

PENNSYLVANIA F-CLASS FILING
Proposed Effective Date April 1, 2014

Discussion of Exhibits

Exhibit 1 – Indicated Change in Rate Level

Exhibit 1 attached shows the derivation of a decrease of 1.84 percent in collectible premium for Pennsylvania F-Class business. On a manual basis, the indicated change is a decrease of 2.14 percent.

The procedure for developing the indicated change in Exhibit 1 is the same as that used in the 2011 Pennsylvania F-Class filing. Derivation of the trended loss ratios on Line (1) is described in Exhibit 5.

Based on the payroll credibility table used in the class ratemaking portion of the Pennsylvania April 1, 2013 Loss Cost Filing, the indicated overall credibility weight for F-Class exposures would be five percent. A credibility weight of 25 percent was judgmentally selected to assign greater weight to the Pennsylvania experience, in part because F-Class filings have not been prepared annually. This same credibility weight was used in each Pennsylvania F-Class filing since and including 2002. The complement of the selected credibility (75 percent) has been assigned to the loss ratio underlying the current rates. Line (4) shows the projected credibility weighted loss ratio.

The credibility-weighted loss ratio is adjusted to include loss adjustment expenses (Line (5)) and fixed expenses (Line (7)). The total on Line (8) is then compared to the permissible loss, loss adjustment and fixed expense ratio (Line (9)) to produce the indication on Line (10)). Derivation of Lines (5), (7) and (9) are discussed under the caption “Expenses” below.

The indicated change in collectible premium is converted to an indicated change in manual rate level (Line (13)) by adjusting for the change in the off-balance of the Experience Rating Plan (collectible premium ratio). The proposed collectible premium ratio is drawn from the Pennsylvania April 1, 2013 Loss Cost Filing, as approved by the Pennsylvania Insurance Department.

Losses

Exhibit 5 – Analysis of Experience

Exhibit 5 presents a review of F-Class experience as reported under the Unit Statistical Plan. Experience for the most recent available years through 2010 was newly extracted from the current revision database. This recent data has been supplemented by prior experience included in each F- Class filing since and including 1997. Page 1 of Exhibit 5 shows reported standard earned premiums (1995 to 2010) and indemnity incurred losses (1995 to 2010). The step-shaped lines separating successive evaluations for a given policy period indicate that the data was extracted from the 2000 filing (above the highest line), the 2002 review (between the highest and lower line), the 2005 review (between the second and third lines reading from top to bottom), the 2007 review (between the third and fourth lines reading from top to bottom), the 2009 review (between the fourth and fifth line reading from top to bottom), the 2011 review (between the fifth and sixth line reading from top to bottom) or the current review (below the lowest line). Page 2 shows similar detail for F-Class medical experience.

Page 3 shows the age-to-age incurred loss development factors for indemnity losses from 1st through 10th report. The step-shaped lines separate ratios of losses whose successive evaluations were drawn from six different rate revision extracts (2000-2002, 2002-2005, 2005-2007, 2007-2009, 2009-2011 or 2011-2014). The data from prior filings was not re-extracted and edited and may therefore have a degree of inconsistency with data subsequently extracted due to corrections of units, availability of previously missing units or the lack of units previously included. The cells denoted with asterisks (****) represent points where an inconsistency in data was observed between successive extracts for a given report year and maturity. Average age-to-age factors for the latest three, five and seven years available are shown. The selected age-to-age factors for indemnity are derived on Page 5 and are the result of fitting the age-to-age factors using seven years averages to a curve and also projecting a tail factor (10th-to-ultimate) based on that curve. Age-to-age incurred loss development factors for medical losses were likewise fitted to a number of curves. However, no satisfactory curve fits resulted. A seven-year arithmetic average was instead selected to calculate age-to-age factors for medical losses along with a 10th-to-ultimate factor of 1.0000. The bottom sections of Pages 3 and 4 show incurred loss development factors to an ultimate basis for indemnity and medical losses, respectively.

Page 5 shows the derivation of selected indemnity age-to-age development factors. Residuals (LDF-1) of average age-to-age loss development factors are fitted to a curve of the form $y = 1/(a+b*x+c*x^2)$. An average factor of 1.0000 was chosen for the 14th to 15th development stage to improve the fit and shape of the resulting curve. A tail factor was selected by compounding the age-to-age factors for successive stages beyond 10th report.

Ultimate on-level loss ratios are calculated on Page 6 for indemnity, medical and in total. Page 7 shows a graph of the resulting projected ultimate loss ratios.

