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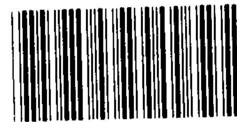
Report to the Chairman, Subcommittee on Entrepreneurship and Special Problems Facing Small Business, Committee on Small Business
United States Senate

December 1986

WORKERS' COMPENSATION

Initial Experiences With Competitive Rating



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Office of the Chief Economist

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December 4, 1986

The Honorable Robert W. Kasten, Jr.
Chairman, Subcommittee on Entrepreneurship
and Special Problems Facing Small Business
Committee on Small Business
United States Senate

Dear Mr. Chairman:

In accordance with your request, this report assesses the experiences of states that have recently introduced competitive rating methods for establishing workers' compensation premiums. Specifically, the report examines changes in the cost and availability of workers' compensation insurance that occurred after competitive rating was instituted in these states and compares these changes with those that occurred in states that maintained prior approval rate regulation.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of the report. At that time we will send copies to interested parties and make copies available to others upon request.

Sincerely yours,

Lawrence H. Thompson

Lawrence H. Thompson
Chief Economist

Executive Summary

Purpose

In 1982, GAO indicated, on the basis of a theoretical assessment, that competitive rate making could reduce the costs of workers' compensation insurance for most employers, although smaller firms might encounter higher premiums and greater difficulty in obtaining coverage under competitive rating.

Since 1981, 10 states have adopted some form of competitive rating. The Chairman, Subcommittee on Entrepreneurship and Special Problems Facing Small Business, Senate Committee on Small Business, asked GAO to review developments in these states to assess the impact of competitive rating and to determine whether the effects anticipated in 1982 had materialized.

Background

All states have workers' compensation statutes that govern the insurance coverage that employers are to carry for their employees' work-related injuries. Six states provide insurance through exclusive state-operated funds. Most states, however, require employers either to obtain insurance through private insurance companies or to self-insure against the risks of job-related injuries. Employers that cannot self-insure or obtain coverage voluntarily from private insurers are insured through state-established mechanisms called assigned risk or residual market pools.

As recently as 1981, all states that allowed private insurance companies to sell workers' compensation insurance required that premiums be approved in advance by state insurance departments. In these states, known as prior approval states, proposed premiums were generally prepared and filed on behalf of the individual companies by private rating bureaus. From 1981 to 1985, however, 10 states enacted competitive rating laws under which each insurance company generally prepares and files its own workers' compensation rates and may use them without first obtaining state approval.

Results in Brief

Between 1982 and 1984, both the average cost of workers' compensation insurance and the size of the assigned risk pools declined in most states, but these declines were greater in states that instituted competitive rating laws. The greater initial declines in competitive states are consistent with the effects anticipated in 1982. The only evidence that GAO could find about the effect on small businesses came from a study in one state, Michigan. That study found that the initial effect on most small businesses was at least as favorable as the effect on larger businesses.

Only the smallest businesses—those with 1 fewer than five employees—did not experience a decline in rates. This initial evidence seems to contradict the 1982 expectation.

It is too soon to draw firm conclusions about longer run trends, however. In workers' compensation, as in some other lines of property and casualty insurance, average costs (and, where they exist, the size of assigned risk pools) tend to rise and fall according to an underwriting cycle that can span a number of years. Preliminary data indicate that the cycle may have entered a new phase after 1984, since costs and the size of assigned risk plans appear to have increased in 1985. A complete assessment of competitive rating's impact requires sufficient time to allow the observation of rate and availability trends through all phases of the underwriting cycle.

GAO found no evidence that competitive rating has thus far appreciably affected the market structure of the workers' compensation insurance industry.

GAO's Analysis

Considerable price competition can exist in prior approval states even though a rating bureau files a single set of rates on behalf of most insurance companies. This competition occurs because many companies offer particular employers discounts or rebates which reduce net costs relative to initial premium quotes. GAO found that several states introduced competitive rating with the expectation that, in addition to lowering actual costs for workers' compensation insurance, the change would also lead to initial premium quotes which more accurately reflected the eventual employer cost. They believed that lower initial premium quotes would make them appear more attractive to employers considering whether to locate in their state or a neighboring state.

Costs Declined

In five states that introduced competitive rating, the cost of workers' compensation, as measured by the net amount of premiums paid per dollar of losses, declined by an average of 34 percent between 1982 and 1984. In prior approval states the cost of workers' compensation declined by an average of 23.4 percent over this same period. While competitive rating is a relatively new phenomenon in workers' compensation, several states have used competitive approaches for over a decade to establish automobile insurance premiums. GAO's analysis of changes in the cost of automobile insurance between 1976 and 1983 showed that, when costs were generally declining, the declines were

more rapid in competitive rating states than in prior approval states. When costs were generally increasing, however, the rate of increase was also greater in competitive rating states. Thus, the greater declines in the cost of workers' compensation insurance observed in competitive rating states over the 1982-84 period might be followed by greater cost increases in these states as the underwriting cycle reverses and costs start to rise. (See pp. 40 to 44.)

Availability of Insurance in the Private Market

Over the 1982-84 period, the size of assigned risk pools declined in both competitive rating and prior approval states. Between 1982 and 1983, the average decline was substantially greater among four competitive rating states than among prior approval states; weighted average earned premiums in the assigned risk pool declined by 34 percent in the competitive states and by 18 percent in the prior approval states. Between 1983 and 1984, both groups of states showed an average decline of 47 percent in earned premiums.

As with the cost trends, the data are still too limited to conclude that competitive rating laws will reduce the size of assigned risk pools in all phases of the underwriting cycle. Preliminary data for 1985 indicate that assigned risk pools are beginning to grow in both prior approval and competitive rating states. (See pp. 46 to 47.)

Impact on Small Firms

Data limitations make it particularly difficult to assess the impact of competitive rating on small firms. Both small and large firms should generally benefit from any general declines in the cost of workers' compensation insurance. Increased availability in the voluntary market is of particular benefit to small firms, however, because a disproportionate number of the firms forced to rely on assigned risk pools are small employers and coverage tends to be more expensive in assigned risk pools.

A special study of the cost of workers' compensation by size of firm in Michigan indicated that, except for the very smallest firms—those with fewer than five employees—small firms experienced greater than average declines in the cost of coverage between 1983 and 1984. The cost of coverage for firms with fewer than five employees did not change, which indicates that these very small firms actually experienced an increase in the relative cost of coverage when compared with the cost of coverage for all firms. (See pp. 47 to 49.)

Market Structure

The markets for workers' compensation insurance in both prior approval and competitive rating states are competitively structured; that is, they are characterized by low degrees of seller concentration and have no substantial barriers that might deter the entry of new insurers. Neither national data nor individual state data indicate any substantial degree of concentration in the industry, either before or after the introduction of competitive rating. In Michigan, the extent of seller concentration showed no appreciable change after the introduction of competitive rating; the largest four insurers accounted for about 21 percent of premiums in both 1981 and 1984. (See pp. 49 to 54.)

Recommendations

GAO is making no recommendations.

State and Industry Comments

GAO received comments on a draft of this report from several state insurance officials and a major industry association. These comments stated that the report accurately described and assessed the initial experiences with competitive rating and noted certain minor technical clarifications, which have been incorporated in the report as appropriate.

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Abbreviations

GAO General Accounting Office
NCCI National Council on Compensation Insurance

Introduction

Since 1948 every state has had a workers' compensation law.[1] These laws were intended to guarantee that injured workers would be recompensed for lost wages and health costs associated with work-related injuries, regardless of who was at fault. The laws apply to almost all types of employment and to both accidental injury and occupational disease. Employers typically arrange for coverage by purchasing workers' compensation insurance either from a private insurance company, with rates usually regulated by the state insurance department, or from a state insurance agency. Some employers insure themselves; self-insurance is permitted for qualified employers in all but three states.

In a 1982 staff briefing[2] to the Subcommittee on General Oversight of the House Committee on Small Business, we reported that if competitive forces were allowed to establish workers' compensation insurance premiums, the cost of such insurance could be lower. We also suggested, however, that smaller firms might encounter higher premiums and reduced availability of coverage for their employees. Our analysis viewed the rate-making process from a theoretical perspective since, at that time, competitive rate making had been adopted just recently and by only a few states. In June 1985, the Chairman of the Subcommittee on Entrepreneurship and Special Problems Facing Small Business, Senate Committee on Small Business, requested that we do a follow-up study, using data now available, to determine if competitive rate-making was successful in reducing the cost of workers' compensation and to assess its impact on small businesses.

The Origin and Nature of Workers' Compensation

U.S. industrial injury rates reached an all-time peak in the first decade of the 20th century. In 1907, in two industries alone (railroading and bituminous coal mining), 7,000 workers were killed in industrial accidents. At that time, injured employees seeking damages through the courts from their employers found that three common law doctrines frequently prevented their recovery of losses. These doctrines were (1) contributory negligence, (2) the fellow servant rule, and (3) assumption of risk.

Under the principle of contributory negligence, even if an employee could establish that the employer's negligence had caused an accident, the employer would not be held liable for losses if he or she could show

[1] In addition, there are two federally administered workers' compensation programs: the Federal Employees Compensation Act and the Longshoremen and Harborworkers' Compensation Programs.

[2] B-209252, Nov. 10, 1982.

that negligence on the part of the employee contributed in any way to the injury. The fellow servant rule prevented recovery of losses if the injury resulted from a coworker's negligence. Assumption of risk was based on the notion that a worker was free to bargain for wages commensurate with the hazards of a given job. Thus, under this doctrine, voluntary acceptance of employment under obviously dangerous conditions was considered to be an employee's assumption of the risk that injury might result from those conditions.

Concern over the shortcomings of the legal remedies for work-related injuries intensified early in the 20th century. The compensation system basing liability on negligence was viewed as an anachronism. Awards for injuries were seen as inadequate, inconsistent, and uncertain. The system was viewed as wasteful, partially because of high legal costs, and settlements were delayed by court procedures.

Workers' compensation laws were enacted in an effort to remedy these deficiencies. Most states had enacted workers' compensation laws by 1920 and all states had by 1948. These laws incorporated the principle that industrial accidents were part of the cost of the finished product and that compensation for resulting death or injury should be paid by the product consumer without regard to the fault of either employer or employee. The costs of work-related injuries were to be allocated to the employer not because of any presumption of blame, but because of the inherent hazards of industrial employment. Thus, employers lost their traditional common law defenses, while employees lost the opportunity to bring tort actions and secure possibly higher damage awards from sympathetic juries.

Workers' compensation statutes have aimed to provide adequate benefits to employees while limiting employers' liability for workers' compensation payments. Payments are to be prompt and predetermined to relieve both employees and employers of uncertainty and to eliminate wasteful litigation. Employers must cover the costs of required medical care, which are usually unlimited in time or amount. Most states also provide vocational and medical rehabilitation services or supervise these services when furnished by the employer or other private organization.

Cash benefits usually are classified as temporary total, temporary partial, permanent total, permanent partial, and death benefits. Temporary total benefits are paid to employees unable to work after a specified waiting period. Temporary partial benefits are paid during a period of

reduced earnings. These temporary benefits cease when the worker returns to full wages or is found eligible for permanent total or permanent partial benefits. Permanent total benefits are paid to those workers disabled completely for an indefinite time. Permanent partial benefits are paid if the employee either incurs an injury or disease that causes a permanent impairment or experiences a permanent, but partial, loss of wages or of wage-earning capacity. If the worker is fatally injured, the employer is required to provide burial expenses and to pay benefits to specified dependent survivors. For each category of benefits, all states prescribe a maximum benefit and usually a minimum benefit. Some states prescribe limits on benefit duration or total amount or both for certain classes of benefits.

