

Public/Private Mechanisms For Handling Catastrophic Risks in the United States

The Florida Hurricane Catastrophe Fund (FHCF)

The National Flood Insurance Program (NFIP)

California Earthquake Authority (CEA)

Terrorism Risk Insurance Act (TRIA)

Nuclear Insurance Program (Price-Anderson Act)

Fair Access to Insurance Requirements (FAIR) Plans

Florida Citizens Property Insurance Corporation (CPIC)



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1. Florida Hurricane Catastrophe Fund

Overview

Hurricane Andrew caused \$15.5 billion of insured losses in 1992 – at that time an unprecedented loss. Following Hurricane Andrew, 11 smaller insurers became insolvent and other insurers were downgraded by ratings agencies. Reinsurance for hurricanes became scarce and extremely expensive. That, in turn, made homeowners and condominium insurance more difficult to obtain and more costly for people in Florida. To provide a stable and affordable market for reinsurance the Florida legislature in 1993 created the Florida Hurricane Catastrophe Fund (FHCF).

The FHCF is a state-run catastrophe reinsurance program and participation is mandatory for every residential property insurer writing covered policies in the state of Florida. The purpose of the Fund is to improve the availability and affordability of property insurance in Florida by providing reimbursements to insurers for a portion of their catastrophic hurricane losses. Each company is required to pay a premium into the Fund based on its hurricane exposure.

Covered policies are residential property insurance policies that provide wind or hurricane coverage on structures located in Florida (including single-family homes, mobile homes, condominiums and apartments), their contents and additional living expenses (ALE). ALE reimburses policyholders for lodging and other expenses when their residence is uninhabitable because of damage from a hurricane. Most commercial property was exempted from the Fund during the 1995 legislative session.

In 2004, the total claims-paying capacity of the Fund was expanded from \$11 billion to \$15 billion. The increase in capacity was approved by Florida's legislature in an effort to expand the availability and affordability of residential insurance in the state. This was one of the most significant structural changes to the Fund since its inception in 1993. In 2005, the Florida legislature passed Senate Bill 1486, leaving the FHCF's overall \$15 billion capacity unchanged. Subsequent season capacity, which ensures that capacity is available on an ongoing basis a year after a major event, is also \$15 billion. Other important changes to the structure of the FHCF were introduced by the legislature and are discussed below.

The FHCF is overseen by the State Board of Administration (SBA) and has federal tax exempt status. It is funded by three sources: 1. reimbursement premiums charged to participating insurers, 2. investment earnings, and 3. emergency assessments on Florida property/casualty insurers.

The FHCF provides hurricane reinsurance to primary insurers at rates that are one-quarter to one-third of rates in the private reinsurance market, and sometimes, depending on conditions in the private market, in quantities not available elsewhere. These lower rates are possible due to the Cat Fund's "tax exempt status, low administrative costs and lack of any profit or risk-load factor," the Senate Banking and Insurance Committee noted in its staff summary on the bill (April 20, 2004). "As such, the FHCF acts to lower premiums for residential property insurance as well as to expand reinsurance capacity, which enables a greater amount of insurance to be written in the state than could otherwise be written if the fund did not exist."

The FHCF was the first program in the country in which a state provided for tax-exempt accumulation of private cash to pay for major disasters. It has been studied by other states and by the federal government as a possible model for future federal natural disaster insurance programs. As a public-private partnership, the FHCF has created a multi-billion-dollar pool of cash and contingencies to pay part of the cost of rebuilding homes after major hurricanes.

How it Operates

Property insurers doing business in Florida purchase reinsurance from the FHCF, based on their exposure to hurricane losses. Basically, the FHCF reimburses property insurers for a selected percentage of hurricane losses above their individual retention (deductible).

The impact of 2004's record hurricane losses prompted debate about whether the Cat Fund's \$4.5 billion industry aggregate retention level should be lowered to provide greater coverage for multiple hurricanes in one year. Senate Bill 1486, passed by the Legislature in May 2005, changed the threshold at which insurers can access the Fund. Effective June 1, 2005, the industry aggregate retention remains at \$4.5 billion for the first two storms, but drops to \$1.5 billion for subsequent storms. Each insurer's

individual retention is a proportionate share of the industry aggregate retention. This means that a carrier taking unusually heavy losses from a smaller storm could qualify for Cat Fund reimbursement, while the industry overall might not.

Insurers participating in the Fund can select one of three coverage levels (45, 75, or 90 percent) above their retention/deductible. Most insurers with significant hurricane exposure in Florida elect the 90 percent option. This means that once an insurer triggers FHCF coverage, 90 percent of its losses will be covered by the Fund, up to the insurer's limit of coverage. Insurers may purchase additional reinsurance in the private market to cover their hurricane losses for amounts below the retention, amounts above their reimbursement limit, or for the coinsurance amount (e.g., 10 percent) that is the insurer's responsibility for the layer of coverage provided by the FHCF.

The FHCF must charge insurers the actuarially indicated premium for the coverage provided, based on hurricane loss projection models found acceptable by the Florida Commission on Hurricane Loss Projection Methodology. Each insurer's reimbursement premium is different, based on the insured value of the residential property it insures, their location, construction type, deductible amounts, and other factors. In order to calculate the FHCF premium, each insurer must report its total covered property exposure in force under covered policies as of June 30. This information is required to be reported by September 1.

Premiums paid by insurance companies into the Fund are reflected in the rates paid by policyholders as are other reinsurance expenses. The reinsurance premium may be included in rates or recouped as a surcharge. Companies must demonstrate to the Office of Insurance Regulation that there is no overlap between the FHCF premium included in their rate filing and their so-called "cat load," covering either private reinsurance or the insurer's retained losses for catastrophes.

At the end of 2005, the Fund is projected to have a year-end cash balance of \$2.93 billion, before losses. Its revenues and investment earnings are exempt from federal taxes. If the Fund issues bonds to cover claims it cannot pay from cash, the bonds will be treated as tax exempt government bonds.

Claims-Paying Capacity

As mentioned earlier, Senate Bill 1486, passed by the Legislature in May 2005 left the maximum capacity of the Cat Fund unchanged at \$15 billion a year - for both the "initial" season and "subsequent" season. The Fund's current capacity of \$15 billion consists of its cash holdings and bonding capacity (see Table 1). This means that after homeowners insurers absorb the first \$4.5 billion in losses from the first two storms, they are eligible for reinsurance recoveries from the fund for additional losses up to \$15 billion. When it is activated, the Cat Fund first uses its cash balance. Once the cash balance is exhausted, additional liabilities up to the \$15 billion limit are financed through revenue bonds or other debt from the major financial markets.

Table 1.

FLORIDA HURRICANE CATASTROPHE FUND (FHCF)	
General Information	
Year Created	1993 as a consequence of Hurricane Andrew
Perils Covered	Peril of windstorm during a hurricane - residential structures
Primary/Reinsurance	Reinsurance
Purchase of Reinsurance from the Fund by Primary Carriers	Mandatory
Mitigation	Limited funding for mitigation studies
Operation of the Fund	
Limits	No direct impact on primary insurance limits
Retention/Deductibles	Retention is 6.2876 times FHCF premium. Limit adjustable, US\$4.5 billion in 2005 for first and second event, US\$1.5 billion for subsequent events (for entire industry).
Rates	Premium based on portfolio: location, construction type, value, policy type and deductible
Funding	
Government Funding	No
Fund Buildup	US\$2.93 billion projected for year-end 2005
Standby Funding	Yes
Contributors and Accruals	Yes
Tax Deductible	
Limitations	
Cap Amount	Adjustable: In 2005, US\$15 billion, First Season US\$15 billion, Second Season Total Capacity at US\$ 42.67 billion
Triggers	Only a hurricane declared by the National Hurricane Center can be dealt with by the FHCF
Second Event Coverage	Yes, annual aggregate. Second season added in 1999

Source: Guy Carpenter, The World Catastrophe Reinsurance Market, 2005; Florida Hurricane Catastrophe Fund (FHCF)

For the current contract year (2005/2006), the \$15 billion FHCF capacity consists of a projected 2005 year-end cash balance of \$2.93 billion. Thus, the FHCF bonding capacity will need to be \$12.1 billion to provide the maximum overall capacity of \$15 billion for the 2005/2006 contract year. The revenue bonds are required to be issued only if the Florida Cat Fund's cash balance is insufficient to reimburse losses. These revenue bonds are funded by a special emergency assessment on all property and casualty insurance policyholders, including surplus lines but excluding workers compensation, and accident and health. For losses occurring before June 1, 2007 direct premium for medical malpractice is also excluded from the assessment. The annual assessments that insurers apply to insurance policies to help finance these bond issues are capped at six percent of premium for a single year's storm and 10 percent for multiple storm seasons.

A quartet of hurricanes that hit the southeast coast during the third quarter of 2004 contributed to what turned out to be a record year in terms of catastrophe losses. Hurricanes Charley, Frances, Ivan and Jeanne between them caused estimated insured losses of \$22.8 billion (*Exhibit 1*). Based on latest loss reports by insurers to the Florida Cat Fund for the 2004 hurricane season, the Fund is expected to reimburse insurers approximately \$3.75 billion, leaving a cash balance of \$2.92 billion. Of the approximately 237 insurers covered by the Florida Cat Fund, around 136 companies are expected to trigger FHCF coverage (i.e. to meet their individual retention level) and up to 62 companies are expected to exhaust their limits of FHCF recovery.

Despite the magnitude of 2004's hurricane losses, the issuance of revenue bonds was not necessary as the FHCF's cash balance was not exhausted. Since its inception in 1993, the Cat Fund has never had to make emergency assessments. The FHCF has stated that Hurricane Katrina, which struck the state as a Category 1 storm in late August 2005, is expected to trigger minimal reimbursements to insurers. Katrina went on to strike the state of Louisiana as a Category 4 storm, where it produced severe losses.

How Insurer Retentions Affect Recoveries from the FHCF

Following a catastrophic hurricane, the FHCF reimburses insurers for their covered losses, in excess of their retention, from the amounts held in the Fund. As explained in the previous section, each insurer must meet their retention/deductible before the Cat

Fund monies are available to pay claims. The retention level for each insurer is different because the retention level is based on the amount of premiums the insurer pays to the Cat Fund. The insurer must meet its retention level for each storm in a hurricane season before the FHCF will step in to pay claims.

Wholesale activation of the fund takes effect after insurance industry aggregate damages from a hurricane exceed \$4.5 billion for the first two storms and \$1.5 billion for subsequent storms. However, loss recovery from the FHCF is based on an individual insurer meeting its own retention prior to losses being reimbursed. Therefore, some insurers may trigger FHCF coverage even though insurance industry losses are expected to be less than \$4.5 billion. In the aggregate, the insurance industry is covered for up to \$15 billion, meaning \$15 billion is the most the Cat Fund will pay to the insurance industry on claims for a hurricane season.

The largest beneficiary of the Cat Fund is state-run Citizens Property Insurance Corporation, which has about one third of the total residential hurricane in Dade, Broward and Palm Beach counties and almost all of the exposure in Monroe County, including the Florida Keys. Other large stakeholders are State Farm, Allstate, USAA, Nationwide and Chubb. A detailed discussion of Florida's CPIC follows on page 40.

Insurers are required to report their losses from covered events for the contract year no later than December 31, and quarterly from then on. Under certain circumstances, earlier reporting may be required. The necessary reporting forms and detailed instructions are mailed to each insurer after a covered event. They are also available on-line.

Insurers are required to report estimated incurred ground-up losses for covered policies and their estimated recoverables from the FHCF on both an incurred basis and a paid basis. Prior to reimbursement, an insurer's loss reports are examined and tested for reasonableness. The company is also required to execute a statement verifying that losses have been accurately reported.

As soon as practicable after receiving loss reports, the FHCF determines and pays reimbursement amounts due to the insurer. Adjustments are made, as necessary, after subsequent loss reports.

Legislative Developments

The 2004 hurricane season was particularly destructive for Florida, with four major hurricanes hitting the southeast in the third quarter (*Exhibit 1*). As noted before, Hurricanes Charley, Frances, Ivan and Jeanne between them caused estimated insured losses of \$22.8 billion. According to ISO's Property Claim Services Unit (PCS), Florida suffered \$18.8 billion in insured losses, on 1.63 million claims – more than twice as many as were filed following Hurricane Andrew. Alabama suffered \$1.8 billion in losses. More than one in five Florida homes were damaged by a hurricane in 2004 and an estimated 37,000 homes were destroyed according to the Governor's office. Claims payments so far suggest that Hurricane Charley was the most destructive storm of the four major hurricanes with \$7.5 billion in losses projected.

Until 2004, deductibles in property and casualty insurance policies applied to each covered event or occurrence. The use of separate percentage hurricane deductibles was first authorized by the Florida legislature in 1993 after Hurricane Andrew. The hurricane deductibles were established to make insurance coverage more available and affordable in high risk areas. However, after 2004's four consecutive hurricanes, about 36,000 Florida homeowners paid more than one deductible, according to the Florida Insurance Council. This prompted widespread debate over the application of hurricane deductibles in the state. In December 2004, a bill was passed in a special session of the Florida legislature that eliminates occurrence-based hurricane deductibles and sets up a reimbursement program for homeowners who paid more than one deductible during the 2004 hurricane season. Beginning in May 2005, homeowners are subject to a single hurricane deductible per year. Homeowners who paid more than one deductible will be eligible for reimbursements of up to \$10,000 for two deductibles and up to \$20,000 for three or four deductibles. The \$150 million funding for this is coming from the Florida Hurricane Catastrophe Fund.

In addition, Florida's Joint Select Committee on Hurricane Insurance that was formed to study ways to deal with issues related to the state's homeowners insurance market, recommended giving policyholders more hurricane deductible options. Its recommendations included giving homeowners the option of choosing a 1 percent

deductible (or 1 percent of the home's insured value). Following the passage of Senate Bill 1486 in May 2005, homeowners now have two more hurricane deductible options, 5 percent and 10 percent, in addition to the current 2 percent and flat rate of \$500. However, the proposed 1 percent option was rejected because it would have raised insurers' exposure to loss, increasing the likelihood that some would reduce their writing of homeowners insurance in the state.

2. National Flood Insurance Program

Overview

Congress enacted the National Flood Insurance Act in 1968 creating the National Flood Insurance Program (NFIP) in response to the rising cost of taxpayer-funded disaster relief for flood victims and the increasing amount of damage caused by floods. Before passage of the Act, the national response to flood disasters had been to build dams, levees and other structures to hold back flood waters, a policy that may have encouraged building in flood zones. The NFIP combines the concepts of insurance protection and hazard mitigation by making federally-backed flood insurance available for residential and commercial properties in communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage.

