

THE INFORMATION NEEDS AND OBLIGATIONS OF THE INSURER

R. J. Roth, Jr

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THE ROLE OF THE CALIFORNIA INSURANCE DEPARTMENT IN RELATION TO DISASTER INSURANCE.

In the United States, a wide range of natural disasters occur frequently, but usually only in certain geographical locations. Hurricanes are a common occurrence on the East coast, but never on the West coast. Tornadoes occur in the Midwest. Raging forest fires occur in the West. Flooding can occur everywhere. Hail is a major threat to corn and tobacco crops in the Midwest and Southeast. Earthquakes have occurred in all but a few states.

All of these natural hazards are insurable events, but the insurance programs vary widely. There is no comprehensive, national approach for insuring natural hazards. The reason is that the insurance on each of these hazards has a history of its own.

In the United States, insurance is regulated by the individual states. The federal government is involved in insurance only with respect to certain programs. The national medicare health program for those over age 65 is the most dramatic example. Flood insurance on structures is only sold by the federal government. The federal government has an extensive involvement in the insuring of agricultural crops. When the federal government gets involved in insurance, the result tends to be bureaucratic, costly and political. On the other hand, the state regulatory commissions often do not seem to have the multi-state perspective to be able to coordinate a multi-state natural hazard insurance program. It does not need to be this way, and there is strong evidence that this history is changing. The federal government is becoming more knowledgeable about insurance as an alternative to disaster relief, and the states, through the National Association of Insurance

Commissioners, are seeking ways to improve the availability and affordability of natural disaster insurance.

Ideally, natural hazards should be insured through a unified, cooperative arrangement between the federal government, the insurance industry and the state regulators. The upcoming International and United States Decade for Natural Hazard Reduction could provide an excellent vehicle for promoting unified, cooperative arrangements between the states and the federal government and between the United States and other countries.

The California Insurance Department has a special interest in earthquake insurance. That is, the insurance covering shake damage to structures and contents. The insurance industry will be liable for losses arising out of an earthquake under such other coverages as workers compensation, automobile, general liability, and, of course, the standard fire policy.

The goal of the California Insurance Department is to promote the purchase of earthquake insurance by the general public. To this end, we are concerned about:

(a) availability. In the United States, the standard homeowners policy has been expanding from a simple fire policy in the 1940s to the comprehensive multi-peril policy that we have today. After the Mt. St. Helens volcano erupted, volcanic eruption coverage was added. We believe that earthquake coverage could also be added for most wood frame homes built since World War II at a reasonable extra cost. Insurance companies will not be willing to offer earthquake insurance on a broad scale to the general public until the peril is better understood and until the federal government agrees to assume some of the catastrophe exposure.

(b) coverage. We would like to see reasonable coverage at about a 5% deductible. Currently, the coverage offered on homes is very restrictive on the coverage of the home itself. Sidewalks, driveways, and swimming pools are excluded,

* Assistant Commissioner & Chief
Property/Casualty Actuary,
California Insurance Department,
Los Angeles, U.S.A.

and the deductible is 10% (or higher) of coverage. This 10% deductible caused some problems after the Whittier earthquake, where the deductible was often \$20,000, and homeowners couldn't raise this amount in order to get the house repaired. (A fire policy has a \$250 deductible.) It is appropriate (and perhaps necessary) to have a high deductible for a catastrophe coverage in order to eliminate small claims and to reduce the exposure of the insurance industry. However, what that high deductible should be is not certain yet.

(c) underwriting. Underwriting is the decision whether or not to insure or the decision as to the appropriate rate to apply. This usually involves an inspection of the applicant risk. The importance here is knowledge. Currently, some insurance companies are excluding risks in certain geographic areas because of fear of soft soil, while freely insuring higher risk areas. Because of lack of knowledge, some insurers' underwriting practices do not reflect the true risk involved. This is especially true with respect to soil conditions and older homes. In a few areas of California, there are older homes on poor soil, but there is no fault in the vicinity that could produce a high enough energy level to cause serious damage.

(d) rating. Up until the last few years, earthquake insurance for dwellings was priced exceedingly crudely and by many insurers, still is. Specifically, California was divided into two earthquake zones (coast and interior) and two types of construction (wood frame and masonry) :

	coast	interior
wood frame	\$1.24	\$0.63
masonry	\$9.64	\$4.39

note: rates are per \$1,000 of coverage with a 10% deductible. Same rates applied to contents.

The goal of the Department of Insurance is work with seismologists, geologists, and structural engineers to bring to the insurance industry the knowledge necessary to price a risk according to:

- (1) type of construction - age, wood frame, masonry
- (2) building codes - lateral bracing requirements in force.
- (3) proximity to known faults
- (4) soil conditions

The State of scientific knowledge is such that this is possible, including knowing the interrelationship between faults and soil conditions. Of the four factors, soil conditions may be the most important. The rates given above are the lowest available. Most insurers charge \$1.50 to \$2.00 (per \$1000) for coverage on a wood frame house.

(e) mitigation. The ultimate solution to making earthquake insurance readily available at a reasonable price is

mitigation. The insurance industry can provide a strong force to promote mitigation. Specifically,

- (1) stricter building codes.
- (2) insurability - requiring retrofitting of bracing in order to make the risk insurable.
- (3) a bad risk with a high rate has an incentive to spend money to mitigate the damage in order to get a rate reduction.

