



Pennsylvania Compensation Rating Bureau

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ACTUARIAL & CLASSIFICATION AND RATING COMMITTEES - RECORD OF JOINT MEETING

A meeting of the Actuarial and Classification and Rating Committees of the Pennsylvania Compensation Rating Bureau was held in the Board (Blue) Room, 7th Floor, One South Broad Building, One South Broad Street, Philadelphia, Pennsylvania on Wednesday, November 7, 2001 at 10 a.m.

The following members were present:

Actuarial Committee

Mr. G. Busche*	Continental Casualty Company
Mr. E. Connell	Erie Insurance Company
Mr. R. Whitlock	Harleysville Mutual Insurance Company
Mr. E. Greenhill	Hartford Accident & Indemnity Company
Mr. W. Wilkins	Insurance Company of North America
Mr. M. Lange**	Liberty Mutual Insurance Company
Mr. S. Warfel	PMA Insurance Company
Ms. P. Sealand-Reale	Security Insurance of Hartford
Mr. M. Yingling	Travelers Insurance Company

Classification and Rating Committee

Ms. M. Provasnik	Argonaut Insurance Company
Mr. J. Zoerkler	Harleysville Mutual Insurance Company
Mr. J. Binkowski	Insurance Company of North America
Mr. M. Lange**	Liberty Mutual Insurance Company
Ms. E. Horan	Manufacturer's Association of Berks County
Not Represented	Manufacturers Association of South Central Pennsylvania
Mr. M. Hoffman	National Federation of Independent Business
Mr. F. Lukawski	Penn National Insurance Company
Mr. L. Boreski	Pennsylvania Chamber of Business & Industry
Mr. F. Preis	Pennsylvania Food Merchants Association
Not Represented	Pennsylvania Retailers' Association
Ms. B. Flaherty	PMA Insurance Company
Mr. G. Kuball	Zenith Insurance Company

Mr. T. Wisecarver	Chair - Ex Officio
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Also present were:

Ms. M. Gaillard	American Home Assurance Company
Mr. R. Purdy	American Home Assurance Company
Mr. D. Broadwater	Coal Mine Compensation Rating Bureau of Pennsylvania
Mr. S. Cooley	Duane, Morris & Heckscher
Ms. B. Kennedy	Fireman's Fund Insurance Company
Mr. B. Llewellyn	National Council on Compensation Insurance, Inc.
Ms. D. Feldman	Office of Small Business Advocate
Mr. G. Watkins	Office of Small Business Advocate
Mr. K. Creighton	Pennsylvania Insurance Department
Mr. R. Rohrbaugh	Pennsylvania Insurance Department
Mr. C. Romberger	Pennsylvania Insurance Department
Mr. E. Liland	Selective Insurance Company
Mr. M. Pozaic	State Workers' Insurance Fund
Mr. B. Decker	Bureau Staff
Mr. M. Doyle	Bureau Staff
Ms. F. Barton	Bureau Staff

* Participated via teleconference

** Member of both committees

The Antitrust Preamble was read at the beginning of the meeting for the benefit of all participants.

All Committee members and other attendees made self-introductions.

Staff noted the meeting agenda materials provided in advance of the meeting and indicated that the Committee discussion would be organized so as to address specific subject areas incorporated in those materials. Staff encouraged all Committee members and other attendees to participate in the meeting by raising questions or posing suggestions as those arose during the course of discussion.

The meeting discussion proceeded to first address the overall loss cost indication by considering a series of technical areas as delineated by staff and shown below:

Trended Ultimate Loss Ratios - Indemnity

Exhibit 5 was identified as providing historical financial data upon which the proposed filing's analysis was based. Participants were reminded that for recent loss cost filings the Bureau had adopted an approach of adjusting financial data to "post-law" levels as respects the medical provisions of Act 44 of 1993 (Act 44) and the indemnity provisions of Act 57 of 1996 (Act 57). It was noted that the limited indemnity provisions of Act 44 had been accounted for in those previous filings by way of a "savings factor" applied to loss ratios initially established on a "pre-law

change” basis. Staff indicated that these techniques were also being used for this proposed filing. This methodology, which offered efficiencies in the overall filing analysis, precluded ongoing revisions of prior estimates of the separate and specific effects of the more substantial effects of those law changes on Pennsylvania workers compensation system costs.

Page 1 of Exhibit 5 provided the two most recent calendar years of premium development data, which staff noted was supplemented by additional older experience taken from previous filings’ documentation for the analysis supporting this proposed filing.

Reported indemnity losses were identified as appearing on Page 3 (case-incurred indemnity loss) and Page 5 (paid indemnity loss) of Exhibit 5. Pages 7 through 14 of Exhibit 5 were noted as presenting details of the adjustment of indemnity experience to a post-Act 57 basis. Adjustments for calendar years prior to 1999 reflected factors derived in previous Bureau filings. The original such adjustments had been prepared using data from the April 1, 1999 Loss Cost Filing. Those adjustments had been balanced so that indications obtained using historical data adjusted to a “post-law” level were comparable to alternative indications derived using historical data stated on a “pre-law” level in combination with savings factors related to legislation. The adjustment for Calendar Year 2000 was presented in this proposed filing for the first time. This adjustment had been performed in a manner similar to adjustments for prior years and used parameters consistent with those prior adjustments and/or ongoing assumptions about the extent to which data had responded to the effects of the law change.

