

Public Policy Monograph

Spring 2000

The Workers'
Compensation System:
An Analysis Of Past,
Present and Potential
Future Crises



AMERICAN ACADEMY *of* ACTUARIES

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SPRING 2000

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The Workers' Compensation System: An Analysis Of Past, Present and Potential Future Crisis

Executive Summary

Workers' compensation countrywide combined ratios (sum of an expense ratio and a loss ratio) for accident years 1988-1990 were in excess of 120% as reported by the National Council on Compensation Insurance (NCCI). At the end of the 1990s, workers' compensation countrywide combined ratios are once again estimated to be in excess of 120%. This monograph contains a review of the forces that caused the workers' compensation crisis of the 1980s, discusses the changes that have occurred in workers' compensation over the past decade, and raises awareness that another significant crisis may be brewing as we approach the new millennium. The tools for dealing with the worsening

workers' compensation combined ratios of the late 1990s differ from those of a decade ago. Insurers have more flexibility in pricing and, therefore, may be better able to respond more quickly to changes in cost trends as they start to rise. Existing self insurance programs and the development of new products have given employers more options for funding their workers' compensation programs. Efforts are already underway to develop better measures of system outcomes. This may enable future reform initiatives to be based on a more objective process that balances the adequacy of benefits with the affordability of the system, rather than having such initiatives be crisis-driven. The issues and tools available are discussed further in this monograph.

Introduction

After a prolonged period of rising costs and operating losses for the insurance industry in the latter half of the 1980s, the American Academy of Actuaries (Academy) published a report in 1993 that expressed concerns about the financial health and ultimate survival of the workers' compensation system. In addition to identifying factors that contributed to the workers' compensation crisis of the 1980s, it focused on the need to implement a number of reforms to end to the crisis. This was a crisis for employers because loss costs were increasing rapidly and eroding profit margins for reasons that were at least partially beyond their control. It was also a crisis for insurers because insurance rate increases did not keep pace with rising workers' compensation costs in most states.

Workers' compensation countrywide combined ratios for accident years 1988-1990 were in excess of 120%, as reported by the National Council on Compensation Insurance (NCCI). Starting in the early 1990s, workers' compensation costs began to fall. Some factors that contributed to this include: a strong economy; efforts of employers and insurers to prevent accidents and better manage the cost of workers' compensation claims; and substantive benefit and administrative reforms in some states.

During the mid-1990s, the financial results for workers' compensation were generally favorable for insurers, as loss trends were better than expected. Consequently, price competition in the mid to late 1990's heated up. While employers benefited from reductions in their workers' compensation costs, financial results for workers' compensation insurers once again deteriorated. At the end of the 1990s, workers' compensation countrywide combined ratios are once again estimated to be in excess of 120%.

The purpose of this monograph is to review the forces that caused the workers' compensation crisis of the 1980s, discuss the changes that have occurred in workers' compensation over the past decade, and raise awareness that another significant crisis may be brewing as we enter the new millennium. While insurance industry results are similar to those of a decade ago, many of the underlying factors are different. This monograph covers:

- History of Workers' Compensation Crises & System Reforms – a summary of the relationship between

crises and benefit reform efforts over the past three decades;

- Economic Influences on Workers' Compensation Costs – a discussion of how the strong economy of the 1990s contributed to cost reductions and how a change in economic conditions may exacerbate the current insurance crisis;

- Introduction of Managed Care Techniques – a review of how the introduction of managed care techniques contributed to declining claim severities and why by the end of the current decade the claim severities are rising again, but at a slower rate;

- Price Competition– an overview of how price competition has changed over the past decade;

- Residual Market Reforms & Depopulation – a discussion of the trend away from assigned risk plans toward state funds or other alternative self-funding mechanisms.

History of Workers' Compensation and System Reforms

Workers' compensation system reforms have generally been enacted in response to crises. Typically, business wants affordable costs, labor wants adequate benefits, insurers want reasonable profits, and hospitals, doctors, lawyers and a host of other service providers want to preserve or expand their respective shares of the system. These conflicting pressures have usually resulted in a political stalemate until a crisis forces state legislatures to take action.

During the 1970s, reforms centered around issues related to the adequacy of benefits. The benefit expansions that resulted produced significant increases in workers' compensation costs for employers. The National Commission on State Workmen's Compensation Laws, established by Congress through the Occupational Safety and Health Act of 1970, produced a report in 1972 with 19 essential recommendations, including higher weekly maximums and escalating benefits.

