INSURANCE RATE MAKING IN WORKERS' COMPENSATION

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LEGISLATIVE PROGRAM REVIEW AND INVESTIGATIONS COMMITTEE

The Legislative Program Review and Investigations Committee is a joint, bipartisan, statutory committee of the Connecticut General Assembly. It was established in 1972 to evaluate the efficiency, effectiveness, and statutory compliance of selected state agencies and programs, recommending remedies where needed. In 1975, the General Assembly expanded the committee's function to include investigations, and during the 1977 session added responsibility for "sunset" performance reviews. The committee was given authority to raise and report bills in 1985.

The program review committee is composed of 12 members. The president pro tempore of the senate, the senate minority leader, the speaker of the house, and the house minority leader each appoint three of those members.

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Insurance Rate Making

in

Workers' Compensation

Legislative Program Review and Investigations Committee
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Introduction

The legislature, through passage of Public Act 91-407, required the Legislative Program Review and Investigations Committee to study all factors related to insurance compensation premiums. The act further specifies that the factors should include but not be limited to insurance premium levels, reserves, return on investment, profitability, retention rates, and administrative costs.

The committee used the factors outlined in the legislation as a framework for the scope of this study. In addition to the examination of these areas, program review has included background on how workers' compensation insurance is regulated, the participants in workers' compensation insurance, the pricing of the product, and an examination of the insurance marketplace that provides this insurance to employers.

In conducting this study, committee and staff relied heavily on the information developed for the committee's report Insurance Regulation in Connecticut, (January 1988). In addition, program review staff examined considerable material concerning workers' compensation insurance, rates, rate-setting, and regulation of rates.

The Legislative Program Review and Investigations Committee, in conjunction with the committees on Labor and Public Employees and Insurance and Real Estate, held a day-long symposium on Workers' Compensation Insurance Rates on February 28, 1992. The symposium consisted of five panels, each comprised of several experts on the topic. A transcript of the day's proceedings is available at the committee's office in the State Capitol.

The committee also obtained a copy of the Findings and Recommendations Reports of the National Association of Insurance Commissioners (NAIC) study of the National Council on Compensation Insurance (NCCI). The report, costing approximately $3.2 million, proposed a number of changes which are referenced in the conclusion of this report.

The scope of this study does not include any analysis of the benefits that are paid through workers' compensation insurance, nor of the administration of the system. Those issues were addressed in Workers' Compensation, a report the committee issued in 1991.

The Regulation of Insurance

The regulation of insurance is based upon two principles. One is that government intervention is required to assure consumers that the product they are purchasing will be delivered. The second principle is that insurance is required by law for many activities and, as such, is of vital concern for the protection of individuals in society and therefore needs to be regulated. Insurance is a device that provides citizens and business entities with the reduction of economic ruin as a result of an unexpected event. Insurance is the means of transferring this risk from an individual to a larger group, thereby pooling the risk and enabling those who suffer a loss to be compensated by those who have not. Of course, there is always the chance that those who have not suffered a loss may not always find themselves in such a condition. The pooling of risk is intended to be of mutual benefit to all those who join by giving members protection against the random event of an accident.

The regulation of insurance has historically occurred in three areas: 1) to guarantee that a company selling an insurance policy today will have the financial resources to cover future claims; 2) that the policies sold meet legal requirements and provide the consumer with adequate protection against the insured risks; and 3) the assurance that rates charged for insurance products are both adequate to maintain solvency and fair based upon projected losses.

The regulation of insurance began with need to assure policyholders that the product they purchased would pay the benefits outlined in their contracts. Because the consumer pays for a service now that may be rendered at some future date, the insurer must be capable of providing that future service. A principal feature of insurance regulation has been the guarantee to the consumer that the company has adequate funds reserved to pay the future claims of policyholders. Maintaining the financial solvency of insurance companies continues to be an important regulatory goal in Connecticut.

The second area of regulatory activity deals with the concern of providing adequate consumer information. The insurance product comes to the consumer in the form of a complex legal contract that defines the losses covered and compensation to be received in the event of an accident. The product must also be in compliance with statutory and regulatory provisions that apply to a given line of insurance. Insurance departments have developed administrative mechanisms to review all contracts and policies and generally have the power to approve or reject policies. Connecticut is heavily involved in the review of insurance policy forms.[1]

Lastly, the monitoring and regulation of insurance rates has attracted much attention in recent years. Initially, rate regulation was sought to ensure that the premium being charged by a company was adequate to ensure that future claims could be met. Regulators sought

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[1] For a description of the Connecticut Insurance Department role in this area see LPR&IC's 1988 study of *Insurance Regulation in Connecticut*, (Chapter IV: Policy Forms Review).

information on insurance pricing to determine if the rates charged provided sufficient reserves to maintain financial solvency. Organizations were developed, and licensed by insurance departments, to provide for the collection of data on losses that occur within various lines of insurance. These rating or statistical agents play a critical role in the development of premiums charged by most insurance companies. They are central in providing the insurance departments with information the adequacy of insurance rates.

Ratemaking in the insurance industry is directed toward one major objective: the determination of the appropriate premium to be charged for risk insured. Rates are composed of three major components: 1) the actual losses paid; 2) projected losses that will need to paid in the future; and 3) the expenses associated with the sales and servicing of the product. The premium is the price for the product delivered.

Establishing a premium is a complex process of determining what should be charged for each insured and line of business based upon the probability and the amount of losses. A basic principle of insurance is to group similar risks together and rate them accordingly. As a result insurance is divided into numerous categories, auto insurance, health insurance, worker's compensation, liability, etc., with further specificity of risk within each of these major groups.