Nearly 20,000 communities across the U.S. and its territories participate in the NFIP by adopting and enforcing floodplain management ordinances to reduce future flood damage. In exchange, the NFIP makes federally-backed flood insurance available to homeowners, renters, and business owners in these communities. As a priority, the 1968 Act required that flood insurance be made available to 1-4 family residential buildings, small businesses, and churches. Flood insurance has since been made available to other residential properties, other business properties, agricultural properties, properties occupied by private nonprofit organizations and properties owned by state or local governments. Insurance is available for all these types of properties and their contents with limited exceptions.

Flood insurance covers direct physical losses by flood and losses resulting from flood-related erosion caused by waves or currents of water exceeding anticipated cyclical levels and accompanying a severe storm, flash flood, abnormal tide surge or a similar situation which results in flooding. Mudflows (which occur when water rapidly accumulates in the ground, such as during heavy rainfall or rapid snowmelt) are covered under the NFIP. However, landslides are not. In addition to providing flood insurance and reducing flood damages through floodplain management regulations, the NFIP identifies and maps the nation's floodplains. Mapping flood hazards creates broad-based

awareness of the flood hazards and provides the data needed for floodplain management programs and to actuarially rate new construction for flood insurance.

From 1968 until the adoption of the Flood Disaster Protection Act of 1973, the purchase of flood insurance in the U.S. was entirely voluntary. The 1973 Act added mandatory purchase requirements for properties in flood prone areas where the purchaser sought either a mortgage from a federally regulated lending institution or federal assistance. This meant that flood insurance coverage became mandatory for many properties in flood prone areas not previously covered under the voluntary program. Flood damage is excluded under typical homeowners' policies, but coverage is provided under the comprehensive section of standard auto policies and some coverage is also available under special commercial insurance policies.

In 2004, President Bush signed into law the Flood Insurance Reform Act, reauthorizing the NFIP through 2008. The NFIP is managed by the Mitigation Division within the Federal Emergency Management Agency (FEMA). FEMA is part of the Department of Homeland Security's Emergency Preparedness and Response Directorate.

How the NFIP Operates

A community establishes its eligibility to participate in the NFIP in two ways:

- By adopting and enforcing floodplain management measures to regulate new construction, and
- By ensuring that substantial improvements to existing buildings within identified Special Flood Hazard Areas (SFHAs) are designed to eliminate or minimize future flood damage.

An SFHA is an area within a floodplain having a 1 percent or greater chance of flood occurrence in any given year. SFHAs are delineated on flood maps issued by the Federal Emergency Management Agency (FEMA) for individual communities. These flood zones are represented on the flood maps by darkly shaded areas with zone designations that include the letter A or V.

Property owners in NFIP communities may purchase flood insurance whether the building or its contents is located in or outside the floodplain. In fact, one in four NFIP

claims comes from outside high-flood-risk areas. In order to be eligible for flood insurance, a structure must have at least two solid walls and a roof, be principally above ground, and not entirely over water. Community participation in the NFIP is voluntary.

Federal flood coverage initially was available only via insurance agents who dealt directly with the Federal Insurance Administration (FIA). In 1979, the FIA was placed under the Federal Emergency Management Agency (FEMA), and since 1983 the “direct” policy program has been supplemented with a program known as the Write-Your-Own (WYO) Program.

The WYO program allows a pool of participating property/casualty insurance companies to write and service the Standard Flood Insurance Policy in their own names. The premium charged by the private insurer is the same as that charged by the federal government through the direct program. Nearly all of the flood policies issued today are written through WYO policies.

The WYO program was started to increase the NFIP policy count and geographic distribution of policies by taking advantage of the private insurance industry’s marketing channels and existing policy base to sell flood insurance. NFIP policies in force doubled from around two million in 1985 to 4.4 million by 2000, and rose to 4.7 million in 2004 (*Exhibit 2*). At the same time, the total value of property insured under the NFIP is growing rapidly and rose to \$764.5 billion in 2004 (*Exhibits 3 and 4*). Some 20,000 communities are participants in the NFIP, while 93 insurance companies were writing flood insurance for the NFIP, 95 percent of those through the WYO Program.

A private insurer becomes a WYO company by entering into a contract, known as the Financial Assistance/Subsidy Arrangement, with the FIA. Under the arrangement, private insurers agree to issue flood policies in their own name. In addition, the WYO companies adjust flood claims as well as settle, pay and defend all claims arising from the flood policies. The companies receive an expense allowance for policies written and claims processed, while the federal government retains responsibility for underwriting losses.

Maximum amounts of coverage are available under the NFIP via two programs: the emergency program and the regular program. The emergency program is the initial phase

of a community's participation in the NFIP. Only limited amounts of coverage are available under this program. The regular program is the final phase of a community's participation in the NFIP. In this phase, a flood insurance rate map is in effect and full limits of coverage are available.

Nearly all participating communities are in the regular program, and individuals can purchase flood insurance up to the following amounts:

- Residential 1-4 family unit buildings and individual residential condominium units are written under the dwelling form and are eligible for up to \$250,000 in building coverage and up to \$100,000 in personal property coverage.
- Residential buildings containing more than four units are eligible for up to \$250,000 in building coverage and up to \$100,000 on personal property.
- Non-residential buildings are eligible for up to \$500,000 in building coverage and up to \$500,000 on personal property written on the general property form.
- Under the Residential Condominium Building Association Policy (RCBAP) form, a condominium association can purchase coverage on a building, which includes all the units within the building and the improvements within the units, up to \$250,000 times the number of units within the residential building. Personal property coverage on the form is limited to \$100,000 per building.

NFIP coverage for the structure and contents of the home are sold separately. Buildings and structures are covered for replacement cost value, but contents coverage is available on an actual cash value basis only. There may also be limits on coverage for furniture and other possessions stored in basements. Coverage is also limited within the Coastal Barrier Resources System (CBRS). Congress passed laws limiting Federal expenditures in certain coastal areas and designating them as a part of the CBRS or as Otherwise Protected Areas (OPAs). In these areas, there is a prohibition for the expenditure of most Federal funds. These prohibitions refer to "any form of loan, grant, guarantee, insurance, payment, rebate, subsidy or any other form of direct or indirect Federal assistance," with specific and limited exceptions.

There is a 30-day waiting period before coverage takes effect under the NFIP. However, there is no waiting period if the initial purchase of flood insurance is in connection with the making, increasing, extending or renewing of a loan. Also, if the initial purchase of flood insurance is made during the 13-month period following the effective date of a revised flood map for a community, there is a one-day waiting period.

NFIP premiums grew from \$1.9 billion in 2003 to \$2.1 billion in 2004 (*Exhibit 5*). The NFIP notes that floods can occur anywhere, including outside of high-flood-risk zones, such as on mountains and in deserts. Most single-family homes, town homes, and apartments in these areas are eligible for the NFIP's preferred risk policy (PRP), a lower cost flood insurance policy. The premium for this policy can be as little as \$112 a year for \$20,000 of building coverage and \$8,000 in contents coverage. According to a study being conducted for the NFIP by the Rand Corporation, nationwide about 49 percent of single-family homes in special flood hazard areas (SFHAs) are covered by flood insurance. In the South, the percentage is higher – about 61 percent. However, outside of the high risk areas there is a steep drop off in coverage. Only about one percent of homeowners in non-SFHAs purchase it.

Claims-Paying Capacity

Funding for the NFIP is via the National Flood Insurance Fund, which was established in the Treasury by the 1968 Act. The NFIP is self-supporting for the average historical loss year. This means that losses and operating and administrative expenses are not paid for by the taxpayer, but through premiums collected for flood insurance policies and deposited into the fund. In addition, the Program has the authority to borrow up to \$1.5 billion from the Treasury when losses are heavy, although these loans must be repaid along with interest.

Until 1986, Federal salaries and program expenses, as well as the costs associated with flood hazard mapping and floodplain management were paid by an annual appropriation from Congress. From 1987 to 1990, Congress required the Program to pay these expenses out of premium dollars. In current dollars \$485 million of policyholder premiums were transferred to pay salary and other Program expenses. From 1991, a

Federal policy fee of \$25, increased to \$30 in 1995, is applied to most policies in order to generate the funds for salaries, expenses, and mitigation costs.

How the Claims System Works

As in other types of insurance, claims under the NFIP require that the insured file a proof of loss. A proof of loss -- the policyholder's valuation of claimed damages -- is a sworn statement made by the policyholder that substantiates the insurance claim. This must be submitted within 60 days of the loss, unless waived by the administrator of the Federal Insurance and Mitigation Administration (FIMA). Claims can be adjusted using either an independent adjuster or an adjuster employed by a WYO company.

Under all NFIP policies, the insured pays a portion of the loss through the application of a deductible. A minimum deductible is applied separately to a building and its contents, although both may be damaged in the same flood. Higher deductibles are available, and an insurance agent can provide information on specific amounts of available deductibles. Optional high deductibles reduce policy premiums but will have to be approved by the mortgage lender.

NFIP claims are growing. In 2004, the NFIP paid some 37,659 claims, up from 36,271 claims paid in 2003 (*Exhibit 6*). This compared with 25,220 in 2002 and 43,503 in 2001, the year of Tropical Storm Allison. Flood losses paid totaled \$1.2 billion in 2004, up from \$759.8 million in 2003 (*Exhibit 7*). The average cost of a flood claim in 2004 was \$32,056, and the average flood insurance premium was \$438 (*Exhibit 8*). The NFIP has received significant claims from Hurricane Katrina, the Category 4 storm that struck the states of Louisiana, Mississippi and Alabama in late August 2005.

An insured will never be paid more than the value of the covered loss, less deductible, up to the amounts of insurance purchased. Therefore, purchasing flood insurance to value is an important consideration. The amount of insurance a property owner needs should be discussed with an insurance agent or broker.

3. California Earthquake Authority

Overview

California has a long history of earthquake damage. The great San Francisco earthquake of 1906 and the 1989 Loma Prieta earthquake rank among the most significant earthquakes ever. The Northridge earthquake, which struck Southern California on January 17, 1994, was the most costly quake in U.S. history, causing an estimated \$20 billion in total property damage, including \$12.5 billion in insured losses. The insurance industry ended up paying out more in claims for this quake than it had collected in earthquake premiums over the preceding 30 years. While no insurer became insolvent, some came very close.

To recover their financial strength and to be better prepared for the next earthquake, most insurers began to limit their exposure to earthquakes by writing fewer new homeowners insurance policies. In addition, most insurers filed for both rate increases and increases in deductibles from the 10 percent that was current then to 15 percent or higher. This triggered a crisis that by mid-1996 threatened the vitality of California's housing market and stalled the state's recovery from recession.

In response to the crisis, legislators took two steps. By law, insurance companies that sell homeowners coverage in California must offer earthquake insurance too. In 1995, legislators specified that the minimum policy of earthquake insurance that residential insurers must offer is a catastrophic policy of property protection. This policy, known as the "mini-policy", effectively set a new minimum standard for coverage that must be offered to every residential policyholder in the state.

The second step taken by legislators was the establishment of the California Earthquake Authority (CEA) in 1996. The CEA is a privately financed, publicly managed entity that helps California residents to protect themselves against earthquake loss (see Table 1). Today, the CEA is the world's largest residential earthquake insurer. Acting through its participating insurers, the CEA sells earthquake policies to homeowners, mobile home owners, condominium owners, and renters throughout the state. The CEA is governed by a board comprised of five elected officials: California's governor, treasurer, insurance commissioner, speaker of the state Assembly, and

chairperson of the state Senate Rules Committee. It is advised by a panel of insurers, agents and members of the public.

Table 1

CALIFORNIA EARTHQUAKE AUTHORITY (CEA)	
General Information	
Year Created	1996, as a consequence of the Northridge earthquake
Perils Covered	Earthquake perils for residential personal lines - covers the home but not other structures such as swimming pools or garages
Primary/Reinsurance	Primary
Purchase of Reinsurance from the Fund by Primary Carriers	N/A
Mitigation	No
Operation of the Fund	
Limits	When capacity exhausted, settlements with policyholders prorated, contents coverage limited to US\$5,000
Retention/Deductibles	15% of limit, deductible on home and contents applied to the total loss, not separately for each coverage
Rates	Average rate in California for earthquake coverage is US\$3.91 per thousand, capped at US\$5.25 per thousand
Funding	
Government Funding	No
Fund Buildup	Yes
Standby Funding	No
Contributors and Accruals Tax Deductible	Yes
Limitations	
Cap Amount	US\$6.725 billion
Triggers	All earthquake losses
Second Event Coverage	Yes, annual aggregate

Source: Guy Carpenter, The World Catastrophe Reinsurance Market, 2005; CEA as of June 2005.

Some 15 insurers representing two-thirds of the California homeowners market participate in the CEA. According to the National Underwriters Insurance Data Services, direct premiums written for earthquake coverage in California, excluding the California Earthquake Authority (CEA), totaled \$722 million in 2004, representing 45.3 percent of total U.S. earthquake premiums of almost \$1.6 billion. The CEA accounted for \$465.4 million of the total earthquake premiums in 2004, up 5.2 percent from \$442.4 million in 2003. At the end of 2004, the CEA had about 731,000 policies in force in the California earthquake market, about the same number as in 2003.

The purchase of earthquake insurance by California policyholders is not mandatory. The percentage of policyholders buying the coverage appears to rise and fall depending on how long ago the last significant earthquake occurred. In 1996, about 30 percent of state homeowners purchased the coverage. In 2004, that number had dropped to around 13.3 percent. Some homeowners, particularly those with little equity in their homes, appear to be forgoing earthquake insurance because of the high cost of premiums. Others believe the greatest threat they face after earthquake is fire, a peril for which they are covered under California's fire following law.

How It Operates

CEA policies are sold only through participating insurance companies. Those insurers who choose not to participate must offer their own earthquake coverage to their residential property policyholders. Earthquake insurance provides coverage for damages to buildings and contents arising out of a seismic event. The insurance does not provide coverage for losses that may arise as a result of subsequent fire, explosion, water damage, glass breakage, or theft. So, for example, a major fire such as the one following the great San Francisco earthquake of 1906 would not be covered.

Standard homeowners, condominium, and renters insurance policies do not generally cover earthquake damage. Coverage is available either in the form of an endorsement or as a separate policy for homeowners, renters and small business owners. The exception is earthquake damage to cars and other vehicles which is covered under comprehensive auto insurance policies. Most policies that non-CEA companies offer are similar in features to the CEA policy. To-date, companies that sell over two-thirds of the residential property insurance in the state have opted to offer the CEA policy.

As noted before, the basic earthquake policy from the CEA is regarded as the industry's standard. The "mini-policy" is designed to provide basic protection against earthquake damage. The policy will pay to repair or replace the dwelling, subject to a deductible, but it excludes some items from coverage, including pools, patios, fences, driveways and detached garages. The standard deductible on a dwelling and its contents is 15 percent (based on insured value) and is applied to the total loss, not separately for each coverage. Only structural damage counts toward meeting a deductible. The policy

pays up to \$5,000 to repair or replace personal property and provides \$1,500 for any additional, higher living expenses incurred if the home is uninhabitable while it is being repaired.

