held liable for indemnification of loss caused by earth movement even though the property insurance policy involved contained the customarily used standard clause expressly excepting from coverage damage or injury caused by earth movent. Even though Garvey's property insurance policy "specifically excluded earth movement" the court found that because Garvey's policy provided "coverage for damage caused by negligence," the Garveys were entitled to damages in the amount of $47,000 as a consequence of the separation of a subsequently built addition from the original structure. Invoking the concurrent cause doctrine, the court based its award on the finding that the loss was "caused mainly (or at least proximately) by negligent construction of the house addition." On appeal, the question of whether the "tearing away" of the addition was attributable to or independent of the earth movement was before the court, but its decision reversing, to allow a jury to reach that issue, was vacated under California law when the California Supreme Court granted review (see endnote 3).

Garvey's ultimate significance will probably be associated more with the legislation it produced than with its ultimate judicial resolution. Under strong pressure from property/ casualty insurers, the California legislature responded even before the Court of Appeals rendered its decision. The compromise statute which emerged (Assembly Bill 2865, which, as chapter 916, 1984 California Statutes became chapter 8.5 of the California Insurance Code) required all insurers writing

property/casualty coverage in California to advise their policy holders that they would, if requested, write an earthquake endorsement and to state the terms on which they would do so. This once-only mandatory offer had to be made no later than the next premium billing date. In exchange, the statute provided that the doctrine of concurrent causation would not be available to policy holders who elected not to take advantage of the offer to procure earthquake/earth movement protection.

The California Post-*Garvey* Statute and its Repercussions

Even before the stimulation provided by *Garvey*, the insurance industry had embarked on a thoughtful and detailed reassessment of its earthquake coverage policy. *Garvey*'s "concurrent causation" application compounded the financial threat already hovering over the industry and triggered the intensive lobbying effort which produced the above-mentioned compromise, the 1984 Earthquake Insurance Act, which took effect on January 1, 1985. Section 2 of this new statute stated that:

> It is the intent of the Legislature in enacting this act to promote awareness of earthquake insurance by residential property owners and tenants by requiring insurers to offer that coverage. It is the intent of the Legislature to make clear that loss caused by or resulting from an earthquake shall be compensable by insurance coverage *only when* earthquake protection is provided through a policy provision or endorsement designed specifically to indemnify against the risk of earthquake loss, and not through policies where the peril of earthquake is specifically excluded even though another cause of loss acts together with an earthquake to produce the loss. [emphasis added] (California Statutes 1984, ch. 916, Sec. 2)

The public benefit written into this contra-*Garvey* legislation (referred to as A.B. 2865) comes from the provision that:

> No policy of residential property insurance may be issued or delivered, or, with respect to policies in effect on the effective date of this chapter, initially renewed in this state by any insurer unless the named insured is offered coverage for loss or damage caused by the peril of earthquake. (Chapter 916, §1, chapter 916, California Statutes, 1984)

Section 10083 of this "Earthquake Code" requires the insurer to provide notice, in clear language and in large print, advising existing policy holders that:

> YOUR POLICY DOES NOT PROVIDE COVERAGE AGAINST THE PERIL OF EARTHQUAKE. CALIFORNIA LAW REQUIRES THAT EARTHQUAKE COVERAGE BE OFFERED TO YOU AT YOUR OPTION. . . .

It also requires the insurer to advise the insured specifically as to the amount of coverage which would be offered, the applicable deductible, and the rate or premium to be charged.

Data acquired in time for incorporation into the 1986 insurance commissioner's report indicate that as the result of this mandate the number of California residential properties covered by an earthquake endorsement increased from 7% to about 15% (Department of Insurance, 1986, p 15). There are indications that this increase is much firmer than increases precipitated by major earthquakes--increases which lapse as apprehension wears off.

Other Changes Taking Place

Garvey was not the only "sea change" taking place in the mid-1980s. The insurance industry was also jolted by what were viewed as alarmingly large jury awards in negligence liability cases and feared that such awards could seriously jeopardize the financial integrity of the industry. That very integrity had

recently been put into question, as mentioned above, when many companies, lured by unusually high interest rates, had attempted to generate investment capital by setting policy premiums lower than sound fiscal management might have dictated. This trend was quickly reversed in 1985, when a substantial drop in interest rates forced a number of firms to restructure their premium charges substantially in order to assure fiscal integrity.

These eccentric patterns engendered conservative attitudes among domestic reinsurers (Department of Insurance, 1986, p. 16), and appeared to stimulate a severe tightening of the international reinsurance market, which, even in the best of times, was more difficult to measure with confidence. Reinsurers became increasingly reluctant to maintain prior levels of exposure as U.S. courts granted ever larger damage awards. Indeed, some reinsurers appeared either to pull out of the earthquake market altogether or to become very selective in reinsuring earthquake.

