NAIC Examination of NCCI

Section I: Data Collection and Data Quality

Executive Summary

May 15, 1991





Executive Summary

1. INTRODUCTION

This report presents the approach, findings and recommendations of the review of data collection and data quality at the National Council on Compensation Insurance (NCCI) performed by Arthur Andersen & Co. and Milliman & Robertson, Inc. It contains the written deliverables of Section I of the NAIC examination of NCCI.

Project Background

Milliman & Robertson, Inc. and Arthur Andersen & Co. performed an examination of the structure and operations of NCCI under the examination authorities of the Florida Department of Insurance, the Maine Bureau of Insurance, the Nebraska Department of Insurance and the Utah Department of Insurance. The National Association of Insurance Commissioners (NAIC) coordinated the activities of the four departments in administering the examination. The specific requirements and conditions of the examination are specified in the Request for Proposal for this project (included in the Appendix to Volume I).

The overall purpose of this examination was to evaluate the data collection and data handling activities of NCCI, certain aspects of its ratemaking activities and practical considerations involved in implementing a loss cost system.

The examination was conducted in three sections:

- I. Data Collection and Data Quality;
- II. Ratemaking Procedures; and

III. Loss Cost Implementation.

Arthur Andersen & Co. had primary responsibility for Section I of the examination; Milliman & Robertson had primary responsibility for Sections II and III.

This executive summary provides an overview of Section I of the examination and outlines the contents of the Section I report.

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Section I Project Objectives

The primary objectives of Section I of the examination were to (1) document NCCI's data collection and data handling systems and procedures and (2) evaluate the quality of NCCI's systems, procedures and data.

Section I Project Scope

The scope of Section I of the examination included only systems and procedures currently used in ratemaking, experience rating and detailed claim information applications. It did not include systems which were in development during the examination. We have also provided comments on current NCCI development initiatives, where appropriate, but we have not formally examined systems in development.

Content and Structure of Section I Report

Our report for Section I of the examination is organized in three volumes:

- I. Overview of Findings and Recommendations;
- II. Description of Data Collection and Data Handling; and
- III. Evaluation of Data Collection and Data Quality.

Volume I includes: (1) this Executive Summary, which presents our approach, major findings and recommendations; (2) a very brief description of current NCCI data collection and handling systems and procedures (Overview of Section IA); (3) our evaluation of NCCI's data collection and data quality (Overview of Section IB); and (4) responses to eight questions concerning NCCI data collection and data quality from the NAIC Request for Proposal for this examination.

Volume II provides detailed documentation of the current NCCI systems and procedures which were within the scope of the examination.

Volume III contains a report on each functional area we examined within NCCI. Each report includes an overall evaluation of the area, a description of our evaluation approach, general observations and recommendations, and detailed findings and recommendations.

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2. EXAMINATION APPROACH

We conducted Section I of the examination in two phases:

- o Section IA: Description of Data Collection and Data Handling Procedures; and
- o Section IB: Evaluation of Data Collection and Data Quality.

Section IA

In Section IA of the examination, a team of Arthur Andersen and Milliman & Robertson personnel, with direct assistance from NCCI personnel, reviewed and documented the existing NCCI systems and procedures which were within the scope of the examination. We developed documentation of current systems in several forms:

- (1) <u>An overview of current systems and procedures</u>, which includes high-level descriptions and process flow diagrams of each major area;
- (2) Detailed data and process flow diagrams of existing systems and procedures;
- (3) <u>Statistical call data documentation</u> for selected calls, including a description of each call, NCCI edits performed on each data element in the call, error correction procedures and NCCI modifications to carrier data, and file documentation for key NCCI computerized data files containing call data; and
- (4) <u>A computerized data dictionary</u>, which cross-references data elements collected by NCCI with the NCCI computer programs which use them.

Items (1) through (3) are included in Volume II (and its Appendix) of this report. Item (4) was developed primarily to support our testing phase (Section IB) and is not included in this report.

Section IB

In Section IB of the examination, our team evaluated NCCI data collection, data handling and data quality. Our evaluation included statistical sampling of NCCI

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data, detailed review of NCCI control procedures, and detailed review and analysis of NCCI's automated systems.

3. OVERVIEW OF NCCL FUNCTIONS

NCCI's stated mission is to provide information and services to support adequate rates and the long term viability of the workers compensation insurance system. NCCI's stated organizational objectives are to achieve adequate and equitable pricing and to facilitate workers compensation reform efforts.

NCCI pursues its objectives by collecting detailed financial and statistical data and using this data to produce rate filing proposals in each state in which NCCI is authorized to file rates. These rates, and the ultimate premiums charged for workers compensation coverage, are based on a three-tiered system.

Aggregate Ratemaking establishes overall rate level recommendations based on analysis of insurance company financial results. Carriers report their summarized annual results to NCCI on "financial calls". Rate levels derived from this information are the primary determinants of overall pricing, and form the basis of NCCI's filed rate change requests.

Class Ratemaking distributes the recommended overall rate change to the more than 600 individual rate classifications. These classifications are used to group insureds according to similar types of business and exposure to hazards. NCCI uses summarized exposure and loss results (unit reports) filed under the Workers Compensation Statistical Plan (WCSP) to accomplish this distribution.

Experience Rating develops factors which enable carriers to adjust an individual insured's premium. These factors reflect an insured's actual loss history relative to expected losses of insureds in the same rate classifications. As in Class Ratemaking, Experience Rating uses WCSP data, but at a detailed, insured level.

Other types of data collected by NCCI contribute to their mission. Policy data is used to assist in controlling the receipt of WCSP data and in combining WCSP data for experience rating. Detailed Claim Information (DCI) data is used to analyze the underlying factors that cause workers compensation results to change over time, and is used in proposing system reforms to control rising insurance costs.

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4. MAJOR FINDINGS

The major findings from Section I of our examination of NCCI may be grouped into four categories:

- 1) <u>Data quality:</u> Our findings indicate NCCI is accurately converting information received from insurers to NCCI electronic data files. We did not evaluate the quality of the data submitted by the insurers.
- 2) <u>Data quality and timeliness policies</u>: We found NCCI's data quality and timeliness policies require clarification and stronger enforcement. Current policies do not provide adequate incentives for carrier compliance.
- 3) Data handling systems and procedures: NCCI mission critical ratemaking and experience rating systems manage excessive hard copy input, lack integration, and perform minimal automated validation of data at the time of data capture. NCCI currently compensates through extensive manual intervention. The problems are less severe for aggregate ratemaking systems than for WCSP systems, largely due to the lower volumes of data processed for aggregate ratemaking and more timely validation of input.
- 4) <u>Current NCCI initiatives</u>: NCCI has development initiatives in process or planned which are intended to resolve the major deficiencies of its current systems. NCCI has planned a very aggressive schedule to implement these new systems. While we did not assess NCCI's progress in completing these projects, we believe NCCI's management is committed to achieving its systems development objectives.

These findings are discussed briefly on the following pages and presented in greater detail in Volume I, Overview of Section 1B, and Volume III of this report.

Data Ouality

Our findings indicate NCCI is accurately converting information received from insurers to NCCI electronic data files. This finding is based on the results of our random statistical sampling and judgmental sampling of NCCI's key data files. Our detailed sampling results are presented in the Appendix to Volume III of this report and discussed in Volume I, Overview of Section 1B, and Volume I, Response to RFP Question 1.

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Our findings on NCCI data quality are limited by the scope of our study. We traced data in NCCI's computerized ratemaking, experience rating and detailed claim information files to input NCCI received from the insurers. We did not test the accuracy of the data submitted by the insurers.

Data Ouality Policies

NCCI's data quality policies require clarification and stronger enforcement. NCCI's constitution and membership agreements provide very broad statements of data quality policies and responsibilities. Standards are currently defined and enforced for each of the major calls by the departments responsible for administering them. The effectiveness of current standards and enforcement varies greatly by department.

- o For the financial calls, data timeliness and accuracy standards are clearly defined but not effectively enforced.
- o Data timeliness and accuracy standards are less precisely defined for unit report data and no policy to impose fines for delinquent or inaccurate reports is yet in place. NCCI plans to assess fines for late or inaccurate unit reports beginning late in November, 1992.
- o NCCI's Data Administration procedures authorize NCCI staff to modify carrier data to correct certain types of unit report errors without carrier approval. The limits of this authority are not clearly defined.
- o NCCI does not have a consistent carrier performance measurement and reporting policy. In the case of financial calls, performance is measured, reported to the individual carriers, and used as a basis for assessing fines. For unit reports, carrier performance is measured, but current performance reporting does not provide an effective performance feedback mechanism.
- o NCCI's current monetary incentive programs do not provide effective incentives to improve carrier performance.
 - Under its Performance Evaluation Monetary Incentive Program (PEMIP), NCCI fines carriers for failure to meet clearly defined timeliness and accuracy standards for financial calls and credits carriers for early submission of financial calls. The fines do not appear to be large enough

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to provide an effective monetary incentive to improve performance and are not imposed for failure to correct errors.

- Fines are not currently imposed for late or inaccurate unit reports.
- o NCCI does not accurately allocate error handling costs among the carriers.
 - NCCI does not currently measure the true cost of error handling for each carrier.
 - NCCI does not currently assess any penalties to cover the cost of handling errors in unit report data. NCCI plans to assess fines for late or inaccurate unit reports beginning in November, 1992.
 - Fines currently assessed for late or inaccurate financial calls are not adequate to cover the true costs of error handling.

The major consequence of the lack of clear data quality policies and enforcement at NCCI is that too much of the burden of ensuring data quality falls on NCCI, and too little on the carriers, agents and insureds. This results in a very inefficient data verification and error correction process and may not assure data quality. A potential additional consequence is inequitable distribution of processing costs among the carriers.

Current Data Handling Systems and Procedures

NCCI systems which support ratemaking and experience rating are the systems most critical to NCCI's mission. These systems have major shortcomings which include excessive reliance on hard copy input, lack of integration and minimal automated validation of data at the time of data capture. NCCI currently compensates for many of its systems shortcomings through extensive manual intervention.

System Architecture

Many of NCCI's systems reflect the outdated design techniques and development technology of the period in which they were developed. This is particularly true of the WCSP systems.

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- o Systems were designed to support narrow functions within departmental boundaries. Processes and data are duplicated across different functions, with little or no integration.
- o Many processes are only partially automated, require extensive manual intervention and rely upon paper inputs and outputs.
- o File structures in many systems support efficient batch processing but do not allow on-line access.
- o Application programs are poorly structured and undocumented, making modifications difficult.

These redundancies, lack of integration, barriers to access and poor structure create inefficiencies and inconsistencies throughout NCCI's systems.

Data Collection and Validation

NCCI's critical data inputs are the financial calls, used to determine overall rate levels, and the unit reports, used for class ratemaking and experience rating. Policy information will become increasingly important as NCCI begins to integrate its systems. Current NCCI systems which collect and validate these critical inputs provide incomplete control over data timeliness, completeness and accuracy. Manual procedures help compensate for system deficiencies, but the resulting process is very inefficient.

Data Collection

NCCI's current data collection systems and procedures do not effectively control the timeliness and completeness of data collected from carriers.

- o The problem is most severe for unit report data. NCCI recently started phased implementation of the Unit Report Control (URC) system, which is ultimately intended to track all unit reports due, received and missing. Under the current schedule, this system is to be fully implemented by mid-1992.
- o NCCI has inadequate controls to ensure all carriers submit financial calls. The principal controls over data completeness are reasonableness tests,

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in which NCCI actuaries make year-to-year comparisons of data during aggregate ratemaking.

NCCI currently manages excessive amounts of hard copy input.

- o NCCI received approximately 1,200,000 hard copy unit cards in 1990.
- o All of this hard copy input requires data entry into NCCI's systems.
- o Unit reports received on hard copy are retained for three years in the field offices in hard copy form. Unit reports are also stored on microfilm.

Data Validation and Error Correction

NCCI's data validation and error correction systems provide incomplete validation, are poorly controlled and are very inefficient. These problems are most severe for WSCP systems and are largely the result of insufficient and ineffective automation. NCCI has several major systems development initiatives planned or in process which are intended to resolve many of the problems noted in these findings.

- o WCSP systems do not thoroughly validate data at the time of receipt.
- o Unit report validation for Class Ratemaking is a cumbersome, time consuming process which requires extensive manual effort.
- o NCCI's unit report data collection and verification systems allow entry of duplicate data.
- o There is no validation to verify that unit report data for a specific risk is consistent with policy specifications, risk inspections or previously submitted data.

End User Computing

Critical ratemaking applications are developed, maintained and controlled by actuarial personnel. These end user controlled applications do not have the degree of automated application control required of most production systems.

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In our control procedure tests of Overall Rate Level and Class Ratemaking end user computing applications, we did not find any errors which had resulted from weak controls. However, given the importance of end user computing to the NCCI's ratemaking process, NCCI is exposed to significant risk due to the lack of controls.

Current NCCI Initiatives

NCCI has development initiatives in process or planned which are intended to resolve the major deficiencies of its current systems. We have outlined some of the leading projects and their objectives below.

Systems Planning

NCCI's Enterprise Data Modeling (EDM) project is a key part of an ongoing Strategic Information Systems Planning effort. The stated objective of the EDM project is to define a strategic framework for designing and developing integrated systems.

The EDM report provides valuable analysis of NCCI's business functions and information requirements, and presents a very high-level model of applications and data. The EDM report also contains a very realistic assessment of NCCI's current systems. This assessment clearly acknowledges many of the major defects of NCCI's current systems.

The EDM report does not, however, present a clear vision of NCCI's future systems, a complete definition of an architecture upon which to build these systems, or a detailed data model. Additional steps are required, and NCCI has begun to take these steps.

NCCI's Information Resources management team is currently refining its vision of NCCI's future systems. They intend to present their vision and plans to achieve it to NCCI's Board of Directors in July 1991.

Systems Development

A number of systems development projects are planned or currently in process at NCCI. Four of these projects are intended to provide the core of NCCI's new information systems and provide a foundation for new ratemaking and experience rating systems.

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- o URC The objective of the Unit Report Control (URC) system is to improve the timeliness and completeness of unit reporting.
- o URQ The objectives of the Unit Report Quality (URQ) system are to provide "front end" data quality edits which validate unit report data immediately upon receipt and to provide an efficient correction process for errors.
- o URS The objective of the Unit Report System (URS) is to provide an integrated unit report database to serve both experience rating and ratemaking applications.
- o **Risk Information System -** The objectives of the Risk Information System project are to develop a database that will contain risk information and establish linkages to all risk-related information in NCCI's systems.

Systems in development during the examination were beyond the scope of our project. Accordingly, we have not evaluated the designs or ongoing development of these initiatives. It is clear to us, however, that the projects noted above address NCCI's major systems deficiencies.

NCCI has planned a very aggressive schedule for implementing these new systems. By the end of 1992, NCCI plans to have designed and fully implemented seven new systems while continuing to support and enhance existing systems. Strong management, adequate resources, and effective training will be required for NCCI to succeed with its current plans.

End User Computing Standards

Recently, NCCI's Internal Audit department developed a set of guidelines for implementing new end user computing standards. NCCI executive management has approved these guidelines and development of new standards will begin soon. NCCI has not set a date for implementation of the new standards.

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5. PRIORITY RECOMMENDATIONS

Our detailed recommendations for each of the areas we examined are presented in Volume III of this report. They may be summarized in four major recommendations:

- 1) Clearly define data quality policies and standards;
- 2) Measure and report carrier and NCCI performance against those standards;
- 3) Build effective incentives to achieve performance objectives; and
- 4) Build integrated systems which support policies and objectives.

Clearly define data quality policies and standards.

NCCI Policy

NCCI needs a clear and unified policy on data collection and data quality. This policy should provide the overall framework within which NCCI collects and processes carrier data.

We recommend that NCCI adopt policies which place appropriate responsibility for data verification and error correction with the carriers, and sharply limit its own authority to modify carrier data. NCCI should reject data known to be in error and return it to carriers for correction. NCCI policies should also specify carrier and risk audit standards.

Industry Standards

For NCCI to be truly effective in the implementation of its data quality standards, comparable standards must be developed for carriers, agents and insureds. Every entity involved in developing data, transmitting data or processing data must be held to the same standards. The quality of data used to set rates is only as good as the weakest link in the chain.

We recommend that the NAIC, through the appropriate task force, develop a model Workers Compensation data quality regulation. The overall objective of this

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regulation should be to promote consistent, timely and accurate data reporting by all parties.

Measure and report carrier and NCCI performance against the new standards.

NCCI should implement systems and procedures which measure timeliness and accuracy of carrier data reporting against very specific standards. NCCI should establish a program of regular carrier performance reporting.

NCCI should also implement systems and procedures which measure the timeliness and accuracy of its own processing.

Build effective incentives to achieve performance objectives.

The NAIC and NCCI must provide more powerful incentives for carriers to submit timely and accurate data and correct errors promptly. The model regulation noted above would be a strong first step. NCCI incentives to carriers should include mechanisms which provide an accurate allocation of NCCI's processing costs, including error handling costs, among the carriers.

Build integrated systems which support the new policies and objectives.

First, NCCI should complete and publish its Strategic Information Systems Plan. This document should provide clear direction for building systems which will support NCCI's strategic objectives. The plan should include a statement of objectives, an overall application architecture, system definitions for all missioncritical applications and an implementation schedule.

We believe the specific systems initiatives outlined below are essential to achieving NCCI's business objectives and should be included in NCCI's systems plan:

- 1) NCCI should implement systems to track and control the due date and receipt of all information submitted by carriers.
- 2) NCCI should develop an electronic data transfer mechanism for submission of data from the carriers to NCCI.

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- 3) NCCI should develop data validation software and distribute it to carriers.
- 4) NCCI should develop systems which validate all data at the time of receipt.
- 5) NCCI should develop systems which provide regular carrier performance reporting.
- 6) NCCI should develop systems which support consistent, effective financial incentive programs to encourage carrier compliance with timeliness and quality standards.
- 7) NCCI should develop an integrated corporate database.
- 8) NCCI should re-engineer and automate many of its current manually intensive areas.
- 9) NCCI should explore alternatives and decide upon an appropriate identification number for insured businesses.
- 10) NCCI should implement more stringent controls over its end user computing environments. NCCI should move stable, regularly executed end user applications into a production environment.

NCCI should use modern software engineering techniques, follow a structured systems development methodology and use consistent documentation standards for development of new systems. This approach will contribute to development productivity, system flexibility and maintainability.

NCCI's management supports these recommendations and has taken steps to implement them. NCCI plans to address these points in its response to this report.

RATEMAKING PROCEDURES EVALUATION OF NCCI RATEMAKING METHODOLOGIES

NCCI EXAMINATION VOLUME I - SECTION II EXECUTIVE SUMMARY

December 4, 1991

MILLIMAN & ROBERTSON, INC.

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I. OVERVIEW OF CONCLUSIONS AND RECOMMENDATIONS

A. Introduction

Project Background

The National Council on Compensation Insurance (NCCI) is the major industrysponsored ratemaking and statistical bureau for workers compensation coverage in the United States. NCCI operates as a rate maker and/or statistical agent in 38 jurisdictions. In some jurisdictions, NCCI only provides advisory pure premiums while in other jurisdictions, it provides the complete manual rates. NCCI promulgates experience rating modifications and manages the operations of the residual market pools for workers compensation in most states where it operates as a statistical signal As such, NCCI plays a major role in determining the pure premiums and manual rates to be charged for workers compensation insurance coverages throughout the United States as well as in determining the types of ratemaking and statistical information that will be utilized and maintained by the industry.

Milliman & Robertson, Inc. (M&R) was retained by the Florida Department of Insurance to assist with an examination of the data collection and ratemaking operations of NCCI. Joining the Florida Department in conducting the examination were the Maine Bureau of Insurance the Nebraska Department of Insurance, and the Utah Department of Insurance. The National Association of Insurance Commissioners (NAIC) coordinated the activities of the participating insurance departments in administrating the examination and established an Examination Oversight Group (EOG), consisting of regulators from various insurance departments to oversee the examination process.

The overall purpose of the NCCI examination was to evaluate the data collection and data handling activities of NCCI, certain aspects of its ratemaking activities and practical considerations involved in implementing a loss cost system.

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The examination was conducted in three major sections:

- I. Data Collection and Data Quality;
- II. Ratemaking Procedures; and
- III. Loss Cost Implementation.

Arthur Andersen & Co (AA&CO), working as a subcontractor to M&R, had primary responsibility for Section I, the Data Collection and Data Quality phase of the examination. Actuarial consultants from M&R were primarily responsible for the Section II and III phases of the study.

A list of the regulators and consultants who participated in the examination is included in Section III, Examination Personnel, of this document. The specific requirements and conditions of the examination are specified in the Request for Proposal (RFP) for this project which is attached as Appendix A.

This Executive Summary provides an overview of Section II of the examination and outlines the approach, conclusions, and recommendations of the examination of ratemaking procedures at NCCI. This Executive Summary is supported by nine separate reports which examine various ratemaking issues specified in the RFP. These reports are identified as Section II, Volumes II through X. The reports provide additional detail and insight into the examination process and should be reviewed for a thorough understanding of the conclusions and recommendations highlighted in this document.

Similar executive summaries are available, from the NAIC Central Office, for Section 1 - Data Collection and Data Quality, and Section III - Loss Cost Implementation of the examination.

Project Objectives

The primary objectives of Section II of the examination were to (1) describe the current ratemaking process of NCCI and (2) perform thorough evaluations of specific areas of that process.

Report Structure

Our report for Section II of the examination is organized in ten volumes:

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- II. Section IIA Part 1 Description of Ratemaking Procedures
- III. Section IIB Part 1 Premium and Loss Development Factors
- IV. Section IIB Part 2 Expenses
- V. Section IIB Part 3 Trend
- VI. Section IIB Part 4 Classification Ratemaking
- VII. Section IIB Part 5 Law Amendments
- VIII. Section IIB Part 6 Alternative Exposure Bases
- IX. Section IIB Part 7 Experience Rating Plan
- X. Section IIB Part 8 Miscellaneous

The nine underlying ratemaking reports (Volume II through X) should be reviewed in conjunction with the Section I report on Data Collection and Data Quality and the Section III report on Loss Cost Implementation to gain a thorough understanding of

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the examination process. All of the examination reports are available through the NAIC Central Office.

B. Examination Approach

In conducting this part of the examination, we proceeded as follows:

1. Initial Project meeting - On October 9-10, 1990, the initial project meeting was held in Boca Raton, Florida. All parties to the examination process met to discuss the importance of the examination and the need for confidentiality during the course of the examination. In addition, we reviewed the scope of the examination and emphasized the need for open and timely communications.

2. Identification of Key Contact Personnel - To facilitate the flow of information and data among parties, we identified key contact personnel working on various parts of the examination. This gave the examination team direct access to NCCI staff responsible for the areas under examination.

3. Schedule for EOG Status Reports - In addition to regularly scheduled conference calls with NCCI and/or the EOG, M&R presented status reports to the EOG/NAIC at meetings in Louisville, New York, Charleston, Indianapolis, Salt Lake City, Pittsburgh, and Houston.

4. Informational Meetings and Interviews - Informational meetings were held at NCCI where key members of the NCCI staff could be interviewed. Although meetings were primarily at the Boca Raton headquarters of NCCI, meetings were also held in New York (Law Amendments) and Hartford (Experience Rating).

5. Data and Information Gathering - To accomplish the objectives of the study, we requested a great deal of data and information in paper or electronic format from NCCI. We also gathered other data and information from various independent rating bureaus around the country. Examples of the kinds of data and information gathered by our consultants include:

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- a. NCCI and other independent rating bureau rate filings for the last 2 or 3 rate filing cycles.
- b. Minutes from various NCCI actuarial or governing committee meetings.
- c. Premium and loss development data for 11 states for policy years 1973 through 1987.
- d. Trend data and information for 8 states for policy years 1981 through 1988.
- e. Historical classification loss experience for the period 1987 through 1990 for twelve states.
- f. Benefit filings from 6 states for the latest 2 years as well as injury and wage distribution tables underlying benefit formula calculations.
- g. Experience rating files on computer tapes including individual risk data from 4 states.

6. NCCI Research and Analysis - We utilized the staff at NCCI in researching and analyzing certain topics. Examples include:

- a. Past classification rates were recalculated by NCCI utilizing alternative ratemaking techniques.
- b. Calendar/accident year loss ratios vs. policy year loss ratios for all NCCI states were analyzed by NCCI for policy years 1986 through 1988 and calendar/accident years 1987 through 1989.
- c. Trend calculations comparing exponential and linear methods for 37 states and 2 states funds.

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7. M&R Research and Analysis - Based on the data and information gathered, we conducted independent research and analysis into the areas outlined in the RFP. In some cases, as a result of our analysis, we identified areas where additional data and information were required of NCCI or where additional research was beyond the scope of the RFP. With EOG approval, we requested the additional data and/or conducted the additional research.

8. M&R Peer Review Process - Prior to releasing any draft reports to the EOG for discussion purposes, M&R actuaries, other than the authors of the report, were utilized for peer review purposes.