Insurance pricing is uniquely different from other commercial products sold by business. While most costs are known when a product is delivered to the market, for insurance the cost of the product is an educated guess. In fact, it is actually an estimate based upon what the industry expects the losses to be for any given category of risk. Losses are usually the single largest expense for the product and actual cost will not be known until some time after the policy expires and all claims are processed. It is this element of uncertainty, both in the probability of a claim being made and the length of time claims come due, that makes pricing difficult and complex. Past loss data are used to predict and develop rates to pay future expenses.

The pricing of insurance by companies takes several steps. Rates for various categories of insurance are built upon losses that have historically resulted for a particular risk. This information is usually provided by a statistical rating bureau that collects loss information for a large pool of risks. The larger the pool of data the greater the probability of predicting loss costs for any given line and class of insurance. In addition, these statistical agencies typically provide an additional service beyond collecting and aggregating loss information. They provide trend analysis of future expectations on what the losses will actually accrue. This is a necessary function because, as noted earlier, costs occur after the premium is set.

Rate Regulation

States have a wide range of regulatory options that can be used to effect the pricing of insurance. On one extreme, a state can determine the rate to be charged by a given class of insurance while on the other extreme, there may be no regulatory involvement in the development of rates. Generally, there are six ratemaking categories that can be used by a state:

1) *State-made rates*. This system represents total control of insurance rates whereby the insurance department sets the premium which must be charged by the insurer.

2) *Mandatory rate bureau systems*. These states require that an insurer obtain membership in a rating organization before writing a particular line of insurance. The rating organizations establishes the rate for the product and insurers must adhere to the bureau-set rate. The rating organization would be approved by the insurance department.

3) *Prior approval rating systems*. Prior approval rating laws require the submission of rates by companies to the insurance department before they can be put into effect. This system is widely used by states for various lines of insurance. While the states can administer this system differently, they generally follow a similar process: rates and supporting data are filed with the department; and rate filings become effective upon affirmative action by the agency or may be deemed to be approved if no action is taken within a specified period of time. Rate approval criteria is usually based upon three broad criteria; rates may not excessive, inadequate, unfairly discriminatory. In some states, rates may be filed cooperatively through a rating organization while other states prohibit this practice.

4) *File and use systems*. These systems do not require prior rate approval but do allow the regulatory agency the opportunity to review and disapprove rates if they are found not to meet the prior approval criteria of excessive, inadequate, or unfairly discriminatory. Rates not meeting these standard can be rejected. Most file and use systems allow rates to be used immediately upon being filed, with the regulatory authority having 30 to 60 days for disapproval. In practice, however, many companies will not use rates until they are officially approved because it would be costly for them to rescind a rate increase after it has been put in to effect.

5) *Flex-rating system*. Flex-rating is a system that permits price variations to occur within certain limits without prior approval. Increases that go beyond the approved limits would be subject to the rate review and approval process set forth by the regulatory agency. The system applies to both increases and decreases and is intended to reduce price fluctuations and stabilize premiums.

6) *No-file system*. This system represents the other end of the regulatory spectrum where there is no involvement by the insurance department in rate-setting. Even under this system, an agency may audit rates to determine if the rates being charged provide for adequate future reserve requirements needed to insure financial solvency.

These six regulatory systems are not mutually exclusive, in fact, many states have regulatory systems that incorporate several aspects of each. Some states use different systems to regulate different lines of insurance. In Connecticut, for example, prior approval is used for auto rates in the assigned risk pool while no filing is required for life insurance rates. Workers' compensation insurance rates are regulated by the file and use system.

Insurance Rate Regulation in Connecticut

Connecticut's rate regulation can best be characterized by that of an open, competitive system with minimal government intervention for most lines of insurance, including workers' compensation. Connecticut does not set rates for any line of insurance, nor are there any mandatory rate bureau requirements. There are four basic systems in place used to review and approve or disapprove company rates. They include: 1) no filing requirements (used primarily for life insurance); 2) use and file without any requirements for department approval; 3) file and use with a provision that the department has 30 days to disapprove a rate before it can be used; and 4) prior approval of rates before they can be put into effect. Prior approval of rates are generally applied to insurance products offered by the residual market (assigned risk pool) in Connecticut. (It should also be noted that these procedures can apply to changes in policy forms and the introduction of new or the modification insurance products as well as rate changes.)

Connecticut is one of 21 states that relies on competitive pricing rather than prior approval to set rates for workers' compensation insurance. In some of those 21 states, rating organizations are allowed to file the full advisory rate -- loss costs and company expenses -- and companies only file separate rates if they were different than submitted by the rating organization.

Rate approval process. If rate approval is required, or disapproval allowed by statute, the basic criteria used are the same for all lines of insurance including workers' compensation. (The criteria does differ slightly for personal lines of insurance -- homeowners and auto[2]). The statutory criteria state that rates shall not be excessive, inadequate, or unfairly discriminatory. A rate that is not "excessive" is generally defined as that which would cover the company's operating expenses and include a certain level of profit. The insurance department does not set any level of profit or rate of return on investment as is done in public utility regulation, nor does it have any set percentage for determining what constitutes an excessive rate. "Inadequacy" is defined as a rate which, along with investment income, would be insufficient to cover a companies claims payments after expenses have been met. Finally, "unfairly discriminatory" means that an insurer cannot charge a significantly different rate for two individuals or

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[2] The Connecticut General Statutes state that if a competitive market for personal lines of insurance (homeowners or automobile) exists then the criteria of excessiveness cannot be applied. Only if the insurance commissioner, after study, determined that the market was no longer competitive could a rate be considered excessive.

businesses who are classified as the same type of risk. Charging different rates must be actuarially sound.