Recent Increases in PML Projections

An additional factor contributing to the erosion of the industry's reinsurance capacity was the emerging projection of a much higher PML than that found in earlier projections. These newer figures were partly a reflection of inflation in property values and also of the end of the soft cycle in the investment market. The increased exposure stimulated first by Garvey and later by A.B. 2865 also was significant. More substantial in effect, however, was the incorporation of a more comprehensive set of considerations, such as business interruption, worker's

compensation, etc., into the calculations. It was significant that some projections produced gross PML figures as much as ten times greater than the several billion dollar amounts listed in earlier estimates which did not take all of these damage potentials into consideration.[4] On the other hand, the PML was impressively reduced when a 10% rather than a 5% deductible clause was used (Department of Insurance, 1986, p. 16).

Reassessment of Capacity

One significant consequence of these and other changes was that industry leaders no longer debated whether the industry had the capacity to underwrite earthquake on a comprehensive basis. It was obvious that such capacity either did not or soon would not exist (see Cheney, 1987, pp. 40-41). This recognition in turn drove industry leaders toward a consensus that some form of federal involvement in reinsurance would have to be established to deal with catastrophic losses exceeding industry capacity. What that excessive figure would be and how such a federal program could be structured acceptably were matters to be worked out within the industry. Committees were formed, studies were vigorously pursued, and informal discussions were held with FEMA to discuss the matter. Out of this effort undoubtedly will come a draft bill for submission to Congress, once final details of the contemplated catastrophic earthquake reinsurance program are worked out within the industry and between the industry and FEMA.

The Legislative and Regulatory Environment Today

The following section is a brief description of federal and state legislative and regulatory efforts since 1980 which affect the property/casualty insurance industry. It does touch on antitrust matters, but a more thorough discussion follows at the end of this paper. The subsequent section identifies selected industry practices and developments which by their nature might have the potential to trigger an antitrust challenge.

Historically, the regulation of the business of insurance has been the province of state governments. When the 1944 South-Eastern Underwriters decision abruptly interposed broad federal preemption, Congressional reassessment quickly produced the landmark McCarran-Ferguson Act,[5] which provided a limited exemption from federal antitrust laws for the insurance industry and assured state governments a considerable continuing power to regulate the industry. California, which had its own antitrust statutes, responded to McCarran-Ferguson by enacting, in 1947, the McBride-Grunsky Insurance Regulatory Act granting the industry certain immunities from those laws.[6]

In 1987, bills were introduced both in the California legislature and in the Congress to weaken the existing antitrust exemptions. A climate for such legislation had been created by the unfavorable publicity which the insurance industry had received as a consequence of the withdrawal of various members from important markets and/or marketplaces, and as a consequence of sharply increased premiums in some lines of insurance.

Some members of the industry, however, felt that premium increases appeared substantial, abrupt, and disproportionate to general economic trends because, as mentioned above, during the soft cycle of the property/casualty market many insurers came to depend too much upon the high interest rates earned in the investment market and not enough on sound underwriting. Again, when the soft cycle ended, an inevitable consequence was that the rates these companies had to charge to assure solvency were markedly higher; still, they were rates which, had they been apportioned over a longer time period, might not have seemed so severe. However, the fact remains that unanticipated developments, such as the trend toward higher and higher jury awards in personal liability cases and changes in the law such as those that followed the Garvey case, contributed substantially to the "fear" that in part led to rate increases that were sufficiently dramatic to stimulate concern among the general public and legislative bodies.

Federal Legislative Activity

At the national level, Senator Simon (D., Illinois) on March 20, 1987, introduced to the 100th Congress, 1st Session, Senate Bill S804, entitled "Insurance Competition Act of 1987," which was referred to the Committee on the Judiciary. In essence this bill would have replaced the general exemption of McCarran-Ferguson with a provision that the antitrust law shall apply to the business of insurance or to acts in the conduct of such business except in certain situations enumerated in the bill.

A somewhat different, more artfully drafted bill with the same general purpose was later submitted by Senator Metzenbaum (D., Ohio), and it, too, was submitted to the Committee on the Judiciary. That bill, the stated purpose of which was "to amend the McCarran-Ferguson Act to limit the federal antitrust exemption of the business of insurance, to reaffirm the continued state regulation of the business of insurance, and for other purposes," was titled "Insurance Competition Improvement Act of 1987." One of its express findings was that "the current broad exemption from the antitrust laws afforded the insurance industry has adversely affected free competition and consumers of insurance." The bill stated that "it is the purpose of this act to promote free competition among insurers and to protect consumers of insurance by modifying the current antitrust exemption of the business of insurance."[7]

Both bills failed in committee.