Most states adopted at least some of the recommendations. Rating bureaus adjusted rates for changes that could be quantified, but they could not adequately anticipate increased benefit utilization and the

expanded role of service providers in the new, larger systems. It took several years for these cost increases to be fully reflected in rate filings. Due to these significant cost increases during the 1970s, many employers opted for self-insurance in order to gain better control of their costs.

In the 1980s, there were relatively few significant statutory benefit changes enacted. Despite this, in the late 1980s, costs were rising at 10% to 15% per year. This was driven by:

- high rates of medical inflation and cost shifting from the general health care arena to workers' compensation;
- lingering effects of the benefit increases from the 1970s;
- increased benefit utilization impacting both the frequency and duration of claims; and
- expansion of benefits in some states through judicial interpretation of statutes.

It was difficult for approved rate changes to keep pace with these cost increases. Thus, loss ratios deteriorated and a crisis ensued.

This cost crisis of the late 1980s drove the wave of administrative reforms, benefit reductions and other changes that occurred during the early 1990s. A synopsis of some of these key statutory benefit reforms is contained in Appendix A. With some exceptions by state, the benefit structure is rarely cited as a key cause for poor financial results for workers' compensation insurers.

In the future, reform initiatives could continue to be crisis-driven. It would be preferable, however, for reforms to be driven by an objective process, balancing the adequacy of benefits with the efficiency and affordability of the system. For this to occur, measures of outcomes are needed that encompass not only the dollar-cost of benefit changes, but their cost in terms of the socioeconomic impacts as well. The rating bureaus expanded their data reporting requirements in the 1990s, requiring additional fields to be added to unit statistical reports and requiring detailed claim information to be filed in all states. This was one step toward improving the industry's ability to better monitor system costs. Organizations such as the Workers' Compensation Research Institute and some state administrative agencies have also begun to work on

initiatives to develop tools to better measure outcomes.

Economic Influences on Workers' Compensation Costs

Complex economic forces influence workers' compensation results in several important interrelated ways. Actuaries evaluate workers' compensation cost trends by analyzing historical loss costs. Loss costs can be divided into two components: the frequency of claims (i.e., the number of claims per unit of exposure); and the severity of claims (i.e., the average cost per claim).

Claim frequency is believed to be influenced by the following factors:

- level of employment and availability of gainful employment (concerns about layoffs or plant closings tend to drive up claim frequency);
- the degree of experience of the workforce (less experienced workers tend to have higher claim frequency);
- the amount of overtime (tired workers tend to get injured more);
- shifts in the mix of employment from manufacturing to the service sector;
- infrastructure investments in safety and ergonomics along with the general level of safety and loss prevention at the employer's site; and
- many other economic factors influencing the relative attractiveness of filing a claim for benefits versus staying in the workforce.

How these forces interact is complex and may change from time to time as the economy changes. Claim frequencies have generally fallen throughout the 1990s, but this pattern cannot be expected to continue forever. The latest available insurance industry data indicate that the rate of decrease in claim frequencies is declining and, in some states, frequencies may now be rising.

Economic forces also influence the size of claims. Some of these forces are the same as those that affect frequency:

- the availability of substitute employment may le-

ad to a more rapid return to work and reduced losses from a particular injury;

- the aging work force may lead to longer durations because older workers may have more difficulty returning to work than younger workers. It may also lead to higher weekly workers' compensation benefits as older often earn more than younger, less experienced workers;

- the amount of overtime and the number of workers holding multiple jobs influence the level of wages lost when an injury occurs;

- medical cost drivers in the economy influence the medical costs of workers' compensation at large;

- many other economic factors, including welfare reform, may significantly affect return to work efforts.

During most of the late 1980s, the annual percentage change in workers' compensation claim severities was much higher than the rate of inflation. Indemnity claim severities grew at a rate of approximately 8% per year from 1980-1990, while wage growth during that period averaged 5% per year. During the same time period, medical severities grew at a rate of approximately 12% per year while the medical consumer price index (CPI) increased at 8%. Medical severities for workers' compensation increased at a much lower rate in the 1990s, as did medical costs for the economy at large. Indemnity severity trends also improved significantly.

The key question for policy makers today is: Where are workers' compensation costs heading as we enter the new millennium? As noted above, this is a difficult question to answer. We are currently in one of the longest economic expansions ever. Someday, the expansion will likely cease and the economy will contract. The impact of this contraction on workers' compensation costs is uncertain but is more likely to increase costs than to lower them.