The insurance department has detailed guidelines for the filing of all rate applications. For workers' compensation, the rate application includes administrative costs and general expenses, profit, investment income, proposed loss costs, rating plans, classification systems, information on loss experience, and an interpretation of the statistical data used to justify the rate change. As with other lines of insurance, much of this material is supplied by a statistical rating organization, in workers' compensation that is the National Council on Compensation Insurance (NCCI).

The role of NCCI. The National Council on Compensation Insurance has been designated as the advisory organization to assist in gathering, compiling, and reporting relevant statistical information for workers' compensation insurance. The main purpose of the organization is to collect, from insurers, loss costs related to over 600 classifications of risk. The data are collected nationally and contain detailed information on the policyholder and the claims paid for the risks insured.

NCCI is the largest workers' compensation insurance service organization in the United States with over 700 members. The organization supplies rate information to 32 states and currently collects information on over 475,000 policyholders. Through this large data base, NCCI is able to supply information on employer's payroll, the amount of premium paid on each policy, as well as the cost of claims. They have the ability to breakdown claims by the kind of injury, indemnity and medical costs, and job classification. NCCI is able to process the information to determine exactly how much it costs insurers to underwrite workers in each of the 600 rate classifications.

By pooling large amounts of data, NCCI allows insurance companies to predict their losses with greater accuracy and thus reduce the risk associated with only insuring a small number of policyholders. Companies also rely upon NCCI to provide trend analysis on the expectations for costs of future claims.

Filing A Workers' Compensation Rate Change

Since October 1, 1989 all insurers have been required to make their own rate filings. Prior to that date, a company could simply adopt the rates submitted by NCCI. This change resulted from a recommendation by the Legislative Program Review Committee in 1988. The committee's study of the industry in Connecticut found "the setting of rates in the commercial property/casualty lines of insurance by rating organizations ... to be an anti-competitive practice. This would be prohibited by federal law if the industry were not exempt from certain aspects of anti-trust legislation under the McCarran-Ferguson Act."[3] In light of this finding, the committee recommended that rating organizations only be allowed to compile and distribute rating information relating to loss costs, loss development, and loss trends. In 1989, the legislature passed Public Act 89-65 which implemented the program review committee's recommendation. Specifically, rating organizations are not allowed to:

> compile for, nor distribute to insurers generally, recommendations relating to rates that include profit, general and other acquisition expenses, commission and brokerage, taxes or licenses and fees ... [4]

This change resulted in a major overhaul in the way rate submissions were made to the insurance department. Rather than each company simply using each other's expenses applied to loss costs, the premium had to be established more competitively. On average, between 15 and 40 percent of the premium for insurance can be attributed to expenses of the company, with the remainder due to claims paid for a given category of risk.

National Council on Compensation Insurance. In filing for new rates, insurers are required to adhere to a uniform classification system and uniform experience rating plans filed with the insurance commissioner by NCCI. All insurers are further required to follow standard policy forms and may adopt advisory forms that have been developed by NCCI. This allows for the product being sold to be standardized and premiums to be comparable for similar risks.

The actual rate submissions to the department of insurance occur in two parts: 1) NCCI submits revisions in loss costs, and 2) each insurance company seeks a rate increase (or decrease), which is arrived at by adding its expenses to NCCI's loss costs.

First, NCCI comes before the insurance commissioner with new loss costs, sometimes referred to as pure premiums, for the over 600 classifications of risk. These costs also include trend and loss adjustment expenses related to the claims. The losses attached to each classification are based upon historical claims submitted by policyholders. Losses are aggregated by accident or policy year and evaluated at different dates to determine the ultimate losses that will occur. This is referred to as loss development and this factor is added to historical data to determine what the actual losses for a given policy year will be paid.

Trend factors are also added to NCCI rates and have a significant impact. In ratemaking, historical experience is used to project the losses expected during the time the rate will be in effect. Compiling historical data, preparing rate filings, and obtaining regulatory approval takes

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[3] *Insurance Regulation in Connecticut*, Legislative Program Review and Investigations Committee, Connecticut General Assembly, January, 1988, p. 119.

[4] *Connecticut General Statutes*, Chapter 701, Section 38a-672(b)(7).

time, and the lapse between the data collection and the final rate can be from two to three years. To compensate for this time lag, NCCI develops a trend factor that takes into account medical and wage inflation, utilization of medical services, changes in claim frequency, and other legal and economic factors. The trend factor is used to adjust historical loss costs to rate levels anticipated as a result of the changes that occur between the experience period and the rate effective period. These three factors, historical losses, loss development, and trends, represent the fundamental basis for NCCI's rate submissions.

Due to the importance of NCCI in the ratemaking process, the National Association of Insurance Commissioners (NAIC) undertook a study of NCCI in 1990. Recently completed, the study was done under the supervision of the insurance commissioners of Florida, Maine, Nebraska, and Utah, with the actual examination being conducted by Milliman & Robertson, Inc., and Arthur Anderson & Co. The study produced 10 volumes of information, analysis, and recommendations covering more than 3,800 pages at a cost of $3.2 million. Eric Nordman, a senior regulatory specialist for NAIC, appeared before the program review committee's symposium on rate-making and described many features of the study. He concluded that