9. EOG Report Review Process - After the M&R peer review process, each draft report was distributed to a team of actuaries who were members of the EOG. The regulatory actuaries serving on the EOG conducted a thorough review of the M&R draft reports. Conference calls were held, and regulatory feedback was received on each report.

10. NCCI Report Review Process - The next step was the issuance of a confidential draft report to NCCI for internal review purposes only. Conference calls were scheduled with M&R and the EOG, and the NCCI staff was given the opportunity to discuss and air issues of concern with the examination team.

11. Final Report Issuance - Based on the review process noted above, M&R issued a final report to the NAIC Central Office for distribution purposes.

During the course of the examination, we received the full cooperation of the staff at NCCI. We recognize that the examination process placed a tremendous burden on NCCI to produce documents and to fulfill data requests and support research activities. NCCI should be commended for their prompt and professional manner in responding to the requests of the examination team.

The contributions of the individual members of the EOG were an essential part of this examination. Although all EOG members contributed significantly, we especially note

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the efforts of Jim Watford of the Florida Insurance Department and Alan Wickman of the Nebraska Department of Insurance.

C. Conclusions and Recommendations

NCCI has fashioned an extraordinarily complex ratemaking system. Many of our recommendations will complicate it further. It is an actuarial fact of life that greater accuracy can rarely be accomplished without further complication. 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.

Broadly speaking, for the elements studied, our conclusion is that NCCI ratemaking system is not as good as it could be, but that it is a sophisticated system that can ordinarily be expected to produce reasonably accurate results. Many of our recommendations relate to aspects of the current NCCI ratemaking system that we believe are 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.

The major ratemaking elements that we did not study were retrospective rating, target profitability, investment income, and the like. These were identified by the RFP as being outside the scope of the examination.

The more significant conclusions and recommendations are discussed in the remainder of this section. Additional conclusions and recommendations can be found in each underlying report. We stress that it would be unwise to take action on the basis of the Executive Summary alone. The summary statements contained here often cannot convey the complexity of the underlying subject matter. In addition, many of these findings will require significant additional research for confirmation and/or implementation.

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In section II of the Executive Summary, beginning on page 19, we provide a brief explanation of each of the underlying ratemaking reports for those readers unfamiliar with the RFP. Appendix A is a copy of the RFP while Appendix B provides copies of the Tables of Contents from the various reports.

Volume II - Section IIA - Part 1 - Description of Ratemaking Procedures

* Volume II contains a detailed explanation of current NCCI ratemaking procedures. In this volume, several suggestions are made for improvements in the clarity of presentation and the explanatory material included with rate filings. In contrast to the other volumes comprising Part II of the examination, this volume does not contain an analysis of NCCI ratemaking techniques.

Volume III - Section IIB - Part 1 - Premium and Loss Development Factors

* The premium and loss development analysis process cannot be reduced to a single best methodology. No one approach for analyzing development patterns or choosing among several alternative projection methods will be most appropriate in all circumstances.

* We recommend that an average of the ultimate losses resulting from paid and paid plus outstanding (excluding IBNR and bulk reserves) projection methods be used as the primary basis for the rate indications. Deviations from the primary methodology (such as using only the paid method, the paid plus outstanding method, or the incurred method) should be made when appropriate, based on diagnostic tests and consideration of the underlying forces influencing the development patterns.

* Our tests of predictive accuracy indicate that projections of ultimate losses from first report are subject to significant estimation error. This suggests that consideration should be given to using data from more than one policy and/or accident year rather than one policy year and one accident year, as in the current NCCI methodology. We recommend that future NCCI filings develop projections of ultimate, trended loss

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ratios based on the latest two or three policy years or the latest two or three policy and accident years. Judgment will need to be exercised in selecting standard weights (or a variable weighting system), although tests of predictive accuracy may be helpful in making this judgment.

* We recommend that NCCI expand the diagnostic tests to enhance their ability to analyze loss development patterns. To asciet in the evaluation of changes in loss development patterns, several such tests are identified in this report, some of which can be calculated with currently available data.

* Development factors based on all three types of data studied (paid, paid plus outstanding, and incurred losses) tended to underestimate the ultimate losses by approximately equal amounts, on average, for the time period studied in this report. This resulted from an upward trend in loss development factors at early stages of development and does not, in our opinion, indicate an inherent flaw in loss development methods.

* We recommend the collection of additional claim count data (number of claims closed with indemnity payments), for use in diagnostic tests of loss development.

Volume IV - Section IIB - Part 2 - Expenses

* NCCI expense provisions have overstated the actual amount of expenses incurred by the companies. This observation is apparent in both general and production expenses. NCCI expense analysis procedures should be improved so that expense provisions more closely relate to actual expenses. To the extent that verifiable trends are apparent, NCCI should reflect them. The effect of this overstatement on final policyholders costs depends on many factors including the adequacy of loss cost estimates and the effect of individual state regulatory actions.

* NCCI compares general expenses to net earned premium. We recommend that NCCI compare general expenses to direct earned premium. NCCI should also

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combine the expense experience of stock and mutual companies in establishing general expense indications. Based on recent experience, this is not expected to have a material impact on the selected expense provision.

* NCCI does not collect data useful to the analysis of the NCCI production expense provision of 15% for the first \$5,000 of standard premium. We recommend that NCCI review production expenses annually, as it does for other expenses in establishing production expense provisions. NCCI should establish a production expense element based on actual experience rather than the budgetary approach by comparing direct production expenses to direct written premium.

* Historically, NCCI has based their Loss Adjustment Expense (LAE) provision on a review of net and direct calendar year experience. In order to enhance their ability to analyze LAE, NCCI issued a special call to collect accident year direct paid and outstanding losses, Allocated Loss Adjustment Expenses (ALAE), and Unallocated Loss Adjustment Expenses (ULAE). We recommend that NCCI rely on the special call data (direct experience) by accident year in establishing the LAE provision. Based on reviewing the latest special call data, an LAE provision between 12.0% and 12.5% of losses is indicated.

* We recommend that NCCI collect ALAE experience by claim and that ALAE be treated like losses for ratemaking purposes. We worked with NCCI to design a survey to sample small, medium, and large companies to determine the cost of collecting ALAE by claim. The cost estimate, .05% of workers compensation premium for insurers and \$1.4 million for NCCI, is sufficiently low in relation to the benefit that we recommend ALAE be collected by claim effective January 1, 1993. However, a transition program may be appropriate for companies which will incur a high relative cost.

* The RFP asked M&R to review the appropriateness of tempering the NCCI expense provision when large rate increases are indicated. We concluded that expense provisions should generally not be tempered.

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* NCCI data suggests that there are expense variations from state to state, and we recommend that additional research be performed to determine the appropriateness of varying expense levels by state. To the extent that verifiable differences exist by state, NCCI should reflect state expense levels in the ratemaking process.

* The data from the 1982 Expense Study does not indicate that there are any significant biases by size of risk. However, we recommend that (1) the expense study by size of risk be updated more often than every nine years, and (2) the expense study by size of risk should incorporate all production expenses (i.e., commission, brokerage and other acquisition expenses), rather than just other acquisition expenses.

Volume V - Section IIB - Part 3 - Trend

* In the past, NCCI utilized linear trending procedures, which tend to yield lower trend indications than exponential trending procedures. Within the last year, NCCI has begun to use exponential trending as a standard procedure. Our tests, based on projection accuracy in recent years, support this change with regard to medical losses. For indemnity losses, our test results are not conclusive, but tend to favor the exponential procedures over the linear procedures. We recommend that NCCI perform tests similar to those contained in this report on a periodic basis (e.g., every two years) to reflect the then more current conditions.

* We recommend that NCCI move toward the adoption of a Bayesian credibility approach for weighting state and countrywide trend indications, unless subsequent investigation reveals an unanticipated problem.

* We recommend that NCCI perform extensive analysis of econometric models to better evaluate and reflect the impact of economic changes on losses.

* We recommend changes to the NCCI approach for recognizing benefit changes in ratemaking. The proposed alternative approach will facilitate econometric analysis, but is likely to increase projection accuracy to only a small degree. Because its impact

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on rate accuracy would be slight, we do not consider this a high priority recommendation.

Volume VI - Section IIB - Part 4 - Classification

* We found that lengthening the experience period used for classification ratemaking from three to five years tended to improve the accuracy and consistency of the methodology in identifying relative loss cost differences among classes.

* We recommend that NCCI increase the number of years of experience used from three to five unless additional tests by NCCI, using methodology we developed for this examination, are not consistent with the results we obtained. We have not tested the impact of the use of more than five years and thus have formulated no opinion regarding the use of more than five years of data.

* There is an inconsistency in the loss limitations inherent in the three partial pure premiums currently used in calculating the pure premiums derived by formula. We recommend that NCCI modify its methodology to overcome this inconsistency.

* We examined losses in excess of the current loss limitation and found, based on the limited data available, that different classes may have different expected losses above the loss limitation than the remaining classes in their industry group. We recommend that NCCI further test this with additional data and, if the results continue to hold, address the effect this has on classification ratemaking methodology.

* We reviewed the composition of the "All Other" industry group. We recommend that NCCI further investigate subdividing this industry group into smaller, more homogeneous industry groups. Given the size of the "All Other" group, we believe that the resulting sub-groups could result in industry groups large enough to have full statistical credibility.

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Volume VII - Section IIB - Part 5 - Law Amendments

* For "formula" benefit changes, NCCI's pricing methodology seems to be working satisfactorily ("formula" benefit changes are those for which NCCI applies standard benefit tables and distributions in its cost evaluation).

* In some non-formula situations, NCCI appears to apply formula techniques when those techniques are not appropriate. In other more recent cases, NCCI has applied new data sources and new estimation techniques. NCCI should improve the method of identifying law changes significant enough to require the use of "non-formula" techniques.

* NCCI should increase the utilization of state specific information regarding the workers compensation benefit system being analyzed.

* NCCI should improve the explanatory material included with a benefit pricing report.

Volume VIII - Section IIB - Part 6 - Alternative Exposure Bases

* No single exposure base for workers compensation (or any other line of insurance) is ideal for all circumstances. Unlimited payroll appears to provide the most reasonable compromise between theoretical and practical considerations for most insureds.

* The introduction of the Revised Experience Rating Plan (RERP) will mitigate the premium basis inequities inherent in the current rating system for many insureds.

* A further analysis of insured characteristics indicates that, despite the combined application of unlimited payroll and RERP, theoretical inequities in the rating system can remain. For purposes of this report, we refer to any unidentifiable premium disparity remaining after application of all aspects of the rating structure, including experience rating, as residual inequity. By testing the impact of the rating system in

various hypothetical situations, we conclude that this residual inequity is most likely to exist for insureds with the following joint characteristics:

They are concentrated in classes with a wide range of verifiable average hourly wages.

The wage variation has no logical relationship to occupational hazard specific to a given type and locale of activity.

The insureds are either too small to qualify for, or have low credibility under RERP.

* The residual inequity can be further mitigated through a wage rate recognition plan limited to those classes with a demonstrated problem <u>and</u> with hours worked data readily available and verifiable.

We do not conclude that recognition of wage rates within the rating structure for <u>all</u> <u>classes</u> of insureds would ultimately improve the equity of the system. It is impossible to identify all who benefit (and all who do not) from such a universal change. However, it is clear that such a universal change would provoke a largely unnecessary disturbance in the workers compensation system with regard to rates and procedures.

* We believe that the costs associated with universal collection of hours worked or average hourly wage could be as much as 0.4% to 0.7% of collected premium. Even at that cost, there is no guarantee that the data collected will be accurate and usable. Furthermore, these additional expenses could be concentrated in those employments least likely to realize an equity enhancement through wage rate recognition.

* We recommend judicious use of wage rate recognition plans only for those states and classes of employment identified as having residual inequities after application of RERP to the unlimited payroll exposure base. The intent of this recommendation is to introduce wage rate differentials as a refinement of the classification system without creating new inequities or extraordinary expenses.

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Volume IX - Section IIB - Part 7 - Experience Rating Plan

* We have evaluated the accuracy of the Revised Experience Rating Plan (RERP), and find it performs better than the prior experience rating plan which it replaces. We conclude that the NCCI's method of introducing the RERP does not tend to result in a premium increase or decrease.

We investigated an alternate experience rating modification formula which is a combination of both a formula used by the Insurance Services Office and the current NCCI approach. The alternate formula would adjust expected excess losses by an experience modification factor based on primary losses, whereas the current NCCI expected excess losses are not affected by the actual primary losses. We believe that the alternate formula can be expected to produce more accurate results than the RERP (or a version of the RERP in which the parameters have been optimized as in the alternate formula). However, the degree of improvement is not clear. We recommend that further testing be done by NCCI using more states and more time periods to evaluate the degree of improvement produced by the alternate formula. If the degree of improvement is found to be substantial, then we would recommend implementing the alternate formula as soon as is practical. If the improvement is found to be minor, then the practical difficulties involved in implementing a change in the formula make it appropriate to postpone implementation until such time as other significant changes are being implemented, or possibly to forego implementation altogether. This will be a matter of professional judgment.

* Our testing, using the alternate formula and an optimized version of the RERP, suggests that the accuracy of the experience rating plan would be improved by expanding the experience period to five years from the current three years. However, inclusion of the fourth and fifth years of experience would entail significant implementation costs as well as substantial ongoing costs. In addition to the impacts on accuracy and cost, extension of the experience period to five years could affect the perception of the plan's reasonableness by policyholders. Some policyholders already

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consider it inappropriate to use data as old as the oldest year currently used in experience rating; the addition of two older years would exacerbate this perception.

* We recommend several changes in the calculation of the Expected Loss Rates and D-ratios used in experience rating in order to make them more accurate.

* Standard NCCI methodology does not address changes in experience rating off-balances, although adjustments have been made by NCCI in some cases. We recommend that standard NCCI methodology identify off-balance levels and movements during the experience periods used for trending and rate level indications. An attempt should be made to determine the cause of significant off-balance changes whenever they are seen. Proper action in response to significant off-balance changes would be a function of the cause identified. We would recommend that adjustments not be made when changes are attributed to a change in the mix of risks insured. We would expect adjustments to be appropriate when changes in off-balance are attributed to changes in the experience rating plan itself (e.g. rules, such as eligibility requirements, or formulas such as those for calculating ELR's), or delays in updating ELR's and D-ratios, due to prior delays in the approval of rate changes. The adjustments could result in either an increase or a decrease in the indicated rate change, depending on the circumstances.

Volume X - Section IIB - Part 8 - Miscellaneous

* Minimum premium risks appear to have consistently worse loss ratios than all other risks. Due to the relatively small premium contribution from minimum premium risks and the size of the loss ratio differential, their effect on overall loss ratios is small. It is not clear what loss ratios will ultimately result from NCCI's current program of minimum premium multipliers. NCCI should continue to study the loss ratio experience of small risks.

* If premium levels for minimum premium risks were increased, either through increasing the minimum premium multipliers or adding a loss constant, insurers might be more willing to provide voluntary coverage to these risks. On the other hand,

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there are a significant number of minimum premium risks and there is likely to be some dissatisfaction after a price increase targeted at minimum premium risks. Due to the low impact of minimum premium risks on the overall loss ratio, we believe that the policy of whether or not to change the pricing of minimum premium risks should be governed by its practical effects, rather than its actuarial significance.

* In general, we believe that the standard NCCI procedures to reflect additional revenue from residual market policies are reasonable. However, we have a number of concerns regarding some related issues. These include the need to improve explanatory material in the rate filing and the need to reflect net premium programs in all states as a standard methodology. In addition, we note that experience rating of assigned risks has the potential to double-count adverse experience in states that charged a surcharge that was high enough to eliminate residual market shortfalls.

* In general, the policy year and accident year loss ratios used in recent filings appear to be consistent with each other. We recommend that NCCI continue to investigate the reasons for the premium differences in those states where they are most pronounced. We also recommend that NCCI strengthen the process for editing carriers' future calendar and policy year premium reports for consistency.

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MILLIMAN & ROBERTSON, INC.
II. SECTIONAL OVERVIEWS

For readers unfamiliar with the details of the RFP, we present below an overview of each of the sections of our report. These overviews briefly describe the analysis undertaken and do not contain any conclusions or recommendations. Appendix B provides the Table of Contents for each of the underlying reports in order to give further incight into the issues examined.

A. Volume II - Section IIA - Part 1 - Description of Ratemaking Procedures

There are three general situations in which NCCI performs ratemaking functions:

- 1. Administered Pricing System
- 2. Advisory Rate System
- 3. Loss Cost System

This section of the examination provides a general description of how ratemaking operates at the NCCI in other than a loss cost system. Our report describes NCCI's current annual ratemaking procedures, including standard methodologies and alternative approaches used in particular circumstances. A discussion of the assumptions underlying the NCCI's procedures and the methods used by NCCI to test these assumptions is also included.

Since this section deals with the documentation of current procedures, there are no conclusions and recommendations contained therein.

B. Volume III - Section IIB - Part 1 - Premium and Loss Development Factors

The determination of an overall rate level requirement is generally based on an estimate of the ultimate loss ratio for the period during which the rates will be in

effect. This estimate is often derived from the ultimate loss levels of prior periods, which are also estimated.

One of the fundamental concepts underlying most actuarial projections of ultimate losses is that of loss development. Losses are aggregated by accident year or policy year and evaluated at different valuation dates. The ratios of the losses at each successive valuation are known as development factors.

When experience is analyzed on a policy year basis, a similar development technique is used in estimating the total premiums on policies insuring the claims.

In this part of the examination, we had two primary objectives:

1a. Evaluate the NCCI's premium and loss development techniques.

1b. Evaluate the NCCI's procedures for reconciling differences that occur between different development techniques and evaluate the effectiveness and likely accuracy of the criteria they use to choose one technique over another.

We reviewed NCCI's process for determining and selecting development factors. Performance tests of current methodology, measured against various alternatives, were conducted for a variety of states. We analyzed issues such as the number of years entering the development factor calculation, the use of multiple state data, as well as the selection of tail factors.

C. Volume IV - Section IIB - Part 2 - Expenses

A critical consideration in the development of a final rate is the expense factor. This component of M&R's examination of the ratemaking procedure used by NCCI discusses the methodology NCCI uses to incorporate expenses in the ratemaking process, evaluates the appropriateness of that methodology, and suggests improvements. As the RFP makes clear, NCCI's treatment of expenses is complicated by many factors. Is it appropriate to use an average, a budgeted amount, or a factor

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that reflects individual company experience? These factors are all, in a sense, interrelated in how they impact the final workers compensation premiums paid by insureds.

In this part of the examination, we had six primary objectives:

- 2a. Evaluate NCCI's expense methodology
- 2b. Costs and benefits of collecting ALAE by claim
- 2c. State specific expense issues
- 2d. Budgeted approach to acquisition expenses
- 2e. Justification for dual expense discounts
- 2f. Equity of premium discount programs and expense constants

In responding to the above objectives, we analyzed the current NCCI expense methodologies by reviewing the expense data utilized and testing alternative methods for their effectiveness and cost.

D. Volume V - Section IIB - Part 3 - Trend

In ratemaking, historical experience is used to project the loss ratios expected for the period during which rates will be in effect (the rate effective period). Due to the time necessary to compile the historical experience, prepare rate filings and, where necessary, gain regulatory approval, two or three years can elapse between the historical experience period and the rate effective period. During that time, many factors can influence loss ratios, including differences between medical and wage inflation, changes in the utilization of medical services, changes in claim frequency, and shifts in frequency between types of injuries. The purpose of trend is to measure

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these changes and to include a provision in the rate level for anticipated changes between the experience period and the rate effective period.

Trend factors are used to reflect the impact of a complex array of forces, including economic and social changes, on losses and wages. A variety of approaches are possible for estimating trends, varying from mathematically simple to mathematically complex methods, and varying from use of a curve fit for extrapolation of a series of past points to in-depth analysis of the forces influencing past points and the projection of the future course of such forces.

In recent years, loss trends have generally exceeded wage trends, particularly for the medical component of losses. Simple extrapolation of this relationship into the future is not appropriate without examining the underlying forces and evaluating the likelihood of their continuation.

In this part of the examination, we had six primary objectives:

- 3a. Evaluate NCCI's trend procedures
- 3b. Evaluate changes to NCCI's trend procedures

3c. Evaluate the impact on NCCI's trend procedures of significant legal or economic changes

- 3d. Evaluate an alternate method of adjusting for benefit changes
- 3e. Evaluate possible distortions in premium on level factors
- 3f. Evaluate possible distortions in benefit on level factors

We reviewed NCCI's general trending procedures and analyzed alternative trending methods for comparison purposes. We reviewed issues such as the trend period, the data underlying the calculations, the statistical approach utilized and the use of multiple state data, as well as the application of credibility concepts.

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E. Volume VI - Section IIB - Part 4 - Classification Ratemaking

An integral aspect of NCCI's ratemaking efforts is the allocation of the overall rate level change to individual classifications. This step is important in determining the relative equity of the premiums to be charged members of each rating class. The process involves analyzing data by classification as produced by the Workers Compensation Statistical Plan (WCSP) and converting this information into a final classification rate indication.

In this section, the examination was to concentrate on the following three objectives:

4a. Study and recommend alternatives to NCCI's current approach to credibility, their practice of using three years of data for classifications ratemaking, and loss limitations used in those calculations.

4b. Evaluate whether procedures for determining industry group relativities could be enhanced by using more years of experience.

4c. Evaluate the application of trend factors in classification ratemaking.

We addressed these objectives theoretically and empirically. We first reviewed the theory underlying the current methodology to identify the procedures used and to understand their impact on NCCI rates. We then identified specific alternative procedures to be tested.

On the empirical level, we designed tests of the accuracy and consistency of the methodology in identifying relative loss cost differences among the classes. These tests can be used by NCCI to evaluate other alternatives.

F. Volume VII - Section IIB - Part 5 - Law Amendments

NCCI is frequently called upon to estimate the impact of statutory revisions that affect benefit levels to determine their impact on loss levels. As states focus on workers compensation cost containment, it is important that the methodologies used by NCCI to price benefit changes be as accurate as possible.

According to NCCI, a benefit change (statutory revision) can be categorized as a "formula" or "non-formula" type change. However, this identification is not always clear cut. NCCI considers a formula change to be any change that can be priced through use of the existing databases and distribution tables, and a non-formula change to be a change that requires additional data and information.

In this section of the report, we address the following four issues:

5a. NCCI's procedures for determining the expected loss changes due to revisions in weekly benefits, waiting periods, escalation provisions, and medical fee schedules (formula benefit changes).

5b. The appropriateness of the 1973 Standard Wage Distribution Table.

5c. NCCI's performance in analyzing non-formula benefit changes.

5d. Whether different wage distribution tables should be used for different class groups.

For use in this report, a formula change was taken to be any benefit revision that involved changes in one or more of the following items: maximum weekly benefit, benefit level as a percentage of gross wages, waiting periods, retroactive periods, escalation rates, or medical fee schedules. All other benefit changes were considered non-formula.

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In our review of formula type changes, we discussed basic pricing parameters and assumptions, the data and distribution tables used by NCCI as well as NCCI's formula pricing methodology.

As respects NCCI's non-formula techniques, we reviewed the effectiveness of NCCI when presented with non-formula type benefit changes. To accomplish this goal, we reviewed the alternative data sources and techniques used $U_f \in CCI$ to price non-formula type changes in states where changes have been implemented.

In addition to studying NCCI's current approach to pricing benefit changes, we have analyzed, where necessary, alternative methods for pricing benefit changes.

G. Volume VIII - Section IIB - Part 6 - Alternative Exposure Bases

The exposure base is the fundamental measurement of an insured's exposure to loss. The exposure base is multiplied by the rate specified by the rating manual to derive the manual premium for the insured. The total premium collected during the policy term is the manual premium adjusted for experience rating modifications, premium discount, expense constant and minimum premium considerations, and other rating variables (e.g., schedule and retrospective rating) that may apply. In most jurisdictions and for most classifications, the current exposure base used by NCCI is unlimited payroll. This base has been used for at least 10 years in most states. However, at various times, limited payroll, hours worked, number of employees and several combinations thereof have been espoused as preferred alternatives to unlimited payroll.

Currently, the discussion on exposure bases centers on whether or not equity in rating can be enhanced by recognizing wage rate differences among insureds within the same classification.

As part of its examination of NCCI ratemaking procedures, M&R was directed to respond to the following two questions:

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6a. What improvement in rate equity could be expected from a system recognizing wage rates (if available) in addition to unlimited payroll?

6b. What additional expenses would be expected from administration of a system using wage rates?

The scope of the assignment did not involve collection and compilation of original data. Instead, M&R was to rely on data compiled from past studies of alternative exposure bases.

We compiled and reviewed existing studies on alternate exposure bases and the expense associated with each alternative.