Many CEA participating insurers also now offer new higher coverage limits to their policyholders. For an additional premium, up to \$100,000 in contents coverage and \$15,000 for loss of use are available. Homeowners and mobile home owners have an additional option of lowering their deductible from 15 percent to 10 percent. Condominium owners and renters are not eligible for a lower deductible but can purchase the higher limits for contents and loss of use coverages.

According to the CEA, average rates range between \$1.10 per \$1,000 of coverage, up to \$5.25 per \$1,000. The average rate is \$3.91 per \$1,000 of coverage, per year.¹ So, an average house that carries \$100,000 of fire insurance will cost \$391 per year for CEA protection against loss from earthquake. The \$3.91 rate is an average rate: residents in higher seismic risk areas will pay higher rates than those in lower-seismic-risk areas.

Premiums vary widely among the 19 rating territories, based on type of house, its age, the nature of the soil and proximity to known fault lines. The average cost statewide is \$500, but it can exceed \$3,000 a year. The CEA currently has reserves of more than \$7 billion. Because of high deductibles, this amount is considered enough to cover two earthquakes as severe as the 1994 Northridge quake, which caused an estimated \$12.5 billion in insured losses (\$15.9 billion in 2004 dollars).

Claims-Paying Capacity & the CEA's Claims System

No state funds and no public money are used to finance the CEA. The CEA is funded from policyholder premiums, contributions from and assessments on participating insurers, returns on invested funds, borrowed funds, and reinsurance (insurance for insurers).

As of June 2005, the CEA has a total claims-paying capacity of \$7.1 billion, but if an earthquake causes insured damage greater than the CEA's claims-paying capacity then policyholders affected will be paid a prorated portion of their covered losses. The

¹ Guy Carpenter, *The World Catastrophe Reinsurance Market*, 2005

prorated claims would be calculated based on the total amount of expected claims compared to the remaining available funds.

The fund is structured in layers (*Exhibit 9*). CEA capital amounts to \$1.97 billion, reinsurance layers total \$1.5 billion and there are two industry assessment layers (described below). The CEA purchases reinsurance from private reinsurers. However, reinsurers are not permitted to purchase retrocession without the permission of the CEA. Retrocession is the reinsurance of a reinsurance company.

The CEA's aggregate claims-paying ability is reduced by any claims payments regardless of when they occur. For example, with a claims-paying capacity of \$7.1 billion, if the CEA suffers a \$1 billion loss, only \$6.1 billion would remain available to fund a second loss. However, the surplus of the CEA does increase in each year in which there is no major event. All CEA earthquake claims are processed by CEA participating insurance companies.

Industry Assessments

The aggregate claims paying ability of the CEA can only be increased as a result of industry assessments. There are two occasions when such assessments may be made. If the loss exceeds the capital of the CEA, participating insurers may be assessed \$2.18 billion. A further assessment of \$1.5 billion may be made on insurers if the previous layers are inadequate to cover claims or if the CEA's capital falls below \$350 million.

The CEA's ability to make the first assessment expires in 2008, as required by a sunset provision in the statute that created the CEA.² The likelihood of the second assessment is considered remote. Any assessment is limited to the amount necessary to pay the outstanding or expected claims of the CEA and to return the CEA's available capital to \$350 million. Primary insurers can purchase reinsurance to mitigate their exposure to an industry assessment. However, there is no provision that allows insurers to recover through a premium surcharge or some other mechanism the cost of this reinsurance or any assessment.

² Credit Suisse First Boston, *Secrets of the CEA*, Sector Review, 13 September 2004.

4. Terrorism Risk Insurance Act (TRIA)

Overview

The terrorist attack of September 11, 2001 produced insured losses estimated at \$32.5 billion, making it by far the most expensive natural or man-made catastrophe ever. Nearly 200 insurance companies worldwide paid many billions of dollars in the weeks and months following September 11, substantially mitigating the overall economic impact of the attack. Apart from the enormity of the disaster, those losses were unusual in that they occurred across many types of coverage, including commercial property, business interruption, workers compensation, aviation, life and disability insurance.

In the aftermath of the attack, global insurance and reinsurance capacity – the capital needed to back the underwriting of all types of property/casualty insurance coverage – fell by 15 to 25 percent. Commercial property insurance prices soared, available limits on many types of coverage were slashed and terms and conditions in insurance contracts were narrowed. The market disruption was finally arrested when President Bush signed the Terrorism Risk Insurance Act (TRIA) into law on November 26, 2002, establishing a temporary mechanism to protect American businesses by ensuring widespread availability and affordability of property and casualty insurance for terrorism risk.

TRIA was created by Congress to provide a temporary federal shared loss program or “backstop” for incurred losses resulting from certain acts of terrorism. Under the Act, private insurers and the federal government share the risk of future losses from terrorism for a three-year period expiring December 31, 2005 (see Table 1). Prior to 9/11, standard commercial insurance policies included terrorism coverage as part of the package, effectively free of charge. Today, terrorism coverage is generally offered separately at a price that more adequately reflects the current risk.

How it Operates

TRIA is a public/private risk-sharing partnership between the federal government and the insurance industry. The program is designed to ensure that adequate resources are available for businesses to recover and rebuild if they become the victims of a terrorist attack. Public/private partnerships of various kinds have been adopted by a number of

European nations, including the United Kingdom, Spain, Austria, France, and Germany. TRIA was established as a 3-year temporary program and is due to expire in its current form on December 31, 2005.

Table 1.
Terrorism Coverage in the U.S.

Primary Insurance	Reinsurance	Comments
Personal lines and workers compensation includes cover.	Prior to the passage of the Terrorism Risk Insurance Act of 2002, there were widespread exclusions on treaties for the terror peril.	<p>The Terrorism Risk Insurance Act of 2002 (TRIA) was passed on November 26, 2002. The program was designed to provide insurers with a federal back-stop and will expire at the end of 2005. The U.S. Treasury will provide interim reports as the details about the bill and its implementation are worked out.</p> <p>The bill provides reinsurance to insurers for an act of foreign terror committed in the U.S. The terror bill covers 90 percent of insurance losses to insurers once the deductible is reached, up to an annual program limit of \$100 billion.</p>
		<p>Expiration of TRIA</p> <p>TRIA expires at the end of 2005. On June 30, the United States Treasury issued a report on TRIA mandated by the law. Treasury concluded that TRIA achieved its goals of stabilizing the private insurance market. Going forward, Treasury opposes the extension of TRIA. The report states that the administration would accept a renewal if major changes were made, including increasing the definition of an event from US\$5 million to US\$500 million, increasing deductibles and co-participation rates, and eliminating liability lines such as commercial auto and general liability.</p> <p>The debate on terror insurance now shifts to Congress.</p>

Source: Guy Carpenter, The World Catastrophe Reinsurance Market, 2005.

Under TRIA, all property and casualty insurers in the U.S. are required to offer terrorism coverage. This “make available” provision applies to most commercial lines of p/c insurance.³ This means that owners of commercial property, such as office buildings, factories, shopping malls and apartment buildings, must be offered the opportunity to purchase terrorism coverage. Insurers are required to make an offer of coverage for “certified acts” of terrorism to policyholders. If the insured rejects an offer, the insurer may then reinstate a terrorism exclusion. Under TRIA, the “make available” provision

³ TRIA does not cover auto and homeowners insurance, reinsurance, federal crop, mortgage guaranty, financial guaranty, medical malpractice, flood insurance and life & health.

was scheduled to sunset at the end of 2004. However, in June 2004, the Treasury Department extended this provision through the end of 2005.

Under the terms of TRIA, an event must cause at least \$5 million in aggregate property and casualty insurance losses to be declared a “certified” act of terrorism by the Secretary of the Treasury. No such declaration is needed to trigger coverage under home and auto policies because there are no exclusions for terrorism. The bill is limited to international terrorism committed on behalf of any foreign person or foreign interest on U.S. soil (damage to an air carrier or vessel outside the U.S., or to the premises of a U.S. mission is also covered by TRIA, however).

Each participating insurer is responsible for paying out a certain amount in claims – a deductible – before Federal assistance becomes available (*Exhibit 10*). This deductible is based on a percentage of its direct earned premiums from years one through three of the program. In 2005, the deductible is as follows: 15 percent of 2004 direct earned premiums (2004 – 10 percent of 2003 direct earned premiums; 2003 – 7 percent of 2002 direct earned premiums). For losses above a company’s deductible, the federal government will cover 90 percent, while the insurer contributes 10 percent. If the Federal government pays for insured losses during the course of a year, the Treasury Secretary is required to recoup the difference between total industry costs (individual insurers’ losses up to their deductibles, plus the industry’s 10 percent cost share above the deductibles) and the following fixed dollar amounts per year: \$15 billion for 2005; \$12.5 billion for 2004; and \$10 billion for 2002 and 2003 (*Exhibit 11*). The recoupment is accomplished through a surcharge on all policyholders that cannot be more than 3 percent of the premium charged for a policy in a given year. Losses covered by the program are capped at \$100 billion.

Claims-Paying Capacity

Federal government payments are triggered after insurers’ losses (industrywide retentions) have reached a certain dollar amount, based on maximums for each commercial lines insurance company and a maximum for the industry as a whole. As discussed above, the industry aggregate retention is \$15 billion in 2005, while the individual company retention is 15 percent of 2004 direct written premiums. The

program is designed to handle up to \$100 billion per year in claims, including insurance company payments.

By sharing potential losses from terrorist attacks between private insurers and the government, TRIA has brought much needed additional capacity to the terrorism market. Before TRIA, businesses were left with little or no terrorism coverage, but now they are able to purchase the cover they need.

Terrorism coverage is very difficult to price because the frequency and severity (cost) of an attack is so unpredictable. Pricing of terrorism coverage varies according to the individual risk (based on factors such as location and industry, for example), but it is clear that TRIA has had a stabilizing influence on the market. Take-up rates for the coverage have climbed steadily, from 27 percent of businesses in 2003, to 49 percent at the end of 2004. Take-up rates are over 50 percent in the Northeast and Midwest.

How the Claims System Works

In the nearly three years since TRIA was enacted there has not been a terrorist attack on U.S. soil, so coverage under TRIA has yet to be triggered. In the event of a qualifying terrorist attack during TRIA's remaining life-span, the following coverage points would apply:

- A business that has not purchased TRIA or other terrorism coverage will not be covered for damage caused to their property by a terrorist attack. An individual that has homeowners, renters or private passenger auto insurance coverage may be covered, according to the individual terms of their policy.
- In some states a doctrine known as "fire following" applies. This means that in the event of a terrorist-caused explosion followed by fire, insurers could be liable to pay out losses attributable to the fire (but not the explosion) even if a commercial property owner had not purchased terrorism coverage. Insurers have sought to limit fire coverage resulting from a terrorist attack, because commercial policyholders that choose to reject TRIA or other terrorism coverage are effectively paying no premium for the protection offered by fire-following

coverage. So far, seven states have amended their standard fire policy laws to exclude acts of terrorism.

- There are long-standing restrictions regarding war coverage and nuclear, biological, chemical and radiological (NBCR) events in both personal and commercial insurance policies. War-risk exclusions reflect the realization that damage from acts of war is fundamentally uninsurable. No formal declaration of war by Congress is required for the war risk exclusion to apply. Nuclear, biological, chemical and radiological attacks are another example of catastrophic events that are fundamentally uninsurable due to the nature of the risk. Under the Terrorism Risk Insurance Act, if some NBCR exclusions are permitted by a state, an insurer does not have to make available the excluded coverage.
- Workers compensation – a compulsory line of insurance for all businesses – covers employees injured or killed on the job and therefore automatically includes coverage for acts of terrorism. Workers compensation is also the only line of insurance that does not exclude coverage for acts of war. Coverage for terrorist acts cannot be excluded from workers compensation policies in any state.

TRIA's Renewal

TRIA is scheduled to expire on December 31, 2005 and the threat of future catastrophic terrorist attacks on U.S. soil remains very real. Unless TRIA is extended by the United States Congress, any commercial insurance policy with an inception date beyond January 1, 2005 will include a period where no federal “backstop” is in place. Attacks occurring on or after January 1, 2006 could be financially destabilizing and lead to insurer insolvencies. Consequently insurers and regulators are developing language that would allow insurers to exclude losses associated with terrorist attacks (except workers compensation losses). Regulators in the majority of states approved such exclusions in the pre-TRIA period.

5. Nuclear Insurance Program (Price-Anderson Act)

Overview

Coverage for nuclear risks was first established in 1957 when Congress passed the Price-Anderson Act. The Act provides a framework for handling potential liability claims and ensures that adequate funds are available to compensate members of the public for personal injury and property damage in the event of a catastrophic nuclear accident.

The legislation helps to encourage private investment in commercial nuclear power by capping the total amount of liability each licensee of a nuclear power plant faces in the event of a nuclear accident. Over the years, the limit of liability for a catastrophic nuclear accident has increased the pool of funds to more than \$10 billion.

Because virtually all property and liability insurance policies issued in the U.S. exclude nuclear accidents, claims resulting from nuclear accidents are covered under Price-Anderson. Policies issued under the Price-Anderson Act include coverage for any accident that occurs: in the course of transporting nuclear fuel to a reactor site; in the storage of nuclear fuel or waste at a site; in the operation of a reactor, including the discharge of radioactive effluent; and in the transportation of irradiated nuclear fuel and nuclear waste from the reactor. It is important to note that while the Act does not specifically reference acts of terrorism, there are also no stated exclusions.

The Act does not require coverage for spent fuel or nuclear waste stored at interim storage facilities, transportation of nuclear fuel or waste that is not either to or from a nuclear reactor, or acts of theft or sabotage occurring after planned transportation has ended. The Act provides financial assistance for bodily injury, sickness, disease or resulting death, property damage and loss as well as reasonable living expenses for individuals evacuated.

As part of the Energy Policy Act of 2005, signed into law by President Bush on August 8, 2005, Price-Anderson has been reauthorized for the next 20 years. This is the fifth time Congress has reauthorized the Act since the law was first passed in 1957, but it is the longest extension ever granted. High prices and dwindling supplies of fossil fuels

have rekindled interest in nuclear energy and the long extension of Price-Anderson helps increase the feasibility of such a large investment. The last nuclear power plant to be built in the United States was in 1978.

How It Operates

Under Price-Anderson, operators of nuclear power plants are required to show evidence of financial protection in two layers. Firstly, utilities that operate nuclear power plants pay a premium each year for \$300 million in private insurance for offsite liability coverage for each reactor unit. Policies are written by American Nuclear Insurers, an insurance pool comprised of investor-owned stock insurance companies.⁴ About 33 percent of ANI's total liability capacity comes from foreign insurers and reinsurers.