Introduction of Managed Care Techniques

The use of managed care techniques by workers' compensation insurers and self-insurers has evolved over the past two decades. Managed care influences

both indemnity and medical costs. The mid- to late 1980s experienced significant cost increases for health care costs. As mentioned above, workers' compensation medical costs were increasing much faster than general health care costs. Many insurers used some elements of managed care, especially for large catastrophic claims. However, comprehensive managed care programs were virtually nonexistent.

The managed care techniques used in the 1980s were predominantly:

- comparing bills to state-approved fee schedules in states with medical fee schedules in place and to usual and customary charges in other states;
- using nurses to manage catastrophic claims (with rehabilitation nurses working primarily on-site);
- focusing on returning the injured worker to work.

During the early 1990s, the workers' compensation industry began more aggressively to address medical and indemnity costs. In addition, many states passed reforms that allowed for the implementation of some further managed care techniques, although some states also restricted carrier flexibility by mandating programs. In the field of general health care, managed care programs and techniques grew rapidly. The workers' compensation industry also began to expand its use of managed care techniques to include:

- adopting medical fee schedules in many states that did not previously have them;
- negotiating preferred provider organization rate discounts (thus obtaining discounts below workers' compensation medical fee schedules or below usual and customary charges in non-fee schedule states);
- implementing utilization review (pre-authorizing hospital procedures; concurrent and retrospective reviews of provider practices);
- using nurse case management on more claims, including problematic temporary total and permanent partial claims (telephonic nurse case management brings rehabilitation nurses to a much wider group of claimants);
- developing and implementing treatment protocols specific to workers' compensation;

- implementing more exhaustive bill review;
- introducing programs in which managed care organizations participate financially in workers' compensation results;
- piloting exclusive provider organizations, specialty networks, HMO's for workers' compensation, and 24-hour programs;
- enhancing the partnership between the employer and the insurer (with a heavy emphasis on return to work and directing care to select providers).

The above steps, along with other changes in the health care delivery system, are believed to have substantially reduced workers' compensation medical costs. In the early- to mid-1990s, medical severity trends for workers' compensation returned to levels similar to those of the general health care system. General health care costs themselves were also trending up at a much slower rate than in the 1980s. In addition, managed care has contributed to a reduction in the duration of indemnity benefits by enabling injured workers to return to work sooner. As a result, average severity trends for workers' compensation indemnity fell below general wage inflation in many states.

As we close out the decade, workers' compensation medical and indemnity costs are growing at a quicker pace than in the mid-1990s. Managed care techniques in some states are reaching saturation. Many insurers have implemented comprehensive managed care programs, and new techniques and programs are being added at a decreasing pace. It is thought that workers' compensation costs may begin to rise more rapidly as the majority of managed care savings has worked its way through the system.

Additional concerns also exist. General health care costs are on the rise, which will likely lead to higher workers' compensation medical trends and to cost-shifting to workers' compensation from health care programs where employees pay the deductibles, coinsurance, and co-payments. There are concerns about a potential managed care backlash and attempts to reverse some of the favorable managed care reforms implemented in the early 1990s. Legislatures are discussing Medical Privacy acts at the federal and local levels. The potential lack of access to medical information is significant because medical issues often drive the eligibility for, and the duration of, workers' com-

pensation benefits. Depending on whether workers' compensation is exempted from these acts, there may be a significant impact on workers' compensation medical costs and on the ability of companies to continue to use various managed care techniques.

Price Competition

"Upfront" price competition in the workers' compensation marketplace has increased in recent years. Prior to the 1980s, workers' compensation insurers operated in an "administered pricing" environment. Rating bureaus filed rates and rating plans on behalf of all insurers, which were required to adhere to their rates. Competition could only be achieved through service and "back end" dividend plans. In the 1980s, states began passing various types of competitive rating laws. In their least flexible form, these competitive rating laws allow insurers to file deviations from the bureau rate level. However, many states passed laws that prohibited rating bureaus from publishing advisory rates. Instead, they must publish advisory "loss costs" by class. In these states, insurers are required to file their own independent rates based on their own expenses and profit requirements, and may reflect their own expected loss levels as well. These changes increased price differentiation in the marketplace and addressed complaints about the appearance of monopolistic pricing in an administered pricing environment. In addition, during the 1990s, schedule rating was expanded from 24 to 34 states – including large states such as California. Schedule rating further increases the insurer's pricing flexibility by allowing price adjustments based on individual risk characteristics.