H. Volume IX - Section IIB - Part 7 - Experience Rating Plan

The Experience Rating Plan (ERP) is intended to increase the accuracy of the premium calculation system by incorporating the recent experience of an insured as an enhancement to the classification process. The NCCI ERP is a prospective rating plan; i.e., it is used to determine the rate for a policy period prior to the availability of actual claim experience for that period. The ERP provides a refinement to the class rates which are determined by the type of business, in an effort to assess the appropriate premium rate for a particular insured.

The ERP results in an experience modification factor which is applied to the manual rate in order to determine the rate for a particular insured.

The fundamental technique in experience rating is to compare the historical experience of the insured with the expected experience (based on the insured's class) in order to adjust the price of the insurance provided. Currently, the process calls for three years of experience and smaller risks are not eligible for experience rating. The data used for experience rating is based on the WCSP.

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The objectives for this phase of the examination called for an evaluation of the following issues:

7a. NCCI's procedures and formulas.

7b. The number of years used in experience rating.

7c. Extension of the plan to small risks.

7d. The current formulas for ELR's and D-Ratios.

7e. The premium impact of implementing the Revised Experience Rating Plan (RERP).

7f. The impact of the experience rating plan off-balance on ratemaking methodology.

We analyzed the accuracy and equity of NCCI's RERP and have suggested improvements. We also studied the benefit and cost of using more than three years of data for experience rating.

I. Volume X Section IIB - Part 8 - Miscellaneous

In this part, we discuss the various ancillary issues that impact the ratemaking process.

The four objectives evaluated in this part included:

8a. Loss and expense ratios of minimum premium insureds.

8b. Additional premiums due to residual market surcharges.

8c. Experience rating plan off-balance (This objective was transferred to Section IIB - Part 7f).

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8d. Calendar/accident year vs. policy year loss ratios (This objective was added by the EOG during the course of the examination).

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III. EXAMINATION PERSONNEL

A. Examination Oversight Group

The following regulators were members of the Examination Oversight Group:

Commissioners:

William McCartney	Director, Nebraska Department of Insurance
Harold C. Yancey	Commissioner, Utah Department of Insurance
Tom Gallagher	Commissioner, Florida Insurance Department
Joseph Edwards	Superintendent, Maine Bureau of Insurance
Jeri Brown	Acting Superintendent, Maine Bureau of Insurance

Examination Coordinators:

James D. Watford	Actuary, Florida Insurance Department
Alan E. Wickman	Actuary, Nebraska Department of Insurance
Robert Klein, Ph.D.	NAIC Central Office

Other members of the review team:

Kevin J. Conley	Actuary, Iowa Insurance Division
Michael R. Lamb	Actuary, Oregon Department of Insurance and Finance
Richard Johnson	Actuary, Maine Bureau of Insurance
Martin M. Simons	Actuary, South Carolina Insurance Department
Robert A. Bailey	Deputy Commissioner, Michigan Insurance Department
Eric Nordman	NAIC Central Office
James Rose	NAIC Central Office

B. Examination Consultants

The following consultants were responsible for Section II - Ratemaking

Overall Project Administration	James R. Berquist, FCAS E. Frederick Fossa, FCAS
Peer Reviewers	Allan M. Kaufman, FCAS Michael A. McMurray, FCAS
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Section IIB - Part 1 - Premium and Loss Development Factors	Patrick J. Grannan, FCAS Gary R. Josephson, FCAS
Section IIB - Part 2 - Expenses	Allan M. Kaufman, FCAS Brian Z. Brown, FCAS
Section IIB - Part 3 - Trend	Patrick J. Grannan, FCAS Spencer M. Gluck, FCAS Susan E. Witcraft, FCAS
Section IIB - Part 4 - Classification Ratemaking	Roger M. Hayne, FCAS Michael A. McMurray, FCAS
Section IIB - Part 5 - Law Amendments	Allan M. Kaufman, FCAS John Herzfeld, FCAS
Section IIB - Part 6 - Alternative Exposure Bases	Michael A. McMurray, FCAS Richard S. Biondi, FCAS Robert J. Finger, FCAS Brett E. Miller, ACAS (AA&CO)
Section IIB - Part 7 - Experience Rating Plan	Patrick J. Grannan, FCAS Richard S. Biondi, FCAS Mark W. Mulvaney, FCAS Marvin Pestcoe, ACAS
Section IIB - Part 8 - Miscellaneous	John Herzfeld, FCAS Gary R. Josephson, FCAS Patrick J. Grannan, FCAS

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C. NCCI Key Personnel

The following were important contact personnel at NCCI:

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Review Coordinators	M. Dolan, FCAS R. Blanco, ACAS J. Mallon
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Section IIB - Part 1 - Premium and Loss Development	P. Langdon B. Spidell, FCAS
Section IIB - Part 2 - Expenses	J. Gillam, FCAS F. Leederman
Section IIB - Part 3 - Trend	P. Langdon J. Gillam, FCAS
Section IIB - Part 4 - Classification Ratemaking	R. Yenke S. Fandrey
Section IIB - Part 5 - Law Amendments	B. Llewellyn, ACAS G. Phillips, FCAS
Section IIB - Part 6 - Alternative Exposure Bases	J. Mallon B. Llewellyn, ACAS

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Section IIB - Part 7 - Experience Rating Plan

W. Gillam, FCAS M. Washburn, ACAS

Section IIB - Part 8 - Miscellaneous

R. Yenke R. Muller

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APPENDIX A: NAIC REQUEST FOR PROPOSAL

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PART I GENERAL INFORMATION

1-1 Purpose

The purpose of this request for proposal (RFP) is to provide information and guidelines for the submission of proposals to the Florida Department of Insurance (hereafter referred to as "the Department") by consulting firms for an examination of the structure and operations of the National Council on Compensation Insurance (NCCI).

This examination will be conducted under the examination authorities of the Florida Department of Insurance, the Maine Bureau of Insurance, the Nebraska Department of Insurance, and the Utah Department of Insurance. The examination is intended to address areas of concern to these states as well as other states with respect to the structure and operations of the NCCI. The National Association of Insurance Commissioners (NAIC) will be coordinating the activities of the four departments in administering the examination but is not a party to the contract with the consultants.

1-2 Issuing Office

The issuing office is the Florida Department of Insurance, Purchasing Section, Division of Administration, Room G-59, Larson Building, Tallahassee, Florida 32399-0300, 904/488-4984.

1-3 Contract Consideration

Due to the nature of the work to be performed, consideration will only be given to consultants with sufficiently qualified people in the areas of actuarial science, computer auditing, statistical analysis, financial and management consulting to undertake a detailed and comprehensive examination of a workers' compensation rating organization.

1-4 Acceptance

The Department reserves the right to accept or reject any or all proposals and to award the ensuing contract in the best interest of the State of Florida and the other participating states, as named above. Any material conflict of interest arising out of current or past work performed for the NCCI could cause the rejection of a proposal.

1-5 Developmental Costs

Neither the Department, nor the other participating departments, or the NAIC or any other state or agency of any other state is liable for any of the costs incurred by the respondent in preparing a proposal in response to this RFP.

1-6 Questions

Only questions in writing concerning this RFP will be received before July 13, 1990 by Robert Klein, Director of Research, NAIC, 120 West 12th Street, Suite 1100, Kansas City, Missouri. A list of the questions received and written answers to those questions will then be distributed by First Class U.S. Mail to all recipients of this RFP by July 20, 1990. Questions received after July 13, 1990 will not be answered.

1-7 Agenda

Any significant change made in the RFP will be brought to the attention of those who have demonstrated interest in responding to the RFP and adequate time will be allowed for response.

1-8 Schedule

The following schedule will be strictly adhered to in all actions relative to this procurement.

- A. June 29, 1990: RFP issued.
- B. From June 29, 1990 to July 13, 1990, written questions will be received.
- C. All proposals are due by 3:00 p.m. on July 27, 1990 in the issuing office (see Part 1-15).
- D. From July 27, 1990, proposal evaluation will begin.
- E. A site visit at the offices of the NCCI on July 10, 1990 (see Part 1-17). The purpose of the site visit is to allow bidders to obtain information on the data systems and procedures of the NCCI.
- F. Oral presentation if required will be scheduled during the period August 21 to August 23. Since this will require coordination of evaluation committee members from four states and the NAIC, respondents should be prepared to attend on relatively short notice.
- G. Notice of the Department decision will be posted on August 24, 1990 in the issuing office (see Part 1-15).
- H. Following the evaluation negotiations and necessary concurrences between the Department and successful respondent, a contract award will occur.
- 1-9 Proposal Content and Signature

To facilitate an objective review, eleven (11) copies of the proposal will be required with a separately sealed cost proposal. All copies must be signed by a company official with power to bind the firm to its proposal for a sixty (60) day period. To be considered, all proposals must be completely responsive to the RFP.

1-10 Proposal Preparation

All respondents will provide a straightforward and concise description of their ability to meet RFP requirements (see Part IV). The

proposal must specify the approach to the development (i.e., computer programs, tables, reports, etc.) of the final product.

1-11 Prime Responsibilities

The selected respondent will be expected to assume responsibility for all services offered in his proposal. The selected respondent will be the sole point of contractual matters including payment of any and all charges resulting from the contract.

1-12 Project Control

Control of the project shall remain the total responsibility of the Department and the other participating departments.

1-13 Rules for Proposal

The signer of the proposal must declare that the only person, persons, company or parties interested in the proposals as principals, are named therein, that the proposal is made without collusion with any other person, persons, company or parties submitting a proposal, that it is in all respects fair and in good faith without collusion or fraud, and that the signer of the proposal has full authority to bind the principal.

1-14 Regulations

The selected firm or individual will be required to comply with all applicable State of Florida regulations and contract provisions. The ensuing contract shall contain such contractual provisions or conditions necessary to define a sound and complete agreement and to satisfy state regulations and statutory requirements of the Department.

1-15 Proposal Submission

The proposal must be submitted (per schedule in Section 1-8) to Ina Boykin, Purchasing Director, G-59 Larson Building, Tallahassee, Florida 32399-0300 telephone (904) 488-4984.

1-16 Proposal Timetable

The final report for the project may be completed on a section by section basis. The final report for Section III Practical Considerations in Implementing a Loss Cost System shall be submitted by November 15, 1990. The final reports for Sections I and II shall be submitted no later than May 15, 1991. If the respondent can complete reports sooner, then this should be noted in the proposal.

1-17 NCCI Site Visit

A site visit at the offices of the NCCI at 750 Park of Commerce Drive, Boca Raton, Florida, is scheduled for July 10, 1990, beginning at 9:00 a.m. The purpose of the site visit is to allow bidders to obtain information on the data systems and procedures of the NCCI. NCCI personnel will be available to answer questions at this meeting. Any other questions concerning the RFF should be submitted to Bob Klein in accordance with Part 1-6.

PART II INFORMATION REQUIRED FROM RESPONDENTS

Proposals must be submitted in the format below:

2-1 Organization and Credentials

Provide a listing showing all persons who will work on the project along with their experience and qualifications. Any work for the NCCI by any person who will be involved in this project over the past 5 years should be clearly noted and explained. Any potential conflict of interest arising out of current or past work performed for the NCCI by the respondent or any subcontractor should be clearly noted and explained. Also, provide an estimate of the number of hours per week that each person would be available. A separate listing should show those persons who would participate on a peer review basis as opposed to being active in the research or drafting of the reports. A separate section should show the computer hardware and systems capabilities that will be used in the project.

2-2 Respondent's Understanding of the Project and Workplan

Provide a precise rendering of the respondent's understanding of the project.

2-3 Subcontractors

Identification of any contemplated subcontractor(s) is required, with identification of personnel to be assigned, their qualifications, and experiences and specific details of how the subcontractor(s) will be used, the work products the subcontractor(s) will produce and the costs for these services.

2-4 Services of the Department, Other Participating Departments, the NAIC and the NCCI.

Respondents should indicate any data they might require from the NCCI or other sources as well as assistance anticipated from Department, other participating departments or the NAIC in acquiring such data.

2-5 Cost Proposals

A Cost Proposal attached to the eleven (11) copies of the proposal must be separately sealed and submitted to the Department utilizing the standard form attached to this RFP and in accordance with the provisions outlined in Part I of this RFP. A separate cost form should be submitted for each of the following parts of the project: Section I.A.; Section I.B.; Section II.A.; Section III; and under Section II.B. each of the following: 1a, 1b, 2a, 2b, 2c, 2d, 2e, 2f, 3a, 3b, 3c, 3d, 3e, 3f, 4a, 4b, 4c, 5a, 5b, 5c, 5d, 6a, 6b, 7a, 7b, 7c, 7d, 8a, 8b, and 8c. A separate cost form should show a consolidation for the entire project. Costs should be based on the hourly fees of required personnel clearly stated and the anticipated hourly involvement of such personnel.

2-6 Additional Information and Comments

Comments under this heading are encouraged and left to the discretion of the respondent. Material should be pertinent to the proposal but not otherwise required in the RFP.

PART III PROPOSAL REVIEW/CRITERIA FOR SELECTION

3-1 Submission

Proposals will be submitted initially on the most favorable terms from both technical and cost standpoints. The date and time of submission (see Part I, 1-8) will be strictly adhered to.

3-2 Proposals for Specific Parts of the Examination

The overwhelming preference is to award the contract to one entity for the entire project. The reason for this preference is the interrelationship between the various sections of the examination. Information or insight gained in one part of the examination could prove to be crucial to other areas of the examination. However, proposals to perform specific part(s) of the project will be accepted. The burden will be on the respondent to explain why and how the project can be performed by several providers and integrated into one final project.

3-3 Proposal Review

The proposals will be reviewed and necessary negotiations conducted by the Department, other participating departments and NAIC personnel. Oral presentations may be required to assist in the final selection of proposals.

3-4 Evaluation

Proposals will be evaluated and the respondent selected on the following criteria with a maximum possible total points of 100.

Weighting Factors for Evaluation of Proposals:

Points Weighting Criteria:

- 15 A. The quality of the proposal submitted and the demonstrated understanding of the nature of the analysis and report required.
- 10 B. Time frames for completion of research and delivery of final reports.
- 20 C. Cost factors.
 - D. The quality and adequacy of the team assembled, including computer hardware and system capabilities, to perform the underlying research and draft of the report(s). This involves consideration of the factors shown under D.(1), D.(2), and D(3). The total points

allowed for D. is 55 which is composed of 20 points for D.(1), 20 points for D.(2) and 15 points for D.(3).

- (1) The experience and qualifications of the team to undertake the examination specified. The number of highly qualified persons who will be active in the research and drafting of the portions of the report relating to ratemaking and experience rating formula, as opposed to merely reading later drafts as a form of peer review. Any material conflict of interest arising out of current or past work performed for the NCCI.
- 20 (2) The number of hours per week that will be available from highly qualified persons, as well as from necessary support staff, and the computer hardware and system capabilities.
- 15 (3) The adequacy of peer review procedures. Any material conflict of interest arising out of current or past work performed for the NCCI.

100 Total Points

PART IV WORK PRODUCT REQUIRED

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This examination stems from a recommendation by the NAIC's Workers' Compensation Advisory Organization Activities Working Group. The working group studied the issue of implementing a "loss cost" system in workers' compensation similar to the system being implemented in the other property-casualty lines. Under a loss cost system, advisory/rating organizations are prohibited from filing final rates but they are allowed to file "prospective lost costs" which include adjustments for development and trend.

In December of 1989, the NAIC adopted that working group's resolution which said that its present belief was that workers' compensation should not be treated differently from the other property-casualty lines with respect to permissible activities of advisory/rating organizations. However, some group members expressed concerns about the impact of a loss cost system on the marketplace as well as concerns about the performance of advisory/rating organizations within workers' compensation which would not be resolved by implementation of a loss cost system. Consequently, the group deferred recommendations on the specific details of the system to be implemented until the completion of two studies: 1) a staff economic analysis of the likely impact of a loss cost system on state workers' compensation markets; and 2) a comprehensive examination of the structure and operations of the National Council on Compensation Insurance (NCCI) conducted under the examination authority of the four states.

The purpose of this examination is to thoroughly evaluate the data collection and processing activities of the NCCI as well as certain aspects of its ratemaking activities. The examination also is intended to review the practical considerations with respect to the NCCI's operations involved in implementing a loss cost system. While the examination will be conducted under the authority of four states, it is intended to address issues of general concern to all state insurance regulators.

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The examiners will be expected to fully document current NCCI procedures, evaluate the adequacy or appropriateness of those procedures, and where possible, present possible alternative approaches and the practical effects of those approaches. The examiners also will be expected to use the results of previous NCCI examination reports where possible to the extent that the results of those examinations can be verified.

The final product of the examination should be a comprehensive and detailed report that will provide insurance regulators with a good understanding of NCCI procedures as well as ideas on how those procedures might be improved. In addition, the report should identify the practical questions that would be associated with the NCCI's transition to loss costs and discuss how those areas might be handled. The report should enable insurance regulators, individually and collectively, to make specific recommendations on the features of the system that would be implemented as well as other improvements to the data collection and analysis services provided by the NCCI.

Section I. Data Collection and Data Quality

A. Description of NCCI's Data Collection and Data Handling Procedures

The consultant will be expected to fully document the NCCI's data systems by either verifying information produced by NCCI or creating documentation where necessary. The final work product will completely document the NCCI data systems from input documents to final data bases. As a general introduction to data collection, the consultant should include responses to the following:

- . What types of data does the NCCI collect?
- . What is the purpose for collecting each type of data?
- . How are the data obtained from insurers and processed into a data base?

For each statistical call, the following should be shown:

- . The fields that are entered on computer systems from the source document;
- . The edits performed on each field;
- . How errors are handled and how corrected fields are integrated into the data base.
- . Any modifications to the data from the source document;
- . A list of all data bases and fields within the data base that come from the statistical call.

Also, for each data base there should be provided a list of all fields, the source of each field, an indication of how long the data are maintained and a discussion of how the data base are used. B. Evaluation of Data Collection and Data Quality

The consultant will be expected to evaluate NCCI data collection, data handling procedures and the quality of the NCCI data. The consultant should make suggestions for improvements in any of these areas. Part of this analysis should be accomplished by sampling actual transactions and testing computer programs within the NCCI. Answers to each of the following questions should be included in the final work product:

- --(1) How accurate is the data base? Are adequate quality control procedures in place to ensure the accuracy of the data as they are reported by insurers and processed by the NCCI? How could these procedures be improved?
- (2) Does the NCCI reconcile data collected for ratemaking purposes with the data reported in insurers' annual statements? If so, how are these data reconciled and what is done when these data do not match? Are there additional reconciliation measures that could be beneficial?
- (3) Does the NCCI have adequate procedures to ensure that classification data are complete and accurate? Are additional checks of the data performed when unusual classification indications appear? Does the NCCI check to be sure that insurers report reimbursements by second injury funds, subrogation and funds associated with cases determined to be noncompensable?
- (4) What quality controls are used to ensure the accuracy of data collected under a detailed claim information call?
- (5) Are the data collected and maintained in such a way that the experience from a specific policy can always be traced? If not, how could this be accomplished? Are the data for risks in the residual markets maintained in such a way that the experience can be compiled separately for the residual market versus the voluntary market?
- (6) Is sufficient information collected and maintained to test and implement reasonable alternative ratemaking methodologies? If not, what enhancements could be made to support alternative methodologies and identify the underlying causes of rate increases?
- (7) Do the NCCI's data gathering procedures ensure that the data base is not distorted by schedule rating?
- (8) What kinds of data on insurer expenses are collected and how are they processed and maintained? What controls are in place to ensure that insurers' reporting of expenses is reasonable and accurate? Are there ways in which the reporting of expense data could be improved to make it more suitable for ratemaking? Is separate information on the cost of loss prevention services collected, and if not, could it be collected?

Section II. Ratemaking Procedures

A. Description of NCCI's Current Ratemaking Procedures

The work product must include a thorough and technically complete description of the procedures and formulas currently used by the NCCI in

producing manual rates and experience rating values. When more than one procedure is sometimes used (i.e., where the NCCI may base its rate change upon policy year incurred losses, with or without incurred but not reported losses (IBNR), or upon paid losses; or where they may average differing numbers of years, etc.), describe the different procedures and describe how the NCCI chooses among them. In areas, if any, where the NCCI will often deviate from their "normal" procedures, note whether these deviations are usually reasonable responses to unusual situations where "normal" procedures would be likely to produce inaccurate results. Describe the assumptions made by the NCCI in their procedures and describe the means used by the NCCI to verify these assumptions.

B. Evaluation of Ratemaking Methodologies

Note: Within the ratemaking methodology section, priorities of "A", "B", "C" or "D" are assigned to each question. The grading corresponds to the depth to which a topic is to be covered, with "A" topics being most important. Answers to "A" priority questions should be detailed and of such quality that they may be used to advance the "state of the art". Answers to "D" priority questions should be the highest quality answers that can be obtained at a moderate cost. As such, limitations to the responses to "D" priority questions are acceptable due to the time and cost that would be necessary to cover every possible issue in the topic area. Questions with "B" and "C" priorities should receive intermediate treatment.

Comments have also been made with regard to the extent of original research which is expected to be most appropriate. These comments are presented as an attempt to be helpful, but should be interpreted as guidelines only.

1. Premium and Loss Development Factors

While the selection of link ratios and the calculation of development factors is often considered a purely mechanical process, differences of 5-10 percent in the estimated ultimate losses for a recent policy or accident year are common between different loss development methods. In addition, differences of opinion in the selection of link ratios can occur within the same development format. Past experience has clearly shown that misestimations in this regard are only compounded by trending, because indicated trends are heavily influenced by the most recent point or two, which are those points most heavily distorted by excessive or inadequate loss development. In this context:

(a) Evaluate the NCCI's premium and loss development techniques. Would the use of more years of data or of multistate data, with appropriate adjustments, produce superior results? Are there other techniques or improvements to current techniques that would be appropriate?

(Priority: "A". Past experience in this regard should be tabulated and reviewed. An attempt should be made to discern what differences might be appropriate for larger vs. smaller states.)

(b) The NCCI uses different formats for loss development from state to state and from year to year. Paid losses through the 8th report may be used one time as a basis, the next time incurred losses excluding IBNR may be used, etc. The use of multiple techniques is common and considered good practice in many types of reserving applications. The results of different techniques, which normally differ, can be studied to gain insights relating to the underlying assumptions used with each technique. Evaluate the NCCI's procedures for reconciling the differences which occur between different development techniques and evaluate the effectiveness and likely accuracy of the criteria which they use to choose one format over another.

(Priority: "B". The nature and quality of NCCI analytical techniques and whether they are reasonably followed should be examined here. Original research should largely be confined to that which is relevant to answer question 1(a). It is not the intent of this question to focus on whether any sort of bias from state to state occurs, although it should be covered if an overt tendency becomes apparent.)

2. Expenses

There is some question as to whether the expense loadings filed by the NCCI are consistent with the actual experience of their member insurers. Several factors complicate this analysis including premium discounts, the interplay of stock versus non-stock discounts, the consideration of stock only expenses in some instances and not in others, plus the impact of expense constants and minimum premiums.

(a) Does the current NCCI expense methodology tend to load more or less expenses in the overall rate level than are actually expended by insurers using stock discounts in NCCI states? If there are biases or inaccuracies, what is their source and their effect?

(Priority: "A". A detailed analysis of the NCCI's expense methodology for insurers using stock discounts should be performed.)

(b) What would be the incremental cost of collecting allocated loss adjustment expense (ALAE) on a unit basis. Discuss the pro's and con's of having this level of detail available versus what is now available. Also, discuss whether it would be more cost efficient to collect this on a more limited survey basis, or only specific areas where problems may exist such as retrospectively rated risks and residual markets. (In these two situations, there is little economic motivation for an insurer to defend claims.)

(Priority: "A". We are aware that the NCCI has been presented with this question in the past, so it is likely that some degree of documentation may exist for the consultant to start with. Consider the costs to insurers as well as to the NCCI with this question.) (c) When a state's premiums and rates grow at approximately the same rate as is occurring on a national basis, it is reasonable to expect a proportional increase in the expense loading for the individual state. However, when a state's proposed rate increase considerably exceeds the national average, is it reasonable to assume that expenses increase proportionally for the state? Should large state rate increases be tempered because of less than proportional increases in expenses?

(Priority: "C". No individual research is required here. The response to this question should be well reasoned and offer, if possible, suggested changes to current methodologies.)

(d) Discuss the advantages and disadvantages of using a budgeted approach to acquisition expenses versus basing these factors on actual expense experience.

(Priority: "C". No individual research is required here. The response to this question should be well reasoned and offer, if possible, suggested changes to current methodologies.)

(e) Traditionally, mutual insurers utilized a non-stock discount and collected a higher premium than stock insurers. In return, however, mutual insurers following this plan would also return generous dividends which resulted in net premiums that were lower than for stock insurers. The workers compensation market has since evolved into a much more complex mechanism and the consultant should examine whether the original assumptions which supported the existence of dual expense discounts still exist. Are the higher rates collected by insurers utilizing non-stock discounts fully returned in the form of higher dividends than are paid by insurers utilizing stock discount tables? In addition, are lower expenses, if any, experienced by insurers utilizing non-stock discounts also returned in the form of higher dividends? (The analysis should be restricted to NCCI states as it relates to dividends, as a high portion of countrywide compensation dividends are paid in California, which is a non-NCCI state.)