The primary purpose of these benefits is to replace some portion of actual or potential wage loss. Many states also provide benefits because of impairment, whether or not this impairment results in lost wages. Most laws prescribe a schedule of permanent partial impairments specifying the number of weekly benefits paid for the loss (including loss of use) of particular parts of the body. In many cases, claimants accept lump sum payments in lieu of these weekly benefit payments.

Variations in State Workers' Compensation Programs

Historically, the structure, regulation, and administration of workers' compensation programs have varied among the states. Most employers are required by state laws to carry workers' compensation insurance except in three states (New Jersey, South Carolina, and Texas). Even in these states most employers purchase workers' compensation insurance because they relinquish their right to the traditional common law defenses against suits by employees if they fail to provide coverage. The types of employers exempt from the laws vary by state but typically include employers of domestic servants, casual labor, and certain types of farm labor.

All states except Alabama and New Mexico have administrative agencies to supervise workers' compensation claims. In 45 states, these agencies also adjudicate disputes concerning eligibility for benefits and extent of disability. The agencies' decisions may be appealed for review by the courts. In five states (Alabama, New Mexico, Tennessee, Oklahoma, and Wyoming) and the District of Columbia, the courts decide disputed claims.

Six states (Nevada, North Dakota, Ohio, Washington, West Virginia, and Wyoming) have an exclusive state-administered insurance fund. In the

other states, workers' compensation is largely a privately administered and funded program. Employers in these states usually purchase insurance coverage from private insurers at rates developed by private ratemaking bureaus and filed with state insurance departments for approval. Assisting many of these private rate bureaus is the National Council on Compensation Insurance (NCCI), a voluntary, nonprofit, unincorporated association of insurers. Its chief function is to analyze statistical and financial data collected from member companies. The rating bureaus use the NCCI financial data— premiums, discounts, benefits, expenses, etc.—in preparing rate filings.

State regulation of premiums goes back to the turn of the century. At that time, most states permitted voluntary associations of insurance companies to set rates and standardize insurance contracts for various kinds of property-casualty insurance, such as fire insurance. But competition on premiums kept surfacing among members of these voluntary associations, often forcing rates to a point below the actual indemnity cost. Thus, many state legislatures came to see competition as destructive because it could lead to insurer insolvency if losses occurred. Also, the states disliked the idea that private rate bureaus were entrusted with setting rates and monitoring rate compliance, which was deemed a state oversight responsibility. Mistrust of these groups and concern for the adequacy of insurer solvency gave impetus to state laws instituting state regulation as the arbiter of premium rates. Insurance companies then had to use a premium rate that had received prior approval by the state insurance department in all 44 states with private insurance carriers. These states, often referred to as prior approval states, varied in the extent to which they regulated rates.

As an option to insurance coverage by the state agency or private companies, most states also permit self-insurance by larger employers that can demonstrate sufficient financial stability to absorb the risks associated with workers' compensation claims. Only Texas and two of the states with exclusive state funds (Wyoming and North Dakota) do not allow self-insurance. As of January 1, 1985, 25 states also allowed group self-insurance; smaller employers with common characteristics or risks can pool risks and liabilities and form groups through trade associations.

In addition to the 6 exclusive state funds, 12 states also have state insurance funds that compete with private insurance carriers. Since workers' compensation insurance is required by law in all but three states, states have established mechanisms, called assigned risk pools or

residual market pools, to provide insurance for employers that are unable to self-insure or to obtain insurance voluntarily from private insurers. In some states, the state insurance fund takes on this residual, insurer-of-last-resort function. In most other states, all private insurers licensed to do business in the state participate in a residual or assigned risk pool by assuming a proportionate share of these higher risks.

A counter trend to prior approval regulation of workers' compensation premiums began in the early 1980's. Ten states that formerly had prior approval rate regulation recently passed competitive rating statutes in an attempt to reduce the escalating costs of insurance and to attract new industry. In these states, insurance companies can generally file and use their own rates for workers' compensation insurance without first obtaining the state insurance department's approval.

1982 GAO Analysis

In 1982 we developed a theoretical assessment of the potential effects of competitive rate making in the market for workers' compensation insurance. The two main issues raised in our analysis were

- whether it was desirable for states to adopt competitive rating statutes that permit insurers to compete more freely on the basis of premiums and
- whether the prior approval system, as practiced by most states, adequately reflected the value of investment income earned by insurers on the premiums they received from employers.

The proponents of open competition, we noted, have argued that two aspects of a regulated system cause rates to be higher than they would be under open competition. First, proponents argue that insurance companies unable to compete freely on the basis of rates will compete in ways that needlessly increase costs, such as by providing excessive engineering safety services and incurring excessive sales and administrative expenses. Second, they argue that the typical premium-setting formula used by most states does not directly account for investment income earned on funds supplied by policyholders.

On the other hand, defenders of regulated pricing claim that insurance companies are very competitive in workers' compensation, as manifested by their ability to adjust the net price of insurance through policyholder dividends and through the adjustments to regulated rates that are permitted in most states. Defenders do not reject consideration of

investment income in the determination of rates, but they express concern that introducing investment income in the regulatory rate process would create new problems. They argue that in the rate-making process, reductions in investment income would not be reflected as rapidly as increases because of a perceived regulatory bias against increasing premiums. Also, they argue that because the profitability of workers' compensation insurance is not excessive, there is no demonstrable need for changing the regulatory system.

In 1982 we concluded that, in theory, state deregulation of rates and adoption of competitive rating seemed viable. Although some states had recently passed competitive rating statutes, there was no evidence available on how such laws had affected the cost and availability of workers' compensation insurance or whether any unexpected problems had occurred. We therefore cautioned that evidence should be gathered and analyzed in those states before making a final judgment on the merits of competitive rating.

Our 1982 analysis further concluded that under the rate formula traditionally used in the regulated rate-making process, premium changes were not predicated on changes in investment income attributable to workers' compensation insurance. Under a competitive system, an insurance company should offer rates to customers that yield sufficient income to cover anticipated costs—i.e., expected benefit payments and administrative, marketing, and other normal business costs—and the profit it needs to earn to make staying in business worthwhile. Profit consists of all income, including investment income, less costs and allocable expenses. Thus, the premiums charged for workers' compensation insurance should reflect changes in investment income under a competitive system.

Objectives, Scope, and Methodology

Our review was made in response to a request by the Chairman of the Subcommittee on Entrepreneurship and Special Problems Facing Small Business, Senate Committee on Small Business. (See app. I.) The overall objective was to assess the impact of competitive rate-making on the cost and availability of workers' compensation in those states that had adopted such methods.

To accomplish this objective, we reviewed selected studies of workers' compensation insurance systems and interviewed state officials in Arkansas, Arizona, Georgia, Illinois, Kentucky, Maine, Michigan, Minnesota, Oregon, Rhode Island, and Vermont. We also interviewed officials

of NCCI and of the rating bureaus in Michigan, Minnesota, Oregon, Illinois, and Rhode Island. We also met with legislators of Kentucky, a representative of independent insurance agents in Michigan, and a representative of the Michigan Association of Insurance Companies.

Our methodology was shaped and constrained by the limited data available due to the recency of events. Competitive rate-making statutes have been in effect since only 1981, and then only in one state. Three states introduced competitive rate making in 1982, two in 1983, three in 1984, and one in 1985. Data on workers' compensation insurance (or any other line of insurance) for any given year are generally not available until one or two years later. For example, information on the 1983 policy year is generally not available until 1985. As a result, financial data are just becoming available on the initial years of competitive rate making in fewer than 10 states.

With the above constraints in mind, we took a case study approach. We visited 6 of the 10 states that had adopted competitive rate making and tried to learn the significant features of their systems through discussions with officials of the state regulatory agencies. We also reviewed reports on those workers' compensation insurance systems. With such information, we identified the similarities and differences among the states and assessed the impact of the differences when possible.

Using national data obtained from NCCI and other sources, we then compared trends in premiums and losses or benefit payments in the competitive rating states with those trends in regulated states. Our purpose was to identify trends systematically related to the system employed (i.e., competitive or regulated). We also gathered data on lines of insurance other than workers' compensation to learn the impacts of the insurance business cycle on premiums and to determine if results found could be extrapolated to workers' compensation. In particular, we examined the automotive insurance line—which has been subject to competitive rating in some states for a number of years—to project what might occur in workers' compensation insurance.

We requested and received comments on a draft of this report from the state insurance departments of Illinois, Michigan, Minnesota and Oregon and from NCCI. The comments stated that the report accurately

described and assessed the initial experiences with competitive rating and noted certain minor, technical clarifications, which have been incorporated in the report as appropriate.

We made our review between September 1985 and March 1986 in accordance with generally accepted government auditing standards.

Measuring the Costs of Workers' Compensation

To understand competitive rating systems and the impact of competitive rating on workers' compensation, one must be familiar with the concepts and cost measures used in the insurance industry and with the cyclical fluctuations of the insurance market. The actual cost that employers must pay to cover their injured employees' wage losses, medical costs, and rehabilitation benefits is difficult to determine because of inherent characteristics of workers' compensation programs. Comparing costs among states is further complicated by differences in workers' compensation laws and economic conditions over time and by the use of non-standard pricing terminology.

One key problem stems from the time difference between premium payments and benefit payments. For example, in 1985 an employer pays a premium to cover job-related injuries in that year. However, the benefit payments to a worker injured in 1985 may involve payments for lost wages and medical expenses that continue for the length of the disability, which may be several decades. In disputed cases, the magnitude of the benefits may not be determined for several years. Because workers' compensation is a prefunded system in which the premiums paid in 1985 are meant to cover the liabilities or losses paid over a number of years, it is often described as having "long liability tails." If premiums are set to cover the expected cost of benefits paid (loss costs) plus expenses, the existence of long liability tails generates considerable uncertainty in determining the appropriate price.

Given the deferred payment of benefits, workers' compensation insurance premiums can generate substantial investment income for insurance companies. Premium levels are therefore affected to some degree by the potential rates of return on the investment of funds set aside to pay future benefits. Variations over time in the rates of return earned on these investments thus cause cyclical fluctuations in the cost of insurance. These fluctuations, which affect workers' compensation, as well as other lines of property/casualty insurance, make up part of what is commonly known as the underwriting cycle. The extent to which state insurance departments consider investment income in regulating insurance rates differs substantially.

Policy dividends also affect the net cost of employers' insurance. Mutual insurance companies and participating stock companies pay dividends that average about 10 percent of premiums paid by policyholders. These dividends reduce the actual cost of the coverage.

Premiums for workers' compensation insurance are usually quoted in terms of the cost per $100 of payroll. Payroll is used as the basis for premiums since wage loss is a major component of benefits. Separate premium rates are defined for about 600 different work classifications in each state. The premiums associated with differential loss experience may vary considerably by work category. For example, selected average premium rates in Michigan were $10.38 per $100 of payroll for iron and steel merchants, $5.16 for janitorial services, $1.86 for hardware store employees, and $0.31 for clerical workers.

Common Cost Measures and Adjustments

A number of cost measures are commonly used in the workers' compensation industry. This section focuses on those measures that are important in assessing the impact of competitive rate making on the cost of workers' compensation.