Competition is not always in the form of price. The competitive drive of insurers to write the best risks has also fostered new product development and new cost control techniques. For example, competitive rating laws allowed insurers to file independent large-deductible programs and competition for large accounts focused on loss control facilities, claims management capabilities, and management information reports. Insurers also now have the ability to develop their own experience rating plans in some states.

Both large and small employers have benefited tremendously from competitive pricing during the

1990s. As costs began to fall because of state benefit reforms, loss control efforts, and the implementation of managed care programs, quantifying the impact of these cost decreases became a challenge. In hindsight, bureau rate indications tended to overstate the actual costs that emerged, in part because of time lags involved with data reporting. Therefore, many insurers looked to their own more current data and formed their own opinions. Competitive rating laws provided a mechanism for insurers to reflect those different opinions in their pricing. Price competition today is so intense that many large employers have abandoned self-funded programs to purchase guaranteed cost policies at very low prices.

Accident-year combined ratios at the end of the 1990s once again appear to be in excess of 120%, yet significant price competition continues. The high combined ratios are raising concerns for regulators and insurers. The crisis for employers may come early in the next decade if contraction in the insurance marketplace leads to sudden and dramatic price increases by insurers akin to those of the liability insurance crisis of the 1980s.

Residual Market Reforms and Depopulation

Most state laws require that employers fund their workers' compensation liabilities by purchasing insurance or qualifying as an approved self-insurer. Therefore, most states provide a "residual market" mechanism to guarantee the availability of insurance coverage to all employers who are unable to obtain coverage in the voluntary market. Traditionally, there have been two main types of residual market mechanisms: self-funded plans (mainly state funds), which bear the risk for residual market profits/losses; or assigned-risk plans, which distribute the residual market profits/losses proportionately among voluntary market insurers via a pooling arrangement and make direct assignments to those insurers not participating in the pool. Appendix B provides a description of these mechanisms and their current use by state.

Despite the advent of competitive rating, assigned-risk plans grew rapidly during the late 1980s. One reason is that residual market rates acted as a cap on voluntary rate levels, and neither set of rates was keeping pace with rising insurance costs. This put the residual

market mechanism in direct competition with voluntary-market insurers. Because the residual market rates approved by regulators were often severely inadequate during the late 1980s, most assigned risk pools operated essentially as insolvent insurance companies. Voluntary-market insurers were forced to absorb the residual market operating losses as residual-market "burdens" and incorporate these costs as additional expenses in their voluntary-market risk selection and pricing decisions. This rendered voluntary-market rates more inadequate, causing growth in the size of the residual market.

During the late 1980s, the size of the voluntary market was relatively stable in states with state funds, while the burden of subsidizing the residual-market mechanisms in states with assigned-risk plans resulted in significant constrictions of the voluntary market. In a few states it became so extreme that the voluntary insurance market collapsed. Consequently, in the 1990s, nine states opted to replace their assigned risk plans with either state funds or with private insurance companies taking on the risk (although one state, Nevada, went in the opposite direction moving from a state fund to an assigned-risk plan). In other states with assigned-risk plans, a number of changes were implemented to address regulatory and insurer concerns.

The changes to assigned-risk plans that took place in the 1990s included:

- In most states, rules related to the administration of assigned-risk plans were filed with regulators for approval, thereby formalizing the requirement that voluntary writers of workers' compensation insurance participate in the assigned-risk market via participation in a reinsurance pool. In 11 states, insurers were also given the option of taking direct assignments and a number of insurers exercised that option;
- Most states retaining assigned risk pools put servicing carrier services out to bid, resulting in reductions in both the number of servicing carriers providing services in a state and in the servicing carrier allowance they received. In some states, plan administration was also put out to bid;
- Pricing programs were implemented to increase residual-market premium levels in most states. The programs included rate differentials, surcharges, elimination of premium discounts, the introduction of a more loss-sensitive experience rating plan for risks

with debit experience modifications via an assigned-risk adjustment plan (ARAP) surcharge, and mandatory retrospective rating plans for risks above a certain premium threshold;

- States implemented programs aimed at depopulating the assigned-risk pools. The programs ranged from providing insurers with take-out credits, reducing their share of the residual-market losses, to more proactive programs helping employers find insurance in the voluntary marketplace. For example, effective January 1, 1998, Alabama introduced a new requirement that employers must obtain one of the two required declinations from a private insurer that has offered a broad-based depopulation program before acceptance into the state's assigned risk plan. Although the Alabama plan had already been depopulated dramatically due to competition, 90% of the remaining risks were removed from the Plan in the first year of the program.

