

The California Earthquake  
Authority

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**AFFORDABLE &  
AVAILABLE EARTHQUAKE  
INSURANCE: *Underscoring  
the Need for Risk-Transfer  
Diversification***

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## 1. California residential earthquake insurance, Northridge, and the CEA

*The CEA is California's not-for-profit, public/private partnership that offers residential earthquake insurance in a voluntary market, throughout California.*

If California were a country, it would be the eighth-largest economy in the world and the 35th most populous nation. Indeed, there are some 37 Million people living in over 9 Million households in the Golden State, which has two-thirds of the U.S.'s earthquake risk—and only about a million of those households have any earthquake insurance.

Residential earthquake insurance has been available in California for many years, but since the 1980s California law has required insurers that sell residential property insurance<sup>1</sup> to make what is commonly known as a “mandatory offer” of earthquake insurance.<sup>2</sup>

Simply put, as a condition to selling a policy of residential-property insurance to a consumer, the insurer must also offer the consumer an opportunity to buy earthquake insurance. The offer must state the proposed insurance limits, the deductible, and the estimated premium.<sup>3</sup>

Only two of the United States have mandatory offers of earthquake insurance for residential risks.<sup>4</sup>

There are no state-law mandates for commercial earthquake insurance (sometimes called a “difference in conditions” policy, a multi-peril form that covers conditions not included in a standard U.S. business policy). It is not uncommon, however, to find that lenders financing commercial construction or purchase in seismically risky areas may require some level of earthquake cover.

Under the residential mandatory-offer system, consumers don't have to buy earthquake insurance but they must be offered the opportunity to do so. Thus, earthquake insurance in California is historically a totally voluntary market — indeed residential quake coverage has never been

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<sup>1</sup> Usually called “homeowners insurance” in the United States.

<sup>2</sup> The CEA offers “residential” earthquake insurance — as defined in California's mandatory-offer law, that includes insurance for renters, condominium-unit owners, manufactured homes (mobilehomes), residential buildings of up to four units, and single-family dwellings. References to CEA “earthquake insurance” in this testimony do not refer to insurance for commercial structures or enterprises.

<sup>3</sup> If the insurer is offering a policy written by the CEA, an additional notice is required that explains certain features of the CEA's financing.

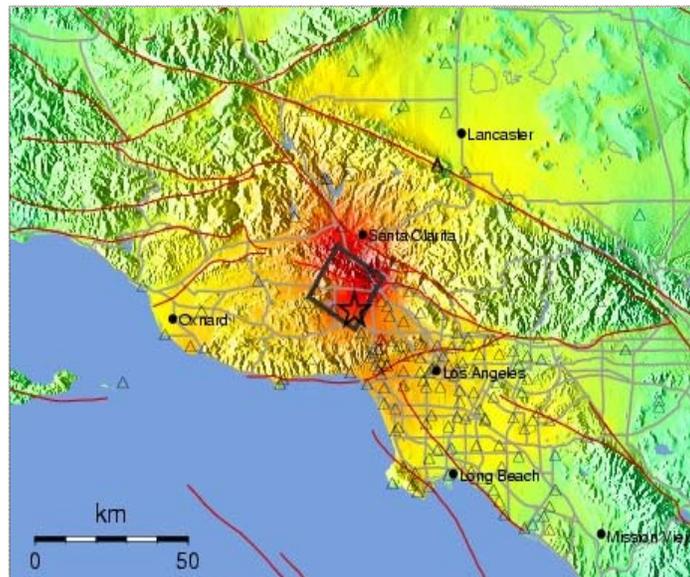
<sup>4</sup> The other state is Kentucky.

mandatory in California — and the only mandate is the insurers' offer, made at homeowners-policy inception and every two years thereafter.

Many observers believe insurers historically did not correctly price the residential earthquake coverage they sold, even under the mandatory-offer system, which led to “competitive” rating and too-low premiums collected for the earthquake coverage sold. This practice, and the entire California residential-earthquake-insurance market, changed dramatically in the wake of the 1994 Northridge earthquake.

**The Northridge event:** On January 17, 1994, at 4:31 a.m., a magnitude 6.7 earthquake struck California's San Fernando Valley, 20 miles northwest of downtown Los Angeles. While the strong shaking lasted only 20 seconds, the earthquake produced enormous ground acceleration, with devastating results: 33 lives were lost, 8,700 were injured, and residential insured losses exceeded \$12 billion, making it one of the costliest natural disasters in the nation's history.