(Priority: "B", it is presumed that the NCCI can provide expense data compilations sufficient to address this question. A degree of imprecision due to the effects of company groups would be acceptable. Basically, this question presumes that the consultant will design requests for compilations to be performed by the NCCI and that the consultant will report on the indications resulting from these compilations.)

(f) Review premium discounts (stock and non-stock) and expense constants to determine whether the relative expense loadings are equitable for all sizes of risk. (Consideration of minimum premium size risks may be excluded here as they are the subject of a broader question under the "Miscellaneous" heading.)

(Priority: "D". The NCCI has studied these factors from time to time. Review this material and report on it.)

3. Trend

In most jurisdictions, losses have increased more quickly than wages and it is necessary to apply trend factors to losses in order to generate adequate rate level indications. Because these trend indications have often been quite large, there is some question of the NCCI trend factors even when past results on a national basis would seem to indicate that trend factors have not been excessive. In addition, the NCCI also appears to project past trends into the future without offset for any legislation attempting to mitigate the increase in workers compensation claims.

(a) Are there any expected biases or errors present in the NCCI's general trending procedures? If so, discuss their impact.

(Priority: "A". This should be an in-depth and refined analysis of the procedure and techniques.)

(b) Would more accurate trending be likely with a different model or with revisions to the current model?

(Priority: "B". This is an extension of question 3(a).)

(c) Are adequate adjustments made to projections by the NCCI's trend model when significant legal or economic changes occur on a state or national level?

(Priority: "C". Traditional actuarial trending procedures presume that future loss trends will continue to be similar to past loss trends. This presumption loses validity, however, when recent legal or economic developments intervene. In response to this question, examine the extent to which the NCCI brings such events into consideration and whether this appears to be adequate.)

(d) Contrast the current model, which puts all losses to a current benefit level, to a model which puts all past losses to the same "relative" value of prospective benefits. (In other words, if the prospective min/max benefit level and state AWW were \$100/\$300 and \$320, respectively, then no adjustment would be made to past losses if the past values were \$80/\$240 and \$256. This method would apply a steeper trend line to a lower historic loss level.)

(Priority: "D". Examine the two approaches from a theoretical point of view. No original research is expected.)

(e) The NCCI determines the overall impact of all classification rate changes combined based on the three years of payroll used in the filing at that time. If the mix of business in a state changes over the years, this estimation of the effect of a past rate filing as it would relate to the current mix of classifications may be distorted. Estimate the likely magnitude of these distortions and discuss whether an improved procedure would be warranted. (Priority: "D". It is presumed that the NCCI can produce data runs for a sampling of states and years so that the likely magnitude of any distortions can be examined. It would be expected that the consultant would provide the specifications for the NCCI to produce such data and that the consultant would review and comment on the results.)

(f) The NCCI brings past losses to a current benefit level by multiplying the various law change factors estimated at about the time the law changes went into effect. Is this an accurate method?

(Priority: "D". Examine this from a theoretical point of view.)

4. Classification Ratemaking

There is a significant concern that current classification ratemaking procedures may be significantly less accurate than would be possible using more years of date and an improved methodology. There are often significant swings in class rate relativities from year to year when there is no reason to expect that underlying loss expectancies are changing so rapidly. An optimum ratemaking procedure should give the weight to state class experience that would be most likely to produce accurate estimates of future losses.

(a) Study the NCCI's current scheme of credibilities and their practice of using three years of data as a sole indicator for most national pure premium indications and as a basic unit for determining pure premiums at the state level. (We recognize the implicit weight given to older years of state data where credibilities of less than 100% are used.) For different types of loss and different expected loss volumes, determine whether class rating accuracy could be improved through the use of more years of data, different credibilities, or both. In addition, determine whether superior results would be expected using maximum loss size limitations that vary as a function of the total expected losses by class, by state, with adjustments made to recognize the effects of these differing limitations.

(Priority: "A". While the NCCI would be expected to do the data compilation necessary to address this question, a thorough response will require a significant level of original research to be performed by the consultant. It is expected that the response to this question may involve more effort than that required to respond to any other ratemaking question.)

(b) Could the NCCI's procedure for determining industry group relativities be enhanced by utilizing more years of data (with appropriate recognition of apparent trends)? How would this vary between large states and small states?

(Priority: "C". The NCCI would be expected to do the data compilation necessary to perform this analysis.)

(c) In their classification ratemaking, the NCCI applies loss

development and benefit level adjustments to individual years of data, but applies a single trend factor to all three years of experience combined. Should the NCCI adjust losses to a current (or common) level by trending individual years separately rather than by applying an aggregate trend factor to all years combined?

(Priority: "D". It would be expected that this question would be approached from a theoretical point of view. If it was felt that a change would produce superior results, then the likely degree of improvement, plus any practical considerations, should be discussed.)

- 5. Determination of Rate Changes Due to Statutory Revisions
 - (a) Review NCCI's procedures for determining expected loss changes due to changes in weekly benefits, waiting periods, escalation provisions and medical fee schedules to see if they would be expected to yield fair estimations.

(Priority: "A". A technically complete analysis of this question should be provided.)

(b) Should the 1973 Standard Wage Distribution Table be updated?

(Priority: "C". The consultant should structure a test of indemnity losses to see if they are reasonably consistent with expectations from the 1973 table. If the NCCI has undertaken studies of this question, use them to the fullest extent possible.)

(c) Discuss the manner and anticipated or observed effectiveness of the NCCI when presented with non-formula type law changes. Could NCCI's performance in this area be practicably improved?

(Priority: "C". Examine a sampling of recent situations where this has occurred and evaluate the NCCI's performance.)

(d) Should different wage distribution tables be determined for major classification groupings, instead of for all occupational groups, so that differences in the job mix from state to state may be recognized?

(Priority: "D". The differences in average wages from state to state will be attributable in part to different mixes of industry as well as different overall wage levels. Without significant research, except to examine any studies which the NCCI may already have available, attempt to determine whether this is an area which warrants the extensive work which it would require to have multiple wage distribution tables.)

6. Alternate Exposure Bases

There has been significant discussion and controversy over total payroll as an exposure base for workers compensation. The controversy involving man-hours as an exposure base has largely

subsided, but plans involving recognition of the wage rate(s) at which total payrolls are earned appear to offer the hope of more equitable rating. The consultant should largely restrict themselves to a study using data culled from previous studies, thereby avoiding the need to collect original data.

(a) What degree of improvement could be expected from a rating system that recognized the wage rate (if available) in addition to total payroll?

(Priority: "A". The consultant should conduct a thorough review of the research which already exists relating to this question.)

(b) Discuss the additional expenses that would be expected to result from the administration of a system utilizing this additional information.

(Priority: "B". A rating system that utilized both wage rates and total renumeration might require additional recordkeeping by employers, more time for insurer audits, and additional data elements for the NCCI and its member insurers. Estimate the magnitude of these additional costs.)

7. Experience Rating Formulas

The work product must include a thorough and technically complete description of the formulas currently used by the NCCI in their production of experience rating modifications. This should include a description of interstate and intrastate experience rating as well as a description of experience rating formulas both before and after NCCI's revised experience rating plan (RERP) filing. LRAF, schedule rating and miscellaneous state exceptions should be omitted.

(a) Is the NCCI's RERP experience rating actuarially sound? Specifically, are there significant tendencies for the formulas to produce debits or credits such that it could reasonably be predicted that groupings of risk by any combination of classification, risk size or modification range would be likely to have excessive or inadequate rates? What changes could be made to lessen these deficiencies?

(Priority: "A". A thorough analysis of the study done by NCCI to develop RERP should be completed. Additional data should be requested, if necessary, to verify the action of RERP.)

(b) To what extent, if any, would experience rating be expected to be more accurate if more than three years of data were used for experience rating? Specifically consider whether five years would be superior, as insurers report unit data through fifth report. Discuss additional costs, if any, that might be applicable from the use of five years of data versus three.

(Priority: "B". Data provided by the NCCI should be tested to determine if the addition of two more years of data would tend

to produce more accurate experience rating. If it would, it would be necessary to examine what additional costs would be incurred by the NCCI to use five years instead of three.)

(c) What credits would be indicated for loss free risks that were less than the minimum size to be eligible for experience rating? To what extent would it be indicated and practicable to debit small risks for higher than expected losses?

(Priority: "B". The consultant should analyze experience runs produced by the NCCI according to specifications provided by the consultant. The consultant should evaluate whether it would be feasible to provide some degree of credits for small risks that had no losses or very low loss ratios if it could be done without endangering rate adequacy.)

(d) Are the formulas used to calculate ELR's and "D" ratios sound? Does the NCCI method of introducing RERP tend to result in a revenue increase?

(Priority: "C". Examine current techniques to see if they are appropriate.)

- 8. Miscellaneous
 - (a) Compare the expected loss and expense ratios of minimum premium insureds to those for all classes of insureds combined.

(Priority: "B". It would be expected that the NCCI would be able to generate the data that would be necessary to address this question. The consultant should analyze data runs produced by the NCCI according to the consultant's specifications.)

(b) What recognition does NCCI give to additional premiums expected to be collected from surcharges imposed on policyholders in residual markets? As these markets increase or decrease, is this expected change in revenue recognized?

(Priority: "C". Examine recent filings made by the NCCI to answer this question. Examine filings where surcharge plans are introduced as well as filings where surcharges are in place to determine whether NCCI filing procedures adequately recognize this additional income.)

(c) Does the NCCI ratemaking formula accurately account for any offbalance due to the experience rating plan? Does the NCCI adequately adjust expected loss ratios (ELR) and "D" ratios to maintain the off-balance at a reasonable level? What improvements could be made in the NCCI's procedures regarding the off-balance in the experience rating plan?

(Priority: "C". Examine NCCI procedures carefully to check for their apparent balance.)

Section III. Practical Considerations in Implementing a Loss Cost System

Under the system adopted by the NAIC for the other property-casualty lines, advisory organizations are allowed to do much of what they had done previously, short of filing final rates. Advisory organizations are allowed to collect historical loss information from insurers, adjust these data for development and trend, and distribute or file this "prospective" loss cost information with the commissioner. Advisory organizations also are allowed to develop and file supplementary rating information, rating manuals (excluding final rate pages) and policy forms and endorsements. Insurers are required to determine individually, their own expense and profit factors and file their final rates. Insurers' rate filings can reference, if necessary, the prospective loss cost and supplementary rating information filed by the advisory organization. This approach seeks to promote competition and maximize benefits to consumers by preserving efficiencies gained through the joint collection and analysis of loss information, while enforcing independence in the areas of expenses and profits which should be based on each insurer's specific methods of operation.

The examination should address the practical considerations involved in implementing a loss cost system on a national scale in workers compensation insurance. In other words, how should the NCCI's activities be modified to accommodate a loss cost system similar to that which is being implemented for the other lines? This question also encompasses how member insurers would be allowed to use NCCI information in making their own rate filings. To the extent possible, the consultant should use the system being developed for the other lines as a model but also should consider areas where workers' compensation may require different treatment. In this analysis, the consultant also will be expected to review how the NCCI and member insurers operate in states that currently have a loss cost system for workers' compensation.

The consultant's analysis should consider, but not be limited to, the following areas:

- . minimum premiums
- . rating plans
- . premium discount plans
- . schedule rating plans
- . expense constants
- . experience rating systems
- . policyholder dividend plans and practices
- . retrospective rating plans
- . anniversary date rating rules
- . other rate-related rules
- . distribution of expense data to insurers
- In addition to these areas, the consultant should evaluate whether any changes

should be made to Part III of the Insurance Expense Exhibit and the approval of rate changes for policies already in effect or rate filings with retroactive effective dates in a loss cost environment.

The examination report should analyze the relevant issues with respect to these areas, as well as any other significant areas, and outline the different options that might be taken and their likely consequences. It should be assumed that the NCCI would continue to administer and make rates for the residual market.

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PRACTICAL IMPLICATIONS OF IMPLEMENTING WORKERS **COMPENSATION LOSS COSTS**

NCCI EXAMINATION

SECTION III

IMPLEMENTATION OF LOSS COSTS

February 22, 1991

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February 22, 1991

Mr. William McCartney Chairman Workers' Compensation Advisory Working Group National Association of Insurance Commissioners 120 West 12th Street, Suite 1100 Kansas City, MO 64193-0108

Dear Mr. McCartney:

We are pleased to present this interim report describing the Milliman & Robertson, Inc. (M&R) study of the practical implications of loss costs. This report represents the results of Section III of the Examination of the National Council on Compensation Insurance (NCCI) conducted by the Florida, Maine, Nebraska, and Utah Insurance Departments on behalf of the National Association of Insurance Commissioners (NAIC).

REPORT STRUCTURE

The summary of the report describes the background of the study, our approach to achieving the study objectives, our analysis and our conclusions. Chapter 1 discusses the issues related to loss costs identified in our interviews, reviews of testimony, and other research. Chapter 2 describes current NCCI rate-related procedures in administered-pricing states. Chapter 3 describes NCCI and independent rating (advisory) organization rate-related procedures in loss cost states. Chapter 4 describes loss cost procedures implemented or under consideration by ISO. Based on the issues identified in Chapter 1 and our analysis in Chapters 2, 3, and 4, we identify a typical loss cost system, and we evaluate the typical system and alternative systems in Chapter 5.

SUMMARY AND RECOMMENDATIONS

Chart 1 attached outlines the elements of a workers' compensation loss cost system typical of existing workers' compensation loss cost systems, supplemented by concepts from the ISO where appropriate. This typical system provides a reasonable basis for a model workers' compensation loss cost system. As more states adopt loss cost systems that permit greater individual insurer independence, assuring the accuracy of workers'

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compensation data becomes more difficult. The NCCI and independent state advisory organizations should therefore be charged with taking the steps necessary to assure data accuracy.

> * * * *

During the course of our examination, we received excellent cooperation from the personnel of the NCCI, NAIC, and other organizations and individuals whom we contacted for insight on this complex issue. We would like to express our appreciation for their assistance.

It was a pleasure to have the opportunity to assist the NAIC on this portion of this important project. We are progressing well with the studies defined as Sections I and II of the NAIC's request for proposal and we will be discussing portions of these assignments with the NAIC's Actuarial Oversight Group in the near future.

Very truly yours,

James R. Berquist

JRB:1hk Enclosure

CHART 1

ELEMENTS OF THE TYPICAL LOSS COST SYSTEM

- 1. The NCCI files loss costs with provisions for:
 - a. Prospective losses by classification which reflect loss development, trend, and anticipated benefit levels
 - b. Assigned risk subsidies to be paid by the voluntary market
 - c. Loss-based assessments
 - d. Loss adjustment expense
 - e. Disease loss components
- 2. The NCCI distributes information relating to its loss cost calculations including (1) alternative approaches for loss development and trend, (2) information on benefit change calculations, (3) information on judgmental decisions such as classification relativity capping, (4) the difference between voluntary and residual market experience overall (and by classification, if relevant), etc.
- 3. The NCCI also distributes historical and factual information with regard to:
 - a. Premium taxes
 - b. Assessments
 - c. Historical information on other insurer operating expenses with appropriate categorization and adjustment for policyholder size and assigned risk service expense considerations
 - d. Premium comparisons
 - e. Individual insurer loss experience compilations
 - f. Expense studies by size of policyholder

CHART 1

ELEMENTS OF THE TYPICAL LOSS COST SYSTEM (CONT.)

- 4. The NCCI administers an Experience Rating Plan, which is common to all policyholders within a state.
- 5. The anniversary rating date rule continues.
- 6. Existing state limitations on individual insurer independence with respect to classification definitions and relativities are continued.
- 7. The NCCI committees of insurers become advisory.
- 8. The Classification and Rating Committees continue to assist in adjudicating questions of class definitions and other roles permitted by the state regulator.
- 9. The NCCI continues to establish residual market plan manual rates.
- 10. For the voluntary market, the NCCI no longer files:
 - a. Provisions for expenses related to premium tax, production, and general overhead
 - b. Provisions for profit and contingencies
 - c. Expense constants
 - d. Premium discounts
 - e. Minimum premiums
- 11. The NCCI adjusts rating plans, where necessary, to exclude expenses as noted above. The relevant plans pertain to experience rating, retrospective rating, schedule rating, excess loss rating for employers liability, and other miscellaneous rating items.

CHART 1

ELEMENTS OF THE TYPICAL LOSS COST SYSTEM (CONT.)

- 12. State regulators, using the NCCI as their statistical agent, develop rules and procedures to maintain and improve the level of data accuracy and availability. This might include increases in field inspections and verification of insurer reported data.
- 13. Filing procedures for individual insurers are streamlined in a manner analogous to the ISO process, including standardized filing forms appropriate for workers compensation insurance and loading factors that remain in effect until changed by the insurer or disapproved by the regulator.
- 14. Schedule rating is permitted or not permitted based on current state law and regulation. Where schedule rating is permitted, NCCI filings could include schedule rating, but individual insurers could file independent schedule rating plans.
- 15. State rating laws remain basically unchanged. Prior approval laws continue to be administered as prior approval for NCCI loss cost filings and for individual company loading factors or other deviations from NCCI advisory material.
- 16. NCCI continues its other field operations work and its role in maintaining policy forms.

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BACKGROUND

The National Association of Insurance Commissioners (NAIC) has adopted a system for implementing loss costs in property/casualty lines of insurance other than workers compensation. Under the loss cost system, advisory organizations are responsible for the following activities:

- Collecting historical loss information from insurers.
- Developing past losses to ultimate and trending to future cost levels.
- Distributing and/or filing prospective loss cost information.
- Developing and filing rating manuals and supplementary rating information (excluding the final rate pages).
- Developing and filing policy forms and endorsements.

In a loss cost system, insurers must individually determine and file final rates referencing, where appropriate, material filed by the advisory organization. Each insurer's rates are intended to reflect its own method and expense of operation and to the extent credible, its own loss experience.

This approach seeks to promote competition and maximize benefits to consumers. Efficiencies gained through the joint collection and analysis of loss information are preserved, while independence is enforced in the areas of expenses and profits.

The NAIC is investigating the implementation of a similar loss cost system for workers compensation insurance. However, prior to taking action, the NAIC has requested this evaluation of the practical considerations of implementing a nationwide workers compensation loss cost system.

Some of the specific areas identified in the evaluation specifications are the following: (1) minimum premiums, (2) rating plans, (3) premium discount plans, (4) schedule rating plans, (5) expense constants, (6) experience rating systems, (7) policyholder dividend plans and practices, (8) retrospective rating plans, (9) anniversary rating date rules, (10) other rate-related rules, (11) distribution of

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expense data to insurers, (12) changes to the Insurance Expense Exhibit, (13) rate changes to in-force policies, and (14) rate filings with retroactive effective dates.

This report presents the results of the evaluation.

APPROACH

Our approach to achieving the objectives of this project was as follows:

- 1. Identify the important practical issues using input from the following sources: National Council on Compensation Insurance (NCCI), Insurance Services Office (ISO), insurers, regulators, agents/sales representatives, and policyholders, among others.
- 2. Examine how those issues are addressed by the procedures actually implemented in workers compensation loss cost states and by ISO for other property/casualty lines of insurance.
- 3. Describe the structure of a model loss cost system for the NAIC and the practical implications of variations from that model.

In our analysis we focused on the operations of the NCCI and the commercial insurance system in states with an administered-pricing system.

While some states have independent rating organizations which perform some or all of the same functions as NCCI, this report is prepared as part of an examination of the NCCI, and thus the focus of the report is on the NCCI. The conclusions are generally applicable to independent bureau states, but a complete analysis of state-to-state variations is beyond the scope of this report.

Most states have an administered-pricing system which require the NCCI or independent rating organization to obtain prior approval of filings proposing gross rates including insurer operating expenses and profit. The focus of this study is the identification of practical implications of the implementation of a loss cost system for those administered pricing states.

States without an administered pricing system require the rating organization to file loss costs (in addition to or instead of gross rates). These filings are subject to either prior approval or open competition rating laws. We utilized the loss cost experiences of this second group of states in our analysis.

SUMMARY AND RECOMMENDATIONS

Chart 1 attached to the cover letter outlines the elements of a workers compensation loss cost system "typical" of existing workers compensation loss cost systems, supplemented by concepts from the ISO where appropriate. This typical system provides a reasonable basis for a model workers compensation loss cost system.

As more states adopt loss cost systems that permit greater individual insurer independence, assuring the accuracy of workers compensation data becomes more difficult. The NCCI and independent state advisory organizations should therefore be charged with taking the steps necessary to assure data accuracy.

ADMINISTERED-PRICING SYSTEMS

In NCCI administered pricing states individual insurers generally adhere to rules and rating plans filed on their behalf by the NCCI. Most importantly:

- 1. NCCI classification definitions and rate relativities are followed by individual insurers.
- 2. The NCCI collects data on individual policyholder experience and calculates an experience rating modification for each eligible policyholder. The experience modification applies to that policyholder regardless of which insurer provides coverage.
- 3. The Anniversary Rating Date Rule limits the frequency with which a policyholder can change rates by changing insurers. The rule provides that if a policyholder moves from one insurer to a second insurer during the policy term, then the second insurer must use rates in effect for the second insurer at the original rating date of the

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policyholder. The second insurer must also use the experience modification calculated by the NCCI at the original rating date of the policyholder. When the original rating period expires, a new experience modification is calculated and the current insurer's rates at that time become applicable to the policyholder.

The decisions of the NCCI with respect to ratemaking procedures in the state and with respect to rate filing actions are made by committees of insurers. A committee of insurers also adjudicates disputes between policyholders and insurers with respect to the appropriate classification definitions.

Individual insurers are permitted to vary from NCCI rates in one or more of the following ways:

- 1. Uniform deviations from NCCI rates for all classifications¹
- 2. Schedule rating which adjusts individual policyholder rates²
- 3. Policyholder dividends³

After a rate filing is approved, revised rates are immediately applicable to each insurer without further action by the insurer. Any filed deviations are applied automatically to the newly approved NCCI rates.

In addition to the individual policyholder information used for the experience rating process, the NCCI collects premium, payroll and claim experience from insurers through a number of different data calls. The insurers are required to convert their collected premiums to the premium level of the NCCI before deviations or schedule rating. This adjusted premium is referred to as Designated Statistical Reporting (DSR) level premium.

¹Applicable in nearly all states.

²Applicable in approximately a dozen states.

³Applicable in all states. Outside the jurisdiction of rating organizations.

The operation of the system in NCCI administered-pricing states is described more fully in Chapter 2.

OBJECTIVES OF A LOSS COST SYSTEM

The advantages of a loss cost system include the following:

- 1. Independent insurer decision-making is encouraged. A loss cost system should facilitate and encourage initiatives in pricing and operations that will improve the workers compensation system.
- 2. The appearance of cartel-like behavior among insurers will be reduced or eliminated as collective activities are limited.

If not properly structured, the potential disadvantages of a loss cost system include the following:

- 1. Increased risk of inadequate, excessive, or unfairly discriminatory rates.
- 2. Deterioration in data quality.
- 3. Reduced incentives for workplace safety.
- 4. Increased cost to operate the workers compensation system.
- 5. Increased confusion to policyholders, insurers, agents/sales representatives, and regulators.

These potential disadvantages can be minimized by properly structuring the loss cost system.

In comparing the objectives of a loss cost system for workers compensation with the objectives for a loss cost system for other lines of insurance, the following fundamental differences should be considered:

1. For other lines of insurance, the residual market is not managed by the voluntary market advisory organization. For purposes of this study we were

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instructed by the NAIC to assume that the NCCI continues to be responsible for the management of residual market rates. Therefore, unlike the situation for ISO, the NCCI necessarily remains involved in developing gross rates for some markets.

2. The NCCI administers a common Experience Rating Plan applied to all policyholders in the state, no matter which insurer provides coverage. This gives policyholders a common basis on which to measure their workers compensation experience. There is no comparable system in other lines of insurance. Maintaining the experience rating system in that form may imply some limits on the independence permitted to individual insurers.

A TYPICAL LOSS COST SYSTEM

Our examination of existing workers compensation loss cost systems and ISO loss cost systems for other lines of insurance did not reveal any insurmountable obstacles to the implementation of a loss cost system for workers compensation. Ease of implementation and potential long-term effects depend on the structure of the loss cost system adopted.

Chart 1 outlines the characteristics common to existing workers compensation loss cost systems. The Chart also describes historical and factual expense information that the NCCI might collect and distribute. The system outlined in Chart 1 could be implemented with minimal disruption to the workers compensation system consistent with the loss cost concept.

The loss cost system characteristics which differ among loss costs states are the following:

- 1. Loss adjustment expenses are either (1) included in the advisory organization loss costs or (2) excluded from loss costs and included in individual insurer loadings.
- 2. Individual insurers are either (1) required to use the advisory organization classification definitions and rate relativities or (2) permitted to establish their own definitions or rate relativities.