State (California) Legislative Activity

The California legislature took a different, earthquake-specific approach. On March 4, 1987, State Senator Alan Robbins introduced Senate Bill 1015, providing that the California FAIR Plan Association's (see endnote 2) basic property insurance coverage must "provide indemnity for direct loss due to the peril of earthquake" (California Senate Bill 1015, March 4, 1987). The senate committee consultant's report on the bill summarizes staff comments recognizing that "earthquake and residential property insurance coverage is not available in certain high risk areas of

the state" (Bianco, 1987, pp. 1-2). Those comments also suggest that, contrary to earlier media reports, there is evidence of a distressed market for earthquake insurance in California. The report also notes that some insurers have initiated a practice of cancelling homeowners' coverage in those instances when the insured responded affirmatively to the A.B. 2865-mandated "offer" to provide earthquake coverage (Bianco, 1987, p. 2). However, insurance executives from both the public and the private sector have stated (at the Boulder workshop, see endnote 1) that only a very few companies have taken this approach. One insurance trade association executive added that, within his knowledge, no similar mandate had been enacted in any other state and no insurer was arbitrarily cancelling earthquake protection or arbitrarily refusing to write it. In an earlier conversation with one of the authors (Brown), that same executive opined that with respect to locations where "adverse selection" was an obvious element, a company might elect not to underwrite earthquake. He said, in effect, that it does not take much effort nor does it require collusion for an insurer to recognize and avoid an odious situation. Similar comments were made by another trade association executive at the Boulder workshop.

California legislative consultants attending the Boulder workshop, which convened on July 17, 1988, the day following the end of the 1987 California legislative session, reported that the above-mentioned Robbins bill, S.B. 1015, had not been enacted.

Regulatory Matters and a Possible State-Action Question

The right of businesses collectively to petition government for legislative or regulatory measures is a significant and sometimes complex area of law. Included in it is an area of exemption from application of antitrust law known as the "state action" exemption. This sanctuary is doctrinally recognized with respect to certain industry interactions which, though in themselves anticompetitive, take place under state directive and continuing supervision because the state has recognized that such interactions are best conducted in the specified manner for the good of the general public. The cooperative reporting called for by the annual data call authorized by the California insurance commissioner can be examined in light of this doctrine. Some participants at the Boulder workshop speculated that there seems to be no strong consensus that the regulation as now worded and applied would qualify for the presumed "state action" exemption. The perceived weakness seems to be that the state directive is not sufficiently mandatory; rather, it may be merely permissive, and the speculation is that if the latter is true then the exemption would not be available. This example at least illustrates that the so-called state-action exemption is not always as easy to apply as it is to explain; still, to date there has been no antitrust violation challenge raised with respect to the data call reporting process.

Industry Practices

There are certain insurance practices which might suggest that antitrust constraints exert considerable influence on the industry and several which competent antitrust counsel might consider worthy of attention. The industry itself is unique; it enjoys at present a considerable antitrust exemption; and it is variously, and some say relatively lightly, burdened by regulatory supervision at the state level. Though the extent of regulation varies considerably among the states, it is fair to say that all states "require that insurance rates must not be excessive, must be adequate, and may not be unfairly discriminatory" (Vaughan and Elliott, 1978, pp. 86, 138). Some of these areas merit attention and analysis.

Ratings

Rate making is a complex process involving experience and judgment as well as data.[8] Rate-making bureaus stem from the post-Civil War period of abuses by insurance companies which stimulated the legislature in New York State to appoint an investigative committee, chaired by Senator W.W. Armstrong, to look into life insurance abuses. The exemplary work of this committee was followed in 1910 by the Merritt Committee, which explored the property insurance industry. Prior to this effort, many states had passed "anticompact laws" prohibiting insurance companies from joining together to make rates, a constraint which severely impeded the application of the principle of large numbers. Many insurance companies went bankrupt following the San Francisco

earthquake and resultant fire, which the case law of the time held to be a covered risk. One principal reason advanced for the bankruptcies was the charging of inadequate rates. An understandable response was that "fire insurance rates then increased throughout the country in what appeared to be a concerted action" (Vaughan and Elliott, 1978, p. 134). The Merritt Committee recommendations "opposed the anticompact laws and urged that rating bureaus be recognized, and further that a company be permitted to belong to a rating bureau, or to file its rates independently if it chose" (Vaughan and Elliott, 1978, p. 134). Rating bureaus are a recognized and legitimate activity under McCarran-Ferguson and state laws, and as long as they publish rates that do not add in a "loading" factor for individual member overhead and profit, their operations do not violate antitrust law.

Today the principal rating bureau for the property/casualty insurance industry is the Insurance Services Office (ISO). Under the California FAIR Plan, companies voluntarily providing basic property insurance in such designated areas are proportionately relieved of liability to participate in the FAIR Plan. The Robbins bill (S.B. 1015 [at §2] mentioned above), proposed to "provide for proportionate relief from liability to participate in the [FAIR] plan for insurers who voluntarily provide earthquake insurance in areas designated as earthquake hazard areas by the Insurance Commissioner."

Lobbying and Informational Activities

The first amendment protects all legitimate efforts to inform legislative bodies of the wishes and demands of citizens. Representatives of insurance companies are free to congregate for the purposes of discussing and establishing points of agreement and/or difference with respect to matters that are or might become the subject of legislative or regulatory attention. Associations of insurers can and do employ lobbyists to monitor pending legislation and to speak for the segment of the industry represented.