> NCCI has fashioned an extraordinarily complex ratemaking system. Many of the recommendations made by the examiners will complicate it further. It is an actuarial fact of life that greater accuracy can rarely be accomplished without further complications. The NCCI ratemaking system strives to be as accurate as reasonably possible and must therefore be complicated. Unfortunately, this results in a process that even actuaries find time-consuming to understand in detail.
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> Broadly speaking, for the elements studied, the conclusion is that NCCI ratemaking system in not as good as it could be, but that is a sophisticated system that can ordinarily be expected to produce reasonably accurate results. Many recommendations made relate to aspects of the current NCCI ratemaking system that are believed to be basically reasonable but which can be improved. Only a small number of aspects of the current system were found to generally result in underestimation or in overestimation of the overall rate level.[5]

Individual insurers. The second step in the rate submission process involves insurers submitting the actual rates they intend to charge for the products offered. This is generally done by applying an expense factor to the loss costs that were submitted by NCCI. The insurance department requires detailed information on a company's expenses to be applied to loss costs. Specifically, insurers are required to present statewide expenses, if available, for each of the last three years as filed in the company's Annual Report's Insurance Expense Exhibit for worker's

[5] For a complete transcript of The Legislative Program Review and Investigations Committee's *Symposium on Worker Compensation Rate Regulation*, held on February 27, 1992, contact: LPR&IC, Room 506, State Capital, Hartford, Connecticut.

compensation. The expense data must break out information on: general expenses; acquisition expenses; commission and brokerage fees; taxes; licenses; and premium based assessments. The insurer must also describe in detail the formulas used to apply expense factors to loss costs. Rates are allowed to include expenses for contingencies and reasonable profit margins.

Another important feature of each company's submission is a detailed statement on investment income. This exhibit must include the average rate of return as a percentage of direct earned premiums, and all investment income attributable unearned premiums and loss reserves, as well as the methods for calculating the required figures. Finally, the company must explain how it derives its premium rates from the NCCI loss information and explain any modifications to the rates distributed by NCCI. A company may modify NCCI rates if its own loss experience within a given class justifies such a change.

Once these two steps are taken, the insurance department has 30 days to disapprove the rates, with an additional 30 days for extended review. The department may hold hearings and take testimony from interested parties, which was done in the most recent NCCI rate request. The department focuses on the methodology used to calculate various features of the rate, rather than the underlying data from which the rate is derived. Although the department would question any data that does not appear to accurately reflect past experience.

In the most recent rate proposal, NCCI called for an overall 9.9 percent increase in the pure premium level, effective for all policies on January 1, 1992. It should be noted that NCCI estimated that the rate would have been 4.8 percent higher in the absence of the benefit and administrative changes that resulted from the 1991 legislation proposed by the Legislative Program Review Committee and adopted by the General Assembly (P.A. 91-339). This amounted to an estimated $40 million dollar savings to the workers' compensation system. After hearing and review, the department suggested several changes in the rate application that were ultimately accepted by NCCI. The final rate increase was limited to 9.2 percent for the voluntary market as a result of the department's recommendations. For the assigned risk market the increase was held to 8.9 percent.

However, in a note of caution, the commissioner indicated that the department intended to keep a "close eye on the trend" factor used by NCCI. The commissioner "feared" that NCCI's analysis was too optimistic and that "recent reforms may not dampen the escalation of program costs to the extent NCCI hopes."[6]

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[6] *Memorandum of Decision and Accompanying Press Release*, Docket No. PC 91-46, Insurance Department, State of Connecticut, November 19, 1991.

Workers' Compensation Insurance: The Participants

Insurance, in general, is not like most other products. Unlike other goods or services, insurance involves many more participants than just the buyer and the seller. Of all insurance products, workers' compensation probably is more complex and involves more players than any other type of insurance. Those participants include legislators, insurance companies, insurance agents, employers, insurance rating organizations, and government regulators, and workers compensation commissions. A brief description of those parties and their involvement is discussed below.

Legislative involvement. In virtually all states, workers' compensation insurance is statutorily mandated. Thus, state legislatures are involved in establishing the level of benefits, how those benefits should be administered (private insurers, state pools, self-insurance), and also how rates should be regulated. As workers compensation has become an issue with business, labor, and other groups, state legislatures have increasingly played a greater role.

Employers. Since workers' compensation is statutorily mandated, all employers must provide -- in some manner that meets statutory requirements -- wage and medical protection for workers hurt on the job. In Connecticut, all employers or their insureds are required to submit proof of coverage to the Workers' Compensation Commission. However, according to commission staff, there is no way to aggregate the number of policies that are currently in effect, but that the system can verify if a particular employer has workers' compensation coverage.

Most employers seek to cover their workers' compensation exposure through private insurance. In Connecticut, about 85 percent of private-sector employers are insured through insurance companies (based on total payout), while 15 percent are self-insured. An employer can insure his workers' compensation risk with one of two types of private insurance companies: the direct writer, which does not use insurance agents; or, insurers that write their business through independent insurance agents.

In either case, the employer is trying to purchase coverage for his or her employees at the best price. Since Connecticut has a competitive pricing system rather than prior approval rate regulation, employers can be quoted different prices for the same or similar insurance.

Agents. An insurance agent may represent one, or a number of insurance companies. There are currently some 40,000 insurance agents licensed in Connecticut, although not all are licensed to write property casualty insurance, which includes workers' compensation. If an employer goes to an insurance agent to obtain workers' compensation insurance, the agent tries to get the employer the best coverage for the lowest price. The agent's functions include classifying the risk, and implementing any company underwriting guidelines to categorize a risk (e.g. preferred program, sub-standard risks, etc), although some companies retain the right to categorize risks according to their underwriting guidelines. The agent must also apply a company's expense factors, deviations to manual rates and any experience rating factors, surcharges or discounts that apply to arrive at the final rate. The rate is then applied to the payroll of the employer to arrive at the premium. If the employer chooses to insure with a direct writer, the insurance company will perform these classification and pricing functions.