There was a dramatic turnaround in the results of the residual market in the 1990s when compared to the huge

residual-market operating losses in the late 1980s. At its peak, the residual market averaged close to 25% of the insurance market in states with assigned-risk plans, with some variation by state. The average residual-market operating loss as a percent of voluntary-market premiums in those states was in excess of 10%. Residual-market pools became largely self-funded in the mid 1990s, and in some cases were actually profitable.

By the 1990s, the residual market was generally so small that its operating results became inconsequential relative to voluntary-market premiums. Alternatives to the traditional residual-market pools have been implemented in a number of states. As we enter the new millennium, we can only speculate as to what will happen to the size and cost of funding the residual market if competition for voluntary-market risks decreases. It's also still unclear how the alternative approaches to the residual market will fare if we once again end up in a situation, similar to that of the late 1980s, in which cost increases significantly outpace changes in premium levels.

Conclusion

Countrywide combined ratios for workers' compensation at the end of the 1990s may mirror those of the late 1980s, but the causes of the high combined ratios differ in many ways. Although insurance industry results differ by state, concerns about the health of the economy, rising medical costs, and employment levels existed in both decades and impact all states. In the 1980s, loss costs were rising, the residual market had become a large burden on the voluntary market, and price levels in many states were only beginning to be deregulated. In contrast, in the late 1990s, price

competition is driving up combined ratios. Competition has also dramatically increased the availability of voluntary-market insurance. Residual markets in most states are now so small that their operating results are inconsequential relative to voluntary-market premiums. Employers have benefited from several years of sustained improvement in the affordability of workers' compensation costs, and pressures to increase benefits are beginning to emerge.

The chart below compares and contrasts workers' compensation issues over the past decade.

Workers' Comp Issue	Late 1980s	Late 1990s
Cost to Employers	Rose rapidly, often with double digit increases.	After several years of decreases or flat price changes, employers are concerned that costs may once again start to rise.
System Reforms	Benefits expanded due to increased utilization of the WC system. Pressure to reform systems led to substantive administrative and benefit reforms in the early 1990s.	Pressures to increase benefits.
Economy	Increased claim frequency. High rates of medical inflation for general health care exacerbated the already high WC medical inflation rates.	Downward trend in claim frequency of mid 1990s may be reversing. Concern that recent price increases for general health care will drive up WC medical costs.
Managed Care	In infancy for WC, but expanding use of programs in the general health care system shifted more costs to WC.	Mature market with numerous WC programs in place. Some political backlash emerging.
Price Competition	Insurers used some deviations and schedule rating. Some states introduced "open rating", but insurers were concerned with adequacy of rates.	Widespread price competition, with insurers extensively using independently filed rates and other pricing tools introduced over the past decade.
Residual Markets	Grew rapidly, placing major burden on the voluntary market.	Rapid pool depopulation of mid 1990s continuing. Improved pool operating results. Residual market burdens are generally insignificant.
Insurer Profitability since	Deteriorated rapidly.	Deteriorating significantly and persistently 1995, after having improved for several years.

As we enter the new millennium, the tools for dealing with the worsening workers' compensation combined ratios of the late 1990s differ from those of a decade ago. Insurers have more flexibility in pricing and therefore, may be able to respond more quickly to changes in cost trends as they start to rise. Existing self insurance programs and the development of new

products have given employers more options for funding their workers' compensation programs. Efforts are already underway to develop better measures of outcomes. This may enable future reform initiatives to be based on a more objective process that balances the adequacy of benefits with the affordability of the system, rather than having such initiatives be crisis driven.

Appendices

APPENDIX A - Administrative and Statutory Benefit Reforms

In the early part of the 1990s, many states enacted substantive changes to their workers' compensation administrative and statutory benefit systems in efforts to address the causes of persistent and significant cost increases. These reforms attempted to target documented cost drivers or sources of administrative inefficiency in the following areas:

Anti-Fraud Measures—Efforts to combat the various forms of insurance fraud lead to added resources for the investigation and prosecution of fraudulent activities and increased criminal penalties for convicted perpetrators. Many insurers also increased their investment in special investigative units.