- 3. Individual insurer loading factors either (1) remain in effect when NCCI loss costs change or (2) must be re-filed when NCCI loss costs change.
- 4. Uniform filing forms have not been developed to simplify the administration of the regulatory compliance process.

There are many alternatives to this typical loss cost system.

EVALUATION OF THE TYPICAL LOSS COST SYSTEM

Benefits

While the typical loss cost system outlined in Chart 1 may be considered by some to be a minimum step towards a loss cost system, this typical loss cost system includes the two primary features of a loss cost system. It requires that insurers establish their own margins for operating expenses, profit, and contingencies, and decision-making in establishing loss costs is vested in the rating organization rather than insurer personnel. These are also two of the key changes in the ISO loss cost system.

Although the impact of any system change is uncertain, the typical system is likely to have a more significant effect on workers compensation than the system being implemented by ISO will have on other property and casualty lines. For example, the role of dividend competition for workers compensation is likely to be significantly reduced in a loss cost system as it is replaced by competition through loading factors. The transformation from dividend competition to initial price competition is evident in the experience of loss cost states. In the ISO lines, on the other hand, initial price competition, not dividend competition, was the norm before the conversion to loss costs.

Risks--Data Accuracy

The loss cost system in Chart 1 is not obtainable without risk in the area of the accuracy of the data used for overall loss cost analysis by the NCCI. The NCCI depends on individual insurers to report premium converted to the designated

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statistical reporting (DSR) level. For many years insurers have been reporting DSR premium when the only necessary conversions relate to uniform deviations or schedule rating, apparently without significant problems.

However, the loss cost system described in Chart 1 might permit more individual insurer deviations from NCCI loss cost relativities by classification. For this type of deviation, determining the DSR premium is more difficult for the insurer, and verifying the accuracy of the DSR calculation is more difficult for the NCCI. There has not been sufficient experience with this type of system to be confident that accuracy will be achieved without special monitoring efforts by the NCCI. Additional NCCI audit efforts should be required as loss cost systems permitting classification flexibility are introduced.

In the long run, the NCCI may be able to revise statistical plans and reporting procedures to become less reliant on individual insurer DSR calculations.

Perceptions

The system described on Chart 1 permits the NCCI to collect historical expense information, adjust the data to a common basis, and report the data to insurers and regulators. This continued involvement in the expense area may, for some, leave the impression that the system has not sufficiently accomplished the objectives of a loss cost system.

ALTERNATIVES TO THE TYPICAL LOSS COST SYSTEM

Areas of increased insurer independence and reduced rating organization involvement might include the following:

- 1. Components of Loss Costs
 - a. Include provision for loss adjustment expenses in individual insurer loadings. This item would be excluded from NCCI loss costs.
 - b. Include provision for residual market subsidies and/or loss-based assessments in individual insurer loadings. These items would be excluded from NCCI loss costs.
- 2. Experience Rating Plan
 - a. Allow individual insurers to file for the use of their own experience rating adjustments on top of the experience modifications determined by the common NCCI-administered Experience Rating Plan. This approach provides some insurer independence, but maintains a common experience rating plan and the common data base.
 - b Maintain the NCCI as a statistical agent collecting individual policyholder data and providing that data to insurers that use the common data to apply their own experience rating plans. This approach grants insurers independence from a common experience rating plan, but it maintains the common data base.
 - c. Abandon the use of common experience rating plans and common policyholder data bases. This approach provides maximum independence to insurers.
- 3. Classification independence
 - a. Permit insurers to subdivide NCCI classifications.
 - b. Permit insurers to use their own classification relativities.
- 4. Anniversary rating date rule--allow modifications to the rule.

- 5. Individual insurer filing forms--require new filings when NCCI rates change.
- 6. Expense data--restrict the NCCI from the compilation and distribution of any expense information.

These areas are discussed below.

Components of loss costs

The typical loss cost system as presented in Chart 1 of the cover letter, provides that loss costs include adjustments for the following: loss development, trend, anticipated benefit levels, residual market subsidies, loss-based assessments, and loss adjustment expense. Although excluding adjustments for any of these items does not necessarily impair the system, the workers compensation rating system is complex, and all insurers may not be able to properly adjust for these factors. Even a small number of insurers improperly calculating loss costs could result in inadequate, excessive, or unfairly discriminatory rates.

These risks are greatest if adjustments for loss development, trend, anticipated benefit levels, and residual market subsidies are not included. Almost all loss cost systems allow the rating organization to include these adjustments.

Existing loss cost systems vary in their treatment of loss adjustment expense and lossbased assessments, but advisory organizations are generally permitted to include these factors in the advisory loss costs.

Premium-based assessments are generally excluded from loss costs.

Experience rating plan

The weight of history and the practice in loss cost states suggest that continuing a common centrally administered plan is desirable. The common plan may (1) encourage workplace safety in ways which may not be achieved through individual

insurer action, (2) reduce policyholder confusion and (3) permit policyholders to compare their experience to that of other similarly-classified policyholders. The use of a common plan has been viewed as a way to achieve equity among policyholders. Moreover, if there were no common experience rating plan then there are technical issues related to the off-balance in the individual insurer experience rating plans which might affect loss cost adequacy. Further study of the effects seems desirable before taking action to replace a common plan with individual insurer plans.

However, permitting the use of approved individual insurer plans in addition to the common centrally-administered plan is an alternative that minimizes the potential disadvantages listed in the OBJECTIVES OF A LOSS COST SYSTEM section above. Insurer proposed and regulator approved rating plans would be designed to produce adequate and equitable rates. The process of calculating DSR premium would be similar to the process now required to calculate DSR premium when schedule rating is applied. Incentives for workplace safety would probably remain unchanged, because the NCCI common plan remains a factor in the policyholders premium. Control of cost and policyholder confusion would be in the hands of the insurer that proposes to use such a plan.

Classification independence

It is generally recognized that data accuracy is greatest when the data affects the insured's premium. From this perspective, maintaining the common experience rating plan helps to assure uniform classification coding.

Thus, if insurer classification definitions vary too far from the NCCI classification, there is an increase in the risk of classification errors.

In addition to the need for data accuracy in the experience rating plan, the NCCI ratemaking system requires that insurers convert their premium data to NCCI DSR level. This conversion process is critical to the accuracy of NCCI loss cost levels. Too much variation in definitions may affect insurer accuracy and limit the ability of NCCI to audit this process.

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By maintaining an enhanced NCCI field audit program it may be possible to better assure data accuracy under a flexible classification system. However, this will probably require increasing NCCI's role as a statistical agent. Specifically, NCCI enforcement authority may need to be increased, and increased costs may result.

Anniversary rating date rule

The anniversary rating date rule has two components:

- 1. The NCCI prepares experience rating modifications effective on the anniversary rating date, which approximates the policyholder renewal date.
- 2. The manual rates of the policyholder change only on the anniversary rating date, subject to the same flexibility now provided for in the NCCI Experience Rating Plan.

Item 1 is required to maintain a centrally-administered experience rating plan, while item 2 is a convenience in maintaining item 1. The anniversary rating date rule is assumed to apply when the NCCI calculates premium at current rate level. If the rule were totally eliminated, the NCCI would need to collect additional data and/or apply approximations to adjust for the change in procedure. Typically both parts of the rule are maintained in the system. This is the simplest process.

One alternative is the following: (1) experience modifications are promulgated at the anniversary rating date, (2) a policyholder can change insurers and obtain the benefit of the new insurer's rates for the period from the date the policy changed until the anniversary rating date, but (3) at the anniversary rating date, the insured's rates would change based on the revised experience modification and based on the new insurer's rates at the anniversary rating date. The policyholder receives the benefit of the new insurer's rates at the transfer date for the short-term period until the anniversary rating date.

Filing forms

Potential regulatory delay, with resulting inaccuracies in rate levels, makes it undesirable to require companies to file a revised form with every NCCI loss cost change.

The automatic process also simplifies the designated statistical reporting (DSR) process for data reporting. If insurer premiums do not change at the same date that the NCCI loss costs change, then the insurer must do a special conversion of premium to DSR level for the short time period until a uniform, or nearly uniform, relationship to the new NCCI loss costs is reestablished.

Distribution of expense data

The individual workers compensation loss cost states have not addressed the role of the advisory organization in the compilation and distribution of expense information. The system approved for ISO lines of insurance permits ISO to distribute historical factual expense information. We propose that NCCI be permitted to proceed as follows:

- 1. Collect historical general and other acquisition expense data from insurers.
- 2. Adjust the data to a common basis with respect to policyholder premium size distribution, residual market servicing carrier fees, and variations in rate level.
- 3. Summarize the adjusted expense data into groups such as stock insurer, non-stock insurers, national insurers, regional insurers, small insurers, and large insurers.
- 4. Distribute that information to insurers, regulators, and others.

The disadvantage of this approach is that the NCCI appears to maintain a role in insurer expense analysis. The advantages are that the adjusted data is more meaningful than publicly available expense information, and the comparative data would be useful to regulators as well as insurers in evaluating the reasonableness of an insurer's filed loading factor.

With regard to this issue, it is important to note that regardless of the NCCI expense role in the voluntary market, the NCCI appears to maintain a role in insurer expense analysis because of its involvement in the residual market system. Overall, we conclude that the benefits of the distribution of this historical information outweigh the disadvantages. ISO also plans to distribute historical expense information.

Studies of expense by size of policyholder

Objective studies of general and other acquisition expenses by size-of-risk are likely to be available to regulators and insurers only if historic information is collected, analyzed, and distributed by the NCCI. If multi-company studies of expense by size of risk are not available to insurers and regulators, then it is likely that insurer operating expense discounts will become more market-driven rather than costdriven. In the typical system, the NCCI would continue conducting these studies and make the information available to insurers and regulators

Distribution of premium tax and assessment information

In the typical system, this would include historical and factual information on premium tax levels and assessment levels in the state, and how the assessments are handled in the loss costs.

TRANSITION ISSUES

To minimize the costs and confusion associated with the transition to loss costs, we suggest the following:

- 1. There should be as much consistency as possible in the loss cost implementation procedures among states.
- 2. Consideration should be given to deferring the transition to a loss cost system until ISO has completed its own program of loss cost implementation for other property and casualty lines; late 1992 or early 1993 was suggested by many of those we interviewed during this examination.
- 3. The transition should coincide with the NCCI's usual state rate review schedule.
- 4. The implementation procedures should include an educational effort by the NCCI and perhaps other interested organizations for the affected parties. This would include regulatory personnel, insurer personnel, and agents/sales representatives. The timing for loss cost implementation should allow for this educational effort.

REPORT STRUCTURE

Chapter 1 discusses the issues related to loss costs identified in our interviews, reviews of testimony, and other research. Chapter 2 describes current NCCI rate-related procedures in administered-pricing states. Chapter 3 describes NCCI and independent rating (advisory) organization rate-related procedures in loss cost states. Chapter 4 covers loss cost procedures implemented or under consideration by ISO. Based on the issues identified in Chapter 1 and our analysis in Chapters 2, 3, and 4, we evaluate alternative components of loss cost systems in Chapter 5.

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CHART 1				
ELEMENTS OF THE TYPICAL LOSS COST SYSTEM				
1.	The NCCI files loss costs with provisions for:			
	a.	Prospective losses by classification which reflect loss development, trend, and anticipated benefit levels		
	b.	Assigned risk subsidies to be paid by the voluntary market		
	с.	Loss-based assessments		
	d.	Loss adjustment expense		
	e.	Disease loss components		
2.	includ inform decision betwe	The NCCI distributes information relating to its loss cost calculations including (1) alternative approaches for loss development and trend, (2) information on benefit change calculations, (3) information on judgmental decisions such as classification relativity capping, (4) the difference between voluntary and residual market experience overall (and by lassification, if relevant), etc.		
3.	The N to:	The NCCI also distributes historical and factual information with regard to:		
	a.	Premium taxes		
	b.	Assessments		
	c.	Historical information on other insurer operating expenses with appropriate categorization and adjustment for policyholder size and assigned risk service expense considerations		
	d.	Premium comparisons		

CHART 1

ELEMENTS OF THE TYPICAL LOSS COST SYSTEM (CONT.)

- 3. (Continued)
 - e. Individual insurer loss experience compilations
 - f. Expense studies by size of policyholder
- 4. The NCCI administers an Experience Rating Plan, which is common to all policyholders within a state.
- 5. The anniversary rating date rule continues.
- 6. Existing state limitations on individual insurer independence with respect to classification definitions and relativities are continued.
- 7. The NCCI committees of insurers become advisory.
- 8. The Classification and Rating Committees continue to assist in adjudicating questions of class definitions and other roles permitted by the state regulator.
- 9. The NCCI continues to establish residual market plan manual rates.
- 10. For the voluntary market, the NCCI no longer files:
 - a. Provisions for expenses related to premium tax, production, and general overhead
 - b. Provisions for profit and contingencies
 - c. Expense constants

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CHART 1				
ELEMENTS OF THE TYPICAL LOSS COST SYSTEM (CONT.)				
10.	(Continued)			
	d. Premium discounts			
-	e. Minimum premiums			
11.	The NCCI adjusts rating plans, where necessary, to exclude expenses as noted above. The relevant plans pertain to experience rating, retrospective rating, schedule rating, excess loss rating for employers liability, and other miscellaneous rating items.			
12.	State regulators, using the NCCI as their statistical agent, develop rules and procedures to maintain and improve the level of data accuracy and availability. This might include increases in field inspections and verification of insurer reported data.			
13.	Filing procedures for individual insurers are streamlined in a manner analogous to the ISO process, including standardized filing forms appropriate for workers compensation insurance and loading factors that remain in effect until changed by the insurer or disapproved by the regulator.			
14.	Schedule rating is permitted or not permitted based on current state law and regulation. Where schedule rating is permitted, NCCI filings could include schedule rating, but individual insurers could file independent schedule rating plans.			
15.	State rating laws remain basically unchanged. Prior approval laws continue to be administered as prior approval for NCCI loss cost filings and for individual company loading factors or other deviations from NCCI advisory material.			
16.	NCCI continues its other field operations work and its role in maintaining policy forms.			

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In this chapter, we identify issues of importance to various participants in the workers compensation system: insurers, regulators, agents/sales representatives, policyholders, and others. To obtain input from those groups, we reviewed testimony already provided to the NAIC, interviewed additional individuals, and obtained written material from various groups. Appendix A lists the sources of information for this portion of the examination.

Issues associated with the implementation of a loss cost system for workers compensation insurance are similar but not identical to the issues associated with the implementation of loss cost systems for other property/casualty lines of insurance.

The issues can be divided into the following categories:

- I. THE RATING ORGANIZATION
- II. INSURERS
- III. AGENTS/SALES REPRESENTATIVES
- IV. INSURANCE REGULATORS
- V. OTHER ISSUES

The remainder of this chapter is a discussion of these issues.

I. THE RATING ORGANIZATION

The current activities of the NCCI which may be affected by the transition to loss costs are discussed below.

A. Material filed by the rating organization

Under a loss cost system, the rating organization files for the loss cost portion of the rate, not the gross rate. The portion of the rate for which the rating organization is responsible could include the following:

- a. Historical losses
- b. Analysis of loss development
- c. Analysis of trend
- d. Adjustments to current benefit level
- e. Residual market subsidies to be paid by voluntary market policyholders
- f. Loss-based assessment provisions for costs such as second injury funds and other special funds, and workers compensation board costs
- g. Loss adjustment expenses
- h. Disease element loss costs
- i. Premium-based assessments for items similar to those listed in item f

These items are discussed in greater detail in Chapter 2.

In addition to gross rates by classification, NCCI filings currently include minimum premiums, premium discount plans, schedule rating plans (applicable in some states), an experience rating plan, retrospective rating plans, other rating plans, expense constants, anniversary rating date rules, and other rating rules. Some or all of these items may continue to be filed by the NCCI in a loss cost state.

B. Role of NCCI staff

Decision-making

In the workers compensation administered-pricing states listed in Chapter 2, insurer personnel serve on committees which are directly involved in making decisions concerning the development and filing of rates.

In a loss cost environment, it is generally assumed that insurer committee decision-making is eliminated. This is the case for ISO, and also applies to NCCI ratemaking in open competition states. In these situations, the rating organization staff makes the decisions. Insurer personnel are available to provide technical guidance and professional (not business) advice to the rating organization staff.

Thus rating organization staff might become responsible for decision-making in the following areas:

- Preparation of prospective loss costs
- Filing, negotiation, and refiling of loss costs with insurance regulators
- Development of classification definitions and relativities
- Rating plans including the Experience Rating Plan

Distribution of information

In a loss cost system, the rating organization may become responsible for distributing information such as (1) loss cost filings; (2) summaries of expense information for use by insurers, regulators, and others; (3) comparative rate and rating plan information; (4) special studies of the workers compensation system; and (5) evaluations of actual or potential benefit changes.

This information could be made available to a narrow audience--member insurers and regulators on request--or to a broader audience, potentially including any entity requesting and willing to pay for the information, but subject to appropriate confidentiality on individual insurer or policyholder data.

NCCI structure

Some changes in NCCI funding may be desirable. NCCI is funded primarily by premium-based assessments of insurers, which differs from the situation at ISO, where over 70% of financing is from fees for specific services. The assessment process is most suitable for an organization providing similar services to all members, with essentially mandatory membership. If members are allowed to vary their practices from the NCCI's approach, and if NCCI staff is to operate more independently of NCCI's member/owner insurers, then it may become increasingly desirable for financing to be more service-related and less assessment-based. Obviously, the service charges should be structured to enhance competition. More financial independence is also desirable if the NCCI is responsible for providing data to entities other than regulators and member insurers.

In addition to financing issues, the NCCI has testified that it intends to amend its Constitution to permit public representation on its Board. ISO already has one public member on its Board.

Within the NCCI structure, the issue arises whether the NCCI should rearrange priorities, e.g., put less emphasis on insurer profitability issues and more on research and benefit pricing. It is not clear how a loss cost environment will change the relative need for various NCCI services. As the loss cost system evolves, NCCI must be alert to the need to redirect efforts appropriately. Changes in NCCI organization and committee structure may be needed.

II. INSURERS

The activities of insurers will be expected to change with the transition to loss costs. Below, we identify the major issues.

A. Degree of independence permitted individual insurers

Currently permitted independence

In administered-pricing states, the NCCI files rates and rating plans on behalf of all insurers. Depending on state law and regulations, individual insurers are permitted one or more of the following:

- 1. Uniform deviations from NCCI rates for all classifications
- 2. Schedule rating which adjusts rates for individual policyholders
- 3. Policyholder dividends

Individual insurer variations from NCCI classifications are not generally permitted.

In a loss cost system, individual insurers may be limited to the same level of flexibility available in an administered-pricing state, i.e., deviations, schedule rating,

and policyholder dividends. Alternatively, a loss cost system could be more flexible and allow variations in classification relativities, classification definitions, experience rating, and other rating plans. Some of these variations are discussed below.

Variations in classifications

In establishing a loss cost system, there are two fundamental areas of classification rating that require decisions: variations in classification relativities, and variations in classification definitions.

The current common practice in prior-approval loss cost states is to allow rate deviations (varying multipliers) in only a limited number of classes and few new classifications. Some states require that insurers provide support for the deviation, while others allow more freedom.

It is a common practice in open competition states to allow greater freedom in classification relativities and definitions. In administered-pricing states, the common practice is to permit no variation from NCCI classifications.

Regardless of the classification relativity or definition used by the insurer, the insurer is required to report exposure, premium, and claim experience using NCCI classification definitions and to adjust premiums to the NCCI Designated Statistical Reporting (DSR) level (i.e., the standard rates, advisory rates, or loss costs appropriate in the state). Where rate deviations by class are allowed, the conversion to the NCCI DSR level may not be accurately accomplished.

This requirement that an insurer provide data on the NCCI classification basis, even if the insurer uses a different pricing system, varies from the procedure used in other lines of insurance. In most lines of insurance, insurers report statistical data in a manner consistent with their pricing plans. However, in workers compensation, it is the use of a common experience rating plan that requires insurers to convert their own classification definitions to those of the NCCI. Allowing insurers to create

variations in classification definitions introduces a risk to the quality of data used for experience rating, classification ratemaking, and overall cost level calculations.

Variations in experience rating

A fundamental facet of the workers compensation system is the current use by all insurers of a common experience rating plan centrally administered by the NCCI and independent state rating and advisory organizations. Under this system, all insurers apply the same modification factor to a policyholder.

The use of a common experience rating system is considered important because it is intended to encourage policyholder loss prevention in ways which may not be achievable by individual insurer action. It is also argued that the use of a mandatory common experience rating plan is more equitable to policyholders than the insurer-designed voluntary experience rating plans used in other lines of insurance.

The use of a common, centrally-administered plan requires that all insurers report data to the NCCI on a common classification basis. Furthermore, such a plan requires that the NCCI collect individual policyholder data and maintain premium and claim data in the same database. If a common experience rating plan were not continued, the NCCI could maintain separate premium and claim databases, a simpler task than maintaining the current common database.

Accuracy at an individual policyholder level is critical for experience rating calculations; any errors arising in the experience rating process from variations in classifications from insurer to insurer are therefore significant. For classification and overall ratemaking, however, errors in a small number of individual policyholder situations are not usually material to the ratemaking process. Thus, the need to maintain common classifications is reduced if a common, centrally-administered experience rating plan is abandoned.

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The experience rating plan issue does not arise in the ISO context because (1) plans for ISO lines have generally been voluntary, (2) the plans are applied by insurers rather than ISO, and (3) the plans apply to fewer policyholders.

In workers compensation loss cost states, the use of a common, centrallyadministered plan is generally mandatory. Only Michigan permits variations in the experience rating plan.

B. Structure and content of insurer filings

In administered-pricing states, individual insurers are not required to make any workers compensation filings if the insurer intends to follow the NCCI rates. Furthermore, if an insurer chooses to file a deviation from NCCI rate levels, that deviation generally remains in effect until the insurer files a new deviation, regardless of whether the NCCI rates change in the interim.

Loss cost filings

In a loss cost system, all insurers must, at a minimum, file for a loading factor which is applied to NCCI loss costs to produce manual rates. Individual insurers must also file other expense-related rules such as minimum premiums. Depending on the degree of flexibility permitted, insurers may need to file additional rating rules and rating plans.

Filing form

For the loss cost system applicable to ISO lines of insurance, the NAIC has prepared a standard form. In this form, the insurer refers to the ISO loss cost circular and adds its own expense and profit provisions, and perhaps loss deviations. The form requires support for the provisions proposed by the insurer, and is structured so that

an insurer can either have it apply only to the most current revision or to future revisions until the form is resubmitted.

In a workers compensation loss cost system, a comparable form is desirable to simplify the insurer preparation and regulator review of individual insurer filings. However, changes to the ISO form are necessary, since workers compensation filings must address issues which are not part of the ISO form. These issues are described below.

First, the standard workers compensation rating system includes the use of expense constants for small risks. A provision in the form to show the proposed insurer expense constant, its justification, and the effect on the insurer expense loading would be desirable.

Second, the workers compensation manual rate structure includes a premium adjustment for expenses by size-of-risk. To determine manual rates for workers compensation, it is necessary for the insurer to consider and file information related to both its overall average expenses for all policyholders and the effect of its premium discount and expense constant programs on the manual rate. The average expense information is required to establish the overall loading factor and to allow the regulator to examine the profit level implied by the loading factor. The effect of the insurer's premium discount and expense constant programs is needed to calculate the loading to be applied to manual loss costs to produce rates which yield the target overall loading factor. The current form for ISO lines of insurance does not consider information of this type.

Third, the ISO form does not elaborate on the insurer's development of its profit provision. The investment income potential for workers compensation is more significant than for many ISO lines of insurance; treatment of investment income on the filing form may thus be desirable. Standardization in the investment income area may be difficult, however, because of the wide variations in state practices.

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Fourth, depending on how assessment provisions are handled in the loss costs, the individual insurer filing should show how those assessments are treated in the proposed rates.

Finally, the NCCI loss costs include an off-balance for the average effect of experience rating plan modification factors. If insurers are permitted to use their own experience rating plans, separate identifiable adjustments for the plan off-balance for each insurer would be appropriate. ISO requires no such adjustment because the ISO experience rating plan off-balance is assumed to equal to unity for manual ratemaking purposes.

Benefit changes

In a workers compensation system, consideration of benefit changes is required. For most property casualty insurance policies, contractual coverage seldom changes during the term of the policy. In workers compensation insurance, however, changes in benefit level occur regularly, either due to legislative action or to automatic adjustments built into the benefit structure. These adjustments are typically effective based on the date of the accident; thus, these benefit changes affect in-force policies. In the current workers compensation system, the NCCI files for changes to in-force policies when there is a significant benefit change, and the change is accomplished by filing a table of premium adjustment factors which vary by policy effective date.

A loss cost system should accommodate this aspect of workers compensation coverage. Presumably, the NCCI will evaluate the effect of benefit changes on loss costs and prepare the appropriate loss cost filings, including the appropriate loss cost adjustment factors for in-force policies.

