An Overview of the California Earthquake Authority

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Key Points

- The Northridge earthquake of 1994 caused unprecedented losses for residential insurers, which were (and are) required by California law to offer earthquake insurance. Rather than write earthquake insurance, almost all home insurers stopped selling homeowners insurance, threatening California's residential-property market.
- In response, the state created the California Earthquake Authority (CEA), a public instrumentality that provides basic residential earthquake insurance throughout the state.
- Residential earthquake insurance in California is purchased in a voluntary market. As of 2015, California's statewide take-up rate for residential earthquake policies was 10.23 percent.
- CEA rates are required by law to be actuarially sound and based on the best available science.
- CEA is neither a federal nor a state taxpayer.
- CEA's enabling statute sanctions expenditure of certain CEA funds on (residential) earthquake-loss retrofit projects.
- The central tenets of the publicly managed CEA—autonomy, freedom to participate in markets, and financial and actuarial soundness—have contributed to the program's success and should be transferable and useful in other contexts and other programs.

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* Marshall is general counsel for the California Earthquake Authority. The statements, views, and opinions in this paper are solely those of the author, who is the general counsel of the California Earthquake Authority. They do not necessarily express the views or official policies of the CEA or its Governing Board, or of the State of California.

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1. Introduction

In 1984, California enacted a law that tied homeowners insurance—a generally profitable line of business because of the universal requirement that mortgagors purchase home insurance—to residential earthquake insurance: to sell a homeowners policy, an insurer was required to offer earthquake coverage, upon policy inception and every two years after. During a limited period of 30 days after the offer and at their option, policyholders could accept the offer.

The Northridge earthquake in January 1994 caused extensive damage to homes, businesses, and infrastructure. By 1995, California's homeowners insurers were still paying out large sums in residential and commercial claims, and some companies found themselves overextended or even endangered by the scale of the loss and its effect on their financial standing.

At the same time, more and more residential policyholders in the Los Angeles and San Francisco areas—both of which are seismically risky and highly populated—were buying earthquake insurance. Insured exposure appeared set to grow in a way that was beyond insurers' ability to control.

Alarmed by their Northridge losses and under financial pressure, insurers did not want to offer earthquake insurance, at least in the short term, even if it meant giving up the attractive homeowners insurance line. When the California legislature proved unwilling to end the mandatory quake offer, most insurers stopped selling new homeowners insurance policies. Eventually, about 95 percent of the home insurance market was frozen.

Most insurers saw the solution in straightforward terms: repeal the mandatory earthquake offer law, or at least suspend it long enough to allow insurers to recover financially and then decide whether, how, and to what extent to offer earthquake insurance for renters and homeowners.

But the California insurance commissioner and most legislators wanted to maintain the mandatory offer, to assure market availability.

The resolution that evolved was simple in concept but proved complex to implement. Basically, the mandatory-offer requirement would stay, but new legislation would allow admitted insurers to satisfy the requirement by voluntarily paying an operating-capital levy and agreeing to participate in a new entity, the CEA, which would write the policies. For insurers, the advantage of the CEA structure was that any residual earthquake exposure would be known, to the penny. In a business that consists of betting on uncertainty, gaining certainty in return for the expense of joining CEA was acceptable to a large share of the sector.

Before it opened for business, imagining and developing the CEA concept took about 18 months, over two legislative years. California home insurers representing more than 70 percent of the market worked with legislators, the office of the insurance commissioner, and some financial and reinsurance industry players.

CEA has operated now for more than 20 years, reliably providing earthquake insurance to California homeowners and renters. Although it has not been tested by a large earthquake, it has handled numerous small quakes and has generally exceeded expectations, despite some criticism and market challenges.

2. The CEA Approach

CEA's model is based on three pillars:

- autonomy in its operations;
- freedom to participate fully, responsibly, and imaginatively in markets, guided by its public mission; and
- financial and actuarial soundness.

Autonomy in Operations

By law, CEA is a "public instrumentality," but it operates under a broad grant of permanent, autonomous authority while being subjected to very little inessential government management. CEA sells insurance products as a regulated entity in a voluntary market—that is, no government and no lender require residential earthquake insurance in California—using its contracted participating insurers as sales agents, policy administrators, and claim adjusters. California's insurance commissioner is both regulator and board member, and CEA has been able to tap into the insurance industry's infrastructure, methods, and personnel, making it efficient.

The mandatory offer of residential earthquake insurance has been updated, permitting it to facilitate CEA marketing and outreach. And it allows CEA to leverage a constant, statewide flow of information and opportunity for renters and homeowners to consider insuring against earthquakes.

CEA is not part of the California state budget. Its revenue comes entirely from selling earthquake insurance and investing its surplus, which it alone controls. It does not acquire, hold, or disburse any public or state money. And it does not use any taxpayer money.

CEA's governing board consists entirely of public officials. Board deliberations and decisions are visible to the public, but otherwise the CEA board functions like a corporate board of directors, with statutorily derived plenary authority to guide CEA in its market-based activities. Hiring, investing, and contracting are in most ways closer to a private sector model than to a government model.

Although many CEA employees are civil servants, a number of critical roles are filled by individuals with experience in the insurance industry and allied fields. CEA is able to contract freely with vendors, professionals, and consultants in a fair, open, and efficient procurement program.

Freedom to Participate in Markets

When launched, the CEA was widely assumed to be a temporary solution that would handle earthquake exposure (probably for a brief period) until the private market recovered its interest in the product. Some observers anticipated that another large earthquake would overwhelm its resources.