As insurers assessed their huge Northridge losses, their representatives in Sacramento lobbied hard to repeal the mandatory-offer law — put another way, insurers strongly wanted to stay in the homeowners-insurance market, which was profitable and well understood, but most insurers thought that the earthquake-insurance risk was too high, threatening profits and (in extreme cases) company survival.



California policymakers were highly concerned that mandatory-offer repeal could quickly spell the end of earthquake insurance, so the

mandatory-offer law was retained to preserve availability of earthquake coverage.

Frustrated in their efforts to control their earthquake exposure, insurers responded by severely restricting sales, or simply refusing to sell, homeowners insurance in the state, and with those efforts eventually reaching some 94% of the market, their actions threatened to deprive Californians of household insurance altogether.

To respond to this residential-insurance market crisis, the Legislature in 1995 began considering the CEA framework, but the concepts were so new from any earlier approach in California to earthquake exposure, it imposed three tough conditions on CEA's becoming operational:

- Insurers representing 70% of the homeowners-insurance would have to commit to CEA participation — that participation level would bring the CEA at least \$700 Million in start-up capital;
- The Internal Revenue Service must declare the CEA exempt from federal income tax; and
- The CEA was obligated to obtain in reinsurance cover *twice* the level of initial insurer contributions — this \$1.4 Billion (or more) in initial reinsurance was to require a then-unprecedented reinsurance buy for a single entity writing a single risk.

All the benchmarks were duly met, and the CEA opened its doors and accepted its first risks on December 1, 1996. From that day forward, the CEA has served a statewide, voluntary residential-earthquake market that private insurers had largely abandoned, while making it possible—and profitable—for those very private insurers to insure the residential risks they prefer.

## **2. The CEA Today**

Today, the CEA is the largest monoline writer of earthquake insurance in the United States.

With over 800,000 policies in force, some \$600 Million in annual premium revenue, and almost \$10 Billion in overall claim-paying capacity, the CEA now writes 70% of all residential earthquake policies sold in California.

## **Management.**

The CEA is organized as a **public-private entity, unique** in the United States:

- **It has public management and oversight.**
  - Its Governing Board is composed of California’s Governor, Insurance Commissioner, and State Treasurer (as voting members), and the two leaders of the State Legislature (as non-voting members).
  - As points of interest, the Governor does not have direct executive authority over the CEA, the Insurance Commissioner is the CEA’s principal regulator, and the State Treasurer does not handle the CEA’s money—yet these public officials constitute the CEA’s voting board members.
- **It is privately financed.**
  - Because it is not an agency or department of government, it uses no tax money and its funds are not part of the state treasury.
  - It is wholly outside California’s state budget.
  - When it incurs debt, it does so without California’s “full faith and credit.”
  - Its revenue consists of its investment income and its premium receipts. (Five percent of the investment income is by law set aside for mitigation purposes.)
  - Private-insurer contributions formed the CEA’s seed capital, and all participating insurers retain a further responsibility to pay limited assessments in the event of large earthquakes. The insurer-assessment authority of the CEA diminishes over time, according to statutory formulae.

## **The CEA’s managers and employees.**

The CEA’s management structure is unique among California’s public entities. Headed by a chief executive officer, there is a cadre of other officers in operational capacities, a chief actuary, and a general counsel.

The most recent addition to the CEA’s executive suite is a chief mitigation officer, a position whose creation spotlights the CEA’s commitment to preventing losses and contributing significantly to California’s earthquake preparation.

CEA staff is a combination of employees subject to the state civil service law and other, non-employee staff hired for their particular expertise.

### **CEA Participating Insurers (June 2011)**

*ACA Insurance  
Allstate Insurance  
Company  
Armed Forces Ins.  
Exchange  
Automobile Club of  
Southern California  
California FAIR Plan  
Cal. State Auto Assoc  
NorCal  
Commerce West  
Encompass  
Farmers Insurance  
Group  
Foremost  
Golden Eagle  
Homesite  
Liberty Mutual  
Mercury  
Safeco  
State Farm Insurance  
USAA*

All CEA employees, whether hired through contract or through California's civil service procedures, are employees of the CEA governing board.

### **The role of CEA's participating insurance companies.**

The CEA Governing Board and staff manage the CEA's business activities, but the insurance companies that are the CEA's participating insurers play a central role in the conduct of the CEA's insurance business.