Insurance companies. There are currently 278 insurers licensed to write workers' compensation in Connecticut, and of those, 102 are writing $1 million or more. Insurance companies' functions in workers' compensation are:

- to file the full rate (including its expense factor and any deviations) that thy intend to use with the insurance department;
- file quarterly and annual financial statements with the insurance department;
- maintain accurate data on their insureds and submit that data to its statistical agent;
- establish underwriting guidelines as to which risks a given company will insure;
- ensure that the insureds are practicing safety measures in their businesses;
- pay benefits and other expenses promptly when an on-the-job accident or illness occurs;
- provide claims management services (ensuring injured worker is receiving proper medical, rehabilitative services, etc.); and
- if the employer and/or insurer believe that the claim is not legitimate, the company must defend the employer through the workers' compensation administrative process, and judicial process.

State Department of Insurance. The Connecticut Insurance Department is designated in statute to oversee and regulate the insurance industry in Connecticut. The reasons regulation is necessary were outlined in the first section of the report.

The major responsibilities of the department are to:

- license companies to write insurance in the state;

- examine and oversee the financial solvency of companies already licensed, or those applying for a license;

- review and approve rates and rating manuals, and rating statistical plans through the mechanisms outlined in the first section;

- review policy forms; and

- respond to and investigate consumer complaints, and examine companies' activities in the marketplace.

Rating organization. As noted previously, rating organizations are licensed by the insurance department to make rates, and establish rating plans or rating systems. By statute, an advisory organization is an organization that assists in ratemaking through the collection and furnishing of loss or expense statistics. In Connecticut, these services are provided through one statistical and rate-making organization, the National Council on Compensation Insurance (NCCI). The NCCI acts in a similar capacity in 32 states.

National Association of Insurance Commissioners. All state insurance regulatory agencies belong to this national association, which serves to develop some uniformity in the way states regulate insurance. The NAIC has no enforcement authority to regulate. However, it assists states in performing their regulatory functions through collection and analysis of data from companies' financial reports, and issuance of an annual report on the profitability of insurance companies, and lines of insurance.

The NAIC also conducts research on various insurance topics, including the one recently completed on the National Council on Compensation Insurance and its data collection and rate-making activities. Additionally, the association develops model regulations, and performance indicators for state regulators to use in overseeing financial solvency and rate regulation.

Workers' Compensation Insurance: Pricing The Product

The number of parties involved in purchasing, providing, and regulating workers' compensation insurance is an indication of the complexity of the product; so is the pricing of that insurance. The reason the pricing is so complicated is the number of steps taken before the final price is determined. The final price can varies substantially depending on the buyer and the product the employer wants to buy. The following are the key components to establishing the premium for the insurance product.

Manual rates. The base for all premiums charged are commonly referred to as the manual rates. These are the rates represented by the loss costs developed by NCCI and submitted to the insurance department for approval. The manual rates are the foundation upon which all companies build their final premium. As noted earlier, these rates, or loss costs, are based upon are large pool of statistical data that have been classified by risk.

Classification. Prices are then allocated into three major components -- manufacturing, contracting, and all other -- according to costs (or losses) incurred in each area. The costs or pricing are further refined into about 600 job classifications, which are charged varying rates depending on the risk of that job. Generally, each place of employment is classified into the highest-risk activity that is being carried out at the facility. There are exceptions to this, the most frequent being that office and clerical workers are classified differently than the governing or major classification.

The data for the each classification's losses divided into three major components -- serious claims, non-serious, and medical. Actuaries project those losses into the future and establish a rate to be charge employers for each job class. The losses generated within a state are used to predict a rate, if the data are statistically large, otherwise nationwide data is added to the base to improve predictability. However, no more than 50 percent of a rate can be developed using countrywide statistics.

Based on information contained in the 1992 rate filing, program review determined that less than one-third of the classes rely totally on Connecticut-specific data. The results of that analysis are shown in Table 1.

Once established for a particular class, the rate is then multiplied by each $100 of a business's payroll. The prices per $100 vary dramatically -- e.g. roofers are charged over $50 for $100 of payroll, while clerical jobs are priced at about $.38. Table 2 shows the rates (pure premium or loss cost rates) listed in the rating manual for Connecticut's most frequently used classifications 1989. (However, these manual rates do not cover company expenses, which each company must apply individually.) The full rate charged would be about 25 to 30 percent higher when expenses are included.

Even after the price has been established in the rating manual for each of the job classes, additional adjustments are made before a final price is set. Some adjustments are mandatory and others are optional, often depending on the amount of premium written.

Table 1. Reliance on CT-Only Data in Rate Development.

Class Category	Approximate Number of Classes	# Classes Relying on CT-Only Data for 1 of the 3 Components*	# Classes Rely on CT-only Data for all 3 Components*
Manufctng.	295	65	31
Contracting	71	34	21
All Other	165	67	29

*Components are Serious, Non-Serious and Medical
Source: NCCI 1992 Proposed Rate Filing

Table 2. Rates for Frequently Used Classes.

Class	Rate per $100.
Restaurant	$ 2.82
Clerical	$ .37
Physician & Clerical	$ .48
Carpentry	$11.94
Trucking	$18.46
Store-Retail	$ 1.69
College- Prof.& Clerical	$ .70
Build. Operations	$ 3.55
Salespersons (Travel)	$ .87
Median Rate	$ 1.69
Average Rate	$ 4.54

Expenses. First, as discussed previously, a company seeking a rate change must file with the insurance department -- even if the company intends to use the manual rates that NCCI has filed -- because each company must file its expense portion. The expense portion includes: profit; general and other expenses to service the policy; commissions and brokerage fees; taxes; and licensing fees. It does not include paid losses, expected losses; or loss adjustment expenses, which are a part of the manual rate.