The primary layer of insurance is supplemented by a secondary policy (*Exhibit 12*). In the event that a nuclear accident causes damages in excess of \$300 million, each of the 104 licensed nuclear reactors that are covered would be assessed a retroactive premium, effectively a prorated share of the excess damages up to \$95.8 million per reactor (payable at a rate of \$15 million per year per reactor, adjusted for inflation). A five percent surcharge may be applied, if needed, for legal costs, bringing the maximum to \$100.6 million per reactor per accident. To-date, this secondary layer of coverage under the Act has never been triggered because no nuclear accident has ever reached the \$300 million primary policy limit.

According to the Nuclear Regulatory Commission (NRC), the average annual premium for a single-unit reactor site is \$400,000. The premium for a second or third reactor at the same site is discounted to reflect a sharing of limits.

In the unlikely event that more funds would be required, Congress could request additional assessments if necessary to provide full and prompt compensation to the public for all public liability claims.

⁴ A pool is an association of persons or organizations that combines their resources to economically finance recovery from accidental losses. Pooling is a mechanism for spreading risks and sharing costs.

Claims-Paying Capacity

The most costly nuclear accident to-date was the 1979 accident at the Three Mile Island nuclear facility in Harrisburg, Pennsylvania, which resulted in payments of approximately \$70 million. According to the Nuclear Energy Institute (NEI), since the Price-Anderson Act was enacted in 1957, the nuclear insurance pools have paid out more than \$200 million in claims.

The Nuclear Regulatory Commission (NRC) relies on American Nuclear Insurers to send NRC the annual endorsements documenting proof of insurance after the licensees have paid their insurance premiums. Licensees must also show proof of the secondary insurance layer, excess of \$300 million, to NRC. Typically, each licensee signs a bond for payment of retrospective premiums as proof of the secondary insurance and furnishes NRC with a certified copy.

In the event that claims exhaust the primary coverage, American Nuclear Insurers would collect the retrospective premiums. If a licensee did not pay its share of these retrospective premiums, American Nuclear Insurers would, under its agreement with the licensees, pay up to \$30 million of the premiums in one year and attempt to collect this amount later from the licensees.

Nuclear Terrorism

The terrorist attack of September 11, 2001, and the anthrax attacks later that same year in the U.S. have underscored the potential for attacks of biological, chemical and nuclear terrorism.

Experts have developed a variety of different threat scenarios dealing with nuclear terrorism. For example, Swiss Re has identified three basic scenarios regarding the use of nuclear material for terrorist purposes.⁵ These are:

- The dispersal of nuclear material using conventional chemical explosives – so-called dirty bombs – or spraying devices, such as agricultural crop duster aircraft. The term radiological dispersal device (RDD) is used in this context.
- Attack or sabotage on a nuclear power plant or other nuclear installations.

⁵ Nuclear Risks in Property Insurance and Limitations of Insurability, Focus Report, Swiss Re, 2003.

- The use of a nuclear bomb either from a military source or “home made,” i.e., a so-called improvised nuclear device (IND).

Swiss Re reports that one issue these scenarios have in common is their long-term radioactive contamination and chemical pollution over extensive areas. It points out that cleanup or decontamination to recover the contaminated area after such an incident is extremely time consuming and expensive. Of the three, Swiss Re notes that only the nuclear bomb has the potential for real mass destruction due to the vast amount of energy released by a nuclear explosion, but it believes that this scenario is the least likely of the three.

An April 2004 report by Towers Perrin, includes the following example of a catastrophic workers compensation nuclear terrorism loss:^{6,7}

- **Nuclear Power Plant Sabotage:** Indian Point Nuclear Power plant, 25 miles north of Manhattan, is sabotaged by terrorists resulting in the release of a large amount of radioactive material. Facilitated by a southern-blowing wind, radioactive material is dispersed throughout the area and into New York City. Of the estimated 350,000 people directly affected, most would require only minor medical treatment. Few deaths, but thousands could suffer severe and permanent effects. Workers compensation insurance losses could total up to \$15.4 billion.

There are long-standing restrictions regarding war coverage and nuclear, biological, chemical and radiological (NBCR) events in both personal and commercial insurance policies. War-risk exclusions reflect the realization that damage from acts of war is fundamentally uninsurable. No formal declaration of war by Congress is required for the war risk exclusion to apply.

Nuclear, biological, chemical and radiological attacks are another example of catastrophic events that are fundamentally uninsurable due to the nature of the risk. However, as mentioned earlier, the Price Anderson Act does not specifically refer to or

⁶ Workers Compensation Terrorism Reinsurance Pool Feasibility Study, Tillinghast and Reinsurance Businesses of Towers Perrin, April 2004.

⁷ Workers compensation insurance provides for the cost of medical care and rehabilitation for injured workers, as well as for lost wages and death benefits for the dependents of persons killed in work-related accidents. Workers compensation systems vary from state to state.

exclude acts of terrorism. The intent of the American Nuclear Insurers (ANI) policy is to cover terrorism risk with the backing of federal reinsurance provided under the Terrorism Risk Insurance Act (TRIA).⁸ While ANI does not exclude terrorism at this time, in the event TRIA is not renewed, its policies would be subject to one shared industry aggregate limit of \$300 million for liability arising out of terrorist acts.

The Energy Policy Act of 2005 also incorporated strengthened security measures at nuclear facilities, including improved federal oversight of plant security and the expansion of federal statutes for sabotage of nuclear facilities. These measures reflect the evolving situation post-September 11.

⁸ The Terrorism Risk Insurance Act (TRIA) was signed into law in November 2002 to provide a temporary federal shared loss program or “backstop” for incurred losses resulting from certain acts of terrorism. Under the Act, private insurers and the federal government share the risk of future losses from terrorism for a three-year period expiring December 31, 2005.

6. FAIR Plans

Overview

Fair Access to Insurance Requirements (FAIR) Plans are designed to make basic property insurance available to property owners who are otherwise unable to obtain insurance from the standard market because of their exposure to greater than average losses. The concept of FAIR Plans was established following the passage by Congress of the Housing and Urban Development Act of 1968. This legislation made federal riot reinsurance available to those states that instituted such property insurance pools.

Any insurance applicant who is considered “high risk” may have difficulty obtaining coverage from the standard market. Residual, shared or involuntary market programs make basic coverage more readily available. Today, property insurance from the residual market is provided by FAIR Plans, Beach and Windstorm Plans, and a state run insurance company in Florida, Citizens Property Insurance Company (CPIC). FAIR Plans provide property insurance in certain geographical areas, Beach and Windstorm Plans provide property insurance in coastal areas, and CPIC provides property insurance throughout the state of Florida. In 2004, Louisiana followed Florida’s lead and combined its Beach and Windstorm and FAIR plans into a single entity, the Louisiana Citizens Property Insurance Corporation.

As of December 2004, a total of 32 states and the District of Columbia had FAIR Plans. In most states where FAIR Plans are in operation, they are mandatory. Until recently, most FAIR Plans provided protection only for “perils” outlined in the federal statute: fire, extended coverage (which includes windstorm and hail damage) and vandalism and malicious mischief. However, about half the Plans now offer some form of homeowners insurance policy, which includes liability coverage, either an all-risk policy (HO-3) or a policy with more restricted coverage. The California FAIR Plan also covers areas prone to brush fires.

According to Property Insurance Plans Service Office (PIPSO), in 2004 the nation’s FAIR plans had some 1.9 million habitational policies and 138,163 commercial policies in force for a total exposure to loss of \$400.4 billion (see Tables 1 & 2). The Plans are experiencing rapid growth. Between 2002 and 2004, the number of habitational policies

in force increased by 36 percent and the number of commercial policies by 69 percent. Total exposure to loss nearly doubled from \$269.6 billion in 2002 to \$400.4 billion in 2004.

Table 1.

INSURANCE PROVIDED BY FAIR PLANS, 1997-2004

Year	Habitational policies	Commercial policies	Exposure (1) (\$000)
1997	1,035,941	57,932	\$124,410,722
1998	1,466,626	52,173	169,994,265
1999	1,068,525	44,893	140,281,262
2000	919,703	38,868	113,333,445
2001	912,829	36,748	143,459,479
2002 (2)	1,422,990	81,887	269,566,059
2003 (2)	1,510,665	65,532	345,909,146
2004 (2)	1,907,337	138,163	400,413,034

(1) Exposure is the estimate of the aggregate value of all insurance in force in all FAIR Plans in all lines (except liability, where applicable, and crime) for 12 months ending September through December.

(2) Includes Florida's Citizens Property Insurance Corporation, which includes FAIR and Beach Plans, see next chart.

Source: Property Insurance Plans Service Office (PIPSO).

Table 2.

INSURANCE PROVIDED BY FAIR PLANS BY STATE, 2004 (1)

State	Habitational policies	Commercial policies	Exposure (2) (\$000)	State	Habitational policies	Commercial policies	Exposure (2) (\$000)
California	195,084	14,372	\$44,971,851	Missouri	10,302	639	\$484,165
Connecticut	4,771	356	675,542	New Jersey	51,661	2,069	6,065,014
Delaware	3,457	154	218,044	New Mexico	12,579	489	654,556
Florida (CPIC) (3)	651,505	96,600	206,661,503	New York (5)	66,025	9,276	11,148,869
Georgia (4)	30,518	1,028	2,610,404	Ohio	76,284	1,907	14,711,595
Illinois	15,318	351	1,126,547	Oregon	5,487	266	424,494
Indiana	6,048	210	526,669	Pennsylvania	44,706	3,046	2,228,806
Iowa	1,583	74	119,265	Rhode Island	18,625	198	802,452
Kansas	6,868	257	290,214	Texas	182,124	NA	22,771,896
Kentucky	14,178	1,126	150,500	Virginia	35,188	950	3,636,751
Louisiana	194,864	640	22,738,245	Washington	125	68	44,444
Massachusetts	154,438	1,202	39,162,807	West Virginia	1,568	119	47,541
Michigan	103,895	2,408	15,350,703	Wisconsin	7,172	264	NA
Minnesota	12,964	94	2,790,157	Total	1,907,337	138,163	\$400,413,034

(1) Does not include Arkansas, Washington DC, Hawaii, Maryland, Mississippi and North Carolina which have FAIR plans but do not submit data to PIPSO.

(2) Exposure is the estimate of the aggregate value of all insurance in force in each state's FAIR Plan in all lines (except liability, where applicable, and crime) for 12 months ending September through December.

(3) Citizens Property Insurance Corporation, which combined the FAIR and Beach Plans.

(4) Includes a wind and hail option for certain coastal communities.

(5) Includes wind and hail coverage for any dwelling including those in coastal communities.

NA= Data not available.

Source: Property Insurance Plans Service Office (PIPSO).

A January 2005 report on residual market property plans citing PIPSO data and published by the Property Casualty Insurers Association of America (PCI) shows that residual market premium volume as a percentage of the total property insurance market rose from 1.3 percent in 1999 to 1.9 percent in 2003.⁹ Florida had the largest share of the residual market in 2003 at 14.3 percent, followed by Louisiana at 4.2 percent, Massachusetts (3.3 percent), Michigan (2.3 percent) and Rhode Island (2.1 percent).

In the past there was a clear delineation between coastal and urban plans with coastal properties insured under Beach and Windstorm Plans, and urban properties under FAIR Plans. Increasingly these distinctions are blurring. FAIR Plans are acting as an insurer of last resort for residents who live in shoreline communities in states that do not have a Beach and Windstorm Plan, such as New York State. Beach and Windstorm Plans in some states are being merged with FAIR Plans or joint underwriting associations as in Florida and Louisiana, or are administering new FAIR Plans as in Texas. As a result, it is difficult to compare the number of properties insured under any Plan with numbers from earlier years.

The rapid growth in the FAIR Plans is due in large part to these mergers, and the increase in coastal properties in such states as New York and Massachusetts, but also by more stringent underwriting standards on the part of insurers in the voluntary market. A 2004 report by the National Oceanic and Atmospheric Administration (NOAA) found that in 2003, 53 percent of the nation's population -- 153 million people -- lived in coastal counties (including those that abut the Great Lakes. Between 1980 and 2003 the population of coastal counties grew by 33 million people, or 28 percent. The state of Florida grew by 75 percent and further growth is expected.

Exposure to windstorms and high property values combine to make Florida the state with the highest potential for losses and New York's Long Island the second highest. A study by AIR Worldwide puts the value of insured coastal property in hurricane prone states -- states bordering on the Atlantic Ocean and Gulf of Mexico -- at \$6.86 trillion. The value of residential and commercial coastal property in Florida alone is \$1.94 trillion

⁹ Property Casualty Insurers Association of America, *Residual Markets: Property Insurance 2003 Experience*, January 2005.

(Exhibit 13). This represents 79 percent of the state's total insured property values. In New York it is \$1.90 trillion, representing 61 percent of the total. However, the value of New York's commercial coastal property at \$1.3 trillion is higher than that of any other state on the list. Other states where insured coastal property values exceed 50 percent of the state's total are Connecticut, Maine and Massachusetts *(Exhibit 14)*.

How they Operate

FAIR Plans and Beach and Windstorm Plans are run by state insurance regulators in conjunction with private insurers and basically operate as pools (an association of organizations or individuals that combine resources to economically finance recovery from accidental losses). The pool acts as a single insuring entity, and premiums, losses and expenses are shared among pool members (i.e. insurers) in agreed-upon amounts.

Each state has enacted its own legislation in response to local market needs, so there is considerable variation in the coverages provided and the methods of operation among the 32 jurisdictions with FAIR Plans. The state government does not provide financial support for these plans. In addition, each state has a guaranty fund in place to pay the claims of failed insurers. Guaranty funds are supported by assessments on solvent insurers doing business in the state. Some FAIR plans employ their own staff to handle underwriting, processing and even claim adjustment, while others contract with specific insurers to act as servicing carriers. These insurers, for a percentage of premium, perform underwriting, policyholder service and claim settlement functions.

In all states except California, residents in any part of the state can apply for insurance through the FAIR Plan as long as they meet Plan criteria. In California, applicants for fire coverage must live in areas specifically designated by the insurance commissioner. These include not only urban communities and some entire counties but also certain areas that are prone to brush fires.

A property owner unable to obtain property insurance in the voluntary insurance market may apply to the state's FAIR Plan through a licensed agent or broker. To be eligible for FAIR Plan coverage, the insured must have the property inspected. Only property that meets the FAIR plan's inspection criteria will be insured in the program. Owners of properties failing to meet basic levels of safety, typically older houses and

commercial establishments, may be required to make improvements as a condition for obtaining insurance. Such improvements may include upgrading the electrical wiring, heating and plumbing and ensuring that the roof is sound, for example. Where deficiencies are not remedied, FAIR Plan administrators may deny insurance as long as hazards are unrelated to the neighborhood location or to hazardous environmental conditions beyond the applicant's control, such as being located adjacent to a fireworks factory.