- The decision of an insurer to participate in the CEA is voluntary; over 20% of household insurance in California is written by insurers that are not CEA participants. If a member of an insurer group becomes a CEA participant, then by law all members of that group must become CEA participants. This legal provision prevents adverse risk selection—the CEA knows it is receiving all earthquake risks from a given insurer, not merely one class of risk.
- The first step of the CEA's business process is the offer of earthquake insurance that CEA participating insurers by law retain. That is, California's homeowners insurers still must make the offer of earthquake cover, but only those that under the CEA Act<sup>5</sup> have committed funds to, and participate in, the CEA are authorized to offer a CEA policy.
  - Insurers that have chosen to remain outside the CEA make a mandatory earthquake-insurance offer and underwrite the risk themselves. There is a limited but significant market for earthquake insurance offered by companies that (in California, at least) do not offer homeowners insurance.
  - Consumers who have no policy with a CEA participating insurer are not eligible to purchase a CEA earthquake policy.
- If an earthquake-insurance offer made by a CEA participant company is accepted by a consumer, the CEA participating insurer (using its own agents and sales channels) bills and accepts the premium and remits it to the CEA, less certain uniform, agreed service charges.

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<sup>5</sup> The CEA Act can be found at sections 10089.5 through 10089.54 of the California Insurance Code.

- The CEA participating insurer issues the CEA policy, but it is issued on uniform, required CEA policy forms, which are promulgated solely by the CEA when approved by the regulator.
- While the CEA policy is in effect (all CEA policies are written for a one-year term), the participating insurer has a continuing responsibility to service the policy, handling policy changes, re-rating, and other typical policy-servicing tasks.
- After an earthquake that CEA determines is likely to produce claims, the CEA declares an insured event and then advertises widely in quake-affected areas to direct CEA policyholders to report their earthquake-insurance claims directly to their CEA participating homeowners insurer.
  - Recognizing the CEA's expertise in all matters pertaining to earthquake insurance claims, California law requires all adjusters of earthquake-insurance claims in California to be trained and accredited under CEA claim-adjusting standards. This legal requirement applies to both CEA participating insurers and non-CEA insurers.
  - CEA participating insurers have primary responsibility to handle CEA claims through their own adjusters (assessors), whether employed or under contract. CEA's own claim-adjusting activities are limited to pre-event training, quality control during the claim-adjustment period, and post-event claim audits. By contract, CEA policyholders have one year from the date of an event to submit claims for that event (subject to limited exceptions).
  - The participating insurers generally advance claim payments on the CEA's behalf to pay the claims that are determined eligible, with the CEA providing reimbursement and a claim-handling fee.



### **The CEA's claim-paying capacity.**

The CEA's claim-paying capacity varies year by year, according to the CEA's total insured exposure, its capital level, and the amount of participating-insurer-assessment authority available.

The CEA has issued revenue bonds as part of a debt-financing program, and the rating agencies that rate CEA's debt (Moody's, Fitch) as well as the agency that rates the CEA's financial strength (A.M. Best) require the CEA to maintain a highly conservative level of capacity. The

required level is 1-in-500-years—that is, enough capacity that CEA would be unable to pay 100% of its claims only once in a 500-year period.

The CEA today has \$9.8 Billion in claim-paying capacity. The components of this capacity (and the order in which these funds would be accessed to pay claims) are as follows:

1. CEA capital: \$3.6 Billion
2. Reinsurance: \$3.1 Billion
3. Revenue bonds: \$0.3 Billion
4. Participating insurer assessments: \$2.8 Billion

### 3. The problem: The high cost of earthquake insurance puts the coverage out of reach for most California homeowners.

California is home to about two-thirds of the earthquake risk in the United States. About 2000 *known* faults criss-cross the state, and although California's strong land-use rules strictly determine conditions for building or living very near a fault<sup>6</sup> or where soil liquefies or is subject to landslides<sup>7</sup>, the sheer number of faults means that a majority of Californians live within 20 miles of at least one of them.

With so much earthquake risk within the state, and with a majority of California's large population living on or near faults, the subject of how to prepare for and recover from the next big earthquake is critical to California policymakers.

As occurs everywhere in the United States, most California homes have mortgages and therefore are covered by fire insurance—that is a mortgage-related requirement. But no homeowners policies cover damage from earthquakes, even though most people believe that a cornerstone of earthquake preparedness *should* be earthquake insurance for homes.