Benefit Changes—Numerous states altered statutory benefit features in areas such as cost-of-living features, limits on duration, definitions of permanent disabilities, determination of disability ratings and the benefit formulas.

Compensability Standards—Responding to court interpretations and demands for coverage of new types of disabilities, legislatures adopted new standards for defining conditions and the level of evidence necessary to receive benefits.

Dispute Resolution—Concerns over the increasing involvement of attorneys in state workers' compensation systems lead a number of states to address the administrative and statutory opportunities and incentives for litigation in this "no-fault" line of insurance.

Medical Cost Containment—With double-digit annual cost growth, workers' compensation medical costs were a prime target of reform in virtually every state. Reforms focused on controlling the unit cost of medical treatments through medical fee schedules or through more comprehensive managed care programs that attempted to address the nature of treatments and the control and selection of providers.

Rating Laws—Deregulation of the workers' compensation system continued with an increasing number of states adopting loss-cost systems as part of the

rate-setting mechanism.

Residual Markets—Responding to a growing availability and affordability crisis, several states converted their traditional assigned-risk plans into either state funds, mutual insurance companies or joint underwriting associations.

Safety Programs—Numerous states adopted increased incentives for accident prevention and loss control.

Workers' compensation advisory organizations have estimated that the annualized cost savings resulting from reforms enacted between 1991 and 1996 have amounted to \$3.6 billion. Illustrative examples of the key features of some of the more noteworthy reforms include:

Connecticut (1993)

Reduced schedule permanent partial disability (PPD) durations by one-third and expanded coverage;

Benefit formula changed from 80% to 75% of spendable wages;

Maximum weekly benefit reduced from 150% of statewide average weekly wage (SAWW) to 100%;

Eliminated cost of living adjustments (COLAs);

Authorized managed care;

Adopted Social Security retirement offset;

Reduced durational limit for temporary partial disability (TPD) from 780 weeks to 520 weeks;

Established a schedule of attorney fees, authorized informal hearings and a "pay without prejudice" system.

Florida (1994)

Tightened compensability standards;

Established ombudsman program and reduced schedule of attorney fees by 25%;

Restricted definition of permanent total disability (PTD) to "catastrophic injuries";

Reduced durational limit for temporary total disability (TTD) from 260 weeks to 104 weeks;

Established managed care program;

Limits PPD benefits to a maximum of 401 weeks from date of injury;

Restructured PPD benefits;

- Limits chiropractic care;
- Established return-to-work incentives;
- Established a joint underwriting association mechanism for the residual market.

New Hampshire (1994)

- Allows premium credits for managed care;
- Reduced minimum weekly benefit to lesser of 30% of SAWW or actual wage;
- Reduced benefit formula from 66 2/3% to 60% of average weekly wage;
- Reduced durational limit for non-scheduled PPD and TPD from 350 to 262 weeks;
- Established safety incentive program for residual market insureds;
- Added position of dispute resolution coordinator within the Department of Labor.

APPENDIX B - Description of Residual Market Mechanisms

Traditionally, there have been two main types of residual-market mechanisms: self-funded plans, which bear the risk for residual-market profits/losses; and assigned-risk plans, which distribute the residual-market profits/losses among voluntary market insurers.

Self-Funded Plans

Most of these plans have historically been state funds, i.e. quasi-insurance companies created by state government specifically for the purpose of providing a guaranteed insurance market and quality services to employers in their state. These mechanisms are designed to be self-funding and can be categorized as follows:

- **Exclusive State Funds** – The state funds in North Dakota, Ohio, Washington, West Virginia and Wyoming are the only insurance market available to employers. These funds have been in place since the inception of the workers' compensation system. Nevada used to be in this category, but on 7/1/99 Nevada opened its market to private insurers and implemented an assigned-risk plan.
- **Competitive State Funds**-In California, Colorado,

Mary-land, Montana, New York, Oklahoma, Pennsylvania, and Utah, the state funds have been the residual market since their inception, but they also compete with private insurers for voluntary-market business. The following states converted their residual-market mechanisms from assigned-risk plans to state funds or mutual insurance companies in the last decade: Louisiana (10/1/92), Maine (1/1/93), Rhode Island (1/1/93), Texas (1/1/94), Kentucky (9/1/95) and Hawaii (7/1/97).