Educational efforts by the industry to increase the public's knowledge and understanding of earthquake hazards and to provide useful information on what private citizens can do to diminish their own vulnerability to earthquake damage are extended both through individual company initiatives (with specific advertising credits established) and through industry trade associations and other authorized voices. The technical competence and knowledge within the industry are made available in various ways, including funding assistance, to support the modification of local and state building codes. Assistance and guidance may be offered to federal and to state legislatures to encourage such measures as tax abatements to reward sound efforts to render real property less vulnerable to earthquakes. Such efforts can include industry association originated policy positions and lobbying efforts by association representatives, company representatives, individuals, and, if effectively stimulated, clients.

The National Association of Insurance Commissioners (NAIC) invites to its biannual meetings representatives of the insurance industry "to lobby their positions" and in turn "makes recommendations for legislation and policy" (Vaughan and Elliott, 1978, p. 136).

Most industry lobbying at the national level is done by one or more of the three major trade associations, the National Association of Independent Insurers (NAII), the American Insurance Association (AIA), and the Alliance of American Insurers (AAI). State-level lobbying is conducted primarily by organizations such as the Association of California Insurance Companies. There is often a collective effort made to educate and inform not only members of the legislature, but especially the general public. The Insurance Information Institute is the most comprehensive organization of this sort, and its activities are financed through the participation of a large number of insurers.

Response to Demands by Mortgagees

To date there has been no broad-scale demand by mortgage lenders requiring earthquake insurance as a condition for loan, though there have been a few lending institutions in California which have without fanfare required such coverage, at least where the security property was situated in a known earthquake hazard area (see Palm, 1983, pp. 85, 121; 1985c, pp. 63, 67-68; 1985b, pp. 139, 146-152. Note that "structurally poor ground," such as soil subject to liquefaction, is such an area, though it would not be singled out under the Alquist-Priolo Act. For such poor

ground, according to Steinbrugge (1978a, p. 208), the premium charge for an earthquake endorsement would be assessed at a uniform 25% rate penalty. Of course, the leverage that could be brought to bear by lending institutions would not be directly imposed on insurers. Rather, as a condition of loan, the requirement would be impressed upon the loan applicant, as has typically been the case with respect to fire and extended coverage policies. The FNMA and the FHLMC, through a simple modification of the hazard insurance paragraph of the uniform covenants of their standardized mortgage and trust deed instruments, could impose a specific earthquake insurance requirement as a condition for acceptance of a mortgage security into the secondary market, and such a demand could be geographically selective. If such a requirement were imposed, the insurance industry would have to determine whether the demand would force it beyond its capacity.

It could also be anticipated, because some of the most earthquake-vulnerable residential and light-commercial property lies within urban sectors predominantly occupied by low-income residents, that the legislature would impose for such areas some version of a FAIR Plan. Certainly vigorous negotiations between insurers, secondary lenders, loan originators, and state and federal legislative bodies would precede such a decision. The fact that some borrowers would be more attractive clients than others and that distinctions could often be recognized within

geographical delineations might provoke struggles over just how the insurance burden might be fairly allocated.

If the market for loan-condition insurance coverage was not readily serviced by the industry, charges of discrimination could be expected from prospective borrowers who were precluded from obtaining financing or whose financing was substantially delayed.

In recent years, life insurance companies have expanded operations into the property/casualty field. They have also invested heavily in the mortgage finance arena. Some broad coverage companies have invested in pass-through or other mortgage-backed securities. The recent period of "creative financing" techniques (which seem to be getting more attention again after a period of relative quiescence stimulated by the low interest rates of 1984-86) produced various equity-participation loans. Today a strong marketing effort is being made with respect to "home equity" financing for retirees and others with considerable equity build-up. It would not be unusual for a lender with an equity position in a property parcel to require, directly or indirectly, earthquake insurance as a condition of participation. Such a lender also could have an interest in an insurance company which marketed hazard insurance for real property, given the complexities and intricacies of today's mortgage finance market.

One matter that insurers might be forced to consider with respect to earthquake insurance on mortgaged property is the loan clause giving the lender the right to apply insurance payments,

made in satisfaction of claims involving property damage, toward the settlement or the reduction of the outstanding secured indebtedness. Most such clauses provide that the insurance claim payment must be applied toward restoration of the damaged property, but also contain a "take-out" provision permitting the lender to divert the claim payment to reduction of the secured indebtedness in the event that the security property cannot be renovated to the point where its security value is adequate for the purpose. Considering that location is a major determinant in establishing value, it is possible under certain circumstances that common wisdom, factual impossibility or legislative mandate might preclude continuation of previous uses with respect to a given neighborhood or sector. The "Turnagain" area in Anchorage, and the relocation of Valdez, Alaska, stand as examples of such a possibility. But on a less dramatic scale, simple market reaction or demand factors might be enough to negate or diminish for a considerable time any sound resale potential for earthquake-damaged property subjected to default in mortgage debt service. Under such a situation and taking into account state statutes, a lender might well elect to insist on the allocation of damage indemnity claims payments to it for debt reduction application.