#### **Case in point:**

*There is broad consensus in the U.S. scientific community that a 6.7 earthquake somewhere in California within the next 30 years is a virtual certainty – this, of course, means that questions of how best to prepare and protect lives and homes against earthquakes are front and center, framed with urgency.*

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<sup>6</sup> For an excellent official account of the landmark Alquist-Priolo Earthquake Fault Zoning Act, please see: <http://www.consrv.ca.gov/CGS/RGHM/AP/Pages/Index.aspx>.

<sup>7</sup> A further, important refinement to the Alquist-Priolo Act was the Seismic Hazards Mapping Act, which addresses seismic hazards not related to surface faults, such as liquefaction and landslides. Please see: <http://www.consrv.ca.gov/cgs/shzp/Pages/shmpact.aspx>.

**Quake insurance can be costly –**

- *A very basic CEA policy for a \$400,000 house in SAN FRANCISCO costs \$924 per year.*
- *For the same house in NORTHRIDGE (375 miles south, near Los Angeles), the premium is \$732.*
- *In low-seismic-risk areas, the price is much lower: in SACRAMENTO (90 miles from San Francisco), the premium would be just \$164.*

In fact, only 12% of California homes (just one-in-eight) with a fire policy are covered for earthquake shake damage (this 12% number is a penetration rate or a take-up rate established as a comparison to an insured base—as compared to all households, the take-up rate probably falls short of 10%). To flip that coin and focus that statistic on the real public-policy problem, 88% of homes covered for fire (fully seven out of eight) are *uninsured* with respect to earthquake risk.

The consequences of such a large uninsured population could be devastating following a large, damaging quake. For example, if a 7.2 magnitude earthquake occurred on the Peninsula segment of the San Andreas fault (which runs along the peninsula, up and through San Francisco), it is estimated that residential losses would be approximately \$55.1 billion.

**Cost barriers to purchase of earthquake insurance.**

There are two obvious, primary cost barriers that prevent more California householders from buying earthquake coverage:

1. The policy is considered too expensive.
2. The policy requires a deductible that is considered too high and too restrictive.

There is no doubt earthquake insurance can be expensive in California – especially in high-risk areas such as San Francisco or Los Angeles – often exceeding the price of the homeowners/fire insurance. And a 15% deductible does mean that a dwelling must sustain considerable damage before a claim can be paid.

In high-risk regions where earthquake insurance is expensive, the higher predicted loss in such areas is an obvious, but only partial, explanation for the pricey coverage. The other, and often predominating, reason is that an insurer’s *expense load* is the other determinant of rates—high expenses drive higher insurance rates. In the case of the CEA, its overhead and operating expense are well *below* industry averages, but its reinsurance costs consume a far greater share of policyholder premium than virtually any other segment of the primary insurance industry.

**More on CEA ratemaking:**

*An insurance company establishes its rates by applying some variation of the following formula and then distributing its rate needs over its exposures, using a rating plan:*

***projected loss + expenses + profit = insurance company rate***

*Because the CEA is a nonprofit entity, however, it loads and collects no profit – for CEA, therefore, the formula is more like this:*

***projected loss + expenses = CEA rate***

*It bears emphasizing that CEA rates are required – by law – to be actuarially sound: not excessive, not inadequate, and not unfairly discriminatory.*

- *The CEA determines its financial needs and projected losses through sophisticated dynamic-financial analyses and cross-validated earthquake-loss modeling. In fact, the CEA is recognized in the seismic-science and earthquake-engineering communities as among the most sophisticated, responsible users of modeled-loss outputs.*
- *In addition, California’s property-insurance rates are regulated by a highly professional Department of Insurance, which takes a strong interest in ensuring that rates are set correctly and appropriately distributed over CEA risks.*

The bottom line is that CEA earthquake-insurance rates are—by law and by practice—accurately set and appropriately regulated so that they are appropriate for the risks insured, given the expected losses and the CEA’s expense load.

The expense part of the rate formula is the only rate variable over which the CEA has significant control. And fully two-thirds of the CEA’s expenses consist of what is spent each year, every year, for the reinsurance CEA places in its claim-paying capacity. This means that any effort to make the CEA’s capital deployment more efficient and its products richer, higher value, and this more attractive to consumers, must begin with a careful examination of its reinsurance program.