Regulatory compliance

Two concerns regarding regulatory compliance are potential delays and insurer costs. The extent of regulatory delay depends significantly on the details of the filing process, and particularly on whether insurer rate changes happen automatically with NCCI changes or require individual insurer action.

The costs of regulatory compliance also depend on the details of the process. The expenses of rate filings are now largely included in NCCI costs. The NCCI prepares filings, supplemental supporting information, and expert testimony, and supplies legal representation and expert witnesses. The increase in insurer expenses related to filings in loss cost states will probably not be major if (1) the NCCI continues to bear the costs of achieving approval for the loss cost portion of the rate and (2) insurer filings are generally approved without significant regulatory proceedings. If insurers are required to regularly defend their individual filings in independent regulatory proceedings, compliance costs will increase.

C. Other impacts on insurer practices

Dividend plans

Dividend plans are not necessarily affected by the change to a loss cost system; however, some changes can be reasonably expected. The extent of these changes depends in part on the purpose of the dividend plan from the insurer's viewpoint.

Dividend plans serve varying purposes. For one type of dividend plan, the aim is to return expense savings to policyholders; this type would disappear to the extent that expense savings are reflected in individual insurer loading factors. Another type is intended to provide groups of policyholders a dividend based on better-than-expected loss experience for the group, essentially acting as a group retrospective rating plan. This type is likely to continue unless group retrospective rating arrangements are permitted. Finally, differences in loss costs between individual

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insurers and the NCCI-approved average loss costs may be treated differently by different insurers. Some may choose to reflect expected differences in the loss cost loading factor, and others may choose to wait until actual results are available and reflect the differences in dividends. Overall, some reduction in dividends is likely.

Changes in dividend structure may produce changes in insurer marketing strategies. In ISO lines, the introduction of loss costs does not change the basis on which insurers compete. However, for workers compensation prior to loss costs, dividend plans may have been a focus of competition. After loss costs, even with minimal pricing freedom, the focus of price competition is likely to shift toward initial cost based on the loading factor, and away from dividends.

Insurer-agent/sales representative communications

Insurers will need to communicate their rate levels to their agents/sales representatives; this could be done by manual rate pages or other means. This is discussed further in the next section.

III. AGENTS/SALES REPRESENTATIVES

The two major issues directly affecting agents/sales representatives are issues that also affect other participants: (1) how the loss cost system will affect the agents/sales representatives' ability to communicate efficiently with insurers and policyholders, and (2) the extent to which the loss cost system might reduce the number of insurers willing to provide workers compensation coverage.

A. Communication

In other lines of insurance, insurers and agents/sales representatives have varying methods of communicating loss cost information. These methods include agents/sales representatives receiving the ISO loss cost manual, agents/sales

representatives receiving individual insurer loading factors and instructions on the application of those factors to the loss costs, agents/sales representatives receiving insurer manuals containing insurer final rates, and agents/sales representatives using computer rating systems developed by computer service bureaus.

For workers compensation, the possible means of communication are the same, except that there is currently no significant computer rating service market. If there were significant variation in rates and/or rating approaches between insurers, computer rating services for workers compensation might emerge.

Agents/sales representatives use rate vendor services not only to obtain individual policyholder premium quotes, but also to obtain information regarding the market level of rates and to identify unreasonably high or low rates. For workers compensation, that process has been relatively easy when insurers are limited to uniform deviations, individual risk schedule rating modifications, and policyholder dividends. If increased individual insurer variability is permitted, the need for comparative rating services may be increased.

B. Interstate risks

Workers compensation involves interstate risks at least as often as other lines of insurance. Therefore, for agents/sales representatives as well as insurers, standardization of approaches across states is important. Since the workers compensation system includes independent workers compensation rating/advisory organizations in many of the largest workers compensation states, it may be more difficult to achieve standardization in workers compensation than in the ISO lines of insurance. While the current system is not standardized, implementing loss costs may make standardization even more difficult.

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C. Market concentration

There is concern that the additional complexities of dealing with a loss cost environment will reduce the number of insurers providing workers compensation coverage. This can affect agents/sales representatives, policyholders, and others. The effect of loss costs on market concentration may be different in smaller states than in larger states. Analysis of this issue is beyond the scope of this study.

IV. INSURANCE REGULATORS

From a workload perspective, the issues discussed in section II.B above with respect to the content of insurer rate filings will also have a significant effect on the regulatory workload.

The overall regulatory objectives of a loss cost system can be viewed as those expressed in the Alternative Model Workers Compensation Competitive Rating Act. These are as follows:

- 1. To prohibit price-fixing agreements and other anti-competitive behavior by insurers.
- 2. To protect policyholders and the public against the adverse effects of excessive, inadequate, or unfairly discriminatory rates.
- 3. To promote price competition among insurers, thus providing rates responsive to competitive market conditions.
- 4. To provide regulatory procedures for the maintenance of appropriate data reporting systems.
- 5. To improve the availability, fairness, and reliability of insurance.
- 6. To authorize essential cooperative action among insurers in the

ratemaking process and to regulate such activity to prevent practices that tend to substantially lessen competition or create a monopoly.

7. To encourage the most efficient and economic marketing practices.

Our evaluation of a reasonable loss cost system is based on these criteria.

V. OTHER ISSUES

Other issues which are affected by loss costs concern transitional issues, data quality, the impact on the residual market plans, the potential for needed changes to the Insurance Expense Exhibit, and other issues.

A. Transitional issues

Timing

The foremost transitional issue is timing. Many are concerned that a change to workers compensation loss costs while ISO is completing its transition will create problems for agents/sales representatives, regulators, and insurers. There is some degree of consensus from within the industry that it would be desirable for workers compensation loss costs to begin after ISO is essentially through its transition for the currently scheduled lines of business. This would mean beginning in late 1992 or early 1993.

The reasons for waiting include the fact that attention by insurer, agent/sales representative, and regulator personnel is required for the ISO transition, and multiple transitions may be too much to handle. Furthermore, some expressed the view that it would be desirable to allow ISO to resolve potential problems with the system before introducing it to workers compensation.

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It is also considered important that the transition occur in a phased manner like the ISO transition, rather than by converting all rates to loss costs at a single date.

Education

The second transitional issue is education for agents/sales representatives, insurer personnel, regulators, and others. To some extent, these groups will have been educated to the requirements of a loss cost system through the ISO conversion. However, the current workers compensation system is different from the pre-loss cost ISO system, and the workers compensation loss cost system is also likely to differ from the ISO loss cost system. Therefore, an active education process by the NCCI, at least at the level of the ISO education process, is reported desirable.

Use of rate freedom

It remains uncertain how quickly, if at all, insurers will use the rating freedom given to them under the provisions of a loss cost system.

B. Data quality

The issue of maintaining data quality was mentioned by most of those we interviewed as being one of their greatest concerns in the loss cost transition for workers compensation.

Data accuracy for individual policyholders is critical for a centrally-administered experience rating system. A loss cost system does not necessarily disrupt that process; however, depending upon the degree of independence available to insurers, the loss cost system does put additional burdens upon the system.

With respect to overall loss cost levels, the accuracy of the NCCI procedures depends on insurer compliances with the Designated Statistical Reporting (DSR)

level rules for premiums. The greater the insurer independence, the greater the chance for inaccuracies in the process.

The anniversary rating date rules are also relied upon in the NCCI calculation of earned premium on current level. If the rule is eliminated, additional data or approximate methods will be needed. In the long run, the NCCI may need to change its approach to obtaining premium at current rate level in order to rely less on insurer calculations (DSR) and policy writing rules (anniversary rating date rules).

For classification relativities and experience rating values, the accuracy with which insurers define classes and convert them back to NCCI classifications is important. For reasons including the use of a common experience rating plan, the NCCI has probably been more attentive to classification assignments than is true for other lines of insurance. Changes to the system may reduce the homogeneity of classification data.

In general, it should be recognized that exceptions which can be readily accommodated on a state exception basis become more difficult in a national system.

In addition, the impact on the database will depend on the manner in which loss costs are implemented.

C. Management of residual market plans

The residual market plans are now administered through the NCCI. In administered-pricing states, insurer committees have the decision-making responsibility for residual market plans, including the development of final gross rates. In advisory rate and loss cost states, insurer committees have largely removed themselves from residual market plan decision-making.

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ISO is moving towards an environment where it will no longer be involved in any gross rate promulgation, voluntary or involuntary. All ISO activity will be limited to loss costs. This is feasible for ISO, because there are separate organizations like Automobile Insurance Plans Service Office (AIPSO) that handle residual market rate filings. This may be desirable for public relations purposes as well as for the purpose of encouraging greater competition. As long as the NCCI is involved with residual market gross rate levels however, the ISO-type separation will not be achieved for workers compensation. The role of NCCI committees in the residual market process may need to be carefully separated from the role of the committees as advisors in voluntary loss costs.

D. Insurance Expense Exhibit data

Currently, Part III of the Insurance Expense Exhibit (IEE) requires insurers to adjust net earned premium to a standard premium basis by adding premium discounts and retrospective rating adjustments. By making these adjustments, premiums for all insurers are intended to be on the same level.

With loss costs, insurers are required to report "premium" at the DSR level in NCCI data calls. If "Standard Premium" were replaced by DSR premium for the purposes of the IEE, a uniform level of data would be available when, if ever, all states are on a loss cost basis. At best, the value of this portion of the IEE will be uncertain for several years. Very likely, this portion of the IEE will never accomplish the purpose it had when essentially all states were subject to administered-pricing systems without deviations. Considering that the NCCI may be permitted to collect and distribute more meaningful data, the NAIC should consider eliminating the section.

E. Other perspectives

Some of the comments from the perspective of labor, the general public, and others both inside and outside of the insurance industry follow:

- 1. Will loss costs really result in increased competition and a reduction in rates? Arguments vary on this issue.
- 2. Some say that the full benefit of a loss cost system will not be achieved unless the rating organizations are limited to historical loss costs (consideration of trend, loss development, and the like would be the responsibility of individual insurers) and totally removed from the expense issue (no publication of expense information).
- 3. Will the loss cost system result in fewer insurers and more concentration of the market share by the larger insurers?
- 4. Will a loss cost system increase the cost of doing business and therefore increase the cost to the policyholder? There are no reliable estimates of the additional cost. The magnitude of any such costs will depend on details of the process by which loss costs are regulated.
- 5. With increased competition and perhaps lower premiums, will insurer safety activities be reduced, to the disadvantage of workers? Similarly, will changes to the Experience Rating Plan, if any, reduce policyholder incentives for reducing workplace injuries? Unlike the systems in which ISO is involved, the workers compensation system evolved with the intent of encouraging worker safety as well as policyholder financial security.
- 6. The workers compensation system is under a variety of strains, as evidenced by the increasing residual market, the size of requested rate level changes, and the legislative attention to proposed changes. The loss cost system is not

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seen as a way to deal with any of these problems. The real problems, some say, include increasing attorney involvement, increasing health costs, inappropriate benefit structures, and erosion of the exclusive remedy rule.

7. Should there be more freedom in rating for large policyholders than for smaller policyholders? It is difficult to separate large from small, but more freedom might reduce the pressure to self-insure.

These issues are generally beyond the scope of this study.

CHAPTER 2 Current NCCI Rate-Related Procedures

This chapter describes the services the NCCI provides to its member companies in the traditional prior-approval, administered-pricing environment. This applies to the following states:

Alabama	Mississippi
Alaska	Missouri
Arizona	Montana
Colorado	Nebraska
District of Columbia	New Hampshire
Florida	Oklahoma
Idaho	South Dakota
lowa	Tennessee
Kansas	Utah
Maine	Virginia

Procedures in independent bureau states with administered pricing systems are generally similar, but the scope of the study did not require a state by state analysis of the differences. In open competition and loss cost states, the procedures will vary from those described in this chapter. Chapter 3 discusses the main variations. This chapter contains the following sections:

- I. RATE COMPONENTS AND RULES
- II. COMMITTEE ROLES
- III. DISTRIBUTION OF MATERIAL TO AGENTS/SALES REPRESENTATIVES
- IV. RELATIONS TO REGULATORS
- V. POLICYHOLDER SERVICES
- VI. DATA COLLECTION

MILLIMAN & ROBERTSON, INC.

CHAPTER 2 Current NCCI Rate-Related Procedures

I. RATE COMPONENTS AND RULES

The NCCI rates and rules in administered-pricing states generally determine the premium the policyholder will pay for its coverage, subject to the degree of independence permitted to individual insurers by state law or regulation. The sections below discuss how NCCI filings consider the following: (A) Rates; (B) Expense constants; (C) Premium discounts; (D) Minimum premiums; (E) Anniversary rating date rule; (F) Experience rating plan; (G) Retrospective rating plans; (H) Schedule rating plans; (I) Other rating plans; (J) Policyholder dividend plans and practices; (K) Rate changes for policies in effect; (L) Retroactive rate changes; (M) Distribution of expense information to insurers; (N) Employers liability increased limit percentages; (O) Loss constants; and (P) Residual market classification relativities.

A. Rates

Rates are subject to prior approval and are filed by NCCI on behalf of insurers. The rates the NCCI files in these jurisdictions contain allowances for all losses, expenses, and profit. Specifically, they include the following categories:

Provisions for losses

Workers compensation losses consist of the indemnity and medical benefit payments to injured workers and their healthcare providers for covered injuries. They also include reserves for anticipated future payments for accidents which have occurred. For purposes of ratemaking, there are three major adjustments to losses reported as of a given date.

Loss development

Workers compensation claims take time to settle, pay, and close. As a result, the losses reported under the statistical plan and in the financial data calls are often

CHAPTER 2 Current NCCI Rate-Related Procedures

estimates. Loss development factors adjust the reported losses by the observed historical pattern of the changes in prior loss estimates.

Benefit level changes

Workers compensation losses are governed by the statutory provisions contained in each state's workers compensation act. The benefits under these statutes often change automatically through indexed provisions or amendments. Consequently, historical losses may be adjusted by the average impact of benefit changes contained in the workers compensation act. The NCCI reviews these legislative changes and calculates factors representing their average impact.

Trend

The trend factor adjusts the historical workers compensation losses for expected cost changes over and above the expected changes in the exposure base. The exposure base for workers compensation is generally total payroll, which increases (decreases) yearly by changes in wage rates and employment levels. Thus, workers compensation premiums are indexed to payroll changes.

Provision for Expenses

The expense categories of production; general; and taxes, licenses, and fees are included in the rates.

Production expenses

These are all expenses relating to the production of insurance premiums. They include commission and brokerage and other acquisition expenses, and are usually included as 15% of the manual rate. Premium discounts will reduce this expense
percentage for premiums in excess of \$5,000. Premium discounts are discussed in greater detail below.

General expenses

These expenses are for the general operations of the insurers, other than production and claims. The NCCI's Actuarial Committee annually recommends a provision for these expenses after reviewing countrywide experience. Premium discounts reduce this expense percentage for premiums in excess of \$5,000, based on periodic countrywide multi-insurer size-of-risk expense studies.

Taxes, licenses, and fees

These expenses usually consist of the premium tax in each state, premium-based assessments, and taxes such as industrial commission taxes, second injury assessments, and guaranty fund assessments. They also include miscellaneous fees such as insurer licensing fees, rate and policy form filing fees, agency licensing fees, and the policyholder share of employee Social Security taxes. This expense component is not reduced through the application of premium discounts.

Profit and contingencies

This is a provision for underwriting profit and contingencies. Traditionally, the NCCI requests 2.5% of premium for this provision. The NCCI maintains that this is a reasonable value for underwriting profit and contingencies, after the consideration of investment income.

However, this item is often adjusted downward, sometimes to negative values, in response to alternate calculations of the consideration of investment income. The profit and contingency allowance is not adjusted by the premium discount program.

Loss adjustment expenses

Loss adjustment expenses are considered in the final rates through a factor applicable to losses alone. The NCCI's Actuarial Committee annually reviews and recommends a loss adjustment factor after a review of countrywide Insurance Expense Exhibit loss adjustment expense averages.

Loss-based assessments

Certain loss-based assessments are included directly in the definition of losses collected by the Statistical Plan and under the financial data calls. Other loss-based assessments are calculated and applied to the losses as a factor.

Disease elements

Some classifications contain extra amounts which are added to produce the final rate. Disease elements recognize the impact of special disease limitations introduced in the ratemaking process, the extra hazard implicit in the multiple-occurrence nature of these losses, and the fact that the long latency period associated with many occupational diseases may result in the exclusion of these losses from the classification data.

B. Expense constants

The expense constant, \$140 in current NCCI filings, is a flat charge added to the premium otherwise produced, and is designed to recognize a minimum expense amount common to all policyholders regardless of premium size. It thus recognizes the fixed elements of general and other acquisition expenses. The expense constant is determined through an NCCI special study by size-of-risk, usually performed once every five years. Between studies, the expense constant is adjusted by inflationary factors. The expense constant is added once per policy.

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C. Premium discounts

The NCCI promulgates two tables of premium discounts: a stock table and a nonstock table. In each state, an insurer may use either table regardless of whether it is legally structured as a stock, mutual, reciprocal, etc. Generally, an insurer must notify the NCCI of its decision and must use the selected premium discount table on all policies it issues.

Premium discounts recognize that the expenses of insurers do not increase directly with increases in premium volume. Instead, they result in reduced percentage allowances for commission and brokerage and other acquisition and general expenses at higher layers of premiums. The non-stock premium discounts are determined by an NCCI committee and are based on judgement.

For other acquisition and general expenses, the stock premium discount table is based on the same special study of expenses by size-of-risk as the expense constant. Other portions of the discount program are based on judgement.

D. Minimum premiums

The NCCI Basic Manual also provides for minimum premiums. If the premium for a policyholder as otherwise determined by the rates and rules is below the minimum premium, the minimum is charged. The NCCI publishes minimum premiums by classification in each of the administered-pricing states. In general, the minimum premium is calculated as a multiple of the rate designed to represent the annual premium for one average worker. The expense constant is then added. Typically, the minimum premium resulting from this formula is limited to a minimum and maximum amount before publication on the rate pages. When the minimum premium changes, current ratemaking procedures contain an offset to the rates so that this change does not produce additional premium.

E. Anniversary rating date rule

The Basic Manual contains a rule stating that if a policy is canceled and then rewritten, the rates, rules, and experience modification factor in effect at the beginning of the original policy period are applicable to the rewritten policy. The NCCI or other rating bureau can reestablish the anniversary rating date.

F. Experience rating plan

The NCCI publishes and administers an Experience Rating Plan mandatory for all eligible policyholders. The rules of this plan are contained in the Experience Rating Plan Manual. The experience of all policyholders is reported to the NCCI by insurers according to the Statistical Plan. The NCCI's experience rating formula compares the individual experience of each policyholder to the average experience expected for similar policyholders, and results in an experience modification factor. In general, a three-year period expiring one year prior to the effective date of the new policy is used, although the rules provide for shorter or longer periods in certain circumstances. Factors greater than unity increase the policyholder's premium, whereas factors lower than unity decrease it. All insurers follow the uniform plan, and a single experience modification factor is issued regardless of the insurer writing the policy. In general, the experience is combined for policyholders with operations in more than one state or with more than one insurance policy.

G. Retrospective rating plans

Five retrospective rating options are published by the NCCI. Retrospective rating is optional for eligible policyholders, subject to insurer and policyholder agreement. Generally, only large-premium-sized policyholders are eligible (eligibility starts at \$5,000 in standard premium). Under retrospective rating, the premium charged to a policyholder depends on the actual loss experience that emerges under the policy. A minimum and maximum premium is agreed on, expressed as a percentage of standard premium. Within the minimum and maximum, the premium is based on

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the loss record of the policyholder, multiplied by an expense factor.

The first four plans are called tabular plans. The minimum and maximum premium factors are pre-determined based on the expected loss size of the policyholder, and the other parameters of the plan are contained in a table based on these pre-determined minimum and maximum premiums. The fifth plan is more complicated because it allows different combinations of maximum and minimum premiums to be selected. All retrospective rating options automatically include the standard expense provisions and premium discount plans.

H. Schedule rating plans

In twelve states NCCI files a schedule rating plan, in which the premium for a policyholder may be modified in accordance with the filed plan based on individual risk characteristics. There is a minimum and maximum charge or discount for each of the following risk characteristics: premises; classification peculiarities; medical facilities; safety devices; employee selection, training, and supervision; management cooperation with the insurer; and management-safety organization. The overall schedule modification is subject to maximum and minimum values. The schedule rating plans contain minimum eligibility requirements based on premium at manual rates.

I. Other rating plans

In addition to the standard plans, some rating classes are subject to special rules. In the calculation of chemical and dyestuff rating classes, the applicable rates are tempered through a complicated averaging technique so that the more hazardous chemical classifications receive higher rates. Overall, no additional premium is produced through this procedure. Similarly, the rates for maritime coverage are determined through a combination of state act and federal act rates according to a pre-filed formula. Coal mine classes are subject to a different rate manual, rating rules, and experience rating plan. There are also merit rating plans, and loss deductible plans available in some jurisdictions. Michigan has a special plan for the wrecking of buildings, and Florida has a special plan applicable to contracting

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classes. Other states have implemented an adjustment to the standard experience rating plan for contracting classifications called the Loss Ratio Adjustment Program (LRAP).

J. Policyholder dividend plans and practices

The NCCI does not file, recommend, or administer the dividend plans of any insurers.

K. Rate changes for policies in effect

The amount of workers compensation benefits in a state are determined by that state's legislature. It is customary for legislatures to modify the workers compensation benefit package from time to time. In addition, many state workers compensation statutes automatically adjust benefit levels in response to changes in an index, usually wages. Workers compensation benefit changes affect the benefits for all accidents on or after the effective date of the change.

The impact of these benefit changes are often not known at the time of policy inception, and are not included in the price. The workers compensation policy, however, automatically responds to pay the amount determined by the revised statute. Therefore, to respond to the changes in losses resulting from benefit changes, the workers compensation policy permits the insurer to revise the premium for the unexpired portion of the policy if approval is received by the regulator.

L. Retroactive rate changes

Occasionally, manual rates are not available to agents and/or insurers prior to the effective date of the rates. In that situation, the estimated premium for the policyholder is based on the prior rates. At audit, the final premium is calculated based on the approved rates. From the policyholder's perspective, this appears to

be a retroactive rate change.

M. Distribution of expense information to insurers

The NCCI publishes countrywide summaries of the Insurance Expense Exhibit, with loss, expense, and premium information shown by type of insurer (Stock, Mutual, Reciprocal, State Funds, Other). This information is compiled from the individual insurer submissions of the Insurance Expense Exhibits. In addition, the NCCI rate filings contain the expense allowances used in the determination of manual rates.

N. Employers liability increased limit percentages

The standard workers compensation policy includes employers liability coverage up to \$100,000 for bodily injury by accident, \$100,000 for bodily injury by disease, and a \$500,000 policy limit. The NCCI publishes a table of increased limit percentages to provide the premiums for higher limits, if so elected. The same table contains minimum premiums for the increased limits.

O. Loss constants

Loss constants apply in only a few states. Where applicable, one loss constant is used per state, corresponding to the classification with the highest loss constant. Loss constants are not subject to experience rating. Where applicable, the minimum premium includes the loss constant premium so a further addition is not necessary. Loss constants are not applicable if the premium in any state with loss constants is in excess of \$500.

P. Residual market classification relativities

In general, the NCCI files for the residual and voluntary market rates in the same filing. The residual voluntary market rates use the same classification relativities. In some states, the rates for the residual market are at a higher level than the voluntary

market rates. In other states, the same rates are used for both markets.

II. COMMITTEE ROLES

The NCCI has four committees directly affecting what is contained in a rate filing in administered-pricing jurisdictions.

A. Actuarial Committee

The Actuarial Committee is directly responsible for the ratemaking methodologies contained in the rate filing. Techniques for loss development, trending, experience periods, classification relativity calculations, credibility formulas, and so forth, are first approved by this committee prior to use in any state. These are the general techniques which become available to the NCCI staff for use in preparing the rate filing. The Actuarial Committee does not review the particular application of the methodologies chosen by the staff for use in any particular state in connection with a specific rate filing. Examples of Actuarial Committee decisions include:

Experience Period

Overall rate levels are determined on the basis of an unweighted average of the indications from the most recent calendar-accident year data and from the most recent completed policy year data.

Loss development methods

Currently available development methods are paid loss development, incurred loss development excluding insurer estimates for Incurred-But-Not-Reported losses (IBNR), and incurred loss development including insurer estimates for IBNR.

Regardless of which method is used, the unweighted average of the development emerging in the two most recent calendar years provides the basis for the development factors. NCCI staff independently reviews the specific conditions applicable in a particular state and recommends a method for use in a specific state for a specific filing. However, the Actuarial Committee does not review these recommendations prior to their use in a state filing.

Trending methods

The current procedure results from actuarial committee recommendations. NCCl staff may make specific adjustments, where appropriate, for a given state in connection with a specific filing. These staff decisions are not reviewed by the Actuarial Committee prior to their use.