CEA began by writing the minimum, bare-bones coverages specified in its authorizing law but soon began expanding its products to meet customers' needs (Table 1). Overcoming opposition of some participating insurers, it introduced new policies and higher-limits coverages.

TABLE 1. EARTHQUAKE COVERAGE OPTIONS, 1995–2016

Coverage	*1995*	*1999*	*2012*	*2016*
Structure	Full	Full	Full	Full
Deductible	15%	10%, 15%	10%, 15%	5%, 10%, 15%, 20%, 25%
Personal property	$5,000	Up to $100,000	Up to $100,000	Up to $200,000
Loss of use	$1,500	Up to $15,000	Up to $25,000	Up to $100,000
Emergency repair	5% of covered property, deductible applies	5% of covered property, deducible applies	5% of covered property, no deductible on first $1,500	5% of covered property, no deductible on first $1,500
Mitigation discount	None	5%	5%	Up to 20%

The effort to expand CEA's offerings was led by its staff and governing board, whose voting members are California's governor, state treasurer, and insurance commissioner. Although these officials may have different party affiliations and (presumably) differing political goals, the board has usually acted unanimously to lower rates and improve products.

CEA expanded its staff to include insurance, IT, and engineering professionals, who have helped the entity achieve a market-leading position. Thus far, CEA has not seen market evidence of adverse selection of risks, allowing it to remain highly rated for both its independent credit and its financial strength. The financial staff determined that traditional reinsurance, while indispensable, could someday provide less than sufficient, well-priced capacity for CEA's needs. It has therefore sought to foster risk-transfer competition and thereby mitigate reinsurance price rises by turning to global capital markets, including private debt markets (CEA does not borrow as the state and does not incur debt with the state's full faith and credit), to seed and create innovations in risk transfer. As of 2017, a significant percentage of CEA's risk transfer is sourced from nontraditional markets.

Capitalizing on its federal tax-exempt status and its authorizing legislation, CEA has begun moving into earthquake-loss-mitigation activities and research, using its capital both for direct aid and as leverage to secure outside funding for research by scientists and engineers. Mitigation programming has proved popular with consumers and policymakers alike, and its visibility and obvious benefit make for valuable media coverage.

Financial and Actuarial Soundness

CEA's finances are transparent, and it follows the conservative capacity requirements imposed by its governing board as a result of rating-agency inputs. CEA rates are subject to California's rate regulation statute and purposely and publicly formed to be actuarially sound and based on the best available science, as required by the CEA law.

Its insurance products are fully rated, priced individually for each of 19 rating territories: riskier areas have higher rates. Rating factors include all the seismically relevant characteristics of a structure and its setting. CEA's rates are built on outputs from three commercial loss-modeling firms (for cross-validation), to ensure that expected losses and expenses are accurately and independently determined.

CEA's credit is rated investment grade by Fitch Ratings and Moody's Investors Service, and its financial strength is rated A-minus, or "excellent," by A.M. Best Co.

3. Mechanics

CEA Insurance Policies

Through participating insurance companies, CEA provides a first-party, named-peril, catastrophe insurance policy of "basic" residential earthquake insurance. CEA insurance contracts and insurance rates are developed by CEA itself and are subject to normal regulatory scrutiny by the office of the California insurance commissioner.

CEA insurance is available for owners and renters of single-family houses, multifamily homes (of two to four units), manufactured homes, mobilehomes, and condominium units. CEA does not insure residential structures larger than four units, and it does not insure any commercial properties.

Residential Earthquake Insurance Take-Up

Since its inception, CEA has worked to increase policy take-up. Earthquake insurance in the years before the 1994 Northridge quake was priced at a fraction of the cost CEA imposes, primarily because CEA rates are required to be actuarially sound. Statewide take-up plummeted after CEA's start-up, but in the past four years, CEA has expended comparatively large sums on marketing and advertising, committed to visible outreach efforts (including loss mitigation programs), and encouraged participating insurers to concentrate on selling earthquake coverage. Nonetheless, as of 2015, statewide take-up rates for residential earthquake policies reached just 10.23 percent. There have been, however, higher level of policy sales very recently (Table 2).

TABLE 2. CEA GROWTH 2006–2016 (POLICIES IN FORCE—PIF)

Year end	*CEA PIF*
2006	754,672
2007	775,464
2008	779,362
2009	800,930
2010	811,317
2011	820,932
2012	841,503
2013	841,836
2014	865,084
2015	879,540
2016	931,589

4. Conclusion

Replicating CEA—or even applying significantly or extensively its management and insuring techniques—at a micro level might not be practicable in the setting of other risks, other locations, or other public imperatives. For example, California's regulations for personal lines insurance rates are designed to constrain (through applied regulatory authority) rating and market practices not conducted in the public interest. And CEA's rates—which are built on cross-validated modeling of California's housing stock, soil conditions, topography, and high earthquake hazards—are required to be actuarially sound and based on the best available science. Legally and scientifically, CEA rates are born and live in California.

But its basic principles should be transferable and practicable. The transparent application of responsible and sound insurance principles, coupled with rates based on modern, valid, and responsibly analyzed modeling, are not California-only. They can be applied anywhere, to any catastrophe-insurance goal.

That much is obvious. What is less obvious—and this is borne out by observations of CEA—is that a public organization that is allowed to operate with suitable and transparent independence under an arrangement of trust, and that is unambiguously directed to operate in the public interest under recognized financial, management, and scientific/engineering principles, can act responsibly and insure effectively, and ultimately be helpful. In this manner, public goals are met, and the existence and worth of private homes are safeguarded.