

Pennsylvania Experience Modification Calculation

This application is a tool to assist users in understanding Pennsylvania's workers compensation experience rating calculations. The application responds to information provided to it, without checking, verification and/or correction. Consequently, results obtained from this application may not be used by agents, producers, insurers or employers in determining policy prices or as a replacement for an Experience Rating Worksheet issued by the PCRB.

Experience rating is a systematic, mathematical method of modifying future premiums by comparing the actual (past) incurred loss experience of an individual insured to the normal or average expected loss experience for that insured's classification(s) during a defined experience period. The experience rating formula includes a credibility factor, which reflects the degree of confidence placed in the insured's past experience as a predictor of future experience. The greater an employer's past exposures are, the more credible the experience and the greater the impact that past experience will have in raising or lowering the experience modification.

Under experience rating, insured's that maintain favorable loss levels in the prior years receive a premium reduction (a "credit" experience modification, or an experience modification factor below 1.000), while insured's with poor past loss experience are charged an increased premium (receiving a "debit" experience modification, or an experience modification factor above 1.000).

Implicit in any form of experience rating is the potential for either debits or credits to be derived. Since experience rating offers the prospect of either of these types of premium adjustments, it provides an economic incentive for employers to develop safety programs and claims management initiatives. Thus, experience rating benefits employers and employees by promoting occupational safety and timely return to work for injured workers. Based on extensive historical testing and actuarial methods, experience rating is the best-known method of predicting future experience by utilizing past experience.

This application will help you estimate Pennsylvania "intrastate" experience modifications to better plan future workers compensation insurance costs. While this program cannot be used to develop official experience modifications and is not intended to incorporate and apply many rules and exceptions found in the Experience Rating Plan Manual, it will calculate experience modifications based on loss and payroll information that you enter. This application also allows for the exploration of "what if" scenarios by adjusting loss and payroll information and observing the resulting experience modifications.

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General Instructions

This section provides brief explanations of experience rating rules and procedures and the process of calculating the experience modification. It does not address all of the details of the experience modification calculation or of various rules which might affect data used in experience rating and/or the resulting experience modifications. For additional information or clarification, please refer to the Pennsylvania Basic Manual or contact the Bureau.

Experience Period

- The experience rating calculation generally consists of an experience period of three policy years (36 months) of payroll and claim data organized by classification code(s). The most recent policy year of data used in experience rating is the policy year that expired one year prior to the rating effective date.
- The rating effective date is typically the effective date of the policy or the anniversary rating date for the policy to which the experience modification will apply.
- The experience rating calculation may include up to 3½ years of experience data, if one of the policy periods being used is from a policy that was in effect for nine months or less.
- The experience rating calculation may include less than three years of experience data, if the employer being rated meets the minimum premium eligibility requirements based on based on the reduced period of experience data.
- Note that this application contemplates only rating effective dates of January 1, 2005 and later.

Experience Rating Eligibility

Experience rating is mandatory for all employers that meet the minimum premium eligibility threshold.

- An employer is eligible for experience rating if the premium developed by the audited payrolls or other exposures included in the experience period, extended at current Bureau Loss Costs, is **\$10,000** or more.

Payroll Information

At least one year of experience data must be entered into this application in order to calculate an experience modification. Enter only one 4-digit year, class code and payroll amount per line. After the year, class code and payroll data have all been entered, click **ADD**. The Expected Loss Rate (ELR) will be selected for the classification payroll based on the 4-digit year entered. Expected Losses are then calculated by multiplying the Expected Loss Rate (ELR) factor time the corresponding class code payroll and dividing the result by 100.

- Select a Policy Year from the drop down box, entered as a four-digit year.
- Select a Classification code from drop down box.
- Enter the payroll amount (whole dollar amounts only) for the selected classification *
- Click **ADD** button to calculate Expected Losses.

* When entering Class 993, Ambulance Corp. enter as 100 for 1 garage or 200 for two garages.