The adjusted indemnity financial data, stated on a post-Act 57 basis, was shown on Pages 27 (incurred loss) and 29 (paid loss) of Exhibit 5.

Exhibit 6 presented the Bureau’s loss development analysis in support of the filing, as well as significant portions of the special trend procedure proposed for use therein. Staff reviewed the pertinent portions of Exhibit 6 and related supporting documentation for indemnity benefits as follows.

Page 6.1 of Exhibit 6 provided premium and/or expected loss development history and estimated ultimate, on-level expected losses for use in computing loss ratios. Pages 6.2 through 6.6 provided steps in the application of incurred and/or paid loss development approaches to indemnity benefits. One approach shown used a case-incurred loss development method to estimate ultimate indemnity losses. A series of additional alternative estimates had been constructed using a combination of paid loss development and case-incurred loss development methods. By applying a paid loss development method to indemnity benefits for varying periods of initial development, then converting cumulative paid losses to equivalent case-incurred losses and applying case-incurred loss development for the remaining development period(s) to ultimate, the Bureau had constructed a series of ultimate indemnity loss estimates. Finally, the Bureau had derived estimates using the average of a case-incurred loss development method and the paid loss development method that relied on the longest available period of paid loss experience (in this case, a paid loss development method applied to 20th report).

Staff addressed several questions posed by the Committees and other participants pertaining to loss development analysis for the filing. Principal points raised in that exchange were as follow:

- Staff noted that, for this filing and for other recent Pennsylvania filings, paid loss development tended to produce higher estimates of ultimate loss than did the case-incurred loss development approach. The differences between these methods were somewhat greater for indemnity loss than for medical loss.
- Staff stated that various theories could be advanced about the relative merits of either paid or case-incurred loss development methods but that in the context of the current filing Bureau staff had not been able to identify a compelling reason or set of reasons that would clearly establish one of these methods as preferable to the other.
- Staff explained that case reserves generally did include tabular discounts, especially for indemnity loss. The unwinding of these discounts over time was expected to be one of the reasons for long-term loss development observed in the data.
- A Committee member commented that their experience in a variety of jurisdictions suggested that paid loss development was somewhat more stable and reliable than case-incurred losses due to the necessity of processing payments consistent with each claim's status and possible extraneous effects on case reserves such as workload, turnover and systems changes. Staff noted that in Pennsylvania some statutory changes were perceived as having impacted payment patterns, probably significantly in early periods after their implementation. Staff further observed that the new processes and procedures invoked in those previous changes were perceived as having largely obtained a relatively stable point of operation in more recent experience.

Exhibit 7 presented the Bureau's derivation of "tail factors" for use in its array of possible loss development methods. The methodology applied had been used in prior PCRB filings in response to recommendations in regulatory examinations. Pages 2, 4, 6 and 8 of this exhibit each provided a tail factor estimate for indemnity benefits based on a different calendar year of development experience. An indemnity tail factor for the proposed filing had been selected as the average of these four separate indications, as summarized on Page 1 of Exhibit 7.

Staff reviewed tail factor indications from the April 1, 2001 filing for purposes of comparison to the current indications and noted that differences observed would have nominal effects on ultimate loss estimates for this filing.

Exhibit 8 provided claim frequency experience that the Bureau had used in support of its trend analysis for the proposed filing. Data provided by the Department of Labor and Industry included counts of injuries and illnesses reported in the Commonwealth and non-Federal payrolls. The work injuries and illnesses shown in those reports were incidents resulting in lost time beyond the day or shift of occurrence. A history of these injury reports and payrolls was available on a calendar year basis from 1985 through 2000. In addition, a count for the 12-month period ending June 30, 2001 had also been provided.

Staff noted that in providing the most recent six-month data for counts of injuries and illnesses the Department of Labor and Industry had cautioned the Bureau that this data was thought to have been influenced to an unknown extent by recent changes in reporting practices by some of that Department's data sources. In the main, the changes so noted were thought by the Department representatives to have involved changing from a practice of reporting only indemnity claims to the intended procedure of included injury and illness reports for any case having lost time beyond the date or shift of occurrence. After some reflection about this most recent experience and the Department's reservations about that information, staff had elected to proceed by not including the latest six months of the Department of Labor and Industry's counts in its analysis of appropriate future claim frequency trends.

Staff had separately obtained counts of indemnity claims and exposures (measured by expected losses at a constant set of Bureau loss costs) from unit statistical reports. This data was available by policy year from 1987 through 1999, with the last year having a mid-point of January 1, 2000.

Comparisons of the changes in claim frequency over time suggested by these two different sources (excluding the last six months of Department of Labor and Industry data) showed very comparable patterns in which claim frequency had declined persistently, as illustrated on Page 5 of Exhibit 8. The Department of Labor and Industry data showed somewhat higher rates of decline in most periods than did the Bureau's own data. In previous filings staff had attributed these differences to the fact that the payroll exposure used against the Department's counts of injuries and illnesses did not reflect shifts from more hazardous to less hazardous employment, while the expected losses used against the indemnity claims in the Bureau's own data did account for such shifts. With the benefit of recent discussions with the Department of Labor and Industry, staff now also noted that some part of these historical differences could have been the result of gradual changes in reporting practices in which the Labor and Industry data began to reflect only indemnity claims for some data sources over time.