It is highly probable that if a significant demand for earthquake insurance emerged, insurers would find it desirable to unite in a policy of response. Lender reliance on inflation and equity build-up to protect the value of their security interests

may not always be productive. Unless some sort of blanket loan portfolio policy is developed, the insurance industry may be faced with a situation where the value of the "parts" of a mortgaged residence may have to exceed the insurable value to avoid a consumer revolt. In other words, if the lender can selectively deal with different neighborhoods in making the election whether to apply insurance claims to renovation or to debt reduction, then the consumer can be put into the position where a lesser damage, for which renovation is more desirable and less burdensome, may result in the subject residence being restored to habitability and thus to its best potential for present or future marketing. On the other hand, for property so damaged that the insurance payment would come close to satisfying the entire loan, which presumably would be more likely to entice a lender to divert the payment to debt satisfaction, the homeowner could find himself with a satisfied loan, a seriously damaged premises, and insufficient funds or borrowing capacity to restore the property to habitability. In such a case, payment for "parts" damaged would result in a completely functional home, while "replacement" payment would leave the property owner with a useless or costly property that was not readily marketable even in a seller's market.

Building and Zoning Code Changes and Interactions

Engineering studies and technological advances during the past two decades have made it possible to avoid or to diminish many previous structural vulnerabilities to earthquake damage.

The Uniform Building Code, developed by the International Conference of Building Officials (ICBO) has been accepted as the state building code in California, and, with some localized modifications, has been promulgated as the official code by most California communities. The Uniform Building Code now includes an earthquake section. The City of Los Angeles Municipal Code has incorporated as Division 68, "Earthquake Hazard Reduction in Existing Building," provisions "requiring owners to retrofit unreinforced brick masonry buildings" (Miller, 1985, p. 100).

Engineering knowledge gained over the last decade or two, and its dissemination and application, has made it possible for the Insurance Commissioner of California to observe that the PML for a major earthquake in Los Angeles or San Francisco would be substantially higher were it not for the incorporation of modern seismic design (Department of Insurance, 1984, p. 7, 24-25).

HUD Code and manufactured housing. In our 1980 study, we noted the vulnerability of "mobile homes" to natural hazards and reported differing attitudes about regulatory insistence on certain known safety measures such as storm anchors. Still new at that time, the Manufactured Home Construction and Safety Standards Code, often referred to as the "HUD Code", was and is our first and only national building code. This code is limited in application to "manufactured homes," the designation for houses built under the provisions of the Manufactured Housing Act and the regulations promulgated thereunder. California has legislatively accepted the manufactured homes program, as have fourteen

other states. The HUD Code provides for and requires that Manufactured Homes be anchored to solid foundations, and mandates other safety features not assured in the "mobile home" that is not built to the Hud Code standards. With the acceptance by California of HUD-Code-complying manufactured housing, it would not be permissible for such a product to be generally excepted from earthquake insurance coverage. Before the HUD Code, "mobile homes" were given a specific category, "Class 1E" in the California classification of seven major types of real property. Since one major risk for mobile homes subjected to an earthquake was that they might be jolted or shaken off their foundation supports, the HUD Code provisions may justify a different rate structure. As the cost of housing continues to outpace earning capacity of a large portion of our citizenry, it is a reasonable presumption that an increasing percentage of single family detached housing will be provided by the manufactured housing industry. Whether such housing will in fact be treated by lender and/or insurer in a manner suggesting improper discrimination remains to be seen.

Geographical Selection (Redlining Implications)

If a case could be made that a denial of earthquake insurance was based on any improperly discriminatory basis, such a denial might be challenged on the ground that it was done in restraint of trade. If a given geographical area was unattractive because of unstable soil, inhabitance by low-income residents, or a preponderance of "pre-code" lime-mortar un-

reinforced masonry construction, a deliberate "redlining" by a lender or by an insurer of such an area would raise the question of whether the discrimination was within permissible regulatory limits (see Palm, 1985a, p. 655). The California Administrative Code regulation prohibits "redlining," which it defines as refusal to grant mortgage loans to otherwise qualified buyers for sound property in designated areas. Palm advises that "California state law prohibits lending institutions from denying home loans or discriminating in setting the terms or conditions of such loans if the denial or discrimination is based on 'conditions, characteristics, or trends in the neighborhood or geographic area' in which the property is located 'unless the financial institution can demonstrate that such consideration in a particular case is required to avoid an unsafe and <u>unsound business practice</u>'" [emphasis added] (1985a, p. 658-659). Upon challenge, the initial burden of proof would seem to be on the financial institution (see Benston, 1978, for a good general discussion of redlining).