Pure premium is a measure of the "loss costs"—i.e., benefits and loss adjustment expenses paid by an insurance company to settle workers' compensation claims. In setting rates for workers' compensation, rating bureaus and regulatory authorities usually try to estimate what the expected losses will be for the coming year based on the actual losses incurred in recent years and expectations regarding trends or changes in benefit structures and economic conditions.

Manual premium is calculated by adding the insurance company's marketing and management expenses, plus a return on invested capital, to the pure premium, or loss costs. It is the starting point for quoting prices of workers' compensation insurance to employers. While it may not be the best cost measure, it has some importance because it is the published price, or "sticker" price, for the insurance. In some states, low manual premiums are perceived to be very important in terms of attracting potential employers to a state.

Most states allow various adjustments to the manual premium to produce other cost measures for employers, although the types and magnitudes of adjustments permitted vary from state to state. Differing combinations of price adjustments produce an array of premiums with names like standard premium, net premium, and adjusted net premium. Employers may receive insurance quotations in any of these forms. Given the variation among states in terminology and types of adjustments permitted, it is more important to describe the nature of adjustments than to define the various price quotations used. These adjustments follow:

- Expense constants. To cover the minimum costs of issuing and servicing policies, employers in most states are charged a flat fee, or expense constant, of $35 to $120. The expense constant represents about 1 to 3 percent of the total fees charged for workers' compensation. Expense constants are added to manual premiums to obtain standard premiums.
- Experience rating. Employers' past records of loss costs or benefit payments are used to modify published manual rates. Employers with good work safety experience would have manual rates reduced, while those with high loss costs would have rates increased. Experience ratings are usually applied only to larger firms that have established a meaningful track record on accident experience. According to NCCI, only 15 percent of firms with workers' compensation coverage are experienced rated, but these firms account for about 85 percent of all covered employees.
- Premium discounts. Larger firms, usually those with more than $5,000 in premium payments, generally receive a premium discount which increases in size as the size of the paid premium increases. For mutual insurance companies in NCCI-affiliated states, these discounts were 2 percent for premiums over $5,000 but less than $95,000, 4 percent for the next $400,000 of premiums, and 6 percent for premium payments over $500,000.
- Retrospective ratings. Various plans essentially permit employers to have their rates adjusted at the year's end to reflect the actual loss experience during the year. Larger employers usually have an option of choosing premium discounts or retrospective ratings.
- Schedule credits. Scheduled percentage reductions to premiums are made for characteristics or risks that are not reflected by experience ratings alone. For example, in Illinois, rates can be modified for condition and care of premises; medical facilities; safety devices; classification peculiarities; selection, training, and supervision of employees; and management cooperation with the insurer.
- Deviations. Insurance companies in most prior approval states are allowed to adjust manual rates by a specified percentage. Deviations average about 10 to 15 percent of manual rates.
- Dividends. For participating stock companies and mutual insurance companies, dividends are paid to policyholders depending on the insurer's loss experience and investment experience of the insurer. The average level of dividend payments has been about 10 percent of earned premiums in recent years.

When all the applicable adjustments (except for dividend payments) are made, the result is the net premium. The net premium minus dividends is usually referred to as the net cost to the policyholder. Several of the insurance industry representatives we interviewed contended that these

types of adjustments provided a substantial degree of price flexibility, even in states with prior approval rate regulation.

For most of these measures, another distinction in terms of time period covered is often important in assessing or comparing costs. Typically, premiums are paid at a point in time to cover the coming year's payroll. For example, a policy written on July 1, 1985, will provide coverage through the last half of 1985 and the first half of 1986. This type of policy would generate written premium for 1985. However, only half of this 1985 written premium will actually be earned in calendar year 1985. Thus, half of the written premium represents earned premium in 1985, and half represents earned premium in 1986.

Inverse Loss Ratio: The Ratio of Premiums Earned to Losses Incurred

Most studies comparing insurance costs among states use the loss ratio, which is the ratio of losses incurred by an insurance company in a given year to its earned premiums for that year. Incurred losses for a given year are the sum of losses paid during the year plus the amounts held as reserves for the future payment of claims arising from accidents that occurred during the year. Earned premiums are those premiums paid for coverage during the year, whether or not the policies were written during that year or in a prior year. The inverse of the loss ratio, or earned premiums divided by incurred losses, provides a convenient measure of the price of insurance. It represents the cost paid for each dollar of insurance payment received.

One limitation of loss ratio, or premium-to-loss ratio, comparisons is that they cannot provide unequivocal evidence of the impact of rate regulation on insurer profitability. Although an increase (or a decrease) in the ratio of earned premiums to incurred losses implies an increase (or a decrease) in the cost of insurance and in insurance profits, changes in administrative expenses or investment income can mitigate or even eliminate the effect on profits.

In 1984 the weighted average premium-to-loss ratio for 44 state workers' compensation programs was 1.25, implying that, on average, insurance companies collected $1.25 in premiums for each dollar of losses paid that year. Thus, on average, 20 percent of premium income was available to cover such admistrative expenses as commissions, taxes, licenses and fees, and overhead. These premium-to-loss ratios ranged from a low of 0.89 in Maine to a high of 2.18 in Montana. Only four other states (Arizona, Kentucky, Maryland, and Minnesota) had ratios that were less than 1 in 1984.

The Insurance Underwriting Cycle

The effects of cyclical fluctuations in the insurance industry must be considered in assessing changes in insurance costs over time. Workers' compensation and other forms of liability insurance have been marked by pronounced cyclical swings in the cost and availability of insurance. These market fluctuations, which vary in intensity and duration, are known as the underwriting cycle. When rates are adequate, risk selection careful, investment income rising, and the line of insurance generally profitable, new capital is attracted to that line of insurance. As new capital is attracted from new insurers and from foreign and domestic insurers that usually write other lines of business, the expanded capacity to underwrite insurance in that line is translated into increased competition for available premium volume. The increased competition results in price discounting and in reduced standards for risk selection as insurers begin to underwrite greater risks. As some of the factors that led to increased industry profitability reverse, the cycle also reverses. Capacity shrinks, prices begin rising, and underwriting selectivity tightens.

Evidence of the declining phase of the underwriting cycle can be found in falling premiums, increased dividends, and increased size of the voluntary market. The expansion of the voluntary market reflects both a decrease in the size of residual pools and an increase in the employment level, which increases the base upon which premiums are written. The workers' compensation underwriting cycle differs somewhat from the cycle in other liability lines. One possible explanation is that loss costs tend to be contracyclical to the general economy because losses per employee covered are high when the economy is in a recession. On the other hand, in other lines, such as auto insurance, loss costs fall as the level of driving activity falls during a recession.

Most of the data we analyzed to assess the impact of competitive rating on the cost of workers' compensation insurance (see ch. 4) covered 1983 and 1984—a period of generally declining prices and increased availability in the workers' compensation market. Some data are just becoming available for 1985, when the workers' compensation cycle began to reverse direction and tighten up. The available data, however, still cover only part of the underwriting cycle. A complete assessment would require several more years of insurance industry data.

Competitive Rate Making: An Emerging Phenomenon

Competitive rate making in workers' compensation insurance is a recently emerging phenomenon. Replacement of prior approval systems with file and use systems for workers' compensation first occurred in 1981, although many states adopted competitive rating laws for most other lines of property-liability insurance in the late 1960's and early 1970's. In many states, workers' compensation is the only major line of liability insurance that still requires prior approval of rates by the state insurance department.

Arkansas became the first state to adopt competitive rate making for its workers' compensation insurance system when its statute went into effect on June 17, 1981. Kentucky and Oregon were next with statutes effective July 1, 1982. Since then seven other states have passed competitive rate-making laws for workers' compensation insurance—Rhode Island, September 1, 1982; Michigan and Illinois, January 1, 1983; Georgia and Minnesota, January 1, 1984; Vermont, July 1, 1984; and Maine, July 1, 1985. In 1983 Arizona considered adopting competitive rate making for its workers' compensation insurance but declined to do so because it believed that its regulated system allowed sufficient competition in establishing rates.

States Adopt Competitive Rating Primarily to Reduce Costs

The states that adopted competitive rating during the early 1980's were generally hopeful that increased competition would reduce the cost of workers' compensation for current and potential employers. From about 1970, employers throughout these states experienced rapid and large increases in the cost of workers' compensation insurance. These cost increases were attributed to various causes, including substantially increased benefits, expanded and liberalized eligibility requirements, large judgments obtained through litigation, and an increasing number of claims going to litigation. These states were also adversely affected by the 1980-81 recession. Competitive rating was viewed as a way to reduce costs for current employers and to provide an incentive for attracting new employers. In other words, the states hoped that lower workers' compensation costs would improve their competitive position in attracting and retaining industry.

The theoretical expectation, as indicated in our 1982 analysis, was that increased competition could lead to lower prices if, in fact, workers' compensation insurers had some degree of market power. One of the main reasons the Michigan legislature adopted a competitive rating system was its perception that the workers' compensation insurance

industry was, in effect, operating as a cartel with premiums fixed by a private rating bureau and followed by all insurers.

These states hoped that competitive rate making would reduce "front-end" prices even if it did not lower the net cost of workers' compensation. Front-end prices are the premiums actually quoted to employers before adjustments for dividends and other factors. The manual premium is the most direct form of a front-end price, but other measures quoted when insurance is purchased, such as net premium, are also front-end prices. The states maintained that lower front-end prices would clearly indicate a pro-business environment.

Investment income earned by insurance companies was another factor leading to competitive rating. In Kentucky, for example, officials believed they were unable to regulate workers' compensation rates to the extent deemed necessary because of the difficulty in identifying and quantifying investment income. Because of this difficulty, investment income was not considered in setting manual rates. Competitive rating was seen as a means of making insurers consider investment income in developing their rates, since it would increase price competition among insurers.

In Minnesota, competitive pricing was introduced partly because it was thought necessary to effect a major change in the workers' compensation benefit structure. Minnesota instituted a two-tier benefit plan in which employers paid significantly lower benefit payments if they agreed to offer injured workers comparable jobs. To ensure that employers had an incentive for incurring rehabilitation and job modification costs to enable workers to return to work and to thereby reduce benefit payments, insurance rates had to be flexible enough to reflect employer efforts to reduce loss costs. Minnesota permitted schedule credits in 1982 and fully introduced competitive rating in 1984 to provide price flexibility.

States Take Differing Approaches to Competitive Rating

While we define "competitive rating states" as those states that have shifted from a prior approval to a file and use rating system, the extent to which these states permit competitive pricing still varies substantially. There are differences in the types of companies that can use competitive pricing, the nature of state review of rates filed, the role of rating bureaus, the magnitude of rate reductions permitted, the types of rating categories permitted, the basis for manual premiums, and the adjustments to fixed rates permitted. In addition, as discussed in

chapter 1, the administrative and benefit structures of workers' compensation programs differ among the states. Although these differences make it difficult to obtain a pure indication of the impact of competitive rating independent of other factors, they provide test cases of a range of approaches used to meet the individual states' differing needs. Following are brief descriptions of the competitive rating systems in the six states we chose as case studies and in the four other competitive rating states.

Michigan

Michigan's competitive rating system was designed to make price competition serve as the principal regulator of rates. The state insurance department's function shifted from regulating rates to monitoring the behavior of rates and the level of competition. The principal mechanisms used to accomplish the goal of market determination of rates were

- allowing insurers to file and use rates without first obtaining prior approval from the insurance commissioner,
- prohibiting cartel filings and abolishing rating bureaus, and
- allowing insurers to share only the information on loss costs needed to make pricing decisions.