Deviations. Companies may also deviate from the NCCI manual rates if the company can demonstrate that its loss costs are different. In 1991, of the 124 companies that filed a rate change, 43 filed deviations of 5 to 20 percent lower than the NCCI rates, and 2 filed deviations indicating higher rates. Thus far in 1992, 43 companies have filed rate changes, and 19 indicated they will charge 10 to 20 percent less than the rates filed by the rating organization.

Schedule rating. In some states, insurers may also use underwriting judgement to modify the price, based on factors like the employers' job safety and return-to-work programs, management- safety organizations, employee training, and the like. In Connecticut, this type of modification, known as schedule rating, is prohibited in workers' compensation, although it is allowed in other property casualty lines. Based on the NCCI rating manual, 11 states allow modifications of up to 25 percent, but in actuality the average percentage decrease in premiums achieved through this mechanism in 1990 was only 1.1 percent.

Dividends. Another modification to price can occur through the use of dividends, a percentage of premiums returned to the insured by policyholder-owned (mutual) companies. Based on data provided by NCCI on 37 states, the average dividends paid in 1990 was 3.5 percent. The average percentage dividend in Connecticut for that year was 5.3 percent.

Deductibles. State laws require that all employers carry an approved form of workers compensation insurance. Since 1981, Connecticut law allows insurers to offer policies with deductibles, subject to the approval of the Insurance Commissioner. It was not until 1991 that policies offering deductibles were marketed in the state. The deductible amounts being offered in Connecticut are $1,000, $5,000 or $10,000 per claim. In a sense, these deductibles represent a form of limited self-insurance. Depending on the deductible amount chosen, and the risk of the employer being covered, the reduction in premiums range from 3.2 percent to 24.9 percent. There are no data yet on how many employers are purchasing such deductible policies, and what the pricing impact will be.

Experience Modification. The array of pricing mechanisms are marketing tools that insurers employ to offer more competitive prices. Other pricing formulas, such as experience modification, are mandatory. As the name implies, the premium is changed or modified by comparing the insured's loss experience with the average losses in that classification. The method to arrive at the modification factor is actuarially determined using the latest three completed years of experience, and emphasizes claim frequency rather than severity.

The experience modification plan is mandatory in Connecticut for all insureds with premiums over $5,500. According to NCCI data, only about 23.6 percent of the policyholders in the state are experience-rated. But in testimony at February 28 symposium, NCCI indicated these policies cover about 90 percent of the workers in the state. The actual average modification for all premiums written in 1991 was 1.046, indicating that on average those employers who were experience-rated paid about 4 percent more than the manual rates, because of their past losses.

Retrospective rating plans and premium discounts. For employers that generate very large premiums, other pricing options are available. Insureds of $25,000 or more can opt to use another form of quasi self-insurance, the retrospective rating plan. Under this plan, the insureds pay a premium amount up front that covers expenses and whatever the employer's total claim amounts are, usually within limits agreed upon when the policy is written.

Premium discounts are also available to policyholders that pay over $5,000. This program offers increasing percentage discounts -- from 0.1 to 6.0 for insureds in the voluntary market, and higher discounts for those in the assigned risk pool -- the greater the amount of premiums paid.

Assigned risk pool. Because of the risk involved in a particular business, or because of poor loss history, insurers may be unwilling to write workers' compensation insurance for a particular employer. In this situation, the employer must be insured through the assigned risk pool, which is underwritten by all insurers in the voluntary market based on market share. Employers in the pool pay higher manual rates than do similar employers outside the pool, but are covered by some of the competitive pricing features, like premium discounts.

A new plan, approved by the Connecticut Insurance Department, impacts those employers in the assigned risk plan whose rating, based on loss experience, produces poorer results than the average. The plan would impose an additional surcharge of up to 25 percent of premiums for those employers.

The Workers' Compensation Insurance Market

Many of the competitive pricing components are contingent upon the behavior of sellers in the market. Since competition is such an important factor in the pricing of workers' compensation insurance, program review examined several indicators used to evaluate market competitiveness.

Market Share

Two of the most important factors in evaluating the competitiveness of an insurance market are the number of companies writing a particular line, and the market share of the largest writers.

As mentioned earlier, about 100 companies in Connecticut write more than $1 million each in workers' compensation premiums. The table below shows the top five writers in workers' compensation and the market share each had for the years 1988, 1989 and 1990.

As the table indicates, slightly more than 50 percent of the market is controlled by four insurers. While this represents some strength in market share, it must be noted that there are more than 96 companies writing premiums for the rest of the market, which, by almost any economic market standard, would be considered highly competitive. Companies seeking to increase market share have ample opportunity given the lack of concentration.

Table 3. Market Share of Top Five Companies -- 1988-1990.

Company	% Market Share 1988	% Market Share 1989	% Market Share 1990	Increase/ Decrease
Hartford Ins.	13.46	13.4	15.3	+ 1.9
Liberty Mutual	13.16	14.4	12.0	-1.16
Aetna Life & Casualty	12.53	12.6	11.9	- .63
CIGNA	7.47	8.8	10.21	+2.74
Travelers	6.57	6.0	4.6	-1.97
Total	53.19	55.2	54.01	+.82

Entry and Exit

Ease of entry and exit in the market place is another condition used to measure competitiveness. For the insurance industry, two restrictions to market entry are the capital requirements necessary to do business in Connecticut and the waiting period prior to entering a market.