Under most FAIR Plans, the following types of exposures are considered uninsurable:

- Vacant property
- Property poorly maintained
- Property subject to unacceptable physical hazards, such as storage of flammable materials
- Property in violation of law or public policy, such as a “condemned building” (one that is considered unfit for human habitation)
- In some states, property not built in accordance with building and safety codes

According to PIPSO, excluding Florida, California had the greatest number and percentage share of FAIR Plan policies in 2004, followed by Louisiana, Texas and Massachusetts. In all five years between 1999 and 2003, FAIR Plans experienced an underwriting loss.

Claims-Paying Capacity

As discussed earlier, FAIR Plans vary by state. In nearly all Plans, all licensed property insurers are required to participate in Plan losses in proportion to their share of property insurance premiums in the state. Residual market programs are rarely self-sufficient. Where the rates charged to high-risk policyholders are too low to support the program's operation, insurers generally are assessed to make up the difference. Losses are then passed onto policyholders in the plan in the form of higher rates and in some states to policyholders in the voluntary market as well.

FAIR Plans, like many other residual market programs, historically have lost money over the long term, although in a specific year they may be profitable. According to the PCI, of the 27 FAIR plans reporting data, 15 FAIR Plans reported an operating loss in 2003, and 12 had operating gains. Among the states with operating losses, the total loss was \$82 million, of which 35 percent or \$28 million came from the Louisiana Plan (Florida data is reported separately). The Texas FAIR Plan accounted for 19 percent of the total operating losses while the Massachusetts FAIR Plan accounted for 17 percent. In total these three states accounted for 70 percent of the FAIR Plan operating losses. The total operating gain among the 12 FAIR plans with operating gains amounted to \$36 million in 2003, of which 56 percent or \$20 million came from California. New York had an operating gain of \$9 million, accounting for 24 percent of the total operating gain. These two states accounted for 80 percent of the total operating gain.

Some states prohibit the consideration of residual market results when setting rates in the voluntary market. A number of states allow insurers to recoup losses through rate surcharges, which are itemized on a policyholder's premium bill.

Beach and Windstorm Insurance Plans

Beach and Windstorm Insurance Plans are operated by property insurers in states along the Atlantic and Gulf Coasts to ensure that insurance is available for both residential and commercial properties against damage from hurricanes and other windstorms. In 2001 there were seven pools, but Florida's windstorm pool merged with the joint underwriting association to create CPIC. Louisiana also merged its FAIR Plan with its coastal pool in 2004, to form the Louisiana Citizens Property Insurance Corporation. Hurricane Katrina produced severe losses for this plan when the Category 4 storm struck the state in late August 2005.

The Plans are mandatory in all of these states with the exception of Alabama. (In addition, hail and windstorm coverage for homes in coastal counties is available through a FAIR Plan in Georgia and a Windstorm Market Assistance Program (WindMap) in New Jersey and through the New York Property Insurance Underwriting Association.) Windstorm Plans in Mississippi, South Carolina and Texas offer only wind and hail coverage. The Texas Windstorm Insurance Association (TWIA) offers wind and hail

coverage in 14 coastal counties. Effective June 1, 2005, the TWIA had some \$1.3 billion cash on hand, including a layer of reinsurance. Under the Plan, companies will be assessed the first \$100 million of losses. Losses in excess of \$1.3 billion, are also paid through company assessments, but recoverable through premium tax credits. Hurricane Rita produced some losses for this plan when the Category 3 storm struck the state in September 2005. Plans in Alabama and North Carolina offer coverage for fire as well. Established between 1969 and 1971, Beach and Windstorm Plans operate in a manner similar to FAIR Plans, except that properties must be located in a designated area to be eligible for insurance under the Plans.

To encourage insurers to offer coverage on a voluntary basis to properties in Beach and Windstorm Plan areas, these Plans allow for a company to "buy out" of the Plan by providing insurance in the pool area equal to its share of the voluntary market. In Texas, however, buyouts are limited to 80 percent of a company's share in the Windstorm Plan market, so that some of the potential burden of insuring the least desirable risks is spread over all companies offering property insurance in the state.

Property owners who live in areas covered by Beach and Windstorm Plans may be insured for windstorm losses by the Plan or by an individual insurance company. If an insurer has accepted all the windstorm risk it is prepared to assume, an applicant for homeowners insurance may purchase a policy that excludes windstorm coverage from the homeowner's insurance company and pay a separate premium for windstorm coverage to the Plan. In the states whose Beach Plans offer fire coverage, a policyholder may purchase a basic fire policy from the Plan, or in some states a homeowner's policy that offers more comprehensive protection, including liability coverages. Where there is flood damage and the policyholder is insured through the federal government's National Flood Insurance Program, the policyholder's homeowners insurance broker or agent generally coordinates the claim settlement process. The value of coastal property in the states with Beach and Windstorm Plans has soared over the past decade, more than doubling between 1996 and 2001, alone. In 2004, Texas had the largest number and percentage share of Windstorm Plan policies (Florida data is reported separately) (see Table 3).

Table 3.

INSURANCE PROVIDED BY BEACH AND WINDSTORM PLANS, 2004 (1)

State	Habitational policies	Commercial policies	Exposure (2)	
			\$000	Percent change 2002-2003
Alabama	3,121	48	\$317,691	-3.50%
Louisiana	9,377	370	1,290,585	119
Mississippi	14,814	1,285	1,631,848	21.4
South Carolina	20,285	1,055	6,002,519	12.6
Texas	100,299	13,144	20,796,686	10.5
Total	147,896	15,902	\$30,039,329	13.7

(1) Does not include North Carolina which has a Beach Plan but does not submit data to PIPSO, and Florida's Beach Plan which is now combined with the FAIR Plan in the Citizens Property Insurance Corporation.

(2) Exposure is the estimate of the aggregate value of all insurance in force in each state's Beach and Windstorm Plan in all lines (except liability, where applicable, and crime) for 12 months ending September through December.

Source: Property Insurance Plans Service Office (PIPISO).

7. Florida's Citizens Property Insurance Corporation

Overview

Citizens Property Insurance Corporation (CPIC) was established in 2002 after the state passed legislation combining two separate high risk insurance pools, known as the Florida Windstorm Underwriting Association and the Florida Residential Property & Casualty Joint Underwriting Association.

Citizens is a state-regulated association providing property insurance where it is not available from the regular market. It has tax-exempt status and provides insurance to homeowners, commercial residential properties, commercial businesses in coastal high-risk areas and others who are unable to obtain coverage in the private insurance market.

CPIC offers a full-coverage policy in any part of Florida under certain circumstances and it also offers a high risk account, which covers wind-damage only. Any agent can place a risk with the Citizens personal lines account or the commercial lines for businesses that cannot insure their buildings under a private policy. Citizens' all-perils coverage is limited almost exclusively to Dade, Broward and Palm Beach counties and the Tampa Bay area.

CPIC's policy count/exposure is extremely high. At the end of August 2005, Citizens had more than 421,000 high risk policies in force (those that were in the old windstorm pool), about 350,796 personal/residential policies that would have been in the old joint underwriting pool and about 3,315 commercial/residential policies such as apartment buildings for a total exposure to loss of \$197.7 billion. Almost 21,000 of the properties it insures are worth more than \$1 million. Twenty are valued at between \$40 million and \$80.5 million. In South Florida, the riskiest part of the state, some 2,800 homes are worth more than \$1 million.

How It Operates

Citizens operates like an insurance company in terms of issuing policies and paying claims. The enabling legislation required that the CPIC reduce its probable maximum loss, the greatest loss it is expected to sustain, by 25 percent by February 2007 and by 50

percent in 2012. In order for this to be achieved, more policies have to be written in the voluntary insurance market.

In the wake of the 2004 hurricane season, Citizens again saw substantial growth.¹⁰ This was due not only to the continuing increase in population and property values along the state's coastline, but also insurers' avoidance of certain areas of the state. While 320,000 policies have been transferred to private companies so far in 2005, the addition of new policyholders continues to be greater. Some private insurers are not accepting new policyholders because they have reached their limit on the amount of risk they can assume in Florida. While there was discussion over whether to limit Citizens' exposure to million dollar properties, this provision was not included in the final version of the state's 2005 hurricane insurance bill.

Effective February 15, 2005, Citizens changed its take-out incentives plan. For many years, the state's residual market pool had depopulation plans that offered financial incentives of various kinds to insurers that took over policies issued by the pool. To be eligible for the take-out bonus now, homeowners insurers must provide coverage for five years instead of three and the bonus itself has been changed to a flat fee of \$100 per policy from a percentage of premium. In addition, the take-out company must assume a minimum of 10,000 policies over a period of 18 months and the homeowners policies it removes must provide windstorm coverage.

Claims-Paying Capacity

Citizens was hit hard by 2004's hurricane season, incurring about \$2.4 billion in losses from nearly 120,000 hurricane damage claims, of which \$1.8 billion came from its high risk, windstorm account. If Citizens losses exceed its claims-paying capacity in a single year, it is required by state law to impose a statewide assessment on every insurer based on their market share in the state. Following 2004's record hurricane damage claims, Citizens reported a deficit of \$516 million in its high risk, windstorm account.

In August 2005, Citizens' newly-appointed board approved an assessment to help cover the \$516 million shortfall. The Office of Insurance Regulation has 30 days to

¹⁰ Guy Carpenter, *The World Catastrophe Reinsurance Market*, 2005.

approve the amount. The assessment then has to be paid within 30 days by property insurers in the state based on 2004 market share criteria. By law, insurers may recoup the amount from policyholders as part of the homeowners insurance rate-making process in the state. The surcharge, which will amount to 6.8 percent, will be shown separately on premium notices when homeowners insurance policies come up for renewal. The one-time surcharge amounts to about \$100 per \$1,500 in premiums.

As discussed earlier, Citizens has tax-exempt status. In the event of a major disaster, it can finance loss payments by issuing tax-exempt bonds that carry low interest rates, reducing financing costs over the years by hundreds of millions of dollars.

Legislative Developments

Citizens was criticized for its response to claims generated by the four hurricanes in 2004. The Joint Select Committee on Hurricane Insurance, a task force directed to examine all aspects of the marketplace with particular emphasis on Citizens, recommended a complete examination of the way the organization operates, including its claims unit. Citizens has now added new claims-processing centers in Miami and other parts of central and north-west Florida.

Citizens has been granted two rate increases over the past 12 months. Under a provision in Florida's new hurricane insurance reform law setting up a pilot program on rates in high risk counties, rates in Monroe County are required to be actuarially sound. In other counties, by statute, Citizens' rates must be higher than the rates of the leading homeowners insurers so that it does not compete with the private market. The concept behind the higher rates is that policyholders will be encouraged to seek coverage elsewhere. But in Monroe and other high risk counties there is much less competition because they are so vulnerable to storm damage. Legislators therefore pushed for a program that would make coverage more affordable in such areas while keeping Citizens solvent. The new law also required the creation of a task force to make recommendations on long-term solutions to the state's hurricane insurance market.

In September 2005, Florida Governor Jeb Bush created the Task Force on Long-Term Solutions for Florida's Hurricane Insurance Market to study issues related to coastal development, among them the insurance market for coastal properties and whether

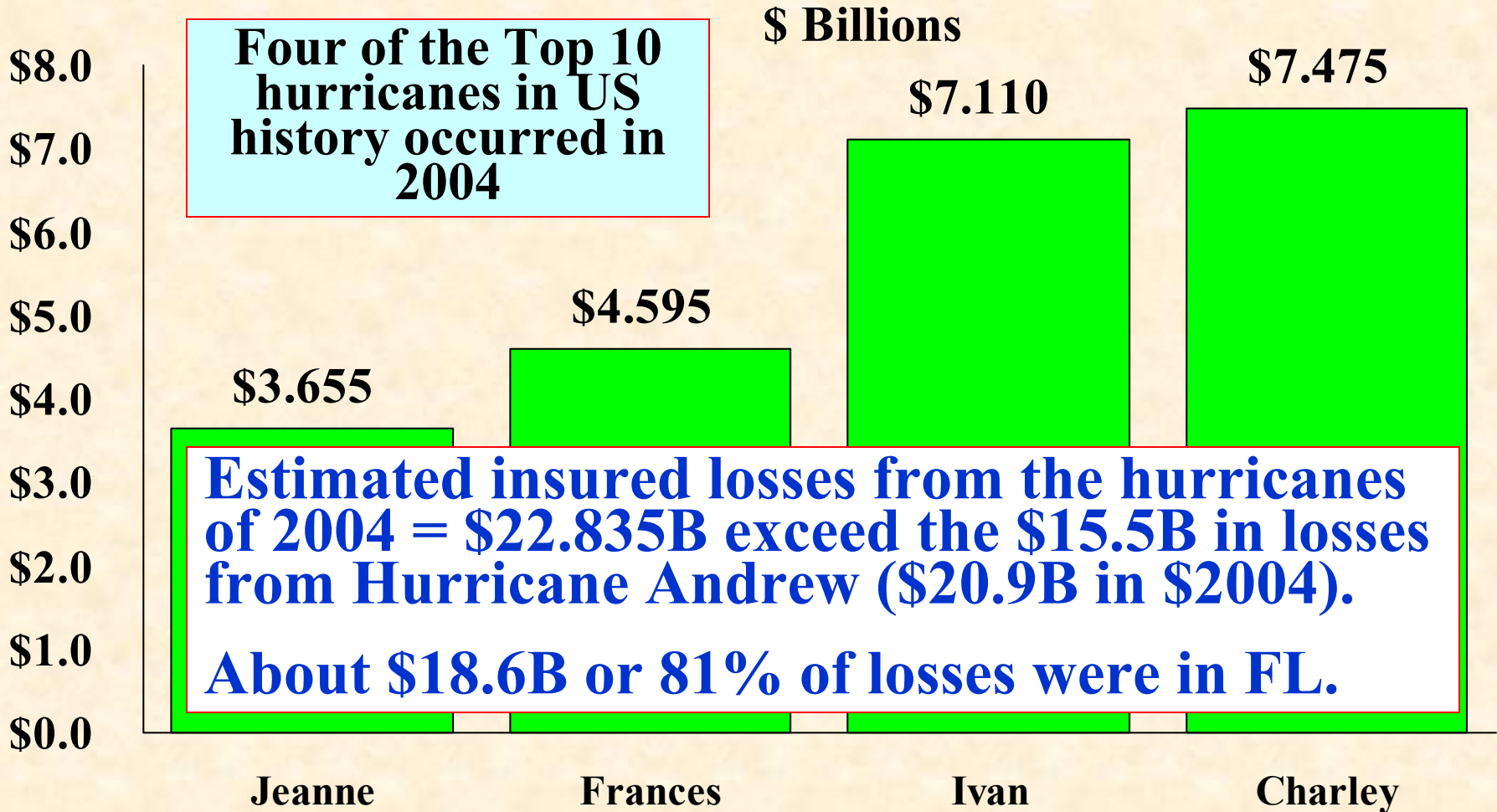
policyholders in other parts of the state should be subsidizing coastal residents through Citizens. The task force is due to report back to the Legislature in early 2006.