* When entering Class 994, Volunteer Fire Co. enter the Loss Cost that corresponds to the population figures by year.

Claim Information

The experience rating formula is more sensitive to loss frequency than to loss severity. As a result, an insured having many small losses may develop a higher experience modification than will another insured having the same total dollar amount of losses resulting from fewer, larger claims. In part, this difference reflects the premise that loss frequency is more susceptible to change by virtue of management's attitudes and other factors than is the amount of loss on individual claims once they have occurred.

The Experience Rating Plan limits the effect of accident severity on employer rates by placing a flat loss limitation of \$42,500 on claim amounts used in the experience rating calculation for any one accident for every rated employer regardless of the employer's size or the actual amount of the claim.

- Claims reported and used in the experience rating calculations are required to be on an incurred (paid plus reserved) basis.
- There are two categories of claims:
 - Claim over \$42,500
 - Claim(s) under \$42,500.
- All claims over \$42,500 must be entered individually and are automatically reduced by the application to a maximum value amount of \$42,500. These claims cannot be grouped together, and doing so will result in incorrect experience modification calculations.
- Claims under \$42,500 may be grouped together for each policy year. Input claims by individual calendar year. For example, 10 claims occurring in 2008 would be entered as 2008 regardless of whether the claim was reported on the 2007 policy. Example: 11/1/07 – 11/1/08 policy, accident dates, 3/12/08, 7/14/08 claim would be entered as calendar year 2008.
- For Catastrophe claims, refer to the catastrophe section of the application.
- Once all claim information has been entered and calculated, that data will be referred to as the Total Incurred Losses for the experience modification calculation.

Catastrophes

Accidents that involve injuries to two or more persons are limited to a maximum value of \$42,500 for experience rating purposes.

- Enter each claim separately and set the Catastrophe indicator on each claim equal to Y.
- The total amount of all combined claims for a catastrophic accident must be greater than \$42,500 in order for the catastrophe limitation to apply.

Results

- 1. Actual Losses.** Actual Losses (F), over the experience period, limited to specified maximum amount of \$42,500
- 2. Expected Losses.** Expected Losses (G) shall be determined from the application of the appropriate Expected Loss Factors to exposures by classification. Expected losses thus reflect both the amount of business activity and the degree of hazard in an employer's operations.
- 3. Credibility.** The Credibility (H) of the experience of the risk is based on the Expected Losses (G). Credibility represents the extent to which an insured's actual (limited) losses will be used in the experience modification calculation.
- 4. Limitation Charge.** A limitation charge (I) reflecting the average effect of the Maximum Value placed on any single claim or accident
- 5. Credibility Complement.** The Credibility Complement (J) is computed by subtracting the Credibility (H) from unity (1.0)

5. Experience Modification. The Experience Modification (K) shall be determined from the formula:

$$\{(F \times H) + (G \times I) + (G \times J)\} / G$$

The Experience Rating Plan sets specified "swing limits" on the extent to which any employer's experience modification may change in one year. The limits employed allow changes (up or down) of no more than 25 percent of the prior experience modification. A new experience modification cannot be higher than the expiring experience modification plus 25 percent, nor can it be lower than the expiring experience modification less 25 percent. For example, if the expiring experience modification was 1.000, the new experience modification cannot be more than 1.250, nor can it be less than 0.750. The swing limit provision provides an extra measure of protection for employers against the possibility of significant changes in an experience modification from year-to-year.

If you know the prior experience modification, enter it in the box

Prior Modification: [Recalculate Mod](#)

By entering a prior experience modification and clicking Recalculate Mod, the Final Modification will be shown reflecting the effect, if any of the swing limits applied to the prior modification.

Double Swing Cap

The double swing cap recognizes the favorable experience of the risk by setting the Final Modification to 1.000. When the application of the swing cap to the employers previous experience modification is above 1.000, but the Indicated Modification is below 1.000, the Final Modification shall be set at 1.000.