**CEA’s too-heavy dependence on reinsurance.**

Since the CEA opened its doors in 1996, it has depended almost exclusively on reinsurance coverage for a significant portion of its claim-paying capacity. That heavy reliance is remains true today, but the purchases have grown much larger, even as CEA capital has grown:

nearly one-third of CEA's claim-paying capacity (today, over \$9.6 billion) is provided through reinsurance.<sup>8</sup>

**High cost of CEA's reinsurance program.** Although reinsurance supports critical risk transfer for the CEA, and in principle (and leaving aside for the moment absolute cost as an issue) it is an appropriate and helpful way to manage risks that outstrip CEA's ability to pay with its own resources. But there have been no suitable alternatives to it. And so reinsurance protection has come at a huge absolute cost.

Over the years, in fact, CEA has collected a total of \$6 Billion in premium from its policyholders. Of that amount, \$2.8 billion – *some 40% of the CEA's premium revenue over 14 years* – has been paid by CEA to the global reinsurance market as reinsurance premium. And of the \$2.8 billion CEA has paid in reinsurance premium, reinsurers have paid to the CEA \$250,000 in reinsurance claims paid.<sup>9</sup>

The CEA is clear on the benefits of good reinsurance in its financial structure and has obtained important capacity from reinsurance over its 14-year history. The CEA's highly conservative capacity levels have allowed CEA to write very safe and secure insurance policies for its policyholders – but only for those lucky relative few who can afford to buy the product.

In the absence of good risk-transfer alternatives, however, the CEA has had no alternative but to commit 40% of its policyholder premium to pay—in advance, in full, and for each and every year—for the capacity to withstand huge events of extremely unlikely probability.

For example, in 2010 the CEA's capacity calculations indicated that only once in every 545 years would earthquake events render CEA unable to pay 100% of all its claims. Reinsurance protection in this financing capacity would not even begin to kick in until the CEA had exhausted nearly all of its capital and revenue bond proceeds, a total of almost \$4 Billion. |

Such mega-catastrophes did not occur in California in 2010. And if such mega-catastrophes do not occur in 2011, CEA's reinsurers will once again

***For perspective...  
\$4 Billion is substantially more than CEA would expect to pay in a repeat of the 1994 Northridge earthquake. And the CEA's total capacity today of \$9.8 Billion exceeds what the CEA would expect to pay in a Northridge repeat and a repeat of the 1906 San Francisco earthquake, combined.***

<sup>8</sup> The latest CEA financial picture is available online at [http://www.earthquakeauthority.com/UserFiles/File/04-28-2011\\_GB\\_Attachments/AI04.pdf](http://www.earthquakeauthority.com/UserFiles/File/04-28-2011_GB_Attachments/AI04.pdf).

<sup>9</sup> Under that CEA program, reinsurers were exposed to the first dollar of losses under a quota=share arrangement. The program no longer operates, and the CEA reinsurance program now operates under uniform aggregate excess-of-loss contracts.

have no losses to pay, whether from capital or from CEA premium received. We won't actually know rate effects, however, until we are in the reinsurance market later this year.

In short, CEA customers—each and every year—are asked to pay a premium sufficient to ensure CEA has full, reinsurance-based claim-paying capacity for a huge, almost unprecedented earthquake in California. And when each year rolls by and no such mega-catastrophe occurs, the CEA's reinsurers realize profits for the risk they assumed for a year, and then the cycle repeats.

So again, for the past 14 years the CEA is fully aware that it has obtained important catastrophe cover from the reinsurance industry. And while this cover has served a purpose, its placement has been highly profitable for reinsurers but has come at an extremely high absolute cost to CEA policyholders—that fact in essence transfers earthquake risk to California consumers and the California economy, just as it transfers California-sourced capital to reinsurers.

A final note about the high absolute reinsurance costs that pose such a challenge to the CEA: Despite the huge disparity between the premium paid by CEA for reinsurance and reinsurance claims that have been paid, last fall, in establishing its reinsurance contracts last year, the CEA was forced to pay a **15% overall rate increase** for its 2010 reinsurance package, despite a claim-free 2008 and 2009.