Following this report are 14 exhibits which illustrate a number of the public/private mechanisms discussed above.

For additional information, see:

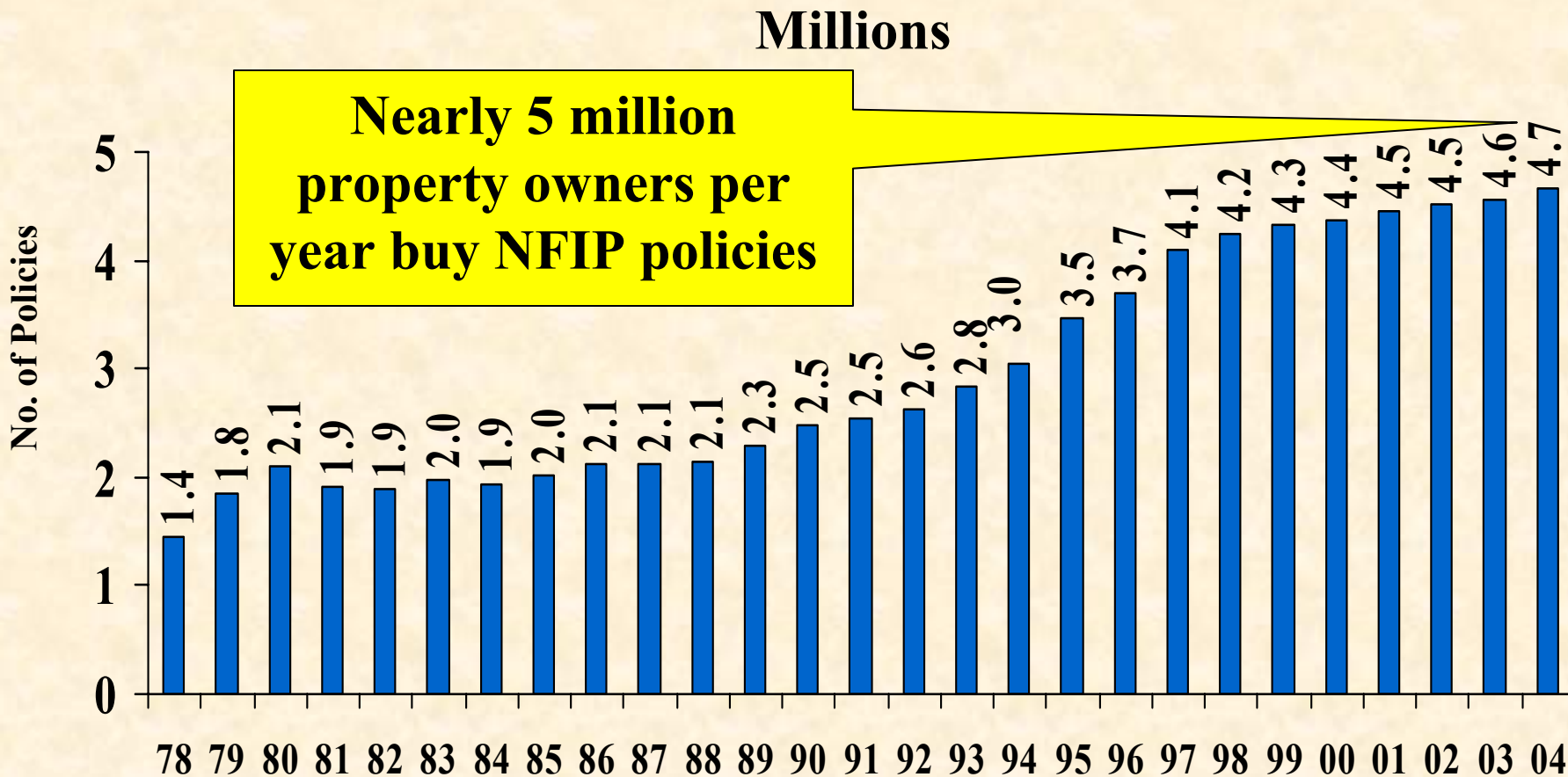
- Insurance Information Institute, www.iii.org
- Florida Hurricane Catastrophe Fund, www.sbafla.com/fhcf/
- National Flood Insurance Program, www.fema.gov/nfip/
- California Earthquake Authority, www.earthquakeauthority.com
- American Nuclear Insurers, www.nuclearinsurance.com
- Florida Citizens Property Insurance Corporation, www.citizensfla.com
- Louisiana Citizens Property Insurance Corporation, www.lacitizens.com
- Texas Windstorm Insurance Association, www.twia.org

Losses from Hurricanes of 2004



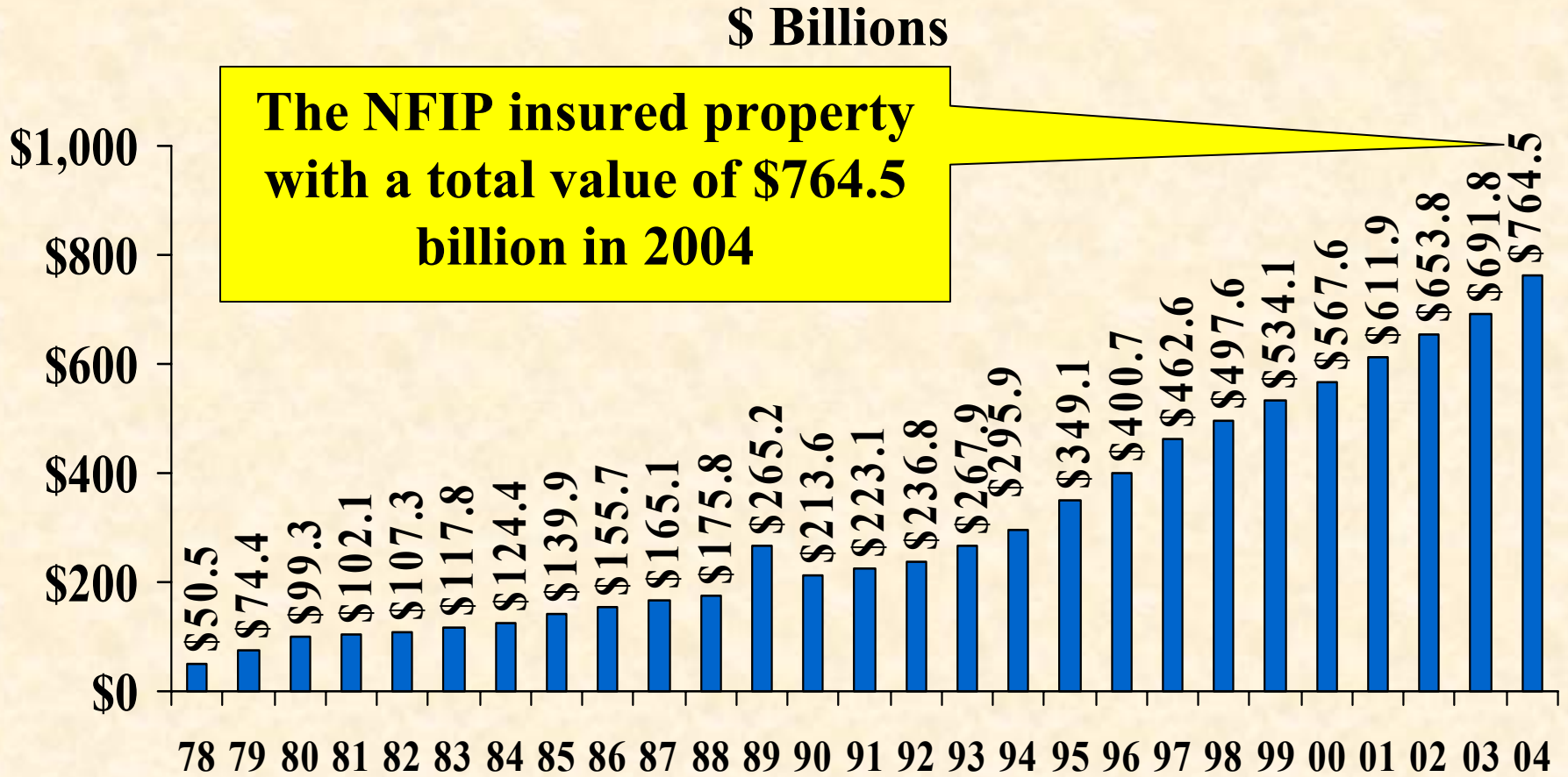


NFIP: Total Policies in Force by Calendar Year 1978-2004



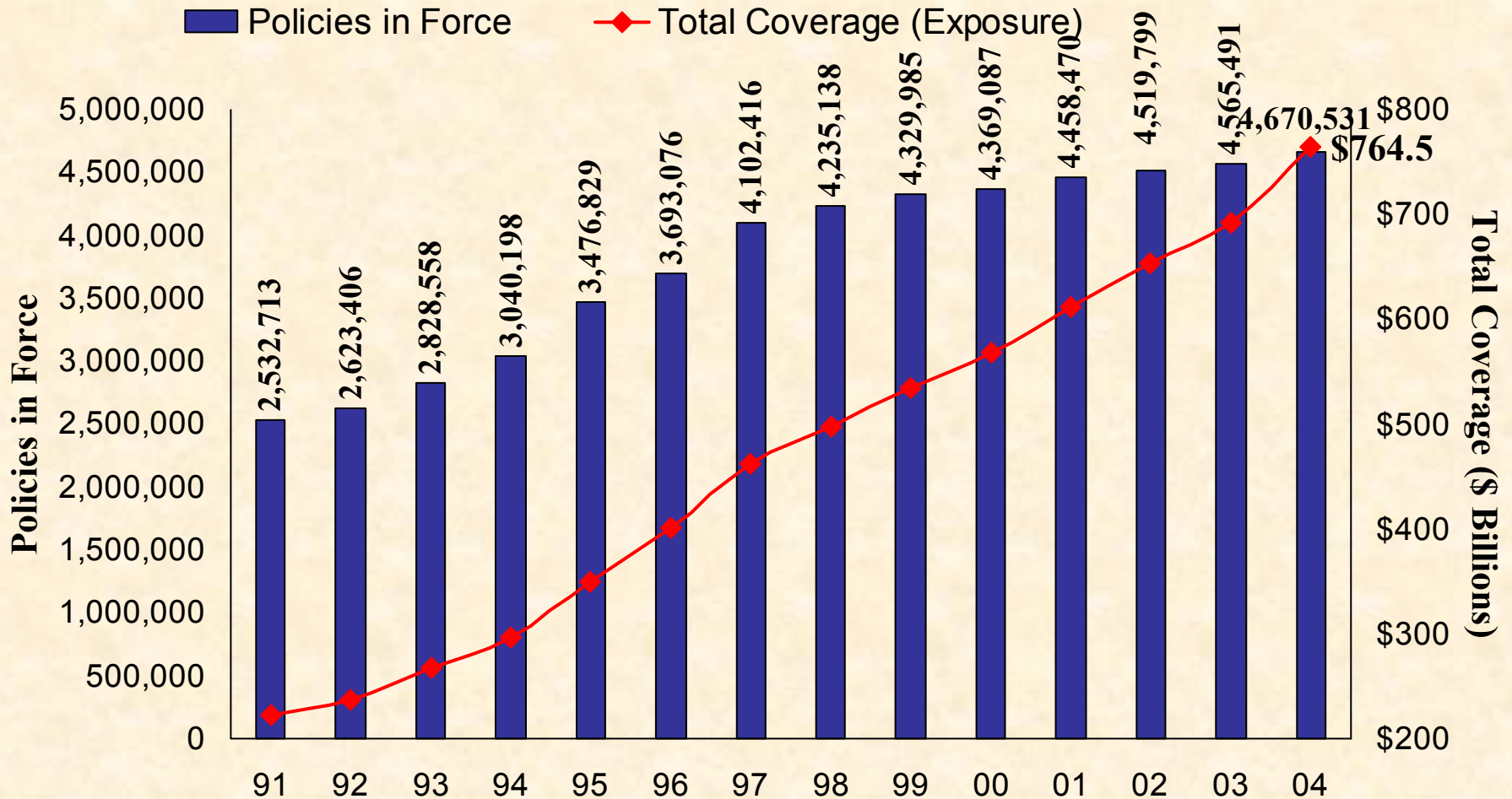


NFIP: Total Coverage by Calendar Year 1978-2004





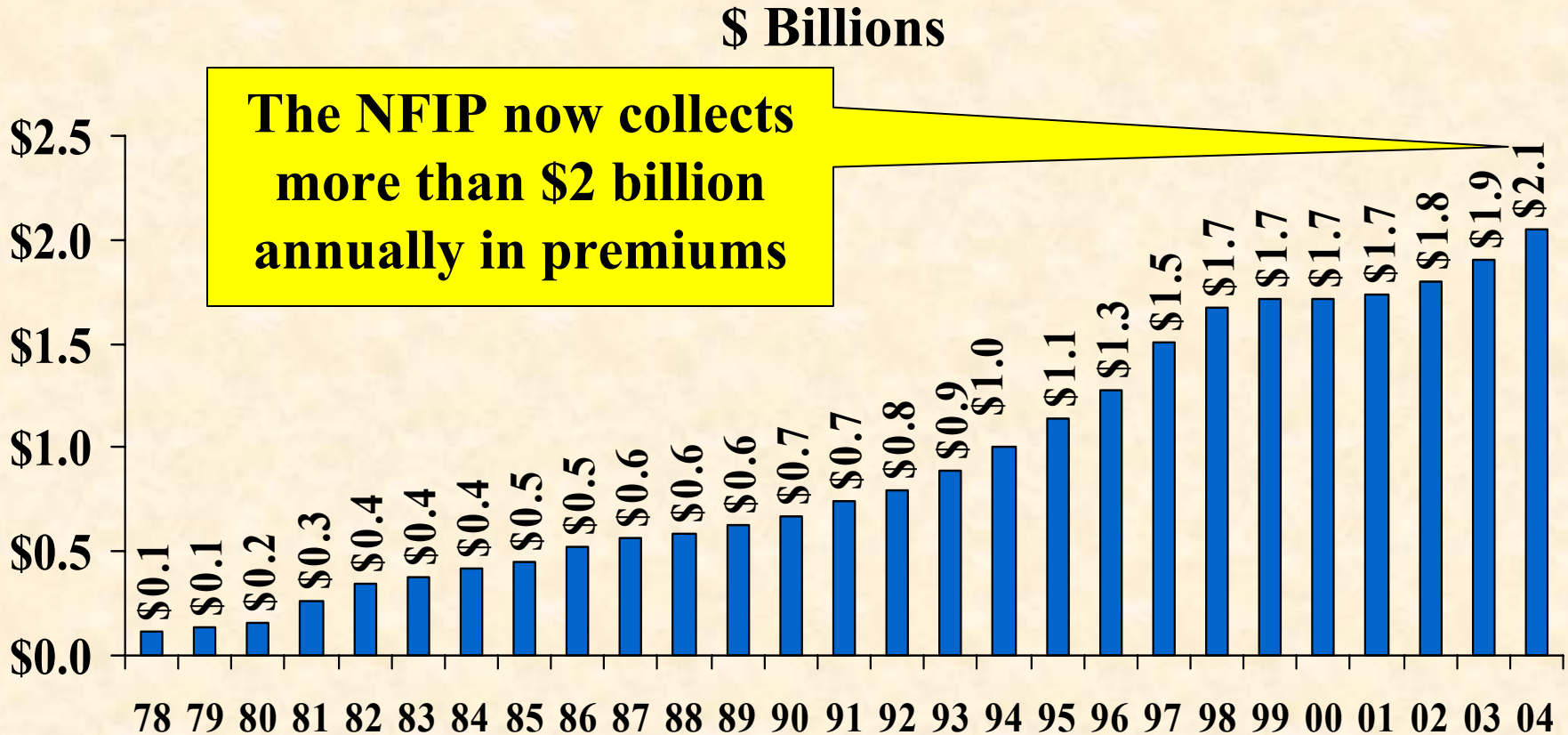
NFIP: Policies in Force and Total Coverage (Exposure)