Staff described the proposed filing's approach to trend analysis in the following fashion. Estimated ultimate on-level loss ratios derived in Exhibit 6 had been adjusted for the effects of changes in claim frequency presented in the Bureau data from Exhibit 8. The results of these adjustments were referred to as "severity ratios" and were presented on Page 6.6 of Exhibit 6. The Bureau had then applied its customary linear and exponential trend models to the severity ratios so derived over numbers of data points ranging from 4 to 10. For each trend model and loss development method in combination, severity trend factors were calculated for each of the three most recent policy years. This severity trend analysis was shown on Pages 6.7 through 6.10 of Exhibit 6.

In Exhibits 9a and 9b, goodness-of-fit tests had been applied to trend models applied to loss ratios (Exhibit 9a) and severity ratios (Exhibit 9b). Exhibits 11a and 11b, respectively, provided further examinations of the effectiveness of trend models by testing predictive abilities of the respective models and trend periods prepared in support of this proposed filing.

For use in conjunction with the indemnity severity trend factors, the Bureau had constructed a set of frequency trend factors. These factors used actual observed changes in indemnity claim frequency by policy year through January 1, 2000 and then applied prospective frequency trends of -4.3 percent for the Calendar Year 2000, -3.0 percent for the Calendar Year 2001 and -1.0 percent per year for the five quarters from January 1, 2002 to April 1, 2003 (the mid-point of the April 1, 2002 filing.) The frequency trend factors consistent with these selections were set forth on Page 6.6 of Exhibit 6.

Indemnity loss ratio trend factors computed as the product of the indemnity severity trend factors and frequency trend factors describe above were shown on Page 6.11 of Exhibit 6. The resulting trended indemnity loss ratios were presented on Pages 6.12 (linear trend model) and 6.13 (exponential trend model).

Exhibit 10 provided graphs of indemnity loss ratios (Page 10.1) and indemnity severity ratios (Page 10.3). In addition, Exhibit 10 provided a graph of indemnity loss ratios, indemnity severity ratios and claim frequency each indexed to a common starting point (January 1, 1988) on Page 10.5. These graphs illustrated the point that historical severity ratio trends in Pennsylvania have been increasing but that these increases have been more than offset by continuing improvements in claim frequency.

Pages 6.12 and 6.13 of Exhibit 6 showed arrays of possible trended indemnity loss ratios produced by the methods described above, with the Bureau's selected result highlighted with a border on Page 6.12. The selected result was produced using the average of a case-incurred loss development approach and the paid loss development method to 20th report loss development. A linear seven-point severity trend was used in combination with actual frequency trend through January 1, 2000 and the serial selections of annual rates of -4.3 percent for Calendar Year 2000, -3.0 percent for Calendar Year 2001 and -1.0 percent for Calendar Year 2002 and the First Quarter of 2003.

It was noted that for the April 1, 2001 Loss Cost Filing the Bureau had used ultimate loss estimates obtained from the paid-to-5th report method and that in other previous filings some changes in loss development method had also occurred, generally in order to produce estimates in the mid-range of all methods tested or in response to specific information thought to be pertinent in a given filing's recent historical environment. For this filing, staff's proposal to use the average of a case-incurred loss development approach and the paid loss development method to 20th report loss development did produce results in the mid-range of all results tested (as would be expected given the types of approaches available) and did so more consistently and over a longer period of successive policy years than would other possible selections.

A series of questions were posed pertaining to the data presented to measure claim frequency. Principal points raised in that exchange were as follow:

- The distortions suspected within the data provided by the Department of Labor and Industry were thought to be largely, if not entirely, contained within the first six months of 2001.

- A discussion took place regarding the availability and potential utility of data from the Department of Labor and Industry on finer subdivisions of time than six months. It was noted that, due to seasonality in the data, use of such reports would require comparison of like quarters across years instead of successive quarters within a given year. It was further noted that more detailed demonstration of the reported increase would not in itself improve understanding of the extent to which the observed changes resulted from real changes in incidence of injuries and illnesses as compared to changes in reporting practices.
- It was noted that the Department of Labor and Industry data showed somewhat more rapid declines in claim frequency than did comparable PCRB data. Staff recalled that in prior filings these differences had been attributed to the fact that the Labor and Industry data related injury and illness counts to payroll, while the PCRB data related indemnity claims to expected losses at a constant rating value level. Thus, the PCRB data would account for shifts in employment between activities of varying degrees of hazard, while the Labor and Industry data would not. For this filing, staff also believed that some part of the observed divergence between PCRB and Department of Labor and Industry data might be attributable to a gradual migration to the incorrect reporting constructs thought to have begun to be identified and corrected in 2001.
- It was noted that the PCRB's adjustment of loss ratios to separately measure severity and frequency had been done exclusively by use of PCRB frequency data. As a result, this calculation had not been and would not be affected by distortions in the Department of Labor and Industry data.
- A discussion ensued about the marked declines in claim frequency seen in or about 1995. Possible causes noted included expanded incentives for safety and enhanced anti-fraud measures, but staff opined that this phenomenon was likely the result of many factors working in concert rather than of one single or dominant cause.
- Staff was asked whether the Department of Labor and Industry data was now thought to be caught up to a new and stable basis of reporting. It was staff's position that it would be very unlikely for this correction to be completed in as short a period of time as six months but that the ultimate duration of this transition was unknown.
- The anticipated detrimental impacts of an economic slowdown on claim frequency were noted, with comments indicating that analysis supporting this expectation had been done by other organizations including the National Council on Compensation Insurance, Inc. (NCCI).
- The prospect that an economic slowdown might adversely impact claim severity as well was raised. Staff indicated that no separate provision for such an effect had been included in deriving the proposed indication and observed that recent loss development had been favorable, especially for indemnity losses. It was agreed that available loss development data ended prior to the point in time where the more substantive effects, if any, of economic factors on loss severity might be apparent.