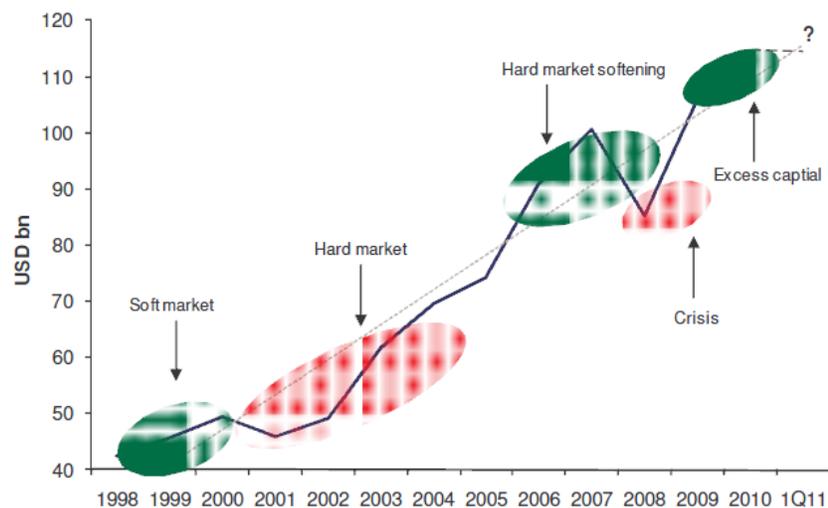
*Put simply, the same reinsurance-market mechanism that spreads California earthquake risk and exposure to global markets also serves to transfer global catastrophe risk, exposure, and losses to California—through pricing effects.*

#### 4. Diversifying capacity sources through enhanced capital-markets access and federal debt guarantees

The CEA's over-dependence on reinsurance is problematic, not only because of the high absolute cost of the product to the CEA and its policyholders but also because global capital flows can make the availability of sufficient reinsurance uncertain, especially after a catastrophic event or series of catastrophic events.

As the chart below from a recent Guy Carpenter presentation shows, capital surpluses and shortages exist in the reinsurance market periodically as a result of normal cyclical patterns largely caused by catastrophe losses.

##### Reinsurers' capital: What do Japan/NZ/Aus/US mean for the cycle?



Excess capital has been impacted through Q1 2011

Guy Carpenter

Source: Guy Carpenter

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With over a third of its claim-paying capacity dependent on an adequate supply of reinsurance, the CEA cannot afford to be at the mercy of these markets. Therefore, while reinsurance has performed a valuable function for the CEA—and will be an important part of its capital structure in the future—the CEA must diversify its claim-paying sources.

More robust use of the **capital markets** are one potential source of such diversification, as are **federal debt guarantees** made available through legislation now pending in the United States Congress.

## The CEA in the Capital Markets.

Insurers, reinsurers, and financial intermediaries have been working for over 20 years to develop viable sources of capital-markets risk transfer for catastrophic events. The CEA has been at the forefront of these efforts.

The theory behind these efforts is logical: capital markets are huge—approximately \$178 Trillion, according to a recent McKinsey estimate, hundreds of times bigger than the global reinsurance market—and natural-catastrophe risk can provide capital-markets investors a non-correlated source of return that can balance and diversify a traditional stock-and-bond portfolio.

Despite these attractions, the development of the capital-markets-risk-transfer market has been slow.

The most common instrument used to transfer catastrophic risk into these markets are so-called “catastrophe (‘cat’) bonds,” also known as insurance-linked securities. Cat bonds are like traditional capital-market debentures in that they pay interest and principal in specified amounts at pre-determined intervals, but with a twist: Their unique feature is that if certain loss events occur, they are designed to stop paying interest or principal (or both) to investors. At that point, the sponsor of the cat bond (i.e., the reinsurer or insurer transferring the risk) receives the proceeds of the issuance to pay loss claims.

Since 1997, when the U.S. domestic insurer USAA sponsored the first catastrophe-bond issuance, insurers and reinsurers have issued over \$34 Billion of such securities. Currently, there are about \$11.5 Billion of principal amount outstanding.

These are obviously small numbers by overall capital-markets standards. By way of comparison, the global corporate-bond market has over \$1 Trillion of annual issuance and over \$7.5 Trillion outstanding.

And even as a percentage of the global risk-transfer market, catastrophe bonds have had a modest impact. One leading market participant estimates that catastrophe bonds account for just about 8% of global risk transfer. Moody’s Investors Service pegs the number at “less than 15%” of total hedge protection for U.S. insurers .

The fundamental challenge in developing a more robust cat-bond market is the **mismatch** between what investors want and what insurers need.