To be licensed to write workers' compensation insurance in Connecticut, companies must have at least $1 million in capital. Further, once a company is licensed to conduct business, it must retain surplus funds that bear a reasonable relationship to its liabilities, usually this is a standard of one dollar of surplus to three dollars of premium written.

In Connecticut, there are no formal waiting requirements for entering the market. Before an insurance company can be licensed, however, its financial situation must be examined and it must submit financial statements while it is awaiting final approval. Currently, there are 130 companies awaiting such review, so in effect insurance companies do have to wait several months or even years before a license is obtained. Companies that are already licensed in Connecticut and wish to write workers' compensation insurance must show that they have experience in writing that product. There is no statutory requirement that companies must wait a certain period before exiting a market, but companies must give notice to the insurance commissioner before discontinuing a line of insurance.

Loss Ratio

The largest costs incurred by insurance companies are claims paid, otherwise known as their losses. A comparison for competitiveness in the market is the loss ratio, or the percent of premium dollars collected that are paid out in claims. A loss ratio that is too close to 100 indicates that the company is suffering heavy claims, and, if continued, could jeopardize solvency. Conversely, low loss ratios suggest the companies are making more profit, and may indicate a lack of competition.

Program review staff compared the loss ratios for Connecticut with the loss ratio for the surrounding Northeast states and the nationwide average from 1986 to 1990. The results are shown in Table 4. As the chart shows, Connecticut's loss ratio was higher than the national average in only one of the five years examined. However, some of the states that contribute to that high loss ratio (like Maine, Rhode Island and Massachusetts) indicate losses well in excess of the premiums collected, and where insurers are unwilling to write workers' compensation insurance. Further, the difference between Connecticut's loss ratio and the national average was not great, and would not indicate a lack of competition.

Expense Ratio

As mentioned above, since 1989 Connecticut does not allow the full rate to be set in workers' compensation; instead each company must file its own expense portion that makes up

Table 4. Comparison of Loss Ratios 1986 -- 1990.					
State	1986	1987	1988	1989	1990
CT.	76.8	84.4	81.7	79.3	80.1
NY	69.7	72.9	78.6	78.6	81.4
NJ	73.7	68.2	74.6	74.4	92.5
RI	116.7	122.1	131.3	130.2	143.6
MA	95.1	103.5	110.9	101.9	109.0
VT	87.4	86.5	74.8	85.7	90.7
NH	85.6	75.9	79.8	86.4	95.5
ME	173.7	151.9	143.9	154.7	145.7
Natl. Avg.	85.0	83.8	86.0	86.0	85.2
Source: NAIC Reports on Profitability					

the full rate. Thus, in this state one of the prime ways that companies compete is to keep their expenses lower than their competitors. Program review examined the expenses in workers' compensation insurance in two ways. First, the variation in expense multipliers filed (the loss costs portion x the expense multiplier = full rate) in this state during 1991 and to date in 1992. The results for 1991 show that in Connecticut the average expense multiplier was 1.278, while the range varied from 1.064 to a high of 1.503. Thus far in 1992, 43 companies or subsidiaries have filed rate changes and the average expense factor for those filings is 1.278 with the multipliers ranging 1.014 to 1.31. Thus, it appears there is competition among companies in the state given the wide variation in expenses applied to loss costs.

Program review staff also compared the average of the expense ratios over a 10-year period between 1980 and 1990 with those of 19 other states and found that the average for the 20 states was 27.9 percent compared to 27.1 in Connecticut, again indicating that Connecticut's expense ratio compares well with other states.

Assigned Risk

One of the primary indications of the competitiveness of an insurance market is the percentage of premiums that are written through the assigned risk plan versus those written in the voluntary market. Connecticut has a low portion of premiums written in the assigned risk plan. In 1988, 10.8 percent of the premiums written in Connecticut were through the assigned risk plan, which is low compared to the national average of 19 percent.

While Connecticut compares well with other states there are indications that the assigned risk area is deteriorating. First, the premiums written in the assigned risk pool are increasing rapidly. In 1984 the assigned risk pool as a percentage of all earned premiums totalled only 2.8 percent, by 1988 that had grown to almost 11 percent. Further, losses in the pool are growing at a dramatic rate.

Profits

A final measure used to evaluate the competitiveness is profitability. Program review staff examined the profitability of workers' compensation insurance in Connecticut, compared with the Northeast region and the nationwide averages and presented the data in Table 5.

Table 5. Comparison of Profitability Among States 1986-1990.

State	1986	1987	1988	1989	1990
CT	8.7	4.2	5.1	7.7	9.5
NY	16.7	15.3	11.3	13.0	12.9
NJ	11.0	15.1	9.4	10.3	.7
RI	-7.4	-15.0	-24.7	-22.2	-26.8
MA	-1.3	-8.0	-14.3	-5.9	-8.9
VT	2.9	2.5	10.3	3.8	1.4
NH	4.6	9.5	6.4	3.2	.7
ME	-36.3	-29.3	-28.4	-36.2	-21.0
NAT. AVG.	5.5	5.3	2.3	2.9	4.4
Median	5.3	6.5	6.4	4.6	5.8

Source: NAIC Reports on Profitability

The measure that is used is the "total profit" measure that NAIC uses in its report on profitability. It should be noted that this gauge of profitability includes the investment gain on capital and surplus, and not just on premiums. If profits on premiums only were considered, NAIC indicates that only 14 of the 55 jurisdictions would have been profitable.

Conclusions

Data Collection

Program review did not examine the data collected by the National Council on Compensation Insurance, nor data submitted by the individual insurers to the council. The committee and staff relied on the findings of the NAIC in its study of NCCI and its data collection efforts.