Other decisions

The NCCI classification ratemaking procedures, including development methods, experience periods, national experience, and credibility, directly result from the decisions of the Actuarial Committee.

In addition, the Actuarial Committee reviews historical countrywide expense data and provides recommendations for the allowances to be used for production expenses; general expenses; miscellaneous taxes, licenses, and fees; and loss adjustment expenses. The committee also determines recommended Premium Discount Tables and expense constants. This review takes place annually and is used by NCCI staff in preparing rate filings in all administered-pricing states.

Other tasks performed by the Actuarial Committee are a review of the percentages for employers liability increased limits, which are then recommended for filing in all states when the Committee determines changes are appropriate, and implementation

of special programs. Examples of these special programs include rate differentials for residual markets and the elimination of premium discounts for the residual market.

B. Individual Risk Rating Committee

The Individual Risk Rating Committee reports to the Actuarial Committee. It is responsible for recommending the formulas used under the Experience Rating Plan, the Retrospective Rating Plan, schedule rating plans, merit rating plans, and other plans. The Actuarial Committee has final authority over the Individual Risk Rating Plan Committee.

C. Rates Committee

The Rates Committee reviews the specific rate indications and the specific methodology or methodologies recommended by the NCCI staff prior to their use in a particular state filing. This committee recommends the methodology and rate indication to the individual state's Classification and Rating (C&R) Committee for final approval.

D. Classification and Rating Committees

There are separate Classification and Rating (C&R) Committees for each state. They have final authority over the rate filings filed in their states, and they review all aspects of the rate indication, including the specific methodologies used. They consider the Rates Committee recommendations, but are not bound by them. The C&R Committees authorize the NCCI filings. They are also involved in the decisions whether to litigate or compromise in states where the original rate filing is disapproved.

In addition to their responsibilities concerning rates and rate filings, the C&R Committees also hear appeals by policyholders concerning the application of the

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classifications and rates to their specific policy. They issue decisions regarding the specific classifications and rates which should be applied to the policies under appeal. The decisions of the C&R Committees on these issues can usually be appealed to the insurance department and/or the courts. The C&R Committees also have jurisdiction over individual classification definitions and new classifications.

III. DISTRIBUTION OF MATERIAL TO AGENTS/SALES REPRESENTATIVES

The NCCI provides a variety of materials to insurers; many of these are available to agents/sales representatives and the general public.

A. Rate and rule manuals

Three NCCI rate and rule manuals are available for agents/sales representatives and insurers.

Basic Manual

The Basic Manual contains the General Rules applicable to all states concerning the premium determination for workers compensation policies. It contains state pages listing exceptions to the General Rules and the rates applicable in a given state. Subscription service is available for updates.

Experience Rating Plan Manual

This manual contains the General Rules and formulas applicable to the Experience Rating Plan. It also contains state pages which list state exceptions and the current experience rating values (Expected Loss Rates, D Ratios, W and B values). Again, subscription service is available for updates.

Retrospective Rating Plan Manual

This manual contains the General Rules, formulas, tables, and endorsements applicable to the retrospective rating plan. State exception pages are also provided. Subscription service is available for updates.

B. Experience modification factors

NCCI sends experience modification calculations to the insurer of record 30 days prior to renewal. Additional copies of the experience modification factors are available, for a charge, with a letter of authorization. In addition, the NCCI provides experience modification factors over the phone to authorized requestors (principally agents/sales representatives).

C. Other products and services

The NCCI also provides a brochure containing the products and services it offers. They are available to insurers, as well as outside parties, including agents/sales representatives.

IV. RELATIONS TO REGULATORS

The NCCI submits filings to regulators and serves as their statistical agent.

A. NCCI rate filings

Rate filings in administered-pricing states are made with the insurance department and are subject to prior approval. The NCCI government, consumer, and industry affairs department is responsible for making and supporting the filings in each state.

B. Statistical agent

The NCCI is the statistical agent in administered-pricing states. A common Statistical Plan is filed and approved in most of the jurisdictions. Insurers are required to adhere to the Statistical Plan.

V. POLICYHOLDER SERVICES

NCCI provides the following policy services:

A. Policy review

Copies of individual policies are filed with the NCCI's field operations division, where the rates and payrolls are reviewed for compliance with the approved rates and classifications. These policy submissions set up a control procedure whereby the NCCI expects to receive Unit Statistical Reports in accordance with the Statistical Plan.

Unit Statistical Reports contain individual policyholder exposure, premium, and loss data. They are used in the calculations of classification relativities and experience modification factors.

B. Classification inspections

Another service provided by the NCCI field offices is individual on-site inspections to review the insurer's application of the correct classification code assignments. These inspections are performed as requested. In addition, inspections are performed on randomly selected risks.

C. Policyholder inquiries

Finally, the NCCI responds to individual policyholder requests concerning the rates and rating procedures it administers.

VI. DATA COLLECTION

The NCCI collects four distinct types of data:

A. Financial data calls

The NCCI bases the overall rate level changes on the data collected on financial data calls. These calls contain insurer aggregate loss and premium data.

Calendar year experience

Premiums and losses by state are on a calendar year basis. Premiums collected are standard earned premium at NCCI rates, standard earned premium at insurer rates (if deviations or schedule rating are used), and net earned premium (premium after the impact of premium discounts and retrospective rating adjustments). The losses are calendar year incurred losses.

Calendar-accident year experience

The premium information on this call is the same as that for the calendar year call, except that the history for up to the last 15 years is collected. The losses are split into indemnity and medical components, and paid losses, case reserves, bulk reserves, and IBNR reserves are collected for each accident year.

Policy year experience

The same three types of premium are collected; however, policy year premiums contain premiums for policies written during a one-year period. Ultimately, fifteen years of data will be collected. The losses are those that result from the policies issued in each year. The same indemnity/medical and paid/reserve breakdowns are provided as for the calendar-accident year call.

B. Statistical plan data

Data is continuously reported under the NCCI Statistical Plan as individual policy experience reaches the appropriate maturity. Payroll, premium, and loss information is provided on an individual policy basis. These data form the basis for the Experience Rating Plan modifications and the individual classification rate relativities.

C. Detailed claim information

This data system collects descriptive information on lost-time cases, and it is used to review the individual characteristics of losses in the jurisdictions where it is in place. It is not used directly in ratemaking, except to the extent it may provide information useful to the valuation of benefit changes.

D. Other data calls

These data calls are designed to provide supporting information for specific purposes. Information is sought for expense data, including the Insurance Expense Exhibit, state allocations of expenses, and special expense studies by size-of-risk. Information is collected on the impact of schedule rating adjustments, where it is used in the reconciliation of premiums on the other calls. There are also special calls requesting specific information in certain jurisdictions where these data are not available through other sources.

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This chapter describes the services the NCCI and independent rating organizations provide to insurers in open competition and prior approval states which have already implemented loss costs. These services apply to the following states:

Connecticut	Maryland
Georgia	Michigan
Hawaii	Minnesota
Illinois	New Mexico
Indiana	Oregon
Kentucky	Rhode Island
Louisiana	South Carolina
	Vermont

This chapter contains the following sections:

- I. RATE COMPONENTS AND RULES
- II. COMMITTEE ROLES
- III. DISTRIBUTION OF MATERIAL TO AGENTS/SALES REPRESENTATIVES
- IV. RELATIONS TO REGULATORS
- V. POLICYHOLDER SERVICES
- VI. DATA COLLECTION

There are independent rating organizations with jurisdiction in some of the states included in this chapter. The role of the independent rating organization and the relationship between the independent rating organization and the NCCI varies from state to state. Section I, *Rate Components and Rules*, discusses the components of loss costs developed by either the NCCI or independent rating organizations. Sections II through VI, discuss only NCCI procedures.

I. RATE COMPONENTS AND RULES

The discussion below relates to two types of loss cost states. The following major subdivisions apply:

- 1. <u>Open competition states</u> with advisory loss costs that exclude some or all expense and profit. The states listed here require the filing of advisory loss costs. The rate organization might also file advisory rates. Informational filings are made with the insurance departments containing these advisory loss costs.
 - GeorgiaMichiganIllinoisMinnesotaKentuckyRhode Island1MarylandVermont

¹Rhode Island is a competitive rating state for insurers with greater than 1% market shares, and a prior approval state for others. The NCCI files traditional rates for the insurers with less than 1% market shares.

2. <u>Prior-approval states</u> with loss costs. The loss costs filed by the NCCI in these states are subject to prior approval. In addition, individual insurers must file either a multiplier or full rates, also subject to prior approval.

Connecticut Hawaii Indiana¹ Louisiana New Mexico Oregon South Carolina

¹Allows advisory rates.

In both sets of states, gross rates are filed for the residual market plans. The sections below discuss how loss cost filings consider the following: (A) Rates; (B) Expense constants; (C) Premium discounts; (D) Minimum premiums; (E) Anniversary rating date rule; (F) Experience rating plan; (G) Retrospective rating plans; (H) Schedule rating plans; (I) Other rating plans; (J) Policyholder dividend plans and practices; (K) Rate changes for policies in effect; (L) Retroactive rate changes; (M) Distribution of expense information to insurers; (N) Employers liability increased limit percentages; (O) Loss constants; (P) Residual market plan classification relativities; (Q) Other assessments; and (R) Classification relativities and definitions. We confine our discussions below to those states where some form of loss cost, either advisory or prior approval, is used.

A. Rates

The provisions included in the loss cost rates create the principal difference between the filings for the administered-pricing states (discussed in Chapter 2) and filings in the loss cost states (discussed in this chapter).

Provisions for losses

The rates filed in loss cost states consist of only the loss portion of the premium. States differ as to their treatment of the amount of actuarial adjustment permitted to historical reported losses in the published loss cost rates.

Loss Development

Loss development is always included in the loss costs. Minnesota, however, only allows development up to an eighth report. All other states allow development to an ultimate report. Minnesota, however, publishes pure premiums which include the differential impact of eighth-to-ultimate development as it impacts the more serious indemnity and medical losses. The Minnesota ratemaking report contains information concerning historical eighth-to-ultimate factors which could be used by insurers to convert the published loss costs to an ultimate basis.

Benefit level changes

These are included in all states. Oregon, however, does not permit the use of benefit adjustment factors representing the impact of changes in the maximum and minimum weekly benefits, which are indexed to that state's average weekly wage. Oregon believes that these benefit changes are reflected in the premium through payroll increases.

Trend

Trend is included in all states except for Michigan and Minnesota. Michigan excludes trend in its entirety, but Minnesota includes indemnity and medical trend relativities in the loss costs. The Minnesota ratemaking report provides information on observed trends and provides a method for insurers to include trend if they wish.

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Provision for expenses

Provision for production expenses; general expenses; taxes, licenses, and fees; and premium-based assessments is excluded in loss cost filings.

Profit and contingencies

Provision for underwriting profit and contingencies is uniformly excluded in the loss cost filings.

Loss adjustment expenses

Loss adjustment expenses are included in a small majority of states (8 of 15 states). States excluding loss adjustment expenses are Georgia, Hawaii, Illinois, Kentucky, Louisiana, Maryland, and Oregon. Loss adjustment expenses are comprised of allocated and unallocated components. Allocated loss adjustment expenses are those specifically attributable to an identifiable claim, such as outside legal expenses. All loss adjustment expenses, both allocated and unallocated, are either included or excluded in the aggregate. We have not found a state which allows one type of loss adjustment expenses, but which excludes the other.

Loss-based assessments

States which include loss adjustment expenses generally also include loss-based assessments. Exceptions are Connecticut and South Carolina, which allow loss adjustment expenses, but exclude loss-based assessments.

Indiana, Rhode Island, and Vermont include loss adjustment expenses, but have no loss-based assessments to include. The states of Connecticut, Georgia, Hawaii, Illinois, Kentucky, Louisiana, Maryland, Oregon and South Carolina all have lossbased assessments but exclude them from the loss cost rates.

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Disease elements

The disease elements in the loss costs states exclude the expenses and profit in the same manner as the rates for other classes.

B. Expense constants

Expense constants are excluded in all loss cost only filings. They are, however, included in states that allow both advisory rates and advisory loss costs. They are included in Rhode Island.

C. Premium discounts

Premium discounts are excluded in most loss cost only states. However, they are filed on an advisory basis in Hawaii and Rhode Island. They are included in states that allow both advisory rates and advisory loss costs.

D. Minimum premiums

Minimum premiums are included in the states where the NCCI or independent rate organization publishes both advisory rates and advisory loss costs, and they are also included in Rhode Island. In Oregon, the NCCI publishes only the loss cost portion of the minimum premium. Minimum premiums are not published in any other loss cost only states.

E. Anniversary rating date rule

This rule is applicable in all states listed above except Illinois.

F. Experience rating plan

The NCCI Experience Rating Plan is mandatory for all eligible policyholders in all of the above states except Michigan. Insurers must file their own plans in Michigan.

G. Retrospective rating plans

States differ in their treatment of NCCI retrospective rating options. Implicit in options 1 through 4 are the standard expense allowances and premium discount schedules. The NCCI includes references to plans 1 through 4 in all states that allow advisory rates as well as advisory loss costs. The Rhode Island filing also references plans 1 through 4. The other loss cost only states do not include references for plans one through four.

Option 5 is more complicated in that some aspects of this plan include expense elements whereas other aspects do not. In advisory-rate states, all values pertaining to option 5 are supported. The practice in loss cost states, however, is to eliminate all reference to the items in option 5 which relate to expenses or which are impacted by expenses. Specifically, the following references are eliminated:

- Expected Loss Ratios These depend upon the final expense allowances in the manual rates.
- Table of Expense Ratios These depend on the actual expense needs of retrospectively-rated policies.
- Loss Conversion Factor These depend upon the expense needs of retrospectively-rated policies.
- Tax Multipliers These depend upon the specific tax provisions applicable in a state.
- Retrospective Development Factors These depend on the expense allowances included in the manual rates.

Items that are preserved in option 5 for the loss cost states include:

- Table of Expected Loss Ranges This is maintained in some states, but reference to it appears to be eliminated in others. This table indicates which column of the Table of Insurance Charges is applicable to risks of a given size, when size is measured in terms of expected losses.
- Table of Insurance Charges This table is the key to determining the amount to charge for the minimum and maximum premiums agreed to under the retrospective rating option. The net insurance charge is expressed as a percentage of expected losses, and consequently does not include expense provisions.
- Excess Loss Factors This table determines the amount of losses expected in excess of specific loss limitations. The tables in administered-pricing states are expressed as percentages of standard premium which presume the standard expense loadings. A modification to these tables is made in loss cost states to express the losses expected in excess of specific loss limitations as percentages of the loss cost portion of the premium, rather than as a percentage of standard premium. This modification eliminates the impact of expenses in these factors.

H. Schedule rating plans

Of the states considered in this chapter, the rating organizations file a schedule rating plan only in Indiana, New Mexico, Rhode Island, and South Carolina.

I. Other rating plans

In advisory-rate states, the special rating plans continue as they have in the administered-pricing states. For the loss cost only states, these rating plans are adapted to the loss cost environment without difficulty.

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J. Policyholder dividend plans and practices

The rating organizations do not file, recommend, or administer the dividend plans of any insurers.

K. Rate changes for policies in effect

The NCCI files for an adjustment for outstanding policies in situations where a benefit change has a significant impact on benefit costs in the same manner as in the administered-pricing states discussed in Chapter 2.

L. Retroactive rate changes

We did not to find an example of where this occurred in an advisory-rate or loss cost state.

M. Distribution of expense information to insurers

The NCCI publishes countrywide tabulations of historical expense data contained in insurer Insurance Expense Exhibits. Specific expense allowances are shown in NCCI filings in states which allow advisory rates as well as advisory loss costs. There are no voluntary market expense allowances distributed to insurers for the loss cost only states.

N. Employers liability increased limit percentages

These are applied in the traditional manner.

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O. Loss constants

Loss constants did not apply in any state reviewed in this chapter.

P. Residual market plan classification relativities

Generally, residual market filings are made at the same time as the voluntary market filings, but are filed separately. The residual market maintain the same classification relativities as the voluntary market in the loss cost states.

Q. Other assessments

A few states have assessments which are charged directly to policyholders and are not a part of the workers compensation premium. Examples of states with these assessments are Kentucky and Oregon.

R. Classification relativities and definitions

Some states require adherence to the rating organizations' classification definitions, while others allow individual insurer definitions. Where individual definitions are allowed, data is converted back to NCCI definitions. Of the prior approval states, Oregon allows insurers to subdivide the rating organization's classifications.

Independent insurer classification relativities is a related issue. Of the prior approval states, New Mexico and Oregon allow it. It has not been tested in South Carolina and Hawaii. Connecticut and Louisiana do not allow independent classification relativities.

II. COMMITTEE ROLES

The NCCI committees, active in the administered-pricing states, have a restricted role in the loss cost and competitive rating states identified in this chapter.

A. Actuarial Committee and Individual Risk Rating Committee

The activities of the Actuarial Committee and the Individual Risk Rating Committee are the least affected because they operate on a general basis, non-specific to a particular state or rate filing. The basic procedures, tools, and techniques used in the loss cost states are the same as those for the other states. However, these committees do not have any authority concerning a specific state filing.

B. Rates Committee

The Rates Committee does not issue any recommendations concerning the rate filings in the loss cost and competitive rating states. The NCCI staff makes all decisions concerning the specific elements to include, the final methodologies chosen, and the timing and amounts of rate filings.

C. Classification and Rating Committees

Each Classification and Rating Committee relinquishes its authority over voluntary loss costs and residual market rates in each of these states. The NCCI staff is fully responsible for the contents of the rate filings. The Classification and Rating Committees, however, still perform their functions concerning the application of the classification plan to particular policyholders.

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III. DISTRIBUTION OF MATERIAL TO AGENTS/SALES REPRESENTATIVES

Instead of manual rates, the Basic Manual contains advisory rates or loss costs. In loss cost states, retrospective rating plans 1 through 4 are generally excluded. The same Basic Manual, Experience Rating Manual, Retrospective Rating Manual, and products and services are available in most states. The NCCI does not publish advisory loss costs for Minnesota's voluntary market in the Basic Manual. However, the Minnesota Workers Compensation Insurance Association, Inc. does publish advisory loss costs in its Minnesota Ratemaking Report. This publication is available to agents/sales representatives, insurers, and other interested parties.

Experience modification factors are calculated and promulgated in the same manner as in the administered-pricing states. An exception exists in Michigan, which does not use uniform manuals or a uniform experience rating plan. Consequently, no manual pages or experience modification factors are issued for that state.

IV. RELATIONS TO REGULATORS

The NCCI role with regulators includes the following:

A. NCCI rate/loss cost filings

In the loss cost and competitive rating states, rate filings are made with state insurance departments. The loss costs or advisory rates are informational filings in the competitive rating states, and are subject to prior approval in prior-approval states. The NCCI's government, consumer, and industry affairs department is responsible for making and supporting the filings in each of these states in the same manner as in the administered-pricing states, but without guidance from insurer committees.

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B. Individual insurer rate filings

In some states, particularly the advisory-rate states, individual insurers can reference the NCCI filing and adopt it as their own. Alternately, they can reference the loss cost component in the states with advisory loss costs, but must file for the other elements constituting final rates. Frequently, a multiplier from the loss costs is all that need be filed. In the prior approval states, a similar referencing can take place. Usually, if approved, the NCCI's loss costs are the mandatory starting point for individual insurer rates. Adjustments to the level of loss costs, for factors relating to losses as well as expenses are frequently permissible.

C. Statistical agent

The NCCI is the statistical agent in the advisory-rate and loss cost states. A Statistical Plan is filed and approved in most of the jurisdictions. Insurers are required to adhere to the Statistical Plan. Where insurers are free to use subclassifications or other adjustments to the NCCI's Statistical Plan, the insurers must convert data back to the NCCI's Statistical Plan for statistical reporting purposes.

V. POLICYHOLDER SERVICES

NCCI provides the following policyholder services:

A. Policy review

Copies of individual policies are filed with the NCCI's field operations division. The rates are not reviewed, but the payrolls and classifications are. These policy submissions form the basis for the control procedure governing the statistical reporting and experience rating requirements expected to emerge in the future as a result of the policy reviewed.

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B. Classification inspections

Classification inspections continue in the usual manner for the open competition states as well as for the administered-pricing states. As a result of the inspection, the NCCI instructs the insurer on the appropriate NCCI classifications for the risk.

VI. DATA COLLECTION

Of the data collected in NCCI calls, the financial data and the special calls are impacted the most by loss costs. Statistical plan reporting is impacted in a minor way, and the detailed claim call not at all.

A. Financial data calls

The loss information on the three financial data calls, i.e., calendar year call, policy year call, and calendar-accident year call, are no different in the loss cost or advisory-rate states. The reporting of premiums, however, is substantially different. The loss cost and advisory rate states use the concept of a Designated Statistical Reporting (DSR) level for the reporting of the premiums in these states. In the states which allow the NCCI to publish both rates and loss costs, the DSR is usually at the level of the advisory rate spublished during the applicable time periods. In states that allow only loss costs, the DSR is usually at the level of the NCCI's published loss costs.

The use of advisory rates or loss costs, therefore introduces a complication to the reporting process. Insurers must report amounts they <u>would have charged</u> had they used either the NCCI's published advisory rates or published loss costs. The NCCI requests the Standard Earned Premiums at the DSR level, the Standard Earned Premiums at insurer level (i.e., the actual charged rates), and Net Earned Premiums. The Net Earned Premiums are at insurer level and include the impact of premium discounts and retrospective rating adjustments.

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This process appears to be working satisfactorily at this time. However, for most insurers in most states the difference between DSR premium and standard premium is a uniform multiplier. As individual insurers deviate by classification from NCCI loss costs, it becomes more difficult for the insurer to maintain DSR premium information and it becomes more difficult for the NCCI to verify the accuracy of the insurer data.

B. Statistical plan data

The statistical plan reporting continues in exactly the same manner in the advisoryrate and loss cost states. The rates and premium reported under this plan are to be the actual rates charged for the policy. The reporting of losses is unaffected.

C. Detailed claim information

Since the detailed claim call collects only loss and claim information, it is unaffected and functions normally in these states.

D. Other data calls

The other data calls are adapted to DSR level concept where appropriate.

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CHAPTER 4 Loss Costs as Applied by ISO

This chapter contains the following sections:

- I. ISO APPROACH
- II. STATE REGULATORY CHANGES
- III. CALIFORNIA RATING LAWS
- IV. MATERIALS SUPPLIED BY ISO
- V. MAJOR DIFFERENCES BETWEEN ISO AND NCCI

I. ISO APPROACH

Some important points to consider in a discussion of the ISO implementation of loss costs are:

- Loss costs include loss development, trend factors, and all loss adjustment expenses.
- The change to loss costs is being made gradually, state by state, at state rate revision anniversary dates.
- Rules and rating factors are generally not affected by the change to loss costs.
- Individual risk rating plans will be modified to "key off" of loss costs rather than premiums. This will allow the same plan to apply to insurers with different expense loadings.
- Retrospective rating plans will not be changed. They have been designed to reflect insurers' own expense provisions, rather than the ISO provisions underlying manual rates. Therefore, ISO believes that any modification to the plans is not necessary.

CHAPTER 4 Loss Costs as Applied by ISO

- As of October 1990, approximately 35 states have adopted loss cost procedures. ISO did not expect adoption of loss cost procedures in Texas and Puerto Rico. The status of procedures for the remaining states is pending.
- For automobile insurance, ISO has responsibility for voluntary rates only. ISO is not responsible for residual market rates, except in that it serves as statistical agent for AIPSO. Residual market rates are still determined on a gross basis by AIPSO.

II. STATE REGULATORY CHANGES

The NAIC has two model rating laws: a competitive rating law and a prior-approval law. The competitive rating law has not been changed, since it already refers to ISO loss costs. The prior approval law, which previously required that advisory organization rates be filed for prior-approval, has been modified to require that advisory organization loss costs be filed for prior approval.

Under the NAIC-suggested prior-approval procedure, ISO obtains prior approval of loss cost documents. Insurers are required to complete and file for prior approval a form to reference the ISO document, with an expense and profit load and possibly a loss provision modification.

A standard form has been prepared by the NAIC enabling an insurer to reference files from the ISO rate circular, adding expense and profit provisions, and perhaps loss deviations, in a uniform format. The form requires support for the provisions proposed by the insurer.

In states with use and file rating laws, the ISO loss cost circulars and insurer forms will also be filed and subject to evaluation by the insurance department after the rates have been put into effect.

We have not found any states considering fundamental changes in their rating laws, e.g., changing from use and file to prior approval, as a result of the ISO loss cost change. Instead, states are only modifying their regulations where necessary to accept loss costs instead of rates.

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CHAPTER 4 Loss Costs as Applied by ISO

Massachusetts, Texas, and North Carolina have statutory rating organizations for some lines of insurance. In these states, no action has been taken to adopt loss cost procedures for statutory line of insurance.