- Staff was asked if the PCRБ had reviewed claim frequency experience separately by industry group. The response noted that such an analysis had been done for a recent previous filing, with the result that each separate industry group had shown similar and consistent declines in claim frequency, suggesting that the observed overall changes were not driven by shifts in employment. NCCI indicated that this finding was consistent with work it had performed independently.

Trended Ultimate Loss Ratios - Medical

Staff indicated that the analysis done for medical losses paralleled that described above for indemnity losses in most important respects. The pertinent exhibit and page references were provided as follow:

<u>Exhibit</u>	<u>Content</u>	<u>Page(s)</u>
5	Medical financial data - Table I reported data	4 (case incurred), 6 (paid)
	Adjustment of medical financial data to post-Act 44 basis	15 through 24
	Adjusted medical financial data	28 (case incurred), 30 (paid)
6	Medical loss development	6.14 through 6.18
	Trending of medical loss ratios and medical severity ratios	6.19 through 6.22
	Medical loss ratio trend factors	6.23
	Trended medical loss ratios	6.24 (linear), 6.25 (exponential)
7	Medical loss development tail factors	Summary on Page 1, detail on Pages 3, 5, 7 and 9
8	Claim frequency	Per indemnity discussion
9a, 9b	Goodness of fit tests 9a for loss ratios, 9b for severity ratios	9a1, 9a4, 9a5, 9a8 and 9a9 9b1, 9b4, 9b5, 9b8 and 9b9
10	Graphs of medical loss ratios	10.2
	Graphs of medical severity ratios	10.4
	Graph of indexed medical loss ratios, severity ratios and frequency trends combined	10.6

11a, 11b Retrospective tests of prediction 11a6 – 11a10 and 11b6 – 11b10
 11a for loss ratios, 11b for severity ratios

Staff offered the following distinctions between the proposed filing's treatment of medical loss from the preceding discussion of indemnity loss.

- The improvement in measures of goodness-of-fit for medical loss using severity ratios instead of loss ratios was more significant and consistent across combinations of loss development and trend methods tested than had been seen for indemnity loss (see Exhibits 9a and 9b).
- The trend model used for medical severity ratios was an exponential fit through the most recent eight policy year data points (see Exhibit 6).

Indicated Overall Change in Loss Costs

Exhibit 12 of the agenda materials supported this section of the meeting discussion. Staff described the construction and interpretation of Exhibit 12 as follows.

Loss ratios selected for indemnity and medical benefits had been posted for each of the three most recent available completed policy years, i.e., 1997, 1998 and 1999. These loss ratios and the resultant average ratios were shown on Lines (1) through (4) on Page 12.1 of Exhibit 12.

Trended loss ratios based on each of the Policy Years 1997, 1998 and 1999 were presented on Lines (5) through (7) on Page 12.1 of Exhibit 12, with the resultant average trended loss ratio shown on Line (8) of that same page.

The appropriate savings factors for the indemnity provisions of Act 44 of 1993 previously described were shown on Line (9) on Page 12.1 and had been applied to produce Line (12) of that exhibit. This analysis produced an overall collectible loss cost increase of approximately 2.12 percent.

Staff noted that changes in Experience Rating Plan off-balances differing by industry group had been applied to produce the indicated average changes in manual loss costs shown on Line (15), Page 12.1 of Exhibit 12.

Additional discussion focused on the provisions for claim frequency in the proposed indication ensued. Primary matters raised in the course of that discussion were as follow:

- The PCRБ selection of an annual trend in claim frequency of –1.0 percent was thought by some Committee members to be somewhat optimistic. An alternative selection of a flat frequency trend was raised. Comparisons of these selections to observed trends in claim frequency over various recent time frames were made.