- **Private Insurers / "Quasi" Insurers** - On 1/1/94, Florida re-placed its assigned-risk plan with a joint underwriting association (JUA), where employers insured by the JUA are liable for all losses and expenses through assessable policies. In Missouri, (7/1/95) and Nebraska (7/1/97), insurance regulators initiated bid processes to replace their assigned-risk plans with single insurers bearing the risk for residual-market losses. In Missouri, the state retained a pooling mechanism that will result in an assessment to the industry should the residual-market loss ratio exceed 115%.

Assigned-Risk Plans

In states with assigned-risk plans, employers apply to a plan administrator who randomly assigns risks to either an individual insurer (i.e., a "direct assignment" carrier) or to one of several servicing carriers. The servicing carriers are insurers that were selected to issue policies and provide services on behalf of the participants of the reinsurance pool. Direct-assignment carriers bear the risk for the policies assigned to them, while the premiums, losses and expenses of the policies written by servicing carriers are distributed to all participants in the pool via the pool administrator. The pool administrator also works with a reserve committee to establish estimates of the ultimate incurred losses and the net operating profit/losses for the pool. In most states, the pooling mechanism is the National Workers' Compensation Reinsurance Pool (NWCRP), which is administered by the NCCI. This mechanism provides the opportunity for multi-state assigned-risk policies, but only in NWCRP states. Assigned-risk plans can be categorized as follows:

- **NWCRP vs. independent state pools** - In four states—Massachusetts, Michigan, Minnesota and Wisconsin—the plan and pool have been administered independently by the local rating bureau for some time. On 1/1/98, Tennessee selected a private company

to be the plan and pool administrator. Both New Mexico (see below) and Mississippi (1/1/99) have retained NCCI as plan administrator but introduced independent pools. New Mexico is unique in that the assessment base for pool operating losses for policy years 1990-1993 included commercial general liability and commercial multiple peril business in addition to voluntary workers' compensation. The New Mexico pool by-laws still allow assessments to be made on lines of business other than workers' compensation but this has not been done since 1993.

- Independent plans with NCCI pools - Delaware, Indiana, New Jersey and North Carolina have had independent plans for many years but still rely on the NCCI to administer their reinsurance through the NWCRP.

- NCCI plans with programs to depopulate NCCI pools (three old, two new) - In Arizona, Idaho, New Mexico (1/1/91) and Oregon, the legislatures have created a state fund to compete with private insurers and to depopulate their assigned-risk plans. In all but New Mexico, the pool members are reinsured by the NWCRP. In 1998, Alabama introduced a "gatekeeper" program to encourage depopulation of its pool, making the assigned-risk plan in this state truly a "market of last resort"

- NCCI plans and pools - While once the norm, only Alaska, Arkansas, Connecticut, District of Columbia, Georgia, Illinois, Iowa, Kansas, New Hampshire, South Carolina, South Dakota, Vermont and Virginia retain plans and pools administered by the NCCI. Nevada moved into this category on 7/1/99.

GLOSSARY

Accident Year: An insurance accounting view of data where losses are grouped into an accident year based on the accident date of each claim. Premium for an accident-year loss ratio (see definition of Loss Ratio below) is the premium earned during the year. Earned premium refers to the process by which policy premium is "earned" proportionally over the life of that policy. For example, if an annual policy with \$100 of premium is issued on 7/1/99, \$50 of that premium is "earned" during accident year 1999, and the remaining \$50 is "earned" during the accident year 2000.

Administered Pricing Environment: An insurance regulatory environment where insurers in the state are required to use the rates and rating plans filed on their behalf by the appropriate rating bureau once they are approved by state regulators. In some states with an administered pricing environment, insurers may deviate from the approved rates but must obtain prior approval from the state regulators. (See the definitions of Bureau Rate Level and Rating Bureau below).

Advisory Rates or Loss Costs: Premium rates or loss costs filed by rating bureaus on behalf of their member insurers. Under competitive rating laws, insurers may be allowed to file for deviations from advisory rates, may be required to file their own rates based on the advisory loss costs, or may be allowed to file their own independent rates or loss costs with or without using the advisory indications, depending on the state. (See the definition of Loss Costs below).

Assigned-Risk Plan: A residual-market mechanism that provides for an equitable apportionment among voluntary-market insurers of coverage provided to employers under the plan. Insureds under the plan are typically assigned to servicing carriers whose results are distributed to the voluntary market insurers through a pooling mechanism. In some states, insurers may opt out of the pooling arrangement by electing to take "direct assignments" of insureds under the plan. In that case, the insurer will issue policies directly to the directly assigned insureds and will keep the results incurred under those policies. (See the definitions of Residual Market and Servicing Carrier below.)