- All else being equal, investors prefer liquid instruments that can be widely understood and issued in frequent, large amounts.
- Insurers, however, need to sell a specific basket of very difficult to model (or difficult to understand) risks that may be issued infrequently and in small amounts.
- These challenges can be overcome—the global reinsurance market is specifically designed to accept such risks, and relatively small amounts have found a home in the capital markets—but so far not in sufficient amounts to create a large capital-markets source of risk transfer.
- Even when available, catastrophe bonds typically provide little (and sometimes no) pricing advantage compared to private reinsurance, partly because they are facing the same set of difficult-to-quantify risks that reinsurers confront when pricing their products.

Despite these difficulties, the CEA has long perceived opportunity in the capital markets and so has vigorously pursued capital-markets risk transfer since its inception, and it will continue to work to develop this avenue. Whatever amount of risk the CEA can place into these markets will relieve pressure on its reinsurance purchases, thereby easing supply and price pressures. Capital markets will almost certainly be a standard part of the CEA's risk-transfer portfolio in the future.

## The Earthquake Insurance Affordability Act – pending legislation pending in the U.S. Congress – a limited, committed debt guarantee

California Senators Dianne Feinstein and Barbara Boxer have just introduced in the U.S. Congress their **Senate Bill 637** (also called “The Earthquake Insurance Affordability Act” or EIAA), which would create a committed, but strictly limited, federal guarantee for post-event borrowing for highly qualified state earthquake-insurance programs.<sup>10</sup>

### ***Legislative background – catastrophe-insurance debt guarantees.***

Many USA states face catastrophic natural-disaster risk so large that private markets don’t fully or economically insure it. And, of course, the cost of natural-disaster insurance is often so high that many consumers can’t afford it—and it’s constantly moving up in price as land development and rebuilding costs increase, and market mechanisms function or overreact or fail.

To bridge these availability and affordability gaps, a number of states have created public insurance or reinsurance programs to help property owners insure their homes against natural disasters. These programs typically require substantial post-catastrophe capital to pay claims, but for public entities, the only available form of external capital is debt capital—that is, equity capital is of course not available in a government-related entity.

In severely disrupted credit markets, however—such as would be expected after a catastrophic hurricane along the U.S. Gulf Coast or after a catastrophic earthquake in California—even the most creditworthy public entities will face challenges in seeking to raise the debt capital necessary to fully fund their program needs.

Well established public programs in California, Texas, Florida, and Louisiana came together in 2009 to formulate an innovative proposal designed to address their common needs for reliable, adequate private-debt financing. The concept was originally embodied in similar standalone bills both in the U.S. Senate and House of Representatives, and it was part of a larger piece of legislation as well.

▼ The bills would have authorized (only for qualifying state catastrophe-insurance programs) a federal guarantee of private-market

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<sup>10</sup> The full text of the bill and related information may be found at <http://thomas.loc.gov/home/thomas.php> – search for bill number S.637.

▲ debt, which would be incurred to pay insured losses from natural catastrophes.

Upon successful application by a qualifying state program, the Treasury Department would have provided a three-year rolling commitment to guarantee private-market debt, re-affirmed each year, but in amounts limited by law: \$5 Billion in guarantees for public earthquake programs and \$20 Billion for other programs, primarily wind.

None of the bills succeeded. All were tenaciously opposed by the reinsurance industry, which prefers to maintain the present system (and its revenues and potential profits), and that opposition was joined by environmental groups sensitive to land-use areas in hurricane-prone states.

Unlike those antecedent efforts, S.637 would permit **only public earthquake-insurance programs operated by states** to receive a committed federal guarantee of post-event debt.

As noted above, California has strong land-use laws that take into account the hazards of living and building on and near earthquake faults—as a result, environmental groups have expressed no concerns that the legislation would lead to or exacerbate poor land-use decisions.

But as might be anticipated, the reinsurance industry has shown no different view of this new legislation. Indeed, reinsurance representatives and their allies in rhetoric continue to bring their version of economic theory to the debate, claiming that EIAA is a form of borrowing from the government and insisting that only a continuing flow of revenue to reinsurers will permit those profitable entities to operate with “efficiency.”<sup>11</sup>

Unlike reinsurance, which of course requires advance payment of premium for all capacity obtained and coverage placed, the EIAA guarantee would be economical to establish and maintain *before* an event, and it would actually be issued only *after* an event.