Michigan's abolishment of rating bureaus distinguishes it from the other states that adopted competitive rating. The perception that rating bureaus contributed to a system of cartel pricing was a major reason behind this change. Michigan, however, did recognize the value of insurers' pooling information on loss experience through an advisory organization that no longer provides information on premium levels or rates. The revised Michigan laws also require workers' compensation insurers to consider after-tax investment profit or loss from unearned premium and loss reserves attributable to workers' compensation insurance in their rate-making process.

The Michigan Insurance Bureau is responsible for monitoring competition in the workers' compensation market and for determining whether it is adequate to keep rates and the resulting front-end premiums at levels that are neither excessive nor unfairly discriminatory. Michigan statutes direct the insurance commissioner to use specific economic criteria in making this determination. (See pp. 45 to 46.)

Illinois

Under the Illinois competitive system, insurance companies are required by law to participate in a statistical pooling organization to help predict

losses, but are prohibited from agreeing to an established price structure. The NCCI-affiliated rating bureau still plays a central role.

In the past, most companies generally accepted final rates or manual premiums filed on their behalf by the rating bureau. Under the new law, companies use advisory rates or pure premiums prepared by the bureau only as an advisory starting point in establishing their own rates. Companies are then free to deviate from these advisory rates (usually by a flat percentage above or below the advisory rates), or companies can add an expense-loading factor to the advisory pure premiums to produce manual rates.

Under both the old and new systems, manual rates may be adjusted to reflect the insured firm's size and loss experience. Also under both systems, rates can be further modified up or down by schedule credits or debits that reflect such characteristics as condition of premises, availability of medical facilities, safety devices, management quality, and degree of cooperation with the insurer. Under the old system, companies were allowed to adjust rates up to 25 percent for schedule credits. Under the competitive rating law, schedule credits may go as high as 60 percent.

Clearly, the old law permitted considerable price flexibility, though prior approval was needed for changes in the manual premium rate structure. However, considerably more pricing flexibility now exists under competitive rate making in terms of deviations from advisory rates or pure premiums; adjustments for administrative expenses; and greater schedule credits.

The state insurance department uses four types of information to assess competition in the workers' compensation market: (1) residual market information; (2) information on market shares; (3) information on price variations; and (4) information from cost analyses, including assessment of factors like premium volume and loss ratios. As in Michigan, the regulatory role in Illinois has shifted toward overall evaluation of market behavior rather than direct regulation of rates except for the assigned risk plan, which accounts for about 10 percent of premium volume in Illinois.

Minnesota

Although Minnesota's movement to a file and use system became effective on January 1, 1984, some changes in the use of schedule credits permitted greater pricing flexibility before then. Minnesota also retained

its NCCI-affiliated rating bureau. However, much like in Illinois, the rating bureau provides insurers only advisory pure premiums from which they develop their own rates.

As we discussed earlier, Minnesota's movement to competitive rating was accompanied by a major change in the administration and benefit structure of the workers' compensation program and was viewed as necessary to effect this change. Minnesota also monitors the extent of competition in the workers' compensation market.

Oregon

Before 1966 Oregon relied exclusively on a state-operated fund, the State Accident Insurance Fund, to operate its workers' compensation program. In 1966 private insurers were allowed to write workers' compensation policies under a prior approval system. The state insurance fund continues to operate, has authority to promulgate its own rating system, and still has a 46-percent share of the market.

In 1982 the state adopted what it called an "open competition-modified file and use" rating system, which eliminated mandatory adherence to NCCI-affiliated rating bureaus, rating systems, and rates. Only policy forms remained standard. The rating bureau now provides only advisory information on pure premiums. Insurers are required to give due consideration to investment income when establishing their rates and to maintain reasonable records on the amount of investment income they earn. Rating is more flexible, but changes in rules for setting rates still require prior approval. While companies may file and use rates without prior approval by the insurance department, the department may challenge rates as being excessive, discriminatory or inadequate.

In addition, Oregon's insurance commissioner is required to report on "the effectiveness and desirability of retaining" the competitive rating system. The first legislatively mandated report focused on changes in rates, the residual market, dividends, market shares, and investment income.

Rhode Island

Effective September 1982, Rhode Island adopted a file and use system applicable to insurers that write over 2 percent of the state's total premiums. The prior approval system was retained for insurers with less than 2 percent of the market. The large insurers write about two-thirds of the state's total volume of premiums, while those with less than 2 percent write the remaining third.

In late 1985, the insurance department was still using the regulated rates in effect before 1982. Since competitive rating had not become fully operational by the time of our review, there were no data available to assess the impact of competitive rating in Rhode Island.

Kentucky

Under Kentucky's competitive rating system, the rating bureau is prohibited from publishing manual rates. Instead, the bureau now develops advisory pure premium rates for use by insurance companies in developing their own rates. The advisory rates may not include profit or expenses except loss adjustment expenses. Rate making for the residual market continues as under the prior system; rates are developed by the rating bureau and approved by the state insurance department before use.

Kentucky's laws do not require any specific studies of the competitive rate-making system but rather establish a presumption that insurance markets are competitive unless the state insurance commissioner determines otherwise. If the commissioner finds that an insurance market is noncompetitive, insurers will be required to file their rates with the state for approval. No such determination had been made as of October 1986.

Other Competitive Rating States

While Arkansas was the first state to adopt a file and use statute for workers' compensation insurance, it still maintains a substantial role in regulating rates. Insurers must file rates with the state 30 days before they can use them, and the state insurance department may disapprove any rate increases. Arkansas was not selected for our case study analysis, but data for Arkansas were included in our comparisons of competitive and prior approval rating states.

Georgia, Vermont, and Maine have not issued any reports assessing the impact of competitive rate-making on workers' compensation insurance.

Under Georgia's file and use system, as under its prior regulated system, 90 percent of insurers rely on NCCI advisory rates. In the prior system, there was little deviation from the NCCI rates.

Vermont included workers' compensation when it adopted competitive rating for all lines of insurance. Under its competitive system, insurers must file and adhere to their rate-making plans. At present, most

insurers use NCCI advisory rates, but Vermont does not restrict the insurers from deviating up or down from these advisory rates.

In Maine competitive rate making for workers' compensation insurance is being phased in gradually. The state mandated an 8-percent reduction in rates effective August 1985 and froze the rates until January 1987. At that time, a 10-percent increase in rates will be permitted, and in January 1988, another 10-percent increase will be permitted. All limitations on rates will be lifted in January 1989, when, according to a state official, "true" competition will begin.

Benefit Changes Accompany Competitive Rating in Some States

In three of the six states visited (Minnesota, Michigan, and Rhode Island), competitive rate making was only one of the means adopted to deal with perceived problems in workers' compensation programs. Changes in benefit structures accompanied competitive rate making in these states. Since the costs of workers' compensation insurance are essentially driven by the costs of the benefits it must cover, major changes in benefit structures make it even more difficult to assess the independent effect of competitive rating on insurance costs.

Minnesota—A Two-Tier Benefit System

In the late 1970's, Minnesota began an intensive examination of its workers' compensation insurance in response to increased employers' complaints about the high cost of such insurance. After comparing its system with that of its neighboring state, Wisconsin, Minnesota concluded that it had substantially higher costs because its litigation rate was three times that of Wisconsin and because its worker disability cases were more frequent and severe. For example,

- Minnesota's rate of permanent total disability cases was 20 times higher,
- the average duration of temporary total disability was 50 percent longer in Minnesota, and
- the frequency of permanent partial disability cases was 60 percent higher.

Effective January 1, 1984, Minnesota adopted a two-tier system of workers' compensation benefits designed to provide incentives for employers to bring injured workers back to work or find other suitable employment for them. The system was also designed to provide incentives for injured workers to return to work.

The two-tier system applies to employees with some degree of permanent injury. The size of the award to which such employees are entitled depends largely on whether the employer offers a suitable job no later than 90 days after the employees have reached a stage of maximum medical improvement from their injuries. If an employee receives a suitable job offer within the time limit, he or she is entitled to a relatively limited impairment award. If the employee accepts the job offer, he or she receives the lump sum impairment award after 30 days. If the employee does not accept the job offer, the same impairment award is made but is paid as a weekly benefit in the same amount and frequency as weekly wage replacement benefits were paid at the time of injury. In either case, eligibility for continuing temporary total disability benefits beyond the amount of the impairment award lapses when the employee begins working or rejects the job offer.

If an employee is not offered a suitable job within 90 days after reaching maximum medical improvement, he or she is entitled to economic recovery benefits that are much larger than the impairment award. This higher tier benefit is paid weekly to compensate for wage loss for 600 to 1,200 weeks, depending on the degree of disability.

Michigan—Coordination of Workers' Compensation With Other Benefits

Michigan's most important change made about the same time as the adoption of competitive rate making was the coordination of workers' compensation benefits with other benefits, such as unemployment compensation benefits, employer-financed wage continuation plans, pension plans, disability insurance plans, and employer contributions to old age benefits under social security. Benefit payments can now be reduced for retired persons drawing private or government pensions. Previously, retirees continued to obtain workers' compensation benefits based on their wage losses even though they voluntarily retired. In addition, the basic benefit formula was changed from two-thirds of gross wages, with a maximum of two-thirds of the state's average after-tax weekly wage, to 80 percent of after-tax wages, with a maximum of 90 percent of the state's average weekly wage. The net effect of these benefit changes was expected to be a modest reduction in the cost of the workers' compensation program.

Besides making these changes, Michigan made other significant changes in insurance law and practice. The Michigan legislature mandated a 20-percent overall reduction in workers' compensation insurance rates, effective January 1, 1982. In response, the Michigan rating bureau announced a voluntary 22-percent rate reduction, effective the same

date. Then, during 1982, the legislature provided that open competition in workers' compensation insurance go into effect on January 1, 1983.

Rhode Island—Three Concurrent Changes

Rhode Island officials told us about three concurrent changes in workers' compensation laws. First, Rhode Island placed a limitation on the amounts physicians could charge for treating workers' compensation injuries. Second, beginning in 1986, the Department of Workers' Compensation, which administers the program, was to hold informal hearings to advise injured workers on their rights and available benefits. The purpose of such hearings is to eliminate the need for attorneys and litigation and therefore the substantial costs of litigation. A third change—but one resulting from a Rhode Island supreme court decision rather than from the state legislature—requires injured workers with partial permanent disabilities to be treated as though they had total permanent disabilities.

The Impact of Competitive Rating on Workers' Compensation Costs

Insurance regulators in states that instituted competitive rating laws before 1984 generally believe that competitive rating has favorably affected the cost of workers' compensation insurance. In these states, the initial years of competitive rating were generally characterized by declining premiums. Although prior approval states also experienced reduced premiums, their reductions were not as great.

Some observers question whether the declines in premiums are attributable to competitive rating or merely reflect the general cyclical trends affecting the workers' compensation industry. There was more agreement that competitive rating had changed the approach to pricing in that insurers placed more emphasis on front-end pricing and less emphasis on dividends.

Four States Report Lower Premiums

Four states—Michigan, Illinois, Minnesota, and Oregon—prepared reports on the impact of competitive rating. Each of these states reported substantial declines in the cost of workers' compensation. Their initial experiences with competitive rating are described below.

Michigan

In Michigan average manual premium rates filed by insurers decreased by 7 percent in calendar year 1983, the first year of competitive rating, and by an additional 7.1 percent in 1984. These declines came after a 22.2-percent decrease in manual rates in 1982 that was mandated by the state insurance bureau under the prior approval system. More recent evidence, however, suggests that this trend may be reversing, as average manual rates for the first half of 1985 increased by 6.4 percent.