Bureau Rate Level: Premium rates and rating plans filed by rating bureaus on behalf of their member insurers for use in determining an individual policy-

holder's premium. Under a competitive rating environment, this "rate level" may reflect the advisory loss costs.

Combined Ratio: The sum of an expense ratio and a loss ratio, where the denominator is premium. An underwriting profit occurs when the combined ratio is under 100%, while an underwriting loss results when the combined ratio exceeds 100%. An insurer's total profit/loss is the sum of underwriting profit/loss and investment income earned. Therefore, a workers' compensation insurer can still earn a positive return at a combined ratio above 100%, although not necessarily at the expected or required rate of return.

Competitive Rating Environment: (See definition of Advisory Rates or Loss Costs above.)

Exclusive Provider Organization: An arrangement whereby a pre-selected group of primary care physicians treat injured workers or refer them to a network of medical specialists and facilities. The primary care physicians are typically selected based on their expertise in workers' compensation, service capabilities, cost control philosophy, and willingness to oversee cases to closure. Exclusive provider organizations are a form of managed care.

Experience Rating Plan: A rating plan where an employer's current premium is adjusted to reflect that employer's historical claims experience.

Fee Schedules: Medical fee schedules are generally promulgated by state workers' compensation agencies and establish allowable fees for medical services provided to injured workers under workers' compensation. These may include doctor and/or hospital fees.

Frequency: Claim frequency is the number of claims per unit of exposure.

Indemnity Benefits: Workers' compensation indemnity benefits primarily replace lost wages due to work-related injuries, but also include all benefits paid directly to injured workers or to other parties on their behalf, except for medical expenses and claim adjustment expenses.

Loss Costs: Broadly speaking, loss costs are defined

as losses per unit of exposure. Actuaries review historical loss costs and estimate expected future loss costs. Those expected future loss costs are the starting point for insurance rates, which are obtained by adding provisions for expenses and profit requirements to the expected loss costs, with an offset for expected investment income. Depending on the state, advisory loss costs (see definition above) generally also include provisions for loss adjustment expense and loss-based assessments levied by the state.

Loss Ratio: The relationship between incurred loss dollars (often including loss adjustment expense) and premium dollars. Specifically, loss dollars are divided by premium dollars in order to calculate this ratio.

Rating Bureau: An organization that develops expected loss costs (or rates) and rating plans in order to assist its member insurers in estimating expected losses (or needed premium) for individual employers. Usually, a rating bureau will also be a statistical agent (see definition below). With the move to competitive rating in most states, rating bureaus are now often referred to as advisory organizations.

Residual Market: A mechanism created to guarantee the availability of insurance coverage to all employers required to obtain workers' compensation insurance. These mechanisms can take on different forms and are discussed in Section VI of the paper and Appendix B.

Retrospective Rating Plan: A rating plan where an employer's premium is adjusted after policy expiration to reflect the actual loss experience under that policy, subject to predetermined bounds.

Schedule Rating Plan: A rating plan where an employer's premium is adjusted to reflect the special characteristics of the employer or considerations that may not be adequately recognized by experience rating.

Self-Insurance: An alternative to the purchase of workers' compensation insurance whereby an employer can meet its legal financial responsibility requirements through a self-funded program. This can be done on an individual or a group basis, although not all states allow group self-insurance. Generally, this

form of risk financing requires approval by state regulators.

Servicing Carrier: An insurer that is selected to issue policies and provide services under an assigned risk plan on behalf of the participants in the pooling arrangement. (See the definition of Assigned Risk Plan above.)

Severity: Claim severity is the average claim size, or cost per claim, and is calculated by dividing loss dollars by claim counts.

Specialty Network: A network of providers offering discounted medical and hospital services, and various degrees of case management. Specialty networks are a form of managed care.

Statistical Agent: An entity that collects and compiles data from insurance carriers and/or self-insurers (or their authorized agents) on behalf of state regulators according to statistical plans authorized by those regulators.

State Administration Agency: State workers' compensation agencies that adjudicate contested workers' compensation claims and/or administer the workers' compensation system. An example would be a state industrial accident board.

Twenty-four Hour programs: Programs that combine aspects of workers' compensation claims administration and/or insurance with an employer's life, disability and/or health programs.

Utilization Review: A process of comparing requests for health care services against standardized protocols. Utilization review is a form of managed care.

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