- Features of wage and expected loss data were explored, with staff noting differences between the wage data used in conjunction with Department of Labor and Industry counts to compute claim frequency and expected losses (and the underlying payrolls) used in conjunction with PCRB indemnity claims for the same purpose. Among these differences was the ongoing inclusion of self-insured data in the payrolls used with the Department of Labor and Industry counts as compared to the exclusion thereof from the PCRB expected losses.
- The possibilities of obtaining Labor and Industry data earlier or for more advanced periods of time were discussed. Staff noted that at the present time having an additional quarter or six months of that data would not be particularly helpful due to the uncertainty regarding effects of changes in reporting practices on that data.
- Various observations regarding recent experiences with respect to employment and their possible ramifications for claim frequency were offered. Views offered ranged from an acceleration in the trend to flatter or even reversing claim frequencies occurring since September 11, 2001 and the impacts of that event on economic conditions to the prospect of reduced claim frequencies being anticipated as hours for seasoned workers were reduced and fewer new entrants were active in the workplace.
- Staff reviewed responses to a survey of large writers pertaining to claim frequency. Most respondents had continued to see declines in frequency through the first part of 2001 (the survey was taken in October 2001). Expectations expressed about future claim frequency trends by survey respondents were mixed and included expected increases, expected further declines and anticipation that frequency would be relatively stable in the near future.
- Potential impacts of economic factors on claim severity were raised. The Committees reviewed recent experience pertaining to claim closure rates, which showed substantial stability in such rates over the past several years. As these results were based on unit statistical data, it was noted that recent experience would not yet be reflected in the available statistics.
- The basis for staff selections of claim frequency trends was reviewed. The Department of Labor and Industry data, previously used as a key part of this process for the early part of the trend period in particular, was deemed to be problematic this year because of the suspected changes in reporting practices. Staff selections began with a review of recent historical trends in PCRB data, tempered with the expectation that economic conditions would remain relatively poor in much of the pertinent trend period for this filing and that this weakness would reduce otherwise expected improvements in claim frequency.

Following the discussion of the overall loss cost change indication, the Committees continued discussion of additional topics related to staff analysis or potential areas for additional review supported by agenda materials as outlined below.

Catastrophe Provisions in Pricing

The September 11, 2001 terrorist attacks had prompted a revisitation of appropriate catastrophe provisions in workers compensation premiums in many quarters within the industry. Staff had prepared and previously distributed a brief introduction of this subject in expectation that some discussion thereof might be raised in the course of the meeting.

An extended discussion of past, prevailing and possible future approaches to the recognition of possible extraordinary losses of the magnitude of or larger than the World Trade Center attack was held. The following issues were included in this discussion:

- Current pricing procedures and experience data do not include any provision for such events.
- Data, models or other objective, quantifiable sources exist for the purposes of deriving an analytically sound measure of what a provision for these types of occurrences might be would be very difficult to obtain and/or develop.
- A variety of initiatives involving various levels of authority, including the federal government, state legislatures, rating bureaus and individual carriers, are under discussion in regard to this issue.
- This contingency could alternatively be characterized as a loss exposure, an expense exposure or both.
- It was thought to be important to understand how any approach taken to funding this type of event would or would not ultimately serve to protect the solvency of those carriers that might be most significantly impacted by future extraordinary catastrophes. Possible dissipation of funds generated by a catastrophe loading, taxation issues pertaining to such an approach and distinctions between self-insured and commercially insured employers were included in this consideration.
- Inclusion of a provision for extraordinary catastrophes would require definition of the events subject thereto and means to exclude such losses from the ongoing analyses and parameters of standard pricing filings and to address implications for such programs as experience rating.
- There was some consensus that the exposure to extraordinary catastrophes would likely vary from state to state. The opinion was advanced that provisions for such events made separately by individual jurisdictions still needed to be considered in the context of what those separate provisions would provide collectively on a national basis.
- The selection, filing and regulatory review of an extraordinary catastrophe provision were all characterized as being largely political.
- It was noted that tools presently available whereby individual carriers could make provision for extraordinary catastrophes in pricing included tabular rates (through loss

cost multipliers) and tiered pricing programs and schedule rating which could differentiate perceived exposures for specific companies and risks.

- Proposals for consideration as regards an extraordinary catastrophe load ranged from one percent to eight percent.
- Some participants suggested that PCRB staff undertake a review of this subject with the benefit of developments on a number of fronts over time and develop alternative approaches for later consideration. It was noted that NCCI was presently engaged in a process somewhat analogous to this suggestion.

Staff expressed appreciation for the ideas and comments put forth, indicated that this matter would be taken under advisement and stated that the Committees would be kept informed of future developments as they occurred.

Experience Rating Plan

Staff first referred to Exhibits 18, 19, 20A, 20B, 20C and 27 of the agenda materials. These exhibits were described as presenting customary review and updating to the current Experience Rating Plan.

Exhibit 18 showed historical results of applying the Experience Rating Plan over a period of five successive years organized by year, industry group, and premium size and modification range. As had been noted in previous exhibits of this type, risks in excess of \$250,000 in premium across all years and industry groups appeared to have collectively received more responsive adjustments based on their observed favorable or unfavorable historical experience than would have been appropriate to balance these employers' loss ratios with those of all risks as a whole.

Exhibit 19 presented derivation of selected parameters within the current Experience Rating Plan. It was further noted that the collectible premium ratios derived on Page 19.1 of Exhibit 19 were the basis for the relativities by industry group of manual changes in loss costs previously discussed in Exhibit 12.

Exhibit 20 provided summary information from unit statistical data that was used in deriving some parameters for the Experience Rating Plan, as well as for the calculation of classification loss cost relativities.