One must wonder whether the same standard with respect to "unsound business practice" would be available to insurers and whether it would be protection against antitrust considerations. It is widely known that certain sectors of Los Angeles, for example, are replete with old lime-mortar unreinforced masonry buildings. In a personal interview with one of the authors (Brown), one insurance industry leader, when asked whether insurers would be inclined to consult with one another with respect

to deciding not to write earthquake insurance in such areas of potential devastation, observed, in essence, that they would not need to get together to avoid such an odious situation. In other words, each insurer could be expected to avoid such a situation as a matter of good business judgment. This judgment might result in de facto designation of a geographic area which would go uninsured in the absence of a FAIR Plan approach such as discussed above. As the Robbins bill, A.B. 1015 indicated, California has no such program applicable to earthquake risks.

"Leveraging" of Agents and Brokers via "Reinsurance Dry-up"

During the period of soft market recently experienced, the threat of a foreseeable major earthquake came to be more generally accepted, the general public became more interested in purchasing earthquake insurance, and a window of opportunity thus opened up which generated a new source of competition for earthquake underwriters. In 1983, as the Garvey case was stimulating the concern which led to the A.B. 2865 statutory offer, each of the three agent/broker trade organization groups took action; the "IIABC, WAIB and PIA started offering, through their members, monoline [single peril] earthquake policies. At the end of 1983, these producer programs were relatively small, insuring approximately 10,000 dwellings for $1.4 billion in exposure. By the end of 1984, these programs, combined, had increased to approximately 80,000 dwellings with estimated annual premiums of $19.3 million and exposures of $11 billion" [emphasis added] (Department of Insurance, 1986, pp. 16-17). "The popularity of these programs

was due to the low deductible ($1,000 instead of the usual 5%), the lack of any coinsurance provision, and the fact that the applicant selected the amount of coverage" (Department of Insurance, 1985, pp. 15-16). However this producer encroachment into the marketplace was short-lived. The 1986 California Department of Insurance Report advises that "the rise in property/casualty insurance industry losses in recent years caused a severe restriction in reinsurance markets. Because of this, each of these producer programs was suspended in early 1985. No new applicants were accepted and eventually non-renewals were sent" [emphasis added] (Department of Insurance, 1986, p. 17).

There has been some speculation regarding whether the failure of reinsurance, which is often ceded, at least in part, to firms which also underwrite directly, was pure happenstance, or whether in fact it was a deliberate attempt to force out this producer competition which was offering a different and apparently quite attractive package. However, during a session of the Boulder workshop (see endnote 1), one consultant to a California senate committee concerned with such matters attributed the producer withdrawal to the marketplace. Rejecting the suggestion of reinsurer involvement, he said of the producer activity that "you cannot ascribe fear, stupidity, lack of business judgment or improper research to collusion." Another Boulder workshop participant, a well-known insurance industry official, offered a more pithy comment: "It was a crappy program!" He continued,

"The reinsurers were not really reinsurers. Most of them were everybody on the street taking a piece of the action. . . . The reinsurers backed off from an obviously unsound program."

The 1986 Department of Insurance report advised, with respect to the situation, "By April 1, 1985, the market had eased and the Independent Insurance Agents and Brokers [organization] of California (IIABC) was able to propose a new program in a modified form. However, as of June 1986, the program is not yet operational" (Department of Insurance, 1986, p. 17).

Withdrawal of Coverage When a "Statutory Offer" Is Accepted

The "statutory offer" requirement of A.B. 2865 seemed simple and explicit: either make the required offer or don't write property insurance in California. But as we noted above, an apparent "loophole" permitting insurers to avoid writing earthquake endorsements by cancelling the policies of those who accepted the offer of earthquake insurance was quickly recognized and taken advantage of by a few insurers. The extent of this practice does not seem to be known as yet, but it does reflect concern over the capacity problem. One newspaper report commented, "An insurer which wanted to limit its earthquake exposure might elect to stop writing residential property policies on homes with masonry construction, or on homes located on land fills, hillsides, or in close proximity to known faults. If a substantial problem of non-availability of insurance coverage arises because of the mandatory earthquake offer, a solution will need to be considered. A residual market mechanism may need to

be established. If it is decided to do this by expanding the California Fair Plan, then legislation would be required to authorize it to write monoline earthquake coverage, either state-wide or in designated areas" (Department of Insurance, 1985, p. 14). This comment is put in broader context by Miller's linkage of lender to insurer, with respect to recognition of particularly vulnerable property. Either one or both may readily decide to avoid financial involvement in such property without need to coordinate with competitors, but that does not rule out the need for coordination between lender and insurer to avoid writing coverage that would be unsound (Miller, 1985).[9] One of an insurance commissioner's primary responsibilities is to assure that insurers do not get overextended in writing coverage of unusual risk. The argument set forth by Benston regarding "redlining" by banks, is pertinent here. If the statute, or antitrust laws, force an insurer to "ignore conventional notions of risk and reward" when they insure properties, we may "in effect [be] demanding that [insurers] set aside business logic—and pursue the logic of 'social needs'" (1978, p. 69).