Recognizing that simple changes in manual rates do not reflect changes in employment patterns or changes in insurance companies by employers searching for lower rates in a competitive environment, the state insurance bureau also calculated changes in average manual premiums and in average net premiums for policies actually written. According to the bureau's calculations, the average manual premium for policies actually written declined by 6.1 percent between 1983 and 1984 but increased by a negligible 0.02 percent in the first half of 1985. The average net premium for policies written decreased by 9.9 percent in 1984 but rose by 3.8 percent in the first half of 1985.

The greater decline in net premiums than in manual premiums suggests that some of the cost decline occurred in premium discounts, experience rating factors, schedule credits, and other adjustments, rather than

solely in the average sticker price or manual premium. But since net premium does not include any adjustment for dividends, it is still viewed as a front-end price quoted to employers. Both of these measures, however, indicated that the cost of workers' compensation declined during 1983 and 1984 but started to rise in 1985.

As the Michigan Insurance Bureau noted, changes in premiums by themselves, are not a sufficient basis for evaluating changes in the cost of workers' compensation insurance. The relationship of premiums to losses is much more meaningful, because premium-to-loss ratios (i.e., inverse loss ratios) more adequately reflect the relationship between price and the insurance product provided. Increasing premium-to-loss ratios indicate declining efficiency, or increased profitability, and increasing costs for workers' compensation insurance. Declining premium-to-loss ratios indicate greater efficiency, or decreased profitability, and declining costs. The ratio of net premiums earned to losses incurred in Michigan was 1.818 in 1982; it decreased by 30 percent to 1.271 in 1983 and decreased by another 9.3 percent to 1.153 in 1984. Data for 1985 were not available at the time of our review. Changes in the premium-to-loss ratio and other cost measures appear in table 4.1.

Table 4.1: Changes in the Cost of Workers' Compensation Insurance in Michigan Since the Introduction of Competitive Rating

Percent change from previous calendar year

Cost measure	1983	1984	1985[a]
Average manual premium	−7.0	−7.1	+6.4
Average manual premium for policies actually written	b	−6.1	+0.02
Average net premium for policies actually written	b	−9.9	+3.8
Premium-to-loss ratio[c]	−30.1	−9.3[d]	b

[a]Based on preliminary data for first half of year.

[b]Not available.

[c]Net earned premium divided by incurred losses, excluding loss adjustment expense.

[d]Based on preliminary data for calendar year 1984.

Source: Michigan Insurance Bureau.

A special report on the costs, benefits, and fairness in workers' compensation was submitted to the Michigan Cabinet Council on Jobs and Economic Development.[1] To make meaningful cost comparisons over time

[1]Theodore J. St. Antoine, Workers' Compensation in Michigan: Costs, Benefits and Fairness, A Report to Governor James J. Blanchard's Cabinet Council on Jobs and Economic Development (Dec. 1984) and John F. Burton, Jr., H. Allen Hunt, and Alan B. Krueger, Interstate Variations in the Employers' Costs of Workers' Compensation, With Particular Reference to Michigan and the Other Great Lakes

and among states, this study used a model to simulate average premiums for 71 major occupational categories. The report first simulated what manual premiums would have been for these occupational categories had competitive rating not been introduced. To obtain simulated estimates of what net premiums would have been, adjustments were then made for experience rating, premium discounts, and other factors that were flexible elements of pricing under the old prior approval system. After a further adjustment for the estimated effects of dividends, these simulated net premiums were then compared with the actual net premiums charged to policyholders under the new competitive rating system. The study estimated that 1984 rates were 30.6 percent less than they would have been if competitive rating had not been introduced.

The study also tried to estimate the impact of Michigan's benefit changes that accompanied the introduction of competitive rating. Benefit changes were estimated to reduce total premiums charged by a little over 6 percent, or about $30 million, in 1984. By combining that savings with about $212 million in savings from the estimated 30.6-percent reduction in rates attributable to competitive rating, the report estimated a $242 million total savings to Michigan employers.

Other evidence of the changing price structure for workers' compensation was also found in Michigan. Most notable was the substantial variability in manual rates that emerged after the introduction of competitive rating. Before competitive rating, the manual rate would have been identical for all firms in an occupational category. Under competitive rating, these rates now vary substantially. In some categories (e.g., newspaper publishing or supermarkets), the highest rate is more than twice the lowest. Table 4.2 presents the variations in manual rates for selected occupations categories for 1984.

The Michigan Insurance Bureau believes the variation in manual rates indicates that insurers are not fixing prices under the new system. However, the bureau is somewhat concerned about the magnitude of this variation. Since workers' compensation is a homogeneous product, the bureau expects the long-run prices to converge to about a level that is just sufficient for insurers to earn a fair return on their invested capital. Insurers may also use different pricing strategies in terms of adjustments to manual rates for schedule credits, experience rating, and other

States, A Report to Theodore J. St. Antoine, Special Counsel on Workers' Compensation for Governor James J. Blanchard (Feb. 1985.)

factors. The state, however, is most concerned that the disparity in manual rates is attributable to the buyers' lack of good information about the marketplace. If business is retained at a higher premium because buyers are not fully knowledgeable about lower cost alternatives, the state is concerned that the market may not be as competitive as possible. Also, the state is concerned that some insurers could selectively use adjustments to manual rates to discriminate against buyers with less bargaining power or less market knowledge.

An alternative view is that workers' compensation is not really a homogeneous product because of the differing loss experience of different employers in the same rate classification. As a result, insurance companies may adopt different underwriting strategies and rates to target particular segments of the market. One insurer may underwrite only employers with good loss-control programs and can thus charge lower rates than an insurer that is willing to underwrite a policy for virtually any firm in a given classification, but at a higher rate.

Table 4.2: Distribution of Michigan Workers' Compensation Policies by Manual Rate for Selected Occupational Classes, 1984

Class description	Number of policies	Lowest rate	Highest rate
Bakeries	575	$4.23	$8.66
Cleaning or dyeing	501	2.71	5.61
Aluminum window sash manufacturing	365	2.59	5.03
Tool manufacturing	473	2.09	4.03
Newspaper publishing	95	2.64	5.80
Masonry	1,346	5.72	10.77
Plumbing	2,396	2.83	5.08
Street or road construction	205	7.28	13.58
Trucking	460	7.14	12.36
Retail clothing store	2,165	.72	1.46
Supermarket	1,459	2.04	4.32
Clerical	62,753	.21	.40
School professional employee	5,585	.25	.46
School nonprofessional employee	3,097	3.48	5.93
Foundry, nonferrous	54	11.48	18.63

Source: Michigan Insurance Bureau.

Illinois

In 1983, Illinois' first year of competitive rating, written premiums decreased by 13.8 percent, or $105 million. The state insurance department attributed this decline solely to competitive reductions in insurance rates. Because the Illinois economy was in a state of recovery in

1983, the department thought it was fair to assume that total payroll (the base for workers' compensation premiums) was either constant or slightly higher while written premiums were declining.

Declines in the Illinois premium-to-loss ratio since 1982 are another indicator of the declining cost of workers' compensation. Between 1980 and 1982 (see table 4.3), the premium-to-loss ratio remained fairly constant at around 1.43. The insurance department expects the expense ratio for workers' compensation, on a total company basis, to be between 20 and 25 percent. The department concluded that 1980-82 were profitable years for workers' compensation insurers since premiums were more than ample to cover incurred losses and expenses. In 1983 the premium-to-loss ratio decreased sharply, indicating a substantial decline in costs. Preliminary data indicate that costs continued to decline in 1984 to a point where incurred losses were just about equal to net written premiums.

Table 4.3: Illinois Workers' Compensation Premium-To-Loss Ratios, 1975-84

Calendar year	Premium-to-loss ratio[a]
1975	1.236
1976	1.229
1977	1.425
1978	1.142
1979	1.152
1980	1.420
1981	1.449
1982	1.431
1983	1.195
1984[b]	1.006

[a]Net written premium divided by incurred losses.

[b]Preliminary estimate.

Source: Illinois Department of Insurance.

The data in table 4.3 also indicate the potential impact of the underwriting cycle on insurance premiums and insurance company profitability. While the 1983 premium-to-loss ratio declined, the price per dollar of losses was higher that year than in 1978 and 1979, well before competitive rating was introduced. Thus, although the cost of insurance fell after the introduction of competitive rating, the evidence is not sufficient to attribute this decline solely to competitive rating. Moreover, the premium-to-loss ratios available when Illinois assessed competitive rating did not include adjustments for dividends. The extent to which

price declines at the front end are later eroded by decreases in year-end dividends is critical. However, in Illinois, as in other states, any decrease in front-end prices resulting from competitive rating was considered important because these prices strongly affect firms' locational decisions.

The Illinois insurance department also examined changes in premium-to-loss ratios by size of insurance company. In 1982 the largest 25 companies, representing 57 percent of the market, had a an average premium-to-loss ratio of 1.364 compared with 1.527 for smaller companies. In 1983 the premium-to-loss ratio fell by 17.8 percent to 1.121 for larger companies and by 16 percent to 1.283 for smaller companies. The department interpreted this difference as an indicator of more intensive price competition among the larger insurers. Another possibility is that the greater cost declines among larger firms are a temporary phenomenon, rather than a permanent response to competitive rating.

An NCCI-affiliated rating bureau still provides advisory premium rates in Illinois. Before competitive rating, only three companies filed rates that deviated from the NCCI-filed rates. By February 1983, 32 companies appeared to be using rates that were lower than the advisory rates. Another change in pricing noted by the state insurance department has been a more aggressive use of schedule rating. Before 1983 schedule debits and credits were limited to 25 percent of premiums. By 1984 over 175 insurers allowed maximum schedule credits in excess of 25 percent. Thus, schedule credits are now viewed as one of the most important competitive pricing tools in Illinois.

Minnesota

The effect of competitive rating on the cost of workers' compensation in Minnesota is even more difficult to assess, partly because competitive rating was introduced more recently (January 1, 1984) and partly because the entire workers' compensation program was radically transformed in the 1980's. Substantial changes were made in workers' compensation benefits in 1983, and schedule rating was introduced in 1980. In addition, a competitive state fund was established and major changes were made in the assigned risk pool, including mandatory participation by all insurers.

Relative to wages, workers' compensation premiums in Minnesota rose rapidly throughout most of the 1970's and then declined steadily after 1978. (See table 4.4.) During 1984, the first year of competitive rating, workers' compensation costs declined only slightly. Minnesota officials

attributed this small decline to the implementation of schedule rating in 1980; that is, insurers already had greater pricing flexibility, as manifested between 1981 and 1983. Also, the sharp decline in costs in 1983 might reflect the expected decline in loss costs attributable to benefit changes and anticipation of competitive rating. The officials also thought that Minnesota's workers' compensation underwriting cycle was already beginning to exert an upward influence on premiums in 1984. Their general view was that the broad range of changes in Minnesota made any assessment of the cost impact of competitive rating questionable at best.

Studies of the 1983 Minnesota workers' compensation reforms noted the difficulties in measuring their effects on premiums and focused instead on measuring the consequent changes in workers' compensation claims.[2] The studies showed that

- the average duration (lost work time) of temporary total disability cases declined by 28 to 32 percent,
- cases entering litigation declined from over 10 percent to 6.6 percent by October 1984, and
- the average duration and size of permanent partial disability awards decreased.