Exhibit 27 provided the proposed Table B or credibility table for the current Experience Rating Plan, consistent with parameters developed in Exhibit 19.

The Committee was next provided a handout exhibit addressing results of ongoing testing of over 100 different experience rating options that had been completed by the PCRB. Staff reviewed these exhibits as summarized below.

In order to compare different experience rating plan approaches and/or parameters, a procedure for quantifying relative performance of different plan alternatives was needed. For this purpose risks had been divided into quintiles across the range of assigned experience modifications under each alternative version of the Experience Rating Plan. Tests were performed for various premium size groups within the overall population of risks insured in 1997. Staff had arranged the quintiles so that approximately 20 percent of expected losses were represented by the risks assigned to each quintile. (It was noted that, because assigned experience modifications tended to cluster in very narrow ranges or even at specific values for some smaller premium size groups, some tests could not accomplish this intended distribution.) Consideration had been given to an alternative approach of arranging quintiles so that 20 percent of the number of risks would be assigned to each quintile. While staff preferred the approach based on expected losses, test results had not appeared to be sensitive to these different approaches to organizing the data.

Calculations were done within each quintile of the average loss ratio on two alternative bases, one using manual premium and the other using standard premium. In each test group, the differences between each quintile's loss ratios on these respective bases and the overall loss ratios for the entire group were computed. These differences were then squared, multiplied by a scalar factor of 10,000 and summed across all quintiles. The ratio of these sums of squared differences based on standard premium to the sums of squared differences based on manual premium was then computed as a test statistic. The smaller this test statistic, the better the Experience Rating Plan under consideration was deemed to have predicted experience and the more equitably it was deemed to have assigned experience modifications.

The testing process had first focused on the existing Experience Rating Plan's credibility assignments. Keeping other features of the plan such as loss limitations intact, staff had first tested nine credibility functions defined as specified increments or decrements to the current plan values, subject to limitations that credibility assignments could not be negative and could not exceed 1.00. Based on results of that effort, staff had designed 12 different credibility tables each constructed by reference to the initial tests within various ranges of risk size. The indicated credibility values had then been used in an extensive series of curve fits, with five good-fitting and well-behaved credibility functions being selected for testing based on each preliminary model (i.e., some 60 different sets of credibility weights in all).

The testing thus performed suggested a credibility model that seemed to perform well overall and for which the areas in which other models produced better results were randomly distributed above and below the selected approach. This model was designated as model "P0."

Once a revised credibility table was in hand, staff had turned to a review of the existing Experience Rating Plan's loss limitations. Some 23 different sets of loss limitations were tried, each in conjunction with the P0 credibility function. The selected size of loss values were of three different types:

- Flat limitations (selected ranging from very low to very high amounts uniformly applied across all size groups of employers)

- Experience modification fluctuation limitations (selected to control the amount of change that could occur in an employer's experience modification as a result of one maximum loss)
- Smoothed, fitted or selected sets of loss limitations derived from review of the results of tests in the first two groups within specific size ranges of employers

The loss limitation that appeared best suited to improving the performance of the Experience Rating Plan at this point in the testing was a flat limitation of \$50,000, a value close to the limit embodied in the current Experience Rating Plan for the smallest eligible employers.

Staff next returned to the question of credibility assignments and tested a dozen credibility functions in conjunction with a \$50,000 flat limit on chargeable losses. Each such credibility function was defined as a specific increment or decrement to the credibility provided by P0. Results of these tests suggested that the credibilities in P0 could be increased nominally for the smallest employers and more significantly for larger employers. Staff shared a representation of the form of this amended credibility function (referred to as P0') with the Committees.

Staff outlined plans for continued testing of the Experience Rating Plan as follows:

Using P0' a set of loss limitations differing in varying amounts from the flat \$50,000 limit would be tried, in order to determine if the revised credibilities reflected in P0' might warrant some adjustment to the loss limitation function incorporated in the Experience Rating Plan.

In the event that a new loss limitation was suggested in that testing, staff would try different approaches in order to identify a desirable and demonstrably superior alternative. In similar fashion, credibility functions and loss limitations would then be serially reviewed and revised in turn until the test plan stabilized into a compatible pairing of credibility and loss limitation parameters that were demonstrably superior to the existing plan.

When a stable plan was defined, its parameters would be retested using a subsequent experience period and effective rate period to confirm that improvement shown for the 1997 year was replicable in a subsequent period.

Finally, staff intended to test an alternative Experience Rating Plan that would assign credibility based on payrolls rather than expected losses, beginning with a plan having average credibility equal to that of the plan derived by virtue of the testing described above. This testing was suggested by the fact that, in the PCRB's previous study of its classification ratemaking methodology, payroll had proven a significantly better basis for assigning credibility to classification experience than expected losses.

Staff concluded its description of Experience Rating Plan testing by soliciting questions and comments from the Committees and other attendees. In response to a question about when staff anticipated having a final proposal ready for submission to the Insurance Department, staff indicated that this project would remain a matter of high priority, with a filing to be made before or concurrent with the 2003 loss cost filing.

Loss-Based Assessments and Employer Assessment Factor

Exhibit 13 of the agenda material addressed the above referenced items.