To assure that guaranteed debt proceeds are used for the right purposes—to support community resilience and recovery—EIAA guarantees are used for access to the private debt markets and are

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<sup>11</sup> A recent online example may be found [here](#), where a reinsurance lawyer is interviewed by an advocacy organization that is a leading anti-EIAA critic.

issued only for borrowing that is needed for actual, event-related claim payments. **EIAA is not a pricing tool—it is a market-access tool.**

An EIAA guarantee is sensitive to a central factor: no guarantor—private or government—wishes to provide a guarantee that is *certain* to be exercised. Good business sense and good public policy alike demand that EIAA guarantees be issued only to responsible borrowers, lest the federal guarantor become a debt “co-signer.”

That is why EIAA would permit only state earthquake programs that meet stringent criteria qualify to receive committed guarantees:

- *The program must fulfill a public purpose and be a public organization, governed by public officials or their appointees.*
- *The program must be exempt from paying federal income tax.*
- *The program must have a proven ability to repay debt.*
- *Rates and rating structures must be actuarially sound.*
- *States with qualifying programs must have strong building codes, support good land use, and require effective loss-mitigation measures.*

This combination of factors ensures that EIAA benefits support good public policy. And importantly, that EIAA programs are responsible, transparently managed, and safe and suitable candidates for a guarantee of debt by the U.S. Treasury.

***The CEA and its use of EIAA.*** The CEA would use the new EIAA tool to reduce some of its reliance on reinsurance, replacing part of that expensive cover with the certainty it could borrow money in the private capital markets, incurring that debt only after an event and repaying the debt exactly as required.

Access to this mechanism would be a paradigm shift—a true game-changer that would allow the CEA to significantly reduce its rates (charging policyholders less, lowering deductibles) and enhance and expand coverage choices.

All this would be accomplished in a responsible and transparent manner, within a seasoned, proven organization that uses an actuarially sound rating structure. The CEA would continue to obtain a layer of reinsurance protection, but it would no longer be forced to spend 40% of its policyholder-premium revenue on this expensive form of risk transfer.

### ***States other than California?***

***The CEA is the only entity now existing (and California is the only state) that could use EIAA, but it is written specifically to permit and encourage other states to combine earthquake insurance and public policy in their own programs. In fact, of the \$5 Billion in available EIAA guarantees, the CEA could access only about \$1.5 Billion—this means that most of EIAA benefits are available for states other than California.***

And it would be a win-win-win situation—the U.S. Treasury and federal taxpayers, the State of California, and CEA customers would benefit.

CEA modeling shows indicates that once CEA blends the EIAA tool into its financial structure, the CEA's odds of borrowing under COGA would be extremely remote: about 1–2%.

Put in practical, scenario terms, the CEA could pay all policyholder claims from **any** of the following events **without** EIAA-supported borrowing:

- **Repeat of 1989 Loma Prieta (San Francisco) Earthquake (M 6.9)**
  - Projected CEA losses: \$0.5 billion
- **Repeat of Northridge (Los Angeles) earthquake (M 6.7)**
  - Projected CEA losses: \$3.2 billion
- **Hayward Fault Scenario (SF East Bay Area) (M 7.2)**
  - Projected CEA losses: \$3.9 billion

And depending on how and where EIAA-guaranteed debt is blended into CEA's financial structure, EIAA-supported borrowing would position the CEA very well to handle larger events that are possible in California.

- **Repeat of San Francisco 1906 earthquake (M 7.8)**
  - Projected CEA losses: \$5 – 6 billion
- **2008 Shakeout Scenario (So. California – San Andreas) (M 7.8)**
  - Projected CEA losses: \$7 billion

**For consumers – savings and choice.** Since fully two-thirds of all CEA's expenses are in the cost of its reinsurance program, EIAA cost-savings will benefit policyholders directly. In addition to making earthquake insurance more affordable, COGA would enable the CEA to offer greater choices of coverage – and greater value – as well.

**For the federal government – more insured homes means less financial pressure on the Federal government following a mega catastrophe.** By offering a more affordable, more valuable earthquake-insurance policy, many more Californians could and would decide to insure their homes for earthquake loss. After all, in California's voluntary residential-earthquake-insurance market, price and deductible level are the declared barriers to purchase—EIAA goes straight to the heart of lowering those barriers, and it would do the same in other states as well.

**For California – more resilient communities that recover faster.** Sound land-use laws, strong building codes, and more earthquake insurance—that combination means California communities are better prepared to recover after a large earthquake. This is EIAA's contribution to community resilience.