An Illustrative Placement Problem: Banker to Insurer

During the 1987 Boulder workshop, Dale Hatfield, then vice president of a major California bank, described an interaction between his bank and a number of insurers from whom he sought coverage. The subject was not earthquake insurance; rather, it was directors and officers liability coverage (D & O), which was similar in that at the time, the early 1980s, the insurance in-

dustry was almost as reluctant to write D & O as it was to write earthquake coverage.

Hatfield pursued a number of initiatives, largely without success, before ultimately reaching a solution which might well be echoed with respect to earthquake coverage, if major mortgage finance institutions are impressed or enticed into exercising initiatives intended to settle upon the private market a greater portion of the financial burden of a catastrophic earthquake. It also illustrates the need for, and advantages to be derived from, full development of pertinent facts in weighing the capacity question.

The stimulation for the effort was the loss of the D & O and Bankers' Fidelity insurance coverages by California banks. Hatfield advised, "We had a number of studies and a number of facts from the insurance companies, but the only thing that was important was that they weren't writing the coverages. So we did our own study and developed our own numbers, . . . which took six months, and [upon completion] we were able to decide the magnitude of the problem and what the various alternatives were to the solution. . . . [Then] we [contacted insurance carriers across the country and] said, 'with these new [favorable] numbers would you be interested in insuring our Independent California banks?' We did this for about six months and contacted about thirty-seven insurance companies and were turned down thirty-six and one-half times. The half was neither a 'yes' nor a 'no' and after approximately six months [that insurer] decided not to

pursue the matter further. At the very moment when we were [thereby] 'left at the altar' we were considering our solution which was to form our own 'captive' [insurance company]. However, we were saved from having to go with a captive . . . by another group of bankers who had already formed a captive, Bank-Insure, Inc., and who had acquired the necessary reinsurance, which was what was bothering us the most and which we knew was going to be our biggest problem.

"Our survey showed that the exposure in this particular case was greatest with the large banks. Our major concern was the smaller banks, and they had a good loss ratio. What the insurers were doing was lumping all the banks—the Bank of Americas and Bank of Californias—all the banks that had made the headlines with the 95 million dollar losses—lumping all those with the small banks . . . [that had] not had a loss in years, but they couldn't buy a bond or a D & O. We had a thousand bank directors in California with no coverage and that was our message—that we had supporting documents and figures to show that our particular segment of the market was a good risk. It all boiled down to that."

Hatfield continued, "What's interesting is that we have already seen the cycle turn. Now we're in business in a big way, with our own captive company, and now many of the carriers who slammed the door in our face are coming back into California with a vengeance. Who are our competitors now? The very guys who said 'No'! Now they are afraid they are going to lose the market

they voluntarily walked away from" (from the 1987 Boulder workshop, see endnote 1).

A somewhat similar struggle, but one in which the former insurers did not come back into the market, was related earlier during the workshop. This struggle involved the California Insurance Commissioner's office playing a part in helping physicians to form their own domestic companies to provide malpractice insurance. During a short dialogue which took place during the Boulder workshop, between an insurance industry executive and a consultant to a California senate committee, the industry executive opined that the five domestic companies created by physicians were "going broke."

The consultant differed, responding, "No, most of them are not going broke. Ask [a workshop participant well qualified to speak for the Insurance Commissioner's office]: 'Are most of them going broke?'" The queried official responded, "No, most of them are in excellent condition."

The insurance executive retorted that though that may be the fact in this particular case, "a lot of 'bed-pan mutuals' . . . are in bad shape."

The consultant then added the qualification that he was "talking about the California circumstance in which there were some laws changed and some restructuring, . . . and what happened in that circumstance is that the insurers, because of their traditional thinking, did not come back into the marketplace, and the people who were entrepreneurial did, and they prospered."

Argument that Reinsurance is Available

The argument has been advanced that there is a sufficient reinsurance capacity to enable the industry to respond to a great earthquake without a substantial collapse of the industry, even though it is anticipated that as a consequence of such an event a few insurers will become insolvent. It has also been suggested that the capacity to assess earthquake risks in an actuarially prudent manner does exist. As evidence of this capacity, the fact has been cited that the Lloyds of London group has been writing earthquake insurance/reinsurance under that premise. The Department of Insurance report for 1986 suggested that the industry could weather a PML as presently projected by that office, in the range of somewhat over five billion dollars, but indicated that such an amount is close to the maximum that could be tolerated. As mentioned, recent studies have suggested that the true loss to insurance companies and the total insurable damage to property in the event of a great California (or Boston, or Charleston, or New Madrid) earthquake could amount to several times that amount. During the Boulder workshop a considerable difference of opinion surfaced, primarily between those representing facets of the insurance industry and those who represented the financial community or who were economists on the faculties of prominent universities, regarding whether there was in fact a capacity barrier lodged in the reinsurance industry and whether the industry-derived and disseminated PML figures were in fact dependable representations. In this regard, C. Robert Hall,

vice president of the National Association of Independent Insurers, reminded the participants at the Boulder workshop that investment in the insurance underwriting and reinsurance business is a competitive market phenomenon.