Sources: FEMA, National Flood Insurance Program (NFIP)



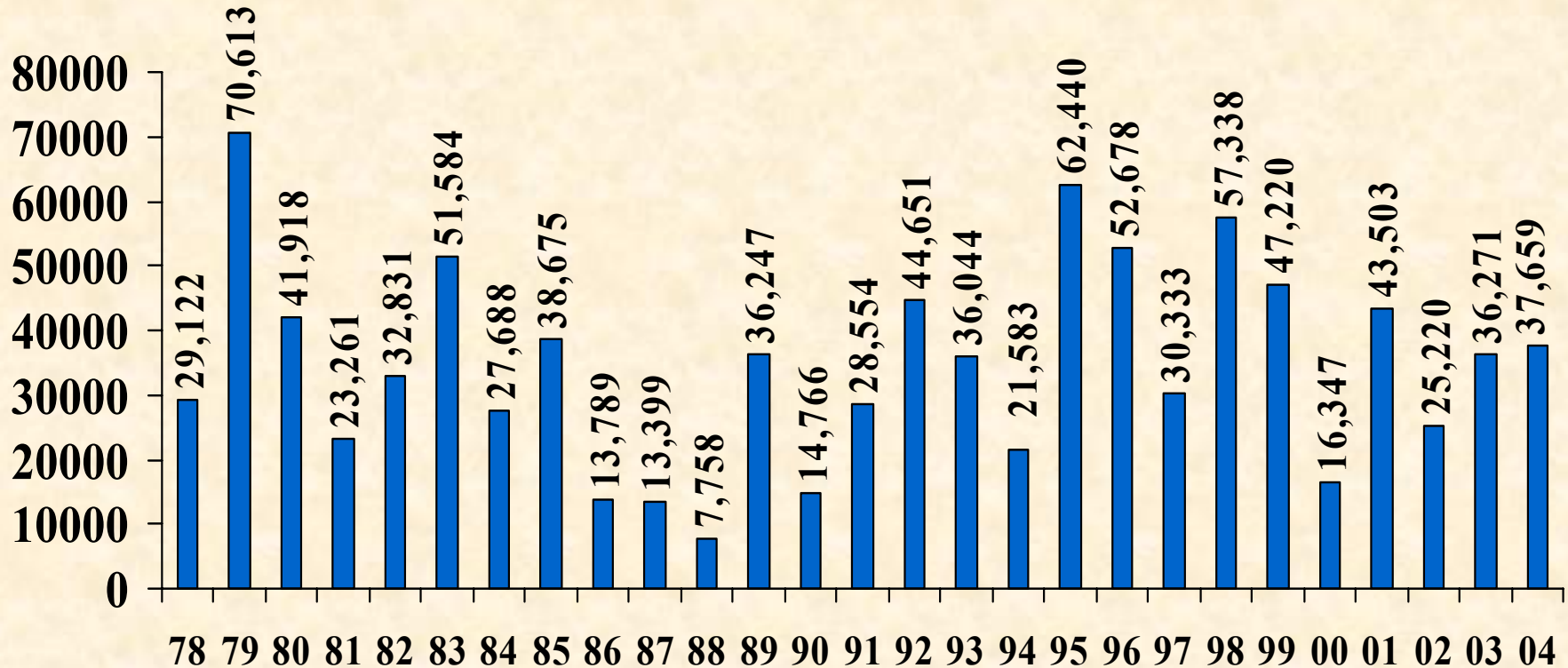
NFIP: Total Premium by Calendar Year 1978-2004





NFIP: No. of Losses Paid by Calendar Year 1978-2004

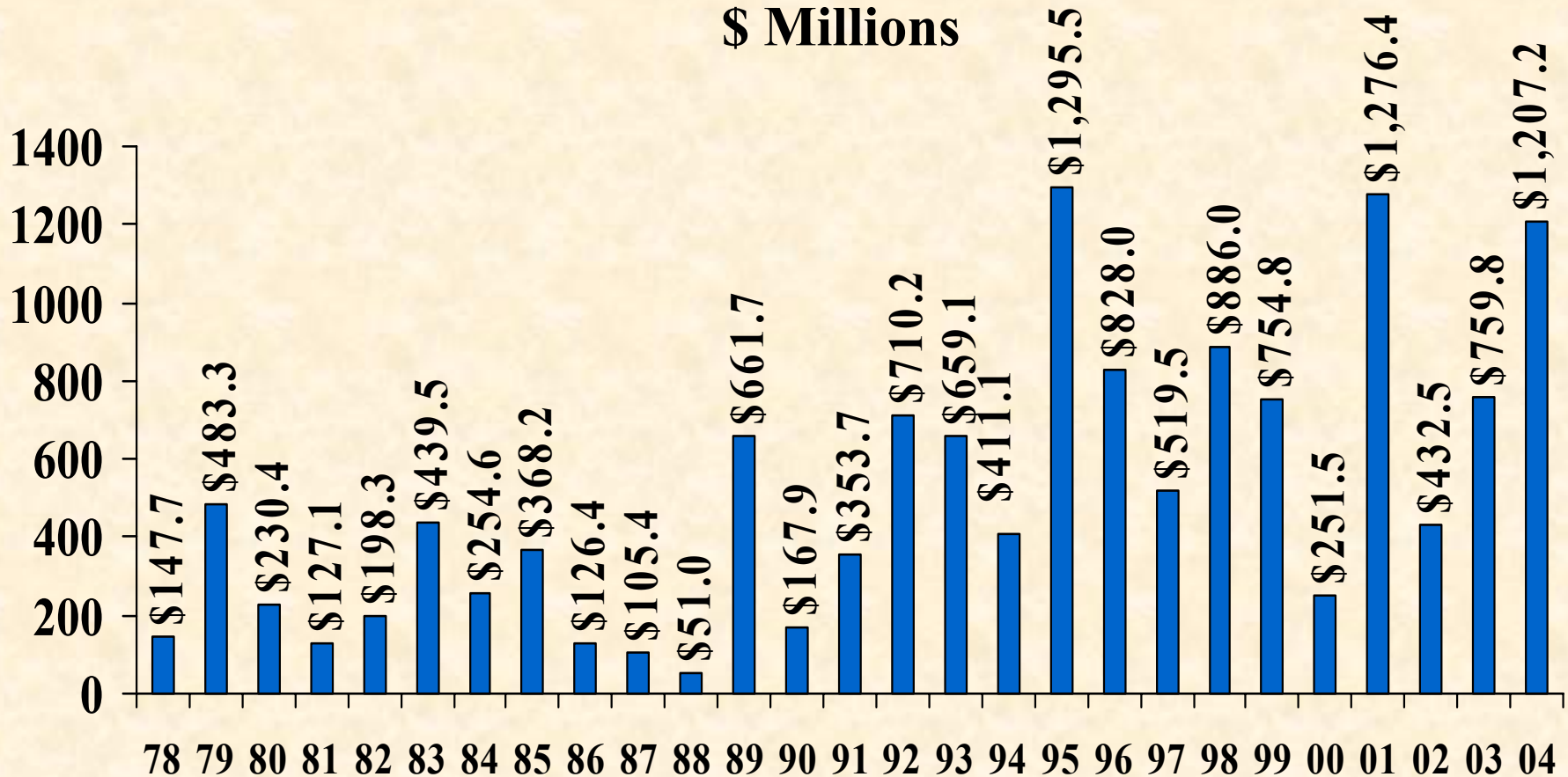
No. of Losses



Source: FEMA, National Flood Insurance Program (NFIP)



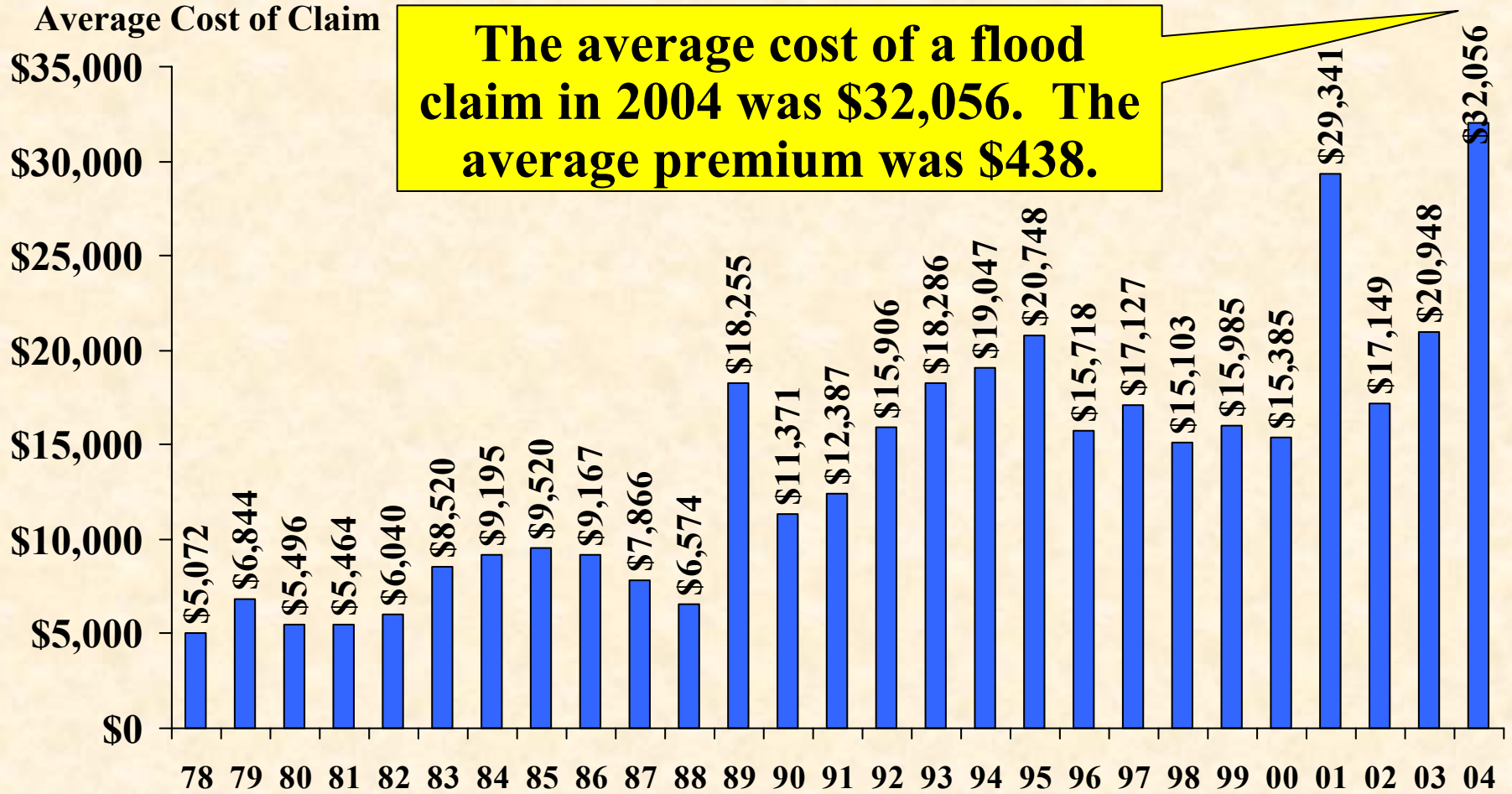
NFIP: Loss Dollars Paid by Calendar Year 1978-2004



Source: FEMA, National Flood Insurance Program (NFIP)



NFIP: Average Cost of Claim By Calendar Year 1978-2004

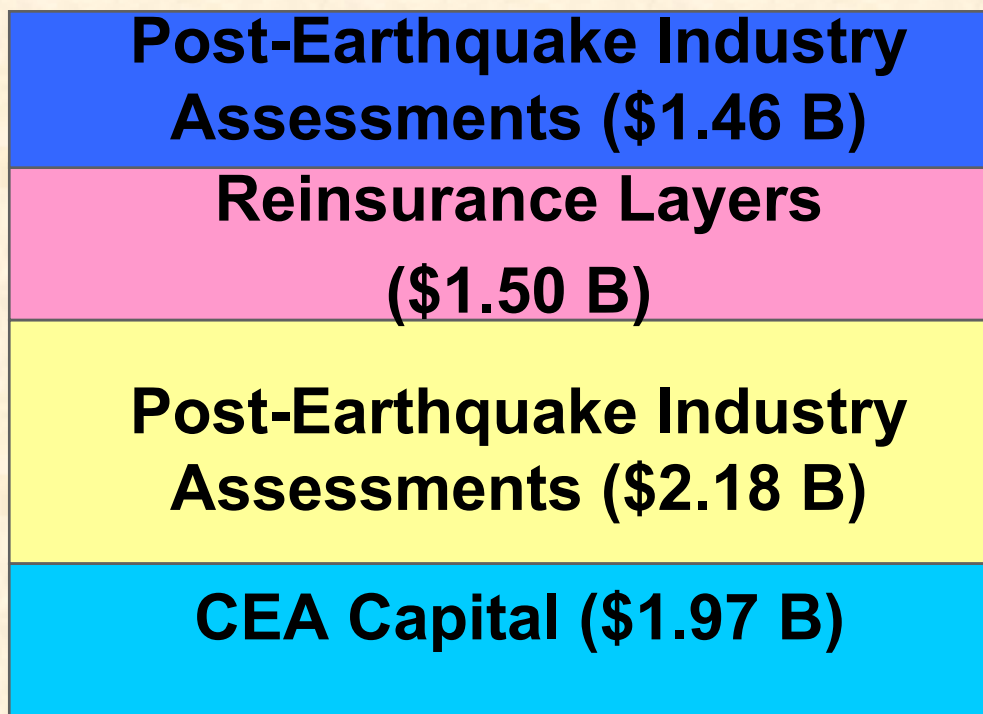


Source: FEMA, National Flood Insurance Program (NFIP)