These changes should all cause future reductions in loss costs. By providing insurers with even greater pricing flexibility, competitive rating was viewed as a mechanism through which these reductions in loss costs could be transmitted more rapidly into lower premiums over time.

[2] Effects of the 1983 Workers' Compensation Reforms, Minnesota Department of Labor and Industry, Research and Education Division (Mar. 1985).

Table 4.4: Minnesota Workers' Compensation Premiums Compared With Wages

Thousands of dollars

	Standard/ earned premiums	Wages	Premiums as a percent of wages	Percent change
1973	$123,960	$8,935,042	1.387	
1974	150,970	9,960,414	1.516	+ 9.3
1975	176,449	10,553,514	1.672	+10.3
1976	218,322	11,813,939	1.848	+10.5
1977	274,449	13,188,837	2.081	+12.6
1978	385,272	15,275,070	2.522	+21.2
1979	385,272	18,227,981	2.475	−1.86
1980	451,160	19,828,655	2.428	−1.90
1981	468,356	21,534,454	2.175	−10.4
1982	421,962	21,706,500	1.944	−10.6
1983	408,380	27,862,191	1.466	−24.5
1984	440,800[a]	30,805,858	1.431	− 2.4

[a]Estimate.

Source: Minnesota Department of Labor and Industry.

Oregon

Oregon also experienced substantial declines in the cost of workers' compensation after introducing competitive rating. The state insurance commissioner examined the cost changes from two perspectives.

1. Changes in the "expense loading factors" that insurance companies added to pure premiums.

2. Changes in average premium rate levels.

Under Oregon's competitive rating law, insurers use a rating bureau's advisory pure premiums or loss costs as a starting point in establishing their own rates. The insurers then add a loading factor to the pure premium to cover expenses. The manual premium is simply the sum of the pure premium plus the expense loading factor.

Just before competitive rating began in July 1982, the expense loading factor amounted to 31.8 percent of the manual premium. In January 1983, the loading factor was about 15.5 percent for all insurers, and by 1984 it declined further to about 12.3 percent of premiums. The manual rates for four insurers were at or near the pure premium at that time. Thus, average manual premiums were nearly 20 percent lower than rates under the old fixed-pricing system in 1983 and about 22 percent

lower in 1984. In 1985 the expense loading factor increased to 18.5 percent of manual premiums—above the 1983 and 1984 levels but still 16 percent below the fixed-pricing manual rates.

Oregon's insurance department found similar effects when it calculated differences between the actual competitive rates and its estimates of what average standard premiums adjusted for deviations would have been without competitive rating. The department estimated that by 1984 workers' compensation rates under the new competitive system were 28 percent below the estimated deviated standard premiums without competitive rating.

Neither of these approaches made adjustments for changes in dividends or the changing composition of benefits, employment, and other factors. While specific data on dividends were not available, state and industry representatives indicated that the dollar amount of dividends in Oregon was decreasing and possibly approaching zero. Thus, many of these apparent front-end price reductions are quite possibly being negated by later reductions in dividends.

Cost Declines Are Not Necessarily Attributable to Competitive Rating

While all four of these states reported substantial declines in workers' compensation premiums in the 1 or 2 years after the introduction of competitive rating, to what extent did competitive rating cause these declines? Are declines in front-end prices being offset by later reductions in dividends? Given the short period in which competitive rating has been operative, these questions cannot be answered with any reasonable degree of confidence. However, some evidence suggests that a substantial portion of the premium reductions can be attributed to general trends in workers' compensation experienced throughout the nation and to reduced dividend payments.

The Illinois loss ratios presented in table 4.3 illustrate the cyclical pattern that affects the relationship between prices and losses. Are the declines in premium-to-loss-ratios in 1983 and 1984 a result of competitive rating or a return to the prices and conditions of the mid-1970's? To get a better measure of the extent to which competitive rating may have affected costs, we compared cost trends between states that introduced competitive rating and states that maintained prior approval rate regulation.

Costs Also Declined in Prior Approval States During Same Period

Table 4.5 compares premium-to-loss ratios for five states that had implemented competitive rating by January 1983 with the weighted average premium-to-loss ratio for 36 states that maintained prior approval rate regulation. Over the 1983-84 period, the cost of workers' compensation, as measured by the ratio of earned premiums adjusted for dividends to losses incurred, declined from 1982 levels in both the competitive rating and the prior approval states. But the declines were greater in competitive rating states than in regulated states, particularly during the initial years of competitive rating.

In 1983 each competitive state experienced declines in premium-to-loss ratios that were at least twice as large as the weighted average change in the regulated states. In 1984 costs again declined in both competitive and regulated states, and the average rate of decline was slightly greater in the regulated states. Thus, the major impact of competitive rating appears to take place in the initial years of its use.

Table 4.5: Comparison of Changes in Adjusted Premium-To-Loss Ratios in Competitive and Regulated States[a]

Percent

	1982 to 1983	1983 to 1984	1982 to 1984
Competitive states:			
Weighted average	−23.5	−13.7	−34.0
Arkansas	−17.3	−21.6	−35.2
Illinois	−17.5	−21.7	−29.7
Kentucky	−39.8	−26.3	−55.6
Michigan	−25.1	−4.8	−28.7
Oregon	−22.3	−11.8	−31.5
Regulated states[b]			
Weighted average	−8.2	−16.5	−23.4

[a]"Adjusted premium-to-loss ratio" is defined as earned premium minus dividends divided by incurred losses.

[b]Excludes the six states with exclusive state funds, as well as Rhode Island, Georgia, Minnesota, and Vermont.

Source: A. M. Best and GAO.

Table 4.5 does not include Minnesota and Georgia because these states did not introduce competitive rating until the beginning of 1984. However, the initial year experience in these two states was similar. Between 1983 and 1984, the adjusted premium-to-loss ratio declined by 18 percent in Georgia and by 33 percent in Minnesota. Thus, both states experienced cost declines that were larger than the weighted average decline in either the regulated states or those states that were in their second full year of competitive rating.

The Underwriting Cycle Affects Cost Comparisons

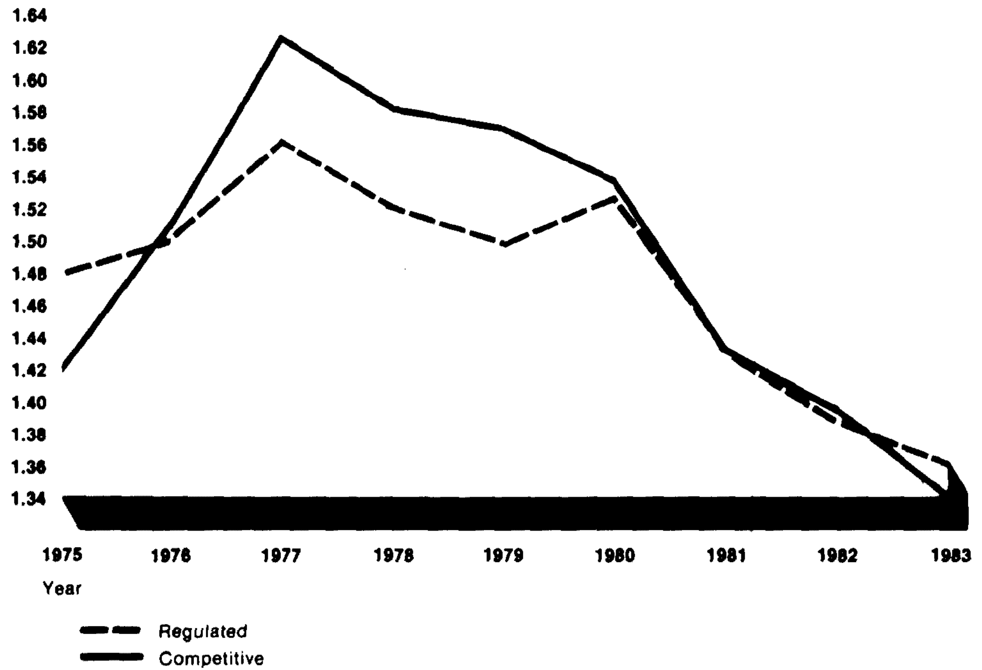
Between 1982 and 1984, premium-to-loss ratios declined by about one-third, on average, in the five competitive rating states listed in table 4.5. It is not possible, however, to attribute all this decline to competitive rating, because the underwriting cycle was generating substantial declines in the cost of workers' compensation insurance throughout the nation over the same period. The data in table 4.5 suggest that perhaps one-third of the decline may be associated with the introduction of competitive rating, while the rest may reflect the underwriting cycle in workers' compensation.

The potential danger of drawing conclusions about the impact of competitive rating from only a few years of data covering only part of the underwriting cycle can be illustrated by comparing cost trends over time in auto insurance with cost trends in workers' compensation insurance. Several states introduced competitive rating for private-passenger automobile insurance during the early 1970's.[3] Figure 4.1 compares changes in the average premium-to-loss ratios between states that had competitive rating and states that had prior approval rating for automobile insurance between 1976 and 1983. The underwriting cycle is evident in both the competitive and the regulated states, but the cyclical changes in costs are clearly more pronounced in the competitive rating states. In competitive states, cost declines are steeper when costs are falling, and cost increases are steeper when costs are increasing. Thus, average premium-to-loss ratios are higher in competitive states in the years near the peak of the cycle and drop below the average ratio for regulated states at the trough of the cycle.

Figure 4.2 compares the 1979-84 weighted average premium-to-loss ratios for the five states (Arkansas, Illinois, Kentucky, Michigan, and Oregon) that introduced competitive rating for workers' compensation by January 1983 with the ratios for 36 states that maintained prior approval rating systems. Until December 1982, the premium-to-loss ratios tended to follow roughly the same pattern in both groups of states. After December 1982, when costs began to decline, the premium-to-loss ratios declined faster in the competitive states than in the regulated states.

[3]For a comprehensive analysis of the impact of different regulatory approaches on the cost and availability of auto insurance, see our recent report, Auto Insurance: State Regulation Affects Cost and Availability (GAO/OCE-86-2, Aug. 5, 1986).

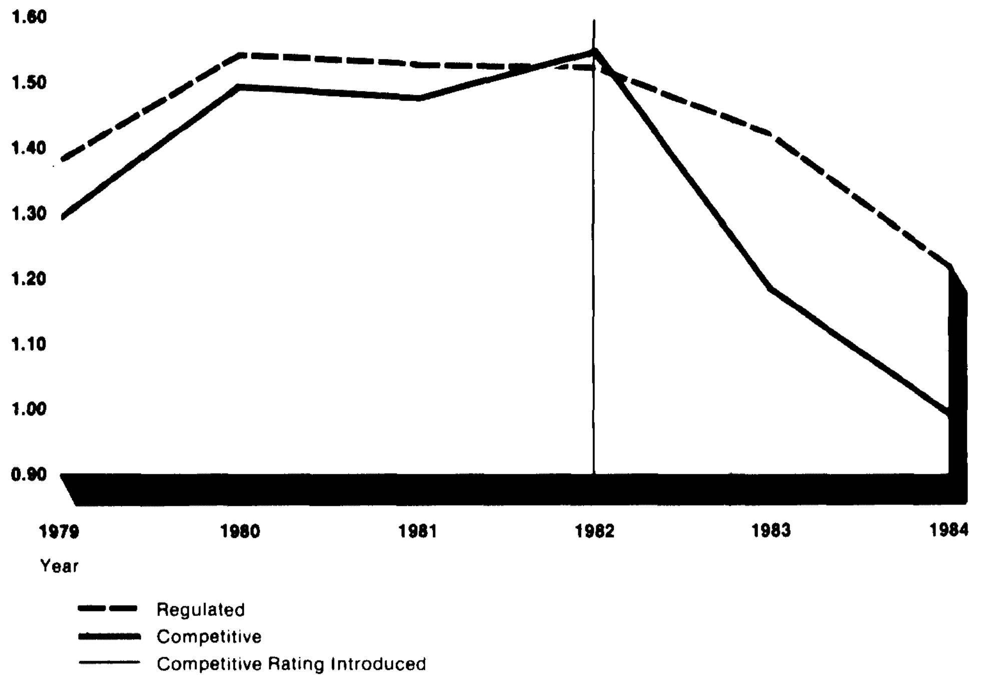
Figure 4.1: Adjusted Premium-To-Loss Ratios (Auto Liability Insurance 1975-1983)



Source: A.M. Best and GAO

The auto liability insurance data suggest that prior approval rate regulation has a moderating influence on the cyclical fluctuations in premium-to-loss ratios. This may be because, under competitive rating, premiums respond more quickly to changes in investment income and other factors reflected in the underwriting cycle. If so, caution must be exercised in assessing the longer range impact of competitive rating on the cost of workers' compensation insurance.