Alternative Approach: Richard J. Roth, Jr.'s Plan

Richard J. Roth, Jr., Assistant Commissioner of Insurance for California, allowed the authors to examine a draft of an article he was developing, which set forth a conceptual alternative briefly summarized here. He noted that all recent studies and recommendations distinguish between the upper level of insurable loss (i.e., affordable without severely impeding the capacity of the insurance industry to service its other policy-based obligations to its clients), which is a very substantial figure, and the "catastrophic" event, which would far exceed the financial capacity of the industry. With respect to the latter, he noted that the consensus seems to be that the federal government will have to provide some type of catastrophe reinsurance to pick up where the industry capacity would be seriously jeopardized by taking a more severe "hit."

To keep the federal government as far removed as possible from direct participation in the business of insurance, his suggestion, which reflects what is now being done more and more, was to initiate a 10% deductible along with a coinsurance clause, and to augment that step by permitting some of the most earthquake-vulnerable properties to be excluded from coverage, and, in essence, written off until they can be phased out of existence.

He noted that a number of somewhat similar strategies have been suggested, but all seem to reflect this general approach. The California Insurance Department contemplates that by using available data from past earthquakes and by using actuarial analyses, it will be possible to quantify this coinsurance relationship. Roth recognized that there is some difference in projected rates, but suggested that since that matter is ultimately one for market determination, and since the widest market possible should be encouraged to purchase earthquake insurance, in order to diminish the adverse selection syndrome, it is unlikely that rates will be pushed upward.

During the Boulder workshop, some details from the "Earthquake Project" under development by the National Committee on Property Insurance (NCPI) were elicited. A fundamental element involves the United States government in a limited reinsurance status, funding being triggered only by a major earthquake causing severe damage, injury, and disruption. A trust fund, administered by a federally chartered corporation, apparently is contemplated to cover losses beyond the capacity of the insurance industry, with the management of indemnity payments incorporated into the traditional processes followed by the industry. The concept is one which, according to industry advocates, "should make money for the government" while holding the costs for the insured property owner to an average of about $15 per year instead of the ten to twenty times that amount experienced under existing programs.[10]

Roth has developed some provocative data on PML variations. He observes that "substantial progress has been made in understanding the impact of an earthquake's wave forces on structures," and that "for given types of dwelling structures and knowledge of the location and soil conditions, the state of the art is advanced so that aggregate structural loss estimates can be made with some confidence." Roth observes that:

> Following the 1971 [R6.4] San Fernando earthquake, a physical inspection of approximately 12,000 single-family frame dwellings was made with particular attention to the more seriously damaged structures. A distribution of dwelling losses by size of loss was developed where the loss estimates were presented as a percentage of replacement cost values, excluding land values. The total amount of earthquake damage represented 6% of the total replacement cost of the 12,000 dwellings. If all of the dwellings had been insured for earthquake damage at a 10% (of coverage) deductible, then 57% of the damage costs would have been absorbed by the dwelling owners . . . and 43% would have been paid by insurance. If, in addition, the federal government paid, under a reinsurance program the individual dwelling losses which exceeded 30% of the replacement cost, then the federal government would have paid 16% of the total earthquake damage and these payments would have gone only to the owners of the severely damaged dwellings.[11]

Projecting those figures to a Los Angeles scenario, presuming one million dwellings, all insured, with an average replacement cost of $100,000, and with slight adjustments to reflect a major earthquake, Roth concludes that if the dwelling owner paid the 10% deductible (or less, if damage did not reach that figure), such a system would put 55% of the cost on the dwelling owner. The insurers would carry the layer ranging from 10% to 30%, approximating 25% of the damages incurred, with the federal government carrying the layer of damages ranging from 30%

to 100%, which would approximate 20% of the total cost of damages incurred. Accepting, for the sake of argument, the San Fernando figure of 6% of all dwellings damaged, the computations show that total damages would be 6% x $100,000 (per dwelling value) x 1,000,000 dwellings, which would equal $6 billion. The dwelling owner would then pay $3.3 billion, the insurers, $1.5 billion, and the federal government, $1.2 billion, under the percentages listed above.

Given these figures, Roth calculates that the annual premium per dwelling would be approximately $.30 per $1000 of coverage, compared with a present premium cost of $1.50 per $1000.

In any functional program development, it is obvious that members within the industry will have to plan together, negotiate together, and decide together on many matters. The present framework of the industry provides an institutionalized structure for accommodating these interactive needs. As the law now stands, it is probable that with sound legal counseling, the interactions can be carried out without violating antitrust laws. Still, with bills pending that would modify the McCarran-Ferguson Act and/or impose regulatory controls at the state level that could substantially limit the freedom from constraint the industry now enjoys, continued monitoring, and probably lobbying, are to be expected before any definitive answer regarding the long-range vulnerability of the industry under antitrust laws. How much and what kind of a change would have to occur before necessary planning would be significantly inhibited does not