California Earthquake Authority 2005 Capacity Schematic

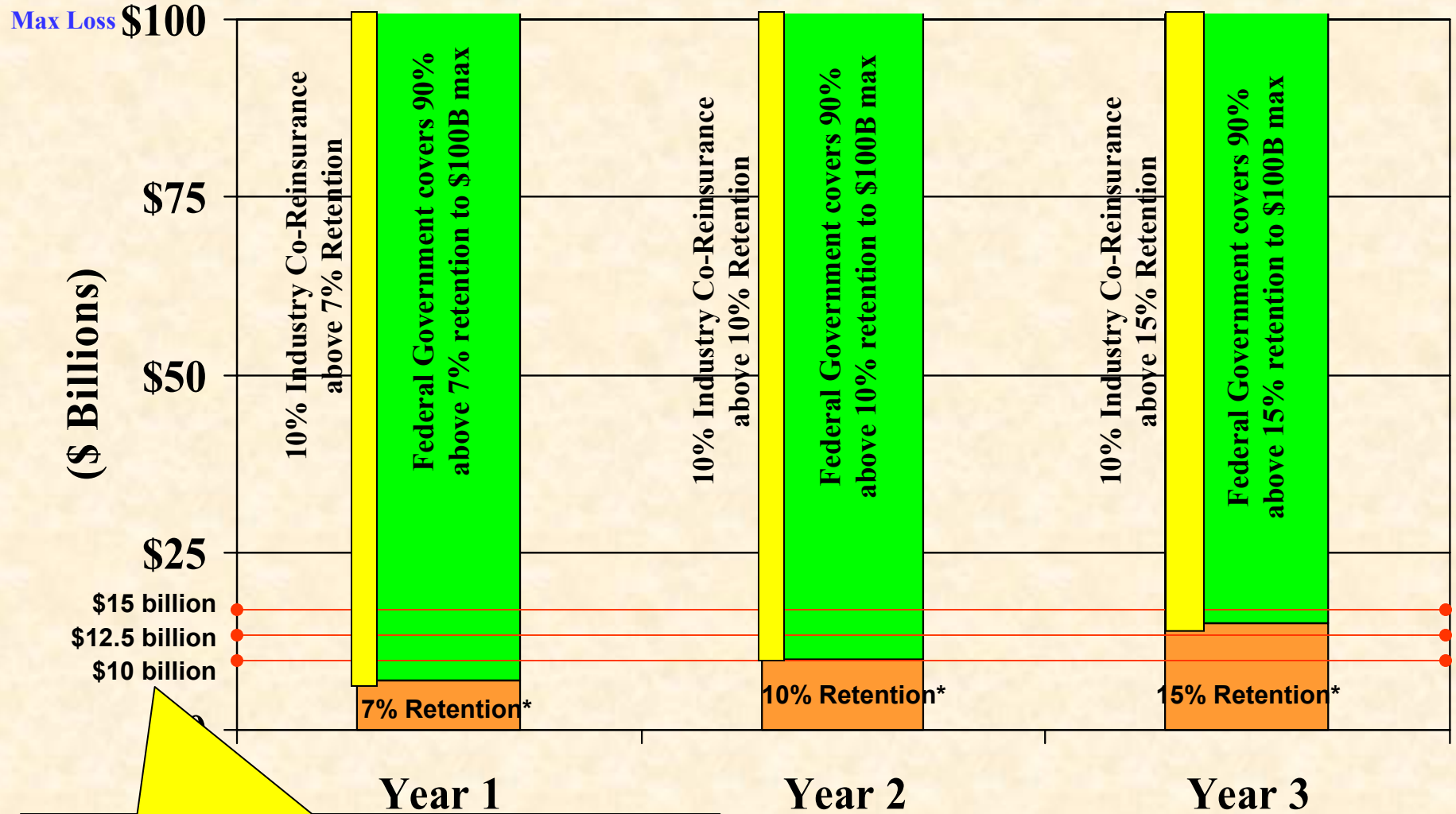
A privately-financed, publicly managed entity, the CEA is the world's largest provider of residential earthquake insurance, with current funding capacity of \$7.1 billion.



Total CEA Claims-Paying Capacity \$7.1 Billion



Structure of the Terrorism Risk Insurance Program



Government recoups payouts below \$10B in Year 1, \$12.5 Year 2, \$15B Year 3 with 3% max surcharge on policy premium

* Company retention based on direct premiums written.

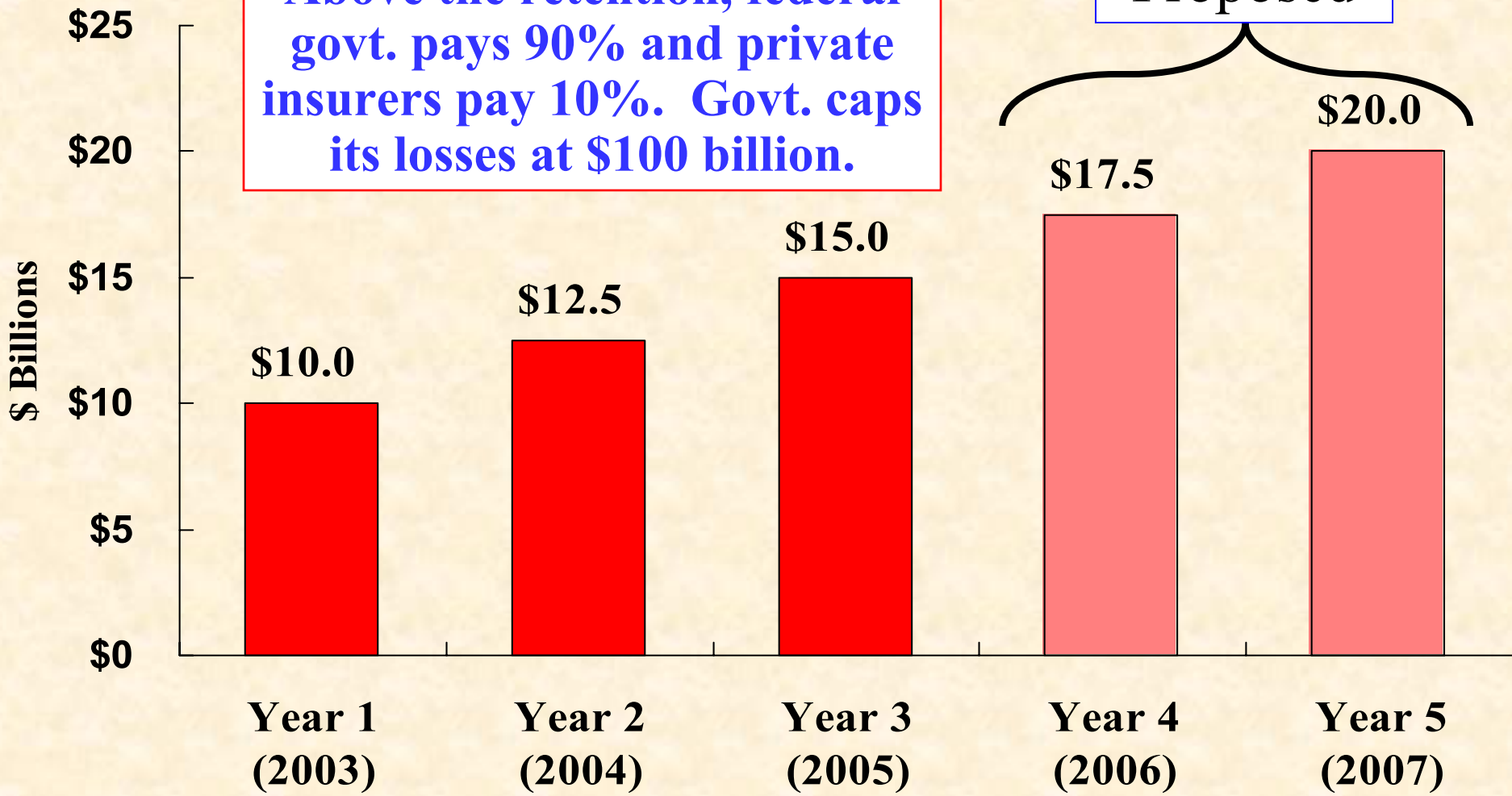
Source: U.S. Congress, Insurance Information Institute.



Insurance Industry Retention Under TRIA (\$ Billions)

Above the retention, federal govt. pays 90% and private insurers pay 10%. Govt. caps its losses at \$100 billion.

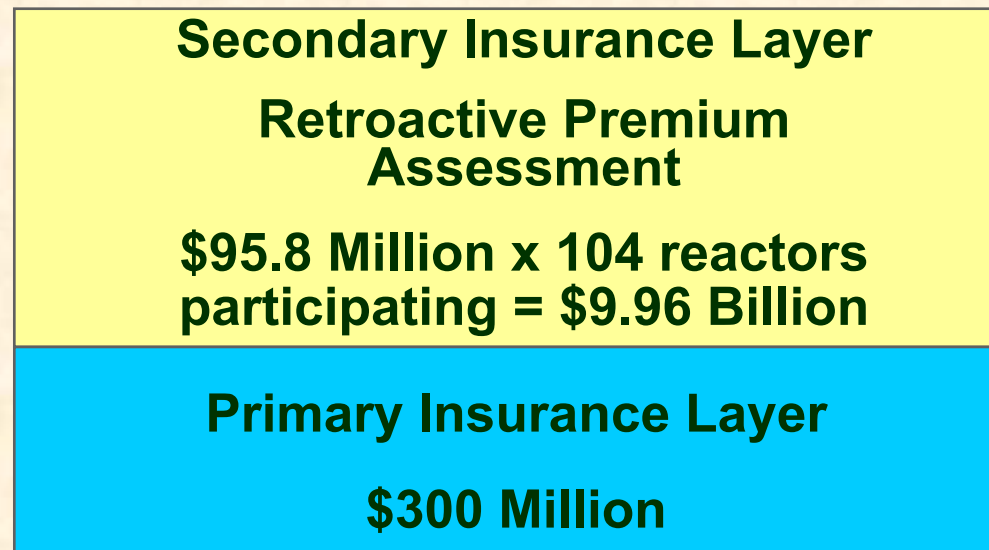
Proposed





Nuclear Insurance Under The Price-Anderson Act

Total Claims-Paying Capacity \$10.26 Billion



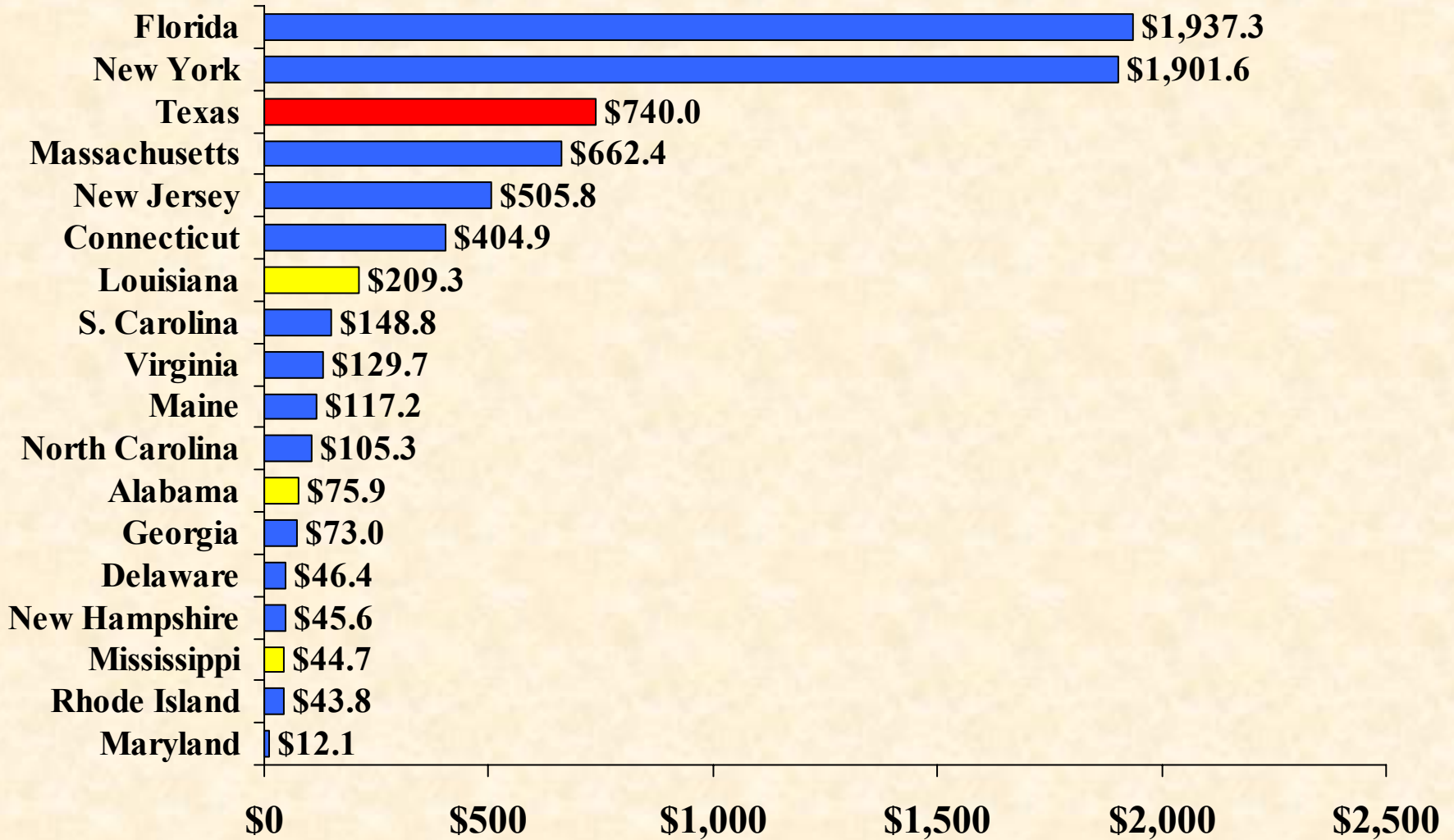
Note: Payable at a rate of \$15 million per year, per reactor, adjusted for inflation

Note: A five percent surcharge may be applied, if needed, for legal costs, bringing the maximum to \$100.6 million per reactor per accident

Not Drawn to scale.



Total Value of Insured Coastal Exposure (2004, \$ Billions)





Insured Coastal Exposure as a % of Statewide Insured Exposure (2004, \$ Billions)