III. CALIFORNIA RATING LAWS

The California system for Proposition 103 lines of insurance (i.e., excluding workers compensation) is unlike the systems in other states. The ISO loss cost approach is not used in California. Instead, insurers individually file a detailed series of forms in which losses are trended, loaded for expenses and profit, and so forth. All computations are done by the insurers on the forms, with all necessary judgements made by the insurers.

ISO is permitted to maintain a personal automobile data bank which is accessible, for a fee, to insurers. In other respects, ISO continues to operate as a statistical agent in California.

Residual market rates are computed by the California Assigned Risk Pool Association. These rates are uniform for all insurers, and are set by prior approval of the department.

IV. MATERIALS SUPPLIED BY ISO

The standard form developed by the NAIC is structured so that an insurer can have it apply only to the most current revision, or to future revisions until the form is resubmitted.

For commercial lines, ISO will distribute loss cost manual pages to insurers and agents/sales representatives on their mailing list. Manual holders will determine gross rates either by obtaining factors or gross rate pages from insurers. They also may obtain the gross rate information from computer servicing organizations.

For personal lines, ISO will produce a manual containing rules only. Loss costs will be distributed by circular to insurers. No manual pages will be distributed by ISO.

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ISO publishes other advisory circulars containing information which may be used by insurers to support their pricing actions, for example, expense data by line and by size-of-risk, loss compilations, trend and loss development circulars, and premium comparisons (for personal lines only, and not in all states).

As stated above, ISO is changing its individual risk rating plans to a loss cost basis. To help insurers adapt to this change, they are distributing explanatory material regarding the change and also are distributing material explaining how an insurer might convert the ISO loss cost plan to its own premium plan.

ISO has prepared educational materials to assist insurers and agents/sales representatives with the transition to loss costs. In addition, they participated in a video teleconference with the Society of Chartered Property and Casualty Underwriters (CPCU) to disseminate loss cost information.

ISO has shifted all responsibility for decisions on actuarial methodology and judgment to the ISO staff. Many of these decisions were formerly made by insurer committees. ISO still has insurer committees, but they act strictly in an advisory capacity.

V. MAJOR DIFFERENCES BETWEEN ISO AND NCCI

The ISO statistical data base is not significantly changing as a result of the implementation of loss costs. However, some major aspects of the ISO data base are different from those of the NCCI workers compensation data base.

The ISO data base is used only for ratemaking. This is unlike the NCCI data base, which is used for experience rating as well as ratemaking. Because of the experience rating requirement, the NCCI data base is a policy data base, where premiums and losses on individual policies can be identified. The ISO data base, however, is actually comprised of a premium/exposure data base and a loss data base, where the two are processed separately. It is thus not possible to match up premiums and losses on individual policies from the ISO data base.

The ISO rules are also more flexible than the NCCI rules in several respects, and this is reflected in the larger number of options in the ISO Statistical Plan. For example,

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ISO experience rating plans are optional, while NCCI plans are mandatory. Also, ISO has schedule rating plans permitting premium credits and debits based upon subjective underwriting criteria in all states, while the NCCI does so only in approximately a dozen states.

There is also much less uniformity of policy forms and coverages underlying the data in the ISO data base than is the case for workers compensation. Many insurers have their own special package program or unique coverages and report the experience for these packages or coverages to ISO, but it is specially coded and used in a limited fashion for ratemaking.

ISO has "A-rated classes," broadly defined classes (e.g. metal products manufacturing) where ISO believes that the average loss per exposure for the class is not indicative of the loss potential for any particular risk within the class. For this reason, ISO does not determine manual rates for A-rated classes. The NCCI, on the other hand, has just a limited number of A-rated classes.

Not all ISO data for standard coverages or packages is used for commercial lines ratemaking; several large classes such as composite-rated risks, large A-rated risks, and loss-rated risks are excluded. This data corresponds to larger corporate risks, where it is believed that premiums are not based on ISO manual rates. This varies from workers compensation, since, workers compensation rates are computed based on experience from all risks.

ISO has a three-tiered statistical plan, i.e., a full plan, an intermediate plan, and a mini-plan. The smallest insurers qualify for the mini-plan, while the largest must use the full plan. The mini-plan data is usually excluded from ratemaking calculations for all commercial lines. The intermediate plan data is used for overall rate level calculations, but not for increased limits factor calculations and is used in a limited fashion for other relativity calculations. The NCCI only has one statistical plan for all insurers.

Some insurers have received permission from ISO to submit data in limited detail. Exposure units are typically not provided in these cases, so the data cannot be used for ratemaking.

Package policies represent a fundamental difference between ISO and the NCCI, in

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that ISO has package policies and the NCCI does not. For commercial lines, ISO segregates monoline and package data. Furthermore, not all package policy data is included in the ISO data base. Data from the ISO SMP Package Program and certain insurer package programs are included in the ISO ratemaking data base, but other insurer package policies are not. ISO makes the decision whether or not to include an insurer's data.

Conversely, the workers compensation data base currently includes data for all risks and is not affected by package variations. Complete recording is required of all insurers reporting to the NCCI.

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This chapter describes a manner in which loss costs could be implemented for workers compensation in NCCI administered-pricing states with a minimum of disruption to the current system. This plan adopts the features common to existing workers compensation loss cost states on issues specific to workers compensation, and it uses concepts from the ISO loss cost procedures in areas where national issues are involved. The system is referred to as the Typical loss cost system. Many variations to this typical system are possible, and some of these are also discussed.

In this chapter we will discuss assumptions in the following areas:

- I. CONTENTS OF NCCI LOSS COST FILINGS
- II. EXPERIENCE RATING PLANS
- III. INSURER FILINGS
- IV. CLASSIFICATION RATING
- V. RETROSPECTIVE RATING
- VI. SCHEDULE RATING
- VII. RELATIONSHIP BETWEEN NCCI AND INSURER COMMITTEES
- VIII. INFORMATION SUPPLIED TO INSURERS
- IX. RESIDUAL MARKET RATES AND RATING VALUES
- X. POLICY FORMS
- XI. OTHER MANUAL RULES
- XII. DISTRIBUTION OF INFORMATION TO AGENTS/SALES REPRESENTATIVES

- XIII. AVAILABILITY OF NCCI DATA
- XIV. TRANSITION PROVISIONS

I. CONTENTS OF NCCI LOSS COST FILINGS

The NCCI would produce loss cost filings in which loss costs are based on historical loss experience modified by loss development, adjustments to current benefit level, and trend. The following additional adjustments would also be included in the loss costs:

- a. Residual market subsidies to be paid by voluntary market policyholders
- b. Loss-based assessments
- c. Loss adjustment expenses, both allocated and unallocated
- d. Disease loss components

As part of the filing, the NCCI would produce loss costs by rate classification. Classification rates would reflect all relevant actuarial procedures, including adjustment for the off-balance in the Experience Rating Plan.

NCCI would also evaluate benefit changes and file in-force policy loss cost adjustment tables.

Currently, the NCCI loss costs include these elements in most loss cost states. A notable exception is Michigan, which does not include trend. Another exception is Minnesota, where the Minnesota Workers Compensation Insurers Association, Inc. (MWCIA) loss costs reflect special treatment of trend and loss development. The

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treatment of loss-based assessments is variable among loss cost states, some include them, but most states exclude them.

These elements are discussed below.

A. Loss development and trend

All states for workers compensation and all states except California for ISO lines have included loss development in the loss costs produced by the rating organization.

One partial exception is Minnesota workers compensation, in which MWCIA loss costs are developed to 8th report, and companies are supplied with information that includes several methodologies with which to calculate development factors from 8th report to ultimate. The Minnesota exception may be viewed as a response to its unique circumstances. Minnesota law provides escalating benefits which have a tendency to increase the loss development "tail" beyond the 8th report. Minnesota also has a mandatory reinsurance pool that covers large claims. This shortens the tail on net of reinsurance data.

All states except Michigan and Minnesota for workers compensation, and all states except California for ISO lines, include trend in the loss costs produced by the rating organization.

While it is true that functioning markets exist in states that have followed alternate paths, to exclude trend and loss development from loss costs for workers compensation would be a major departure from the existing programs. At a minimum, it is likely that if trend or loss development were excluded in whole or in part from the loss costs, additional data must be made available to insurers, and educational efforts would have to be augmented.

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B. Loss adjustment expense

The treatment of loss adjustment expense varies widely among loss cost states in the workers compensation system. Loss adjustment expense is included in the ISO loss costs, except in California.

Insurers divide loss adjustment expense into two categories. The first, allocated loss adjustment expense, (ALAE) refers to claim handling expenses assigned to a specific claim file, for example, attorney fees for a specific case. The second, unallocated loss adjustment expense, (ULAE) refers to claims handling expenses that are not assigned to particular files. These could include the cost of salaries for a claim department.

For liability coverages, allocated loss adjustment expense is defined by ISO to include only the legal defense provided to the policyholder under the terms of the contract. This does not depend on the manner in which the insurer handles claims. ALAE can be included in the overall loss costs and distributed in the ratemaking system to states, territories, and classifications. ULAE by its nature, is not directly chargeable to states, territories, and classification.

For workers compensation, there has not previously been a precise definition of allocated loss adjustment expense for NCCI Statistical Plan purposes. Since the relative proportion of expenses between ALAE and ULAE depends on the extent to which an insurer uses salaried claim personnel or outside claim personnel, the expense distribution varies among insurers. Including only allocated loss adjustment expenses for workers compensation is thus not feasible because insurers may have far different distributions of allocated versus unallocated when compared to the industry, and the resulting loss costs would not properly represent average costs.

Therefore, we propose that all loss adjustment expense be included in the typical system. The alternative is to include no loss adjustment expense. There have been some NCCI attempts to obtain better allocated loss adjustment expense data in the rating system, so it may be premature to eliminate all loss adjustment expense from a nationwide loss cost system.

Even when loss adjustment expense is included in loss costs, insurers can readily use different loss expense provisions by adjusting their loading factors.

C. Assessments

Workers compensation is unlike most other types of insurance with respect to the range of assessment programs. For example, workers compensation may be subject to assessments for (1) second injury funds, (2) workers compensation board expenses, (3) supplemental benefit funds, (4) reinsurance funds, and so on. The magnitude of the assessments varies widely from state to state, and the assessment base also varies from state to state and program to program. For example, some assessments are based on premium, some on premium after several adjustments, some on paid indemnity losses, and some on total paid losses; some are charged directly to policyholders like a sales tax, rather than included in premiums.

Most of the workers compensation states permit the advisory organization to include loss-based assessments in the loss rate. If loss costs do not include loss-based assessments, it becomes particularly important that the NCCI summarize and report to insurers on the details of assessment provisions.

D. Residual market subsidies

Voluntary loss costs would contain provision for residual market subsidies to be paid by voluntary market policyholders. There are three possibilities. First, if the voluntary and residual markets experience is combined to determine a uniform level of loss costs, then the voluntary loss costs will contain a subsidy, provided the assigned risk experience is worse than the voluntary market. Second, if some but not all of the generally worse than average experience is reflected in the assigned risk rates, then the subsidy will be lower, but will still be positive. Finally, if the assigned risk rates reflect all of the experience differential, then there is no voluntary market subsidy.

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II. EXPERIENCE RATING PLANS

In the typical system there would be a single Experience Rating Plan applied to all policyholders. The rating values underlying the plan would be determined by NCCI as part of the loss cost filing. Therefore, as under the current administered-pricing procedure, the experience modification factor for policyholders would be the same no matter which insurer offers coverage. The modification factors would continue to be calculated by the NCCI or the appropriate rating (advisory) organization. Therefore, the NCCI would continue to collect the policyholder data that underlies the experience modifications.

These decisions are discussed below.

A. Experience rating in workers compensation loss cost states

In workers compensation loss cost states, the experience rating plans are generally mandatory. Only Michigan permits variations in the plan among insurance companies.

B. Goals of an experience rating plan

The use of a mandatory common experience rating plan is intended to produce more equity among policyholders than insurer-designed plans or the voluntary plans used in other lines of insurance. If mandatory experience rating were eliminated, the experience rating process is likely to be more market-driven and less cost-driven.

The use of a common experience rating plan, centrally administered and applied to all policyholders, has been viewed as important because it is intended to encourage policyholder loss prevention in ways which may not be achieved through individual insurer action. The use of a common plan can reduce policyholder confusion and permit policyholders to compare their experience to that of other similarly-classified policyholders.

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C. Other issues

If a common experience rating plan is to be used, the NCCI needs to continue collecting individual policyholder data. If a common, centrally-administered plan is not to be used, the NCCI's data collection goals could change. The NCCI could then collect data for exposures and claims, but need not retain the ability to match individual policyholder exposures and losses. This kind of data base is simpler to maintain than the current NCCI database.

Our typical system has a common experience rating plan which applies to both voluntary and residual markets. The rating parameters will be based on the combined experience of the voluntary and residual markets.

There is potentially some logical inconsistency in simply applying a uniform set of experience rating values for companies charging different rate levels. For example, suppose one insurer charges 20% more than another insurer because its loss costs per unit payroll are 20% higher. Use of a common experience rating plan could double-count the adverse experience, since the experience rating parameters are used to measure how much better or worse an individual risk is compared to an average risk. The situation can be handled satisfactorily by the proper selection of the insurer loss cost multiplier. For example, if Insurer A's risks are 20% "worse" than average, then the loss cost differential must be chosen so that the loss cost differential, in combination with the average experience modification, produces the proper amount of premium differential for Insurer A.

III. INSURER FILINGS

Insurers would file a loading factor with the insurance department. This loading factor would adjust loss costs for insurance insurer expenses, profit, and possible differences in expected loss cost levels.

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In addition, insurance companies would file their own premium discount plans, expense constant programs, minimum premiums, and schedule rating, as appropriate.

A form should be developed to assist the insurers with the calculations necessary to derive the multiplier. Workers compensation has an expense structure, which includes expense constants and premium discounts. This is more complex than the expense structures in filings for other commercial lines of insurance. Furthermore, workers compensation is also more commonly subject to assessments than other lines of insurance. The filing form should accommodate these elements of the workers compensation expense structure.

It would also be beneficial to regulators and insurers if NCCI provides some summary expense information. This is discussed in item VIII, below.

The rate multiplier filed by an insurer would remain in effect until it is revised by the insurer or disapproved by the insurance department. That is, if the NCCI files a new set of loss costs, the insurer would automatically adopt the new loss costs with its current rate multiplier unless it files to do otherwise. This includes changes in loss costs caused by changes in benefit levels (i.e., law amendment adjustments). Insurers would be permitted to automatically adopt NCCI in-force loss cost adjustment tables when necessitated by benefit changes and approved by the insurance department.

In cases we studied, the loadings sometimes remained in effect until changed. Of seven prior-approval states three allow loadings to continue, and four do not. The alternative procedure would require that insurers constantly reevaluate their loading and may lead to increased competition. On the other hand, insurance departments would need to process far more filings than they would have to process in the typical system.

IV. CLASSIFICATION RATING

In the typical system, we assume insurers have limited freedom to establish alternative classification relativities and new classification definitions, so long as provisions are made to redefine the experience in standard classifications for ratemaking purposes. For each state, the degree of permitted independence would be the same in loss cost states as it is in the current system. This approach should be able to maintain the existing level of integrity of data for experience rating, overall loss cost calculations, and classification relativities.

Increasing insurer independence is feasible, but it increases the risk to the accuracy of experience rating, overall loss cost calculations, and classification relativities. Diligence by NCCI and insurers could control those risks. However, particularly during the transition to loss costs, the effort required for that increased diligence may not be available.

The risks to the various elements of the NCCI process were discussed in Chapter 1.

V. RETROSPECTIVE RATING

NCCI would continue to provide support for the loss elements of retrospective rating. Options 1 through 4, which rely on tables that include expense elements, would no longer be available. In any event, the NCCI intends to eliminate these options for other reasons, including the fact that they are not frequently used.

Insurers will have to determine their own expense tables for use in option 5. This should not be a significant problem, because these plans are generally used by more sophisticated insurers.

Furthermore, the NCCI is currently responsible for reviewing insurer retrospective rating plan calculations. That service would be discontinued as a standard practice, but the NCCI could provide the service if requested by an insurer. Again, since retrospective rating plans are generally used by more sophisticated insurers, we do

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not expect that the review service would be frequently used. In order for the NCCI to review an insurers retrospective rating plan calculation, the insurer would need to provide its expense provisions to the NCCI.

VI. SCHEDULE RATING

If schedule rating plans are permitted, the NCCI would be allowed to file advisory plans. Any insurer wishing to file an alternative schedule rating plan would be permitted to do so.

VII. RELATIONSHIP BETWEEN NCCI AND INSURER COMMITTEES

NCCI staff would make all decisions regarding loss cost filings. This would include decisions regarding loss development, trend, the effect of changes in benefit levels, classification relativity capping procedures, and others. If the loss cost filing is subject to approval by a state insurance department, NCCI staff would be responsible for negotiations required in achieving a resolution. These issues would not be referred to committees of insurers.

The NCCI Actuarial Committee could continue to provide advice, but would not be permitted to require staff to adopt procedures generally or in any specific states.

The state Classification and Rating Committee would no longer make state specific recommendations regarding loss cost filings, but they would continue to have a role as referee in classification disagreements between policyholders and insurers.

The Classification and Rating Committee may still advise NCCI staff on establishing new classification codes and/or refining existing class code definitions. However, the specific loss costs to be implemented for individual new classifications would be decisions of the NCCI staff.

The removal of insurer personnel from a decision-making role in the loss cost preparation and filing process is common to all the systems we studied.

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We believe that the use of Classification and Rating Committees (C&R) to referee classification disputes is reasonable given the use of a common classification system. Moreover, this reduces the burden upon insurance departments, which would otherwise need to serve as the first level referee for those classification disputes. This is not an issue for ISO lines where classifications are not necessarily uniform across companies. It should be noted that if common classifications are not required then the classification role of the C&R Committees might no longer be necessary.

VIII. INFORMATION SUPPLIED TO INSURERS

NCCI should supply a broad spectrum of materials to insurers to assist them in making independent decisions about their pricing behavior.

Material to be supplied to insurers should include the following categories:

A. Information relating to NCCI's loss cost calculations

This would include such material as alternative approaches for loss development and trend, and information on judgmental decisions such as classification relativity capping. This is the type of information provided in detail form by the Minnesota Workers Compensation Insurers Association and in summary form in NCCI rate adequacy studies.

Increasing the information supplied to insurers seems valuable in a competitive environment. All states we studied permit the advisory organization to publish as much loss cost (as defined in the state) information as it considers appropriate. The NCCI should be permitted and encouraged to maximize the information it publishes so that insurers can knowledgeably evaluate the appropriateness of industry-wide loss cost provisions in relation to their manner of operation, their views of trend, loss development, and so forth.

B. Premium tax and assessment information

This would include information on premium tax levels in the state, assessment levels in the state, and how those assessments are handled in the loss costs.

C. Expense information

The NCCI would summarize insurer expense ratio data in a form where (1) expenses are adjusted to eliminate the impact of residual market servicing insurer fees; (2) expenses are shown on a uniform size-of-risk basis, and (3) premiums are put on a common level, for example, the DSR level which is the loss cost level in loss cost states. This information should be provided for a number of categories of insurers including stock insurers, non-stock insurers, small insurers, large insurers, and regional insurers.

Commission variations by size-of-risk would not be addressed by the NCCI.

If multi-company studies of expense by size-of-risk are not available to insurers and regulators, then it is likely that insurer operating expense discounts will become more market-driven rather than cost-driven. Multi-company information on expense by size-of-risk is desirable for developing residual market rates. In this typical system, the NCCI would continue to conduct expense studies by size-of-risk and make that information available to insurers and regulators.

The publication of expense information is potentially subject to more contention. ISO publishes expense data. In workers compensation to date, the expense issue has not been significant, since NCCI generally uses countrywide expense provisions, which would be readily available until a nationwide loss cost system is established. Even after a loss cost system operates nationally, some expense data would be available through the residual market rate filings.

The issue of expenses for ratemaking is more complex in workers compensation than for other lines of insurance due to the regular use of such items as premium discount plans and expense constants. If the NCCI is not permitted to publish any expense information, there is a risk of unnecessary confusion.

D. Instructions on how to calculate loss cost multipliers

This should include theoretical discussion as to where individual insurers might obtain expense information for their own use.

E. Premium comparisons

ISO publishes premium comparison information for a number of its lines of insurance. It may be desirable for NCCI, or some other party, to do this for workers compensation.

F. Individual insurer loss compilations

Both the NCCI and ISO make available to individual insurers compilations of their own loss data. To increase competition, regulators might encourage insurers, especially larger insurers, to rely more on their own loss data.

IX. RESIDUAL MARKET RATES AND RATING VALUES

The NCCI would continue to develop gross rates and rating values for the residual market. Insurers would be provided with sufficient information to analyze the voluntary and residual market experience separately.

Overall rate level

A residual market loading in voluntary prices becomes more visible in a loss cost environment. Regulators will need to establish a policy on the extent to which residual market rates are self-supporting and the extent to which those rates are supported by subsidies from voluntary rates. The typical system assumes that the residual market subsidy is included in voluntary loss costs.

Classification rates and rating values

Since policyholders move between the voluntary and residual markets, and since classification data may be sparse in either market separately, it seems reasonable to combine the experience for calculating classification relativities.

The interaction of classification relativities and experience rating plan values discussed earlier also applies to ratemaking for residual markets. The relative distribution of residual market policies and voluntary policies by classification can also affect this calculation. Technical aspects of this issue require future NCCI analysis; in the meantime, the use of common rating values is a reasonable approach.

X. POLICY FORMS

Insurers would be allowed to continue to participate in the design and filing of policy forms. Uniformity of coverage for workers compensation is generally required because of the statutory nature of the benefit.

XI. OTHER MANUAL RULES

The anniversary rating date rule would be preserved under the typical system. This would reduce the strain on the system that calculates experience modifications, compared to alternate scenarios that could eliminate this rule.

The anniversary rating date rule has two components:

a. NCCI prepares experience rating modifications once a year at a date which approximates the policyholder renewal date.

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b. Manual rates of the policyholder change only on the anniversary date, subject to the same flexibility now provided for in the NCCI experience rating plans.

Part (a) is required to maintain a centrally-administered experience rating plan, while part (b) is a convenience in maintaining part (a). We propose that both parts of the rule be maintained in this typical system.

The anniversary date rule is assumed to apply in the NCCI calculations of premium at current rate level. If the rule were eliminated, NCCI would need to collect additional data and/or apply approximations to adjust for the change in procedure.

XII. DISTRIBUTION OF INFORMATION TO AGENTS/SALES REPRESENTATIVES

Although insurers and agents/sales representatives may have to change how information is communicated, the situation in workers compensation should not be significantly more complex than other lines of insurance. Companies can provide agents/sales representatives with entire rate manuals or loss cost multipliers and instructions on premium discounts, minimum premiums, and expense constants, if any.

XIII. AVAILABILITY OF NCCI DATA

Summarized data from NCCI, including the information supplied to insurers cited in Section VIII above would be made available to regulators, researchers, and other parties on a request basis. However, distribution of individual policyholder and individual insurer experience would be limited as under the current system.

The issue of allocating costs for the production of this data is an important consideration, but it is not easily considered in isolation from the whole issue of how

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NCCI funds all its operations. In the interests of simplicity, the typical system assumes that regulators will obtain this information free of charge, insurers would receive the "standard" information as part of their membership, and other data for companies and all data for other parties will be obtainable at "cost."

XIV. TRANSITION PROVISIONS

The change from gross rates to loss costs would be implemented gradually on a state-by-state basis as each state is scheduled for a rate review.

The transition would not begin until the implementation of loss costs by ISO late 1992 or early 1993.

The NCCI would begin a series of education and training seminars. Individual seminars would be focused on various target audiences including regulators, small insurers, large insurers, agents/sales representatives, and others. These seminars could be similar to those presented by ISO, but should concentrate on the differences between workers compensation and ISO lines. By then, the various audiences may be more familiar with the general concept of loss costs and how their procedures will need to change. The timing for loss cost implementation should allow for this educational effort.

Even states which have adopted their rating laws or regulations to ISO loss costs may require additional changes to accommodate workers compensation loss costs.

APPENDIX A List of Organizations Contributing Background or Information to Our Study

AFL-CIO

Alliance of American Insurers

American Insurance Association

American Bar Association

Independent Insurance Agents of America

Insurance Services Office

International Association of Industrial Accident Boards and Commissions

National Association of Insurance Commissioners

National Association of Independent Insurers

National Association of Mutual Insurance Companies

National Council of Self-Insurers

National Council on Compensation Insurance

National Insurance Consumer Organization

Professional Insurance Agents of America

Risk and Insurance Management Society

APPENDIX A List of Organizations Contributing Background or Information to Our Study

Connecticut Insurance Department Georgia Insurance Department Illinois Insurance Department Michigan Insurance Department Minnesota Insurance Department New Mexico Insurance Department Oregon Insurance Department South Carolina Insurance Department