recommends that:

a Take-Out/Keep-Out credit program be authorized that includes meaningful incentives.

10. **Hurricane pool.** A majority of the panel recommends that legislation should be considered to authorize the Superintendent to establish a Hurricane Pool within NYPIUA, if necessary, in preference to writing homeowners insurance in NYPIUA, which is the only alternative authorized by current law. Such legislation should include standards defining the funding of and assessment base for the Hurricane Pool and related policy considerations of such funding. Some members of the panel are unable to support this recommendation because they are concerned that “Hurricane Pool” is subject to a wide range of possible designs. One panel member would prefer homeowners insurance in NYPIUA.

**Current Status:** A Hurricane Pool has not been established within NYPIUA. A major factor impeding the establishment of such a pool is the fact that NYPIUA is not a permanent entity. Should NYPIUA gain permanence, it could attract the funding necessary to establish a Hurricane Pool.

The 1998 State of the Market Subcommittee recommends that:

Legislation be enacted amending Section 5411 and Section 5412(g) of the Insurance Law to make NYPIUA permanent.

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