An analysis of loss ratio trend is summarized on Page 8. Linear and exponential trend lines were used to project trended loss ratios for indemnity and medical, using combinations of policy years ranging from three to ten points. Seven-year average loss ratios and zero percent annual trend were selected for both indemnity and medical losses. The resulting trended loss ratios of 37.63 percent for indemnity and 14.66 percent for medical were carried to Line (1) of Exhibit 1.

Expenses

Exhibit 2 – Expense Loading

Expense provisions are presented in Exhibit 2 and are broadly categorized as loss and loss adjustment, fixed expenses, and variable expenses. Variable expenses are those expenses which are expected to remain a constant percentage of premium regardless of the overall premium level or premium charge. Fixed expenses are considered to be a function of changes in payroll levels and/or expense costs independent of changes in premium levels. Fixed expenses are, therefore, separately trended.

The first column of Exhibit 2 shows expense provisions prior to trending, where trending refers to the separate trending applicable to fixed expenses. Provision for the Security Fund (0.00 percent) and taxes (2.00 percent) are based on current assessment levels. Miscellaneous taxes, also included in “Taxes,” are estimated to be 0.36 percent. Provision for general expense, other acquisition, premium discount, commissions and uncollectible premiums are derived in Exhibit 3 – Expense Study.

The second column of Exhibit 2 shows expenses after trending, where trending applies to fixed expenses. The fixed expense trend factor of 2.37 percent is based on a review of countrywide workers compensation dollars of expense for general and other acquisition expenses for the period 2003 through 2011, as compiled by A. M. Best Company. The payroll trend factor of 4.07 percent is based on insured payrolls from Unit Statistical Plan data for the eleven years 1998 to 2009 (excluding 2001). The trended loss ratio is carried from Line 4 of Exhibit 1. Loss adjustment expenses and the federal assessment are functions of losses, with LAE derived in Exhibit 3 and the federal assessment based on the latest available assessment rate.

The last column of Exhibit 2 shows the proposed provision for expenses, consistent with the overall indicated change in rates from Exhibit 1. Premium discount, commissions, taxes and the provision for uncollectible premiums remain a constant percentage of premium and are, therefore, unchanged from Column 2. The fixed expense ratios of Column 2 are adjusted to the proposed rate level by dividing the Column 2 figure by the indicated change from Line (10) of Exhibit 1 (i.e., $2.91 = 2.86/.9816$). The provisions for profit (.07 percent) and the combined provision for loss and loss-related expenses (78.98 percent) were derived from an internal rate of return model, as described in Exhibit 4. The combined provision for loss and loss-related expenses of 78.98 percent was split into the loss (60.13 percent), loss adjustment expense (8.79 percent) and the federal assessment (10.06 percent) components by maintaining a ratio of loss adjustment expense to loss of 14.62 percent and a ratio of federal assessment expense to loss of 16.74 percent.

Exhibit 3 – Expense Study

Page 3.1 of Exhibit 3 derives provisions for commission, other acquisition, and general expense exclusive of expense constant dollars. Commissions are related to premium, including large deductible business on a net (as reported) basis. Other acquisition and general expense are related to premiums, including large deductible business on a gross (before deductible credits) basis. An average factor over three years, 2009 through 2011, is used. Experience for all companies is included.

Loss adjustment expenses for Calendar Years 2009 through 2011 are related to incurred losses, including large deductible business on a gross (before reimbursement) basis. The resulting average factor of 14.62 percent is shown on Page 3.4. Experience for all companies is included.

An average premium discount figure of 7.95 percent is derived on pages 3.5 through 3.8 of Exhibit 3, based on the total Pennsylvania premium for all policies including those with F-Class exposure. The figure includes an adjustment to account for multi-state risks.

Based on data from the Delaware (Assigned Risk) Insurance Plan, an average uncollectible premium rate of approximately 1.0 percent was observed. An uncollectible premium provision of 0.50 percent was selected for Pennsylvania F-Class business.

Exhibit 4 – Internal Rate of Return Model

Exhibit 4 presents an internal rate of return model which tracks the premium, loss and expense cash flows of Pennsylvania workers compensation F-Class business for the prospective rating period. The model combines expense assumptions from Exhibit 2, a premium collection pattern, loss and expense payout patterns, and a base standard premium of \$1 million to model the net cash flows for F-Class business.

A profit loading is chosen so that the net cash flows, when discounted to present value, provide a return on equity equal to the projected target rate of return or cost of capital. The cost of capital is derived in Exhibit 4 and is equal to 8.86 percent.

In the internal rate of return analysis, the profit provision was .07 percent. A loss ratio, including provision for loss, loss adjustment and the federal assessment, and consistent with the other expense values used in the model, was also derived and equal to 