In summary, the NAIC study found while NCCI may accurately convert the information it receives from insurers, there is a lack of incentives for private carriers to submit quality data in a timely fashion.

The study also found that NCCI manages excessive amounts of hard copy, that its systems lack integration, and that it performs minimal automated validation tests of data at the time of input. The report recommended NCCI take corrective action by: clearly defining data quality policies and standards for its members as well as within the organization; measuring and reporting carrier performance against those standards; developing effective incentives for insurers to comply with the standards; and building integrated systems that support those standards and objectives.

The NCCI management, in its response to the study recommendations, indicated its support for most of the proposals and states it has already taken steps to implement some of them. In light of NAIC's findings, the resulting recommendations, and the expected compliance from NCCI in achieving them, program review believes that the problematic areas cited in the study are being resolved, and makes no additional recommendations.

Ratemaking Procedures

The NAIC, in its study of NCCI, also looked at its ratemaking procedures and found that no significant deficiencies existed in the organization's actuarial area. The report concluded that, based on the data, the rate requests filed by NCCI were not too high, and may have been too low. In the three components examined -- trend, loss development, and expenses -- the study found that trend and loss development may have been underestimated, resulting in potentially inadequate rate requests . Only in the expense area did the study find that the NCCI requests may have been overestimated. In Connecticut, this finding would not be of concern, since each company must file its own expenses.

The study made several recommendations to improve the accuracy of the aggregated rate development, including using exponential trending. NCCI is moving to implement exponential trending, but has not yet done so in Connecticut. While this methodology may improve accuracy, its may not necessarily lower the rates, and in fact, may increase them.

Other recommendations made in the study included:

- using five years of data, rather than three, for experience rating plans;

- that NCCI expand its diagnostic tests to enhance its ability to analyze loss development patterns;

- conduct further analysis of historical experience to evaluate which benefit changes tended to have a predictable impact on trend; and

- that NCCI review its composition of the "all other" industry group classification to determine if smaller, more homogeneous industry sub-groups might be achieved.

NAIC also concluded that, while no single exposure base for workers' compensation insurance is ideal for all circumstances, total employer payroll appears to provide the most reasonable compromise between theoretical and practical considerations for most insureds.

Given the large number of recommendations that must be acted upon by NCCI as a result of the NAIC examination, the program review committee believes it would not be prudent at this time to require any further changes in the way that NCCI makes or files rates in Connecticut. Program review also concludes that a competitive market exists in Connecticut for workers' compensation insurance, and that the regulatory mechanisms in Connecticut are based heavily on that competitive environment. Finally, recent measures have been adopted to change the benefit and administrative structure of the workers' compensation system. Those changes should be allowed to be implemented fully before any decisions are made to alter workers' compensation insurance, or the way that insurance is regulated.

APPENDIX A
SOURCES CONSULTED

American Association of State Compensation Insurance Funds, State Compensation Insurance Funds: The Best Alternative, September 1990.

Connecticut Department of Insurance. Annual Reports of the Insurance Commissioner for Business of 1987, 1988, 1989, and 1990.

Connecticut Department of Insurance. Compilation of Individual Insurers Rate Filings for 1991 and 1992.

Connecticut Department of Insurance. Bulletin PC 1 Re: Public Act 89-65 An Act Concerning Insurance Rating And Advisory Organizations -- Workers' Compensation Loss Costs, September 6, 1989

Gardner, John. Benefit Increases and System Utilization: The Connecticut Experience. Workers' Compensation Research Institute, December 1991.

Legislative Program Review and Investigations Committee. Insurance Regulation in Connecticut. January 1988.

Legislative Program Review and Investigations Committee. Workers' Compensation, January 1991.

Legislative Symposium on Workers' Compensation Insurance. Testimony from the Symposium held on February 28, 1992.

Michigan. Department of Commerce Preliminary Report and Certification Regarding the State of Competition in the Workers' Compensation Market, January 1992.

National Association of Insurance Commissioners. Informational Report to Task Force re Rate Regulation and Profitability in Workers' Compensation Insurance, December 1991.

National Association of Insurance Commissioners (NAIC). Report on Profitability By Line By State 1989.

National Association of Insurance Commissioners. Ratemaking Procedures: Evaluation of NCCI Ratemaking Methodologies. Volume I -Section II Executive Summary. Evaluation Conducted by Milliman & Robertson. Inc., December 1991.

National Association of Insurance Commissioners. Examination of NCCI, Data Collection and Data Quality. Section I Executive Summary. Conducted by Milliman & Robertson, Inc., and Arthur Andersen & Co., May 1991.

National Council on Compensation Insurance (NCCI). Issues Reports for 1989, 1990, and 1991.

NCCI. Workers' Compensation Insurance Rate Filings for Connecticut for 1991 and 1992.

NCCI. Annual Statistical Bulletin, 1991 edition.

NCCI. Basic Manual for Workers' Compensation and Employers' Liability Insurance.

NCCI. Comments on the National Association of Insurance Commissioners Examination of NCCI, no date.

NCCI. Ratemaking . . . The Pricing of Workers' Compensation Insurance, (no date).

NCCI. Experience Rating Plan for Workers' Compensation and Employers' Liability Insurance.

NCCI. The Basis of Premium for Workers' Compensation, (no date).

Stephenson, David. "Competitive Ratemaking in Workers' Compensation Insurance" Legislative Policy, (no date).

Williams, C. Arthur. "Workers' Compensation Insurance Rates: Their Determination and Regulation, a Regional Perspective". Current Issues in Workers' Compensation, James Chelius, editor, 1986.