(f) solvency. The primary regulatory responsibility of the Department of Insurance is to monitor the solvency of licensed insurers. Since earthquake coverage is a catastrophe coverage, solvency in the event of a major earthquake is a primary concern. To this end, there are a number of considerations involved:

- (1) there must be a reasonably accurate estimation of the probable maximum loss (PML) for each insurer based on the portfolio of risks insured. The Department's annual questionnaire is intended to do this.
- (2) the PML must be reasonable in relation to the insurer's surplus. At minimum, the insurer must be able to pay for one major earthquake. A more prudent measure suggests that the PML in any one earthquake zone not exceed 10% of the insurer's surplus. This is the law for fire and surety in California.
- (3) the insurer must have made proper use of reinsurance with major reinsurers in the United States and around the world.
- (4) ultimately, there must be a federal (and perhaps state) cooperative program with the insurance industry to share the catastrophe exposure if a region's economy is to be fully protected.

(g) use of insurance. Government must establish a reasonable balance between the use of insurance and disaster relief programs. Insurance not only provides indemnity, but an efficient claims settling service. The balance is between economic efficiency and social expediency.

(h) demand for earthquake insurance. Why do people want to buy earthquake insurance? A common misconception is that only people living in high risk situations, such as in a masonry house on a known fault, will want to buy earthquake insurance. This is known in insurance as adverse selection. This is sometimes advanced as a reason for mandatory earthquake insurance, in order to "spread the risk". The truth is that people want to buy earthquake insurance for a wide variety of reasons

- (1) because they "believe" in insurance.

- (2) they have little or no debt on their home and they want to protect it even if the risk of earthquake damage is nonexistent.
- (3) they have lived through a major disaster.
- (4) they are retired - low income, large assets.
- (5) they can readily afford the premiums.
- (6) they think that the risk of damage is high, although it might not be.

The National Science Foundation is now conducting a study of this issue. It is known that practically everyone wants to be protected against a catastrophic loss to their welfare and are willing to pay a positive amount of money for this protection. However, most people are not willing to pay a large amount of money for protection against a remote event. In short, the demand for catastrophe insurance is highly price sensitive. In theory, as long as the price reflects the relative risk, there is no justification for making the purchase of catastrophe insurance mandatory. The justification for mandatory catastrophe insurance arises only in a social context, where the relative risk cannot be determined or a subsidy structure is desired.

The California Insurance Department has undertaken a range of activities in order to promote the availability and affordability of earthquake insurance:

- (a) the department was granted \$300,000 over 3 years by the state legislature to study the impact of soil conditions on dwellings during an earthquake. This work is shared with the California Division of Mines and Geology.
- (b) the department works with the United States Geological Survey and the other agencies of the federal government to spread the scientific knowledge of the science of earthquakes.
- (c) the department actively seeks contact with foreign countries to exchange information.
- (d) the department actively supports the upcoming International, United States and California Decade for Natural Hazard Reduction beginning in 1990.
- (e) the department conducts an annual survey of licensed insurers and publishes an annual report.
- (f) the department encourages insurers to hire consulting structural engineers and other professionals to evaluate risk portfolios.
- (g) through the National Association of Insurance Commissioners, the department works with other states on disaster insurance issues.

THE RELEVANCE OF THESE ACTIVITIES TO AN
"UNREGULATED" INDUSTRY SUCH AS EXISTS IN
NEW ZEALAND.

While the work of the California Insurance Department has produced some significant progress and has inspired many insurers to expand their own efforts, much work needs to be done. It seems that scientific and actuarial work on earthquake insurance, and catastrophe insurance in general, needs the leadership of a government agency. The issues are too big for any one insurer to take on and try to solve. Frankly, the Earthquake and War Damage Commission would be the natural entity to play such a leadership role.

As the department's annual report clearly shows, California is highly dependent on the whole United States and the world insurance industry's capacity to pay for a major earthquake. Although California, by itself, would rank as a major economy, no one believes that California could rebuild after a major earthquake from its own resources alone. Indeed, this won't happen. In the event of a major earthquake, these financial resources will be available:

- (1) the world-wide insurance capacity through reinsurance agreements.
- (2) actions by the Federal Reserve System to maintain the money supply and liquidity.
- (3) the federal and state disaster relief loans and grants.
- (4) U.S. and foreign investors will raise funds to take advantage of investment opportunities (this was a notable reaction after the 1906 San Francisco earthquake, when outside investor funds flowed in to invest in real estate).
- (5) investment funds will flow into insurance companies to save some of the insolvent insurers, since the prospect for profitable insurance operations in California in the future would be great (this also happened after 1906).

As great as these resources are, they still might not be enough.

As California could not survive alone, New Zealand could not survive alone, and the New Zealand government realizes this.

The role of government is to promote the best possible insurance product for the consumer, while planning for the possibility that an economic catastrophe can occur. Steps must be taken early to provide for the flow of capital to rebuild the damaged economy. This is an essential part of government planning. The subject of society and catastrophes is complex, but extraordinarily interesting.