Figure 4.2: Premium-To-Loss Ratios
(Workers' Compensation Insurance 1979-1984)



Source: NCCI and GAO

The 2 years of comparative data now available reflect only the declining-cost phase of the underwriting cycle. Like the pattern in auto insurance, premium-to-loss ratios for workers' compensation fell more rapidly in competitive rating states than in prior approval states as costs generally declined. But will these ratios also behave like the pattern in auto insurance and rise more rapidly in competitive rating states as the underwriting cycle reverses? The early evidence now available suggests that competitive rating may reduce costs. But to determine whether this apparent impact of competitive rating is sustained or reversed, data covering a sufficient number of years and reflecting all phases of the underwriting cycle need to be analyzed.

The Impact of Competitive Rating on Insurance Availability, Small Employers, and Market Structure

In addition to reporting declines in workers' compensation costs, competitive rating states experienced greater availability of insurance coverage in the private, voluntary market during their initial years of competitive rating. Such expanded availability can generally be expected to benefit small employers that otherwise have to obtain more costly insurance coverage in the residual market.

As with the cost of workers' compensation, the size of the residual market fluctuates cyclically with trends in the underwriting cycle. The greater availability of insurance in the private, voluntary market is therefore not necessarily attributable to competitive rating. Additionally, competitive rating appears to have had little effect on the competitive structure of the workers' compensation market.

The Size of Assigned Risk Pools Declined

As mentioned previously, states have established assigned risk pools to provide coverage to employers that are unable to obtain insurance voluntarily from private insurers or are unable to self-insure against the risks of job-related injuries. The cost of workers' compensation coverage is generally higher in these residual markets. In Michigan, for example, the 1984 cost of residual market coverage was an average net rate of $3.87 per $100 of payroll, which was 98 percent higher than the voluntary market's $1.95 average rate.

The size of assigned risk pools fluctuates cyclically over time as competitive conditions change. This happens because increased competition among private insurers leads not only to reduced premiums for existing customers but also to relaxed underwriting standards. Thus, insurance companies become willing to insure risks they would otherwise consider unacceptable, and employers that would otherwise have to obtain coverage in the residual market become eligible for coverage in the voluntary market. According to NCCI data, the percentage of workers' compensation premiums accounted for by residual markets nationally declined from about 12 or 13 percent during 1977-80 to about 10 percent in 1981, 8 percent in 1982, and less than 6 percent in 1984. Preliminary NCCI data for the first 6 months of 1985, however, showed that residual market pools were starting to increase in size. For the entire year, NCCI projected a 17.3-percent increase in the number of assigned risks and a consequent 67.6-percent increase in residual market premiums.

To assess whether competitive rating had any demonstrable effect on the availability of workers' compensation insurance in the voluntary market, we compared NCCI data on the size of assigned risk pools in 23

states that maintained prior approval rate regulation with 4 states that had switched to competitive rating. These data showed that in the competitive states, the size of assigned risk pools, as measured by the total dollar amount of earned premiums, declined in both 1983 and 1984 after the introduction of competitive rating. However, as shown in table 5.1, the size of assigned risk pools, on average, also declined over those years in the 23 states that maintained prior approval rate regulation. Although the average decline (weighted by the premium volume) for both groups of states was equal in 1984, the average decline in the four competitive rating states was substantially greater than that in the prior approval states in 1983. This difference cannot necessarily be ascribed to competitive rating, because the available data are too limited and cover only one portion of the underwriting cycle. Preliminary NCCI data for 1985, as stated above, indicated that assigned risk pools were beginning to increase in size in competitive rating states.

Table 5.1: Comparison of Changes in Premiums Earned in Assigned Risk Pools for Selected Competitive and Regulated States, 1983-84

Percent change from previous year	1983	1984
Competitive states:		
Weighted average	−34	−47
Arkansas	−34	−27
Illinois	−32	−41
Kentucky	−48	−63
Michigan	−14	−46
Regulated states:		
Weighted average for 23 states	−18	−47

Source: NCCI and GAO.

The Impact of Competitive Rating on Small Employers Is Uncertain

The impact that competitive rating has had on small employers is still uncertain. To the extent that the declines in the cost of workers' compensation and the size of assigned risk pools are attributable to competitive rating, both large and small employers should have benefited. Since assigned risk pools provide coverage predominately for small employers, small employers have more to gain than large employers from an increased availability of the voluntary market's generally less costly coverage.[1]

[1] To illustrate the extent to which small employers obtain coverage from assigned risk pools, NCCI data for 33 states indicated that 71 percent of the employers in assigned risk pools paid premiums of less than $1,000 and 94 percent paid premiums of less than $5,000.

A special study focusing on workers' compensation costs for smaller employers in Michigan yielded some insights into the effects of competitive rating on smaller firms.[2] As indicated in table 5.2, there was no consistent pattern in the relationship between net premiums and firm size in the 2 years after the introduction of competitive rating in Michigan. In both 1983 and 1984, the highest net rate was paid by the very smallest firms (those with four or fewer full-time-equivalent workers), while the next highest rate was paid by relatively large firms with 1,000 to 2,499 employees. Other small firms, including those in the 5- to 9-, 10- to 19-, and 20- to 49-size classes generally paid rates below the weighted average for all size classes.

These data, which are available only for the first 2 years of competitive rating, also show an overall decline of 6.2 percent in net premiums, with most of the smaller size classes showing greater than average declines. For the very smallest firms, net premiums remained stable between 1983 and 1984, which suggests an increase in the relative costs of coverage for these firms when compared with costs for all firms. The study attributed the higher average rates for the smallest employers to their greater participation in the state's assigned risk pool and to the effect of minimum premiums and premium discounts which primarily benefit larger employers.

[2] H. Allan Hunt, The Cost of Workers' Disability Compensation by Size of Firm, Report to the Independent Business Research Office of Michigan (Sept. 1984).

Table 5.2: Changes in Workers' Compensation Premiums by Size of Firm in Michigan

Employment[a]	Average net premium (dollars per $100 of payroll) 1983	1984	Percent change
0-4	$2.63	$2.63	0
5-9	2.05	1.91	−6.8
10-19	2.06	1.91	−7.2
20-49	2.13	1.92	−0.9
50-99	2.08	1.97	−5.2
100-249	1.98	1.78	−10.1
250-499	1.97	2.08	+ 5.6
500-999	2.16 (500 and over)	2.01	n/a
1000-2499		2.46	n/a
2500-and over		1.31	n/a
Weighted average for all size classes	2.11	1.98	6.2

[a]Number of full-time-equivalent employees estimated in each year by dividing covered payroll earnings by average wage in the state of Michigan.
Source: H. Allan Hunt, The Cost of Workers' Disability Compensation by Size of Firm.

The Market's Competitive Structure Is Unaffected by Competitive Rating

Several of the states that introduced competitive rating viewed the structure of the state workers' compensation market as a key indicator of whether the market was, in fact, competitive. Michigan, in particular, carefully examined the relationship between the concentration of insurance activity and the extent to which workable competition existed in the marketplace. The available evidence for Michigan and several other states indicates that workers' compensation markets have a competitive structure— i.e., have low degrees of seller concentration and low entry barriers—and that the industry's competitive structure did not change significantly after the introduction of competitive rating.

The Michigan Insurance Bureau is required by statute to use the following structural criteria in determining whether the market is sufficiently competitive.

1. The extent to which any insurer controls the workers' compensation market or any portion of it. Except for Michigan's State Accident Fund, an insurer is considered to control the market if it has more than a 15-percent market share.

2. Whether the total number of companies writing workers' compensation insurance in Michigan is sufficient to guarantee a competitive market.

These two economic criteria were clearly met. At least 240 individual companies sold workers' compensation insurance in Michigan in 1984, and the highest market share for any one private insurer was only 6.8 percent. Some individual insurance carriers belong to a single parent company or insurance group, although each individual insurer in such a group may underwrite particular types of risks and may have different policies on pricing adjustments to manual premiums. In 1984 the highest market share for an insurance group in Michigan was 7.3 percent, just slightly higher than the individual insurer share of 6.8 percent, and about 120 insurance groups wrote workers' compensation insurance.

Michigan had some concern that competitive rating might lead to increased concentration if larger insurers were successful in increasing their market shares. Table 5.3 shows the individual market shares for the 20 largest workers' compensation insurers from 1981 to 1984. Although the market shares of some of these large insurers did increase slightly after the introduction of competitive rating in January 1983, the market shares of others decreased. Overall, these data indicate little change in the market shares of large insurers and suggest that, if anything, market concentration may have decreased after competitive rating was introduced.

Table 5.3: Market Shares of Michigan's 20 Largest Workers' Compensation Insurers, 1981-84

Percent

	1981[a]	1982[b]	1983[c]	1984[c]	1984 cumulative
Liberty Mutual Fire	7.0	6.9	6.1	6.8	6.8
Michigan Mutual	6.2	4.7	5.9	5.4	12.2
Michigan State Accident Fund	4.0	3.4	3.9	5.1	17.3
Wausau Underwriters	0.1	0.4	2.6	3.7	21.0
Citizens	4.0	4.1	3.0	3.5	24.5
Standard Fire	2.7	2.8	3.4	2.9	27.4
Travelers Indemnity	2.5	3.3	3.6	2.5	29.9
Northwestern National	1.4	1.6	2.1	2.4	32.3
Twin City Fire	2.2	2.7	3.4	2.2	34.5
Travelers	1.5	1.2	1.4	2.2	36.7
Home	3.6	3.3	2.4	2.1	38.8
Transportation	2.3	2.8	2.1	1.9	40.7
National Union Fire	0.5	1.2	2.0	1.8	42.5
Pacific Employers	2.1	1.8	1.5	1.6	44.1
Associated General	1.8	1.9	1.4	1.6	45.7
Associated Indemnity	1.1	1.5	2.6	1.6	47.3
Aetna Casualty & Surety	2.4	1.7	1.5	1.5	48.8
Auto-Owners	1.3	1.3	1.4	1.4	50.2
Sentry of Michigan	1.1	1.0	1.2	1.3	51.5
Transamerica of Michigan	1.7	1.7	1.2	1.3	52.8
Top 4 firms' share	21.2	19.1	19.5	21.0	•
Top 8 firms' share	32.4	31.3	31.1	32.3	•

[a]Based on manual premium obtained from unit statistical reports filed by insurers.