Effective October 1, 1999 the provisions for the Administration Fund, Subsequent Injury Fund and Supersedeas Fund previously included in published Bureau loss costs had been removed from those loss costs. Consistent with requirements of H.B. 1027, these amounts were now treated as a separate charge to insured employers collected through insurers. Loss-based assessments applicable to funding for the Office of the Small Business Advocate remained part of published Bureau loss costs under provisions of this law. Also consistent with past practice, the Bureau continued to include offset provisions for merit rating and credits granted under the Certified Safety Committee Program in published and proposed Bureau loss costs.

Exhibit 13 provided parameters used to compute the proposed employer assessment factor effective April 1, 2002 (0.0337) and the proposed loading to Bureau loss costs to provide for Merit Rating Plan credit offset, Certified Safety Committee Program credit offset and the Office of Small Business Advocate funding effective April 1, 2002 (0.0069). Staff noted that the proposed employer assessment factor was coincidentally identical to the current value. The loading in Bureau loss costs for the remaining factors noted above was down nominally from 0.0078.

Merit Rating Plan

Exhibit 15 of the agenda materials was used as the basis for this discussion.

The Merit Rating Plan was noted as a statutory requirement intended to provide incentive for the maintenance of safe workplaces for businesses too small to qualify for the uniform Experience Rating Plan. Exhibit 15 presented the offset to manual loss costs required to compensate for the net credit received by all eligible employers under this plan, which was shown to have changed only nominally from the level currently in effect (0.34 percent proposed as compared to 0.32 percent currently in effect).

Certified Safety Committee Credit Program

Exhibit 16 of the agenda materials addressed recent experience under the Certified Safety Committee Credit Program. Experience was available for Policy Years 1994-1999 inclusive.

Staff noted that until mid- to late-1996 this program did not allow employers to qualify for credit in more than one policy period. As a result, 1995, 1996 and 1997 data were expected to understate the prospective experience under this program after Act 57 had provided for up to five annual credit periods for qualifying employers. Subsequently, in 1999 or 2000 some employers began to reach the limit of five years' of credit application under current law. This attrition in eligible employers would continue absent new legislation. Accordingly and based on a review of all available experience, staff had selected a proposed loading to manual loss costs of 0.34 percent to offset the effects of credits given under this program.

A question was posed about ongoing legislative consideration of extending eligibility for the Certified Safety Committee Program beyond the present limitation of five years. Staff indicated an awareness of those discussions but expressed the opinion that it would be premature to adjust the indicated offsets in anticipation of possible legislative actions.

Pennsylvania Construction Classification Premium Adjustment Program (PCCPAP)

Exhibit 14 of the agenda materials was described to all attendees.

The purpose of the PCCPAP program was described as responding to wage differentials within the construction industry, providing a program of premium credits to higher-wage employers. These credits were offset by loadings applied to construction classifications reflecting the portion of employers participating in the program and the average premium credit obtained by those participating businesses, thus maintaining the required premium level in each classification.

The table of qualifying wages applicable to the PCCPAP was regularly amended based on actual changes on statewide average wage levels, with such filings subject to review and approval by the Insurance Department and typically effective each July 1.

Staff noted that the average PCCPAP loading indicated, based on the most recent available data, was nominally lower than that currently in effect (3.41 percent proposed vs. 3.67 percent current). This was attributed to the effects of nominal decreases in participation in the program and/or average credits being generated by participating employers.

Staff noted that the PCCPAP program had been revised effective January 1, 2002 to eliminate adjustment of experience modifications in recognition of the effects of PCCPAP credits as the approved means of avoiding providing redundant credits. The adjustment of experience modifications had been seen as a potential impediment to participation on the program. The revised plan would make adjustment within the computation of the credits themselves for the effect of high wages on experience modifications. During the interim period in which available historical data reflected the prior plan and proposed new plan parameters were needed consistent with the revised plan, staff was assuming that the alternative forms of adjustment to coordinate experience rating adjustments with PCCPAP credits were equivalent calculations, the intent of the change approved effective January 1, 2002.

Size-of-Loss Analyses

PCRB loss cost filings include rating values pertinent to various rating plans affected by the size of loss for individual claims or occurrences insured there under. Some such plans provide limitations applicable to the amount(s) of loss that can be used in computing a retrospective premium.

Exhibit 21 presented results of a methodology previously supplied to the PCRB by the National Council on Compensation Insurance, Inc. (NCCI). This method had been used to calculate excess loss (pure premium) factors in some previous PCRB filings. More recent filings had

relied heavily on empirical Pennsylvania data as the basis for these values; however, staff had continued to apply the NCCI methodology in order to review its results as compared to the empirical indications and in order to be able to use relativities established by the NCCI methods for selected loss values where historical Pennsylvania data was either unavailable or of very limited volume and statistical credibility.

Exhibit 22 presented the most recent available Pennsylvania size-of-loss distribution, derived by tabulating reported loss amounts and developing open claim values so as to produce ultimate loss estimates on a case-by-case basis consistent with the PCRБ's analysis of aggregate financial data.

Exhibit 23 showed current and proposed excess loss (pure premium) factors computed using results from Exhibits 21 and 22, together with the indicated percentage changes therein by loss limitation and hazard group.