[b]Based on standard premium obtained from unit statistical reports filed by insurers.

[c]Based on total estimated annual premium obtained from policy declarations filed by insurers. Data for 1984 are preliminary.

Source: Michigan Insurance Bureau.

To make sure that the largest insurers would not be induced to collude in their pricing of workers' compensation insurance or otherwise limit the extent of price competition, the Michigan Insurance Bureau also examined changes in concentration ratios for both individual insurers and insurance groups over time. Such ratios, commonly used measures of overall market concentration, are based on the market share, in terms of written premiums, accounted for by the 4, 8, or 20 largest firms. As shown in table 5.4, these concentration ratios fluctuated slightly over the 1980-84 period and showed no evidence of any systematic increase.

In fact, the concentration ratios were slightly lower in 1984 than in 1980.

Table 5.4: Concentration Ratios for Workers' Compensation in Michigan, 1980-84

Percent

	Top 4 carriers		Top 8 carriers		Top 20 carriers	
	Company	Group	Company	Group	Company	Group
1980[a]	21.3	25.6	33.4	43.1	56.3	72.8
1981[a]	21.9	25.8	34.6	43.2	57.2	74.1
1982[b]	19.6	24.1	32.4	41.9	56.3	71.9
1983[c]	19.5	25.1	31.8	42.8	53.6	70.2
1984[c]	21.0	24.9	32.3	42.2	52.8	71.1

[a]Based on manual premium obtained from unit statistical reports filed by insurers.

[b]Based on standard premium obtained from unit statistical reports filed by insurers.

[c]Based on total estimated annual premium obtained from policy declarations filed by insurers.
Source: Michigan Insurance Bureau.

Another, more sophisticated measure of the extent of seller concentration is the Herfindahl index (H index). This measure is based on the market shares of all firms in an industry, with more weight being given to the market shares of larger firms, and is used by the Department of Justice in deciding whether to challenge proposed mergers on anticompetitive grounds. An industry with an H index over 1,800 is considered to be highly concentrated, industries with H indexes between 1,000 and 1,800 are classified as moderately concentrated, and industries with H indexes below 1,000 are classified as unconcentrated. In Michigan, the H index was 333.4 on a group basis and 211.1 on a company basis in 1984, indicating that the market for workers' compensation insurance in Michigan is unconcentrated. Like the seller concentration ratios, the H index has fluctuated some over time in Michigan, and has actually declined slightly since 1980.

For an industry to remain competitive, there should not be any substantial barriers deterring the entry of new firms. The Michigan Insurance Bureau examined the number of insurers entering and exiting the workers' compensation market over the 1981-84 period and concluded that the overall pattern of entry and exit was consistent with there being low entry barriers and workable competition. Between 25 and 27 firms either entered or exited the Michigan market in each of the years during this period. In 1981 the number of insurers leaving the market

exceeded the number of insurers entering the market, but between 1982 and 1984 more firms were entering than exiting.

Other States Also Have Competitive Structures

The available evidence indicates that the workers' compensation markets in other states, even prior approval states, also have competitive structures. Two studies concluded that the property-casualty insurance industry, as a whole, did not have any significant legal or economic barriers to entry.[3] Table 5.5 shows, on a national basis, the top four and eight firms' workers' compensation concentration ratios for 1978-82 as reported in another study.[4] This study also reported that in 1983 the H index for workers' compensation on a national basis was only 300, with Maine having the highest index of 970.

These data thus indicate that in states without exclusive state insurance funds, the extent of overall seller concentration is not high enough to induce collusive pricing behavior by private insurers. Of course, concentration levels could increase over time if competitive rating led to a substantial increase in bankruptcies among workers' compensation insurers. Insurance officials in four competitive rating states, however, told us that only a few isolated bankruptcies occurred after the introduction of competitive rating.

Table 5.5: Concentration Ratios for Workers' Compensation on a National Basis, 1978-82

Percent

	1978	1979	1980	1981	1982
Top 4 firms	26.9	26.5	26.2	25.2	24.4
Top 8 firms	41.6	40.7	40.3	39.4	38.4

Source: A. M. Best Co., Executive Data Service, selected years.

Oregon is one competitive rating state that has a substantial degree of seller concentration. Until 1966, Oregon workers' compensation was provided through an exclusive state fund. Since 1966 the state has used a three-way system in which employers may self-insure, purchase insurance from the state fund, or obtain private insurance coverage. In 1984,

[3] Paul Joskow, "Cartels, Competition and Regulation in the Property-Liability Insurance Industry," Bell Journal of Economics, Vol. 4 (1973), p. 375, and J. Hanson, "Monitoring Competition: A Means of Regulating the Property and Liability Insurance Industry," Bell Journal of Economics (1974), pp. 385-400.

[4] David Appel and James Gerofsky, "Regulating Competition: The Case of Workers Compensation Insurance," Journal of Insurance Regulation (1985).

the state accident insurance fund accounted for about 46.2 percent of all purchased insurance coverage and two private insurers accounted for another 12.2 percent. If the state fund is viewed as one seller, there is a substantial degree of seller concentration. However, Oregon industry officials told us that since the introduction of competitive rating, very strong price competition has developed because both the state fund and one of the larger private insurers have tried to increase their market shares. In addition, the state fund can be viewed as a barrier to any monopolistic or cartel-like behavior by the largest private insurers. As one official stated:

> "With 39 percent of the private market written by the top eight private carriers in 1983, it is doubtful Oregon has to fear the monopolistic powers of a cartel, especially since the state fund writes almost half the business."

On the other hand, the state insurance fund itself has a large enough market share that it could conceivably exert market power and raise prices above the competitive level.

Request Letter

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United States Senate

COMMITTEE ON THE BUDGET
WASHINGTON, D.C. 20510

June 21, 1985

The Honorable Charles A. Bowsher
Comptroller General
U.S. General Accounting Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Mr. Bowsher:

In May 1982, a request was made of the GAO by then-chairman of the House Small Business Subcommittee on Oversight, Rep. John LaFalce, to do a study of the effects of competitive ratemaking on the cost of workers compensation premiums for employers. The report was completed and forwarded to Congress on November 10, 1982 (B-209252, 53CCPAD82).

The GAO found that on a theoretical level, there was every reason to believe that competitive ratemaking would certainly lower workers compensation premiums. At the time the study was completed, six states had recently enacted competitive ratemaking, but there was no data GAO could examine to prove if this method was successful in practice.

As Chairman of the Senate Subcommittee on Entrepreneurship and Special Problems Facing Small Business, I hereby request the GAO to do a follow-up study to its November 1982 report, with special attention paid to the success (or failure) of competitive rate-making in those states cited in the 1982 report and in any states that have subsequently enacted such legislation.

The questions to be addressed include:

1) Does competitive rate-making work in practice as the GAO projected it would work in theory?

2) What has been the increase or decrease in premiums for WC employers in states with and without competitive rate-making from 1982. Attention should also be paid to those individual states pre- and post-competitive rate-making, with data gathered by size of firms.

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The Honorable Charles A. Bowsher
Comptroller General

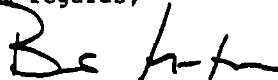
3) How have the states implemented competitive ratemaking? What procedures have they instituted to monitor the program?

4) What has been the impact of competitive ratemaking on the workers compensationn claims paid to employees -- has there been any substantial change in the level of benefits paid that can be attributed to competitive ratemaking?

5) Recommendations for Congressional actions that could be taken to encourage adoption of competitive ratemaking in more states, if the findings of GAO support such an approach.

As the original study took six months to complete, I would expect the follow-up study could be done in at least the same amount of time. I would be open to suggestions for lengthening the time frame if there are legitimate problems regarding the collection of data.

Best regards,



Robert W. Kasten, Jr.

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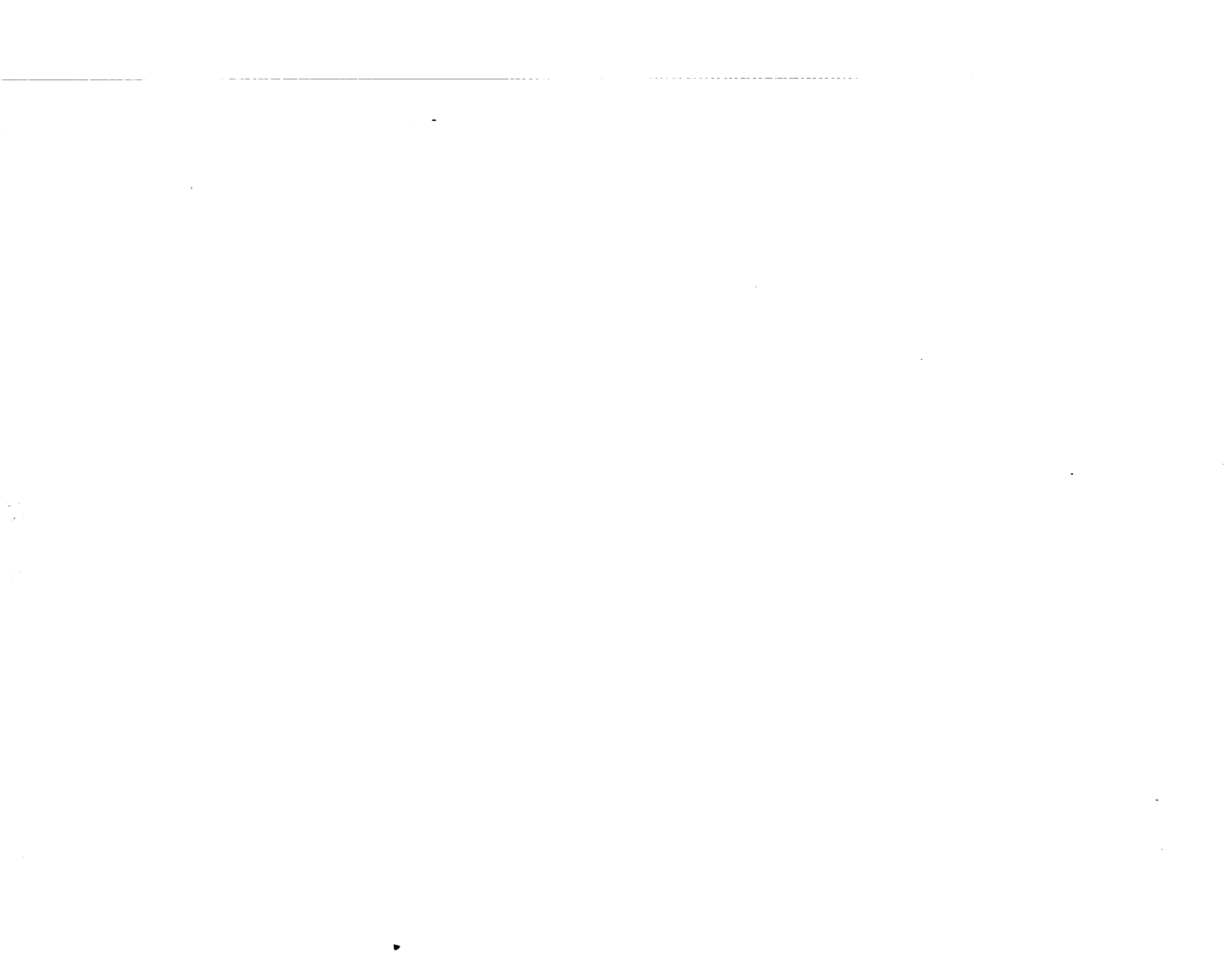

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