Sizes of loss considerations also apply to the determination of state and hazard group relativities that allow a single table of insurance charges and savings to be applied in different jurisdictions where benefit levels and statutory provisions may vary significantly. But for some technical differences pertaining to the date to which various calculations are trended, the procedure used to establish these state and hazard group relativities is the same as that used in the NCCI excess loss (pure premium) factor calculation. Exhibit 24 presented the derivation of state and hazard group relativities.

A question was presented regarding the relative dispersion of Pennsylvania's state and hazard group relativities compared to the results of NCCI's analyses in many other jurisdictions. Staff indicated that a further review of this matter would be conducted. Preliminary thoughts about the reasons such differences might properly arise included differences in the classification structures and procedures applicable in these different groups of states.

Offering of small deductible coverages at certain specified amounts is mandatory in Pennsylvania. PCRБ filings provide loss elimination ratios computed consistent with the mandatory deductible levels. A special consideration arose when computing these loss elimination ratios because Pennsylvania's statistical plan does not require separate reporting of losses below \$2,000, but a loss elimination ratio is required at a \$1,000 deductible. With appropriate adjustment, the needed loss elimination ratios were derived as the complements of per-claim excess loss factors at the specified deductible levels of \$1,000, \$5,000 and \$10,000 as shown on Exhibit 25.

A question was posed regarding the proposed loss elimination ratios, which showed increases from the currently approved values. It was thought that this was counterintuitive if claim severity was increasing, as had been indicated in earlier discussion. Staff noted that, although claim severities were increasing, for this filing those increases were being projected as lower rates that had been the case last year, so that the trended severities (particularly for indemnity loss) might be nominally improved in this filing by comparison to that of a year ago.

Retrospective Rating Plan Optional Loss Development Factors

Carriers may apply loss development factors to early evaluations in order to include a provision for maturation of loss values at subsequent reports. Exhibit 26 of the agenda materials provided such development factors applicable without limitation of losses, as well as a procedure that could be used to apply excess loss factors to compute appropriate loss development factors for various loss limitations and hazard groups.

Proposed Loss Cost Relativities by Classification

Exhibits 17, 20A, 20B, 20C, 28, 29 and 30 of the agenda materials and the Class Book were reviewed with the attendees as follows:

Exhibit 17 presented a narrative discussion of the procedures applied to derive classification loss cost relativities. Staff noted that these procedures were generally unchanged from those of the most recent previous loss cost filing. With respect to certain “test correction factors” which had historically been applied as matrices of factors differing by type of loss and industry group, the Bureau proposed to continue a transition begun with the April 1, 2001 filing toward an eventual process of applying test correction factors uniformly across all types of loss and industry groups. In order to limit the transitional effects of such a change, it had been decided last year to accomplish this over a three-year period. The current filing would thus represent the second (and next-to-last) step in that process.

Exhibits 20A, 20B and 20C of the agenda materials were offered as summary tabulations based on unit statistical data used to derive certain parameters applied in the determination of classification loss cost relativities.

Exhibit 28 showed proposed classification loss costs and expected loss factors by classification consistent with the proposed overall change in loss cost level. Exhibit 29 provided insight into the derivation of the proposed classification rating values by showing a test of indicated and selected classification rating values, including effects of capping and application of loadings for the various assessments which would remain a part of published Bureau loss costs.

Exhibit 30 showed a histogram of proposed classification rating value changes based on the proposed overall change in loss cost levels. Staff noted that desirable features of classification loss cost changes included relatively narrow distribution around the average change and few, if any, classifications which materially shift from better to worse than average or vice-versa between successive filings.

A Class Book providing detail of historical experience and derivation of proposed rating values had been distributed at the meeting. This exhibit contained tabulations of prior experience data by classification together with the detail of the derivation of individual loss cost proposals in the draft filing. Staff reviewed the more prevalent types of circumstances precipitating a selection of class rating value different from that produced by

application of the loss cost formulae to available experience data. One category in this regard, introduced with the April 1, 2001 filing, was a set of selections which had been made to temper movements in individual class rating values which would have precipitated or extended larger fluctuations above and below the average rating value changes over successive filing revisions.

Some discussion was had regarding a specific classification that evidenced application of the secondary capping procedure first.

Auditable Payrolls

A staff memorandum responding to the most recently announced revision to the Statewide Average Weekly Wage (SAWW) was reviewed. Certain parameters used in auditing policies where payroll amounts were expected to be extremely volatile or where payroll records were routinely unavailable were by convention indexed to the SAWW. The last revision to the SAWW, effective January 1, 2001, had been a change from \$611 to \$644.

In retrospect on the meeting discussion, a question was asked regarding the derivation of expected loss factors and how the policy year loss development analysis done on financial data was applied to unit statistical data (or alternatively removed from proposed loss costs) for purposes of this calculation. While the staff sense preliminarily was that the factors presented on Exhibit 19 reflected comparison of financial data ultimates to unit statistical data reported losses, this issue was noted for some further consideration and verification.

There being no further business for the Committees to consider, the meeting was adjourned.

Respectfully submitted,

Timothy L. Wisecarver
Chair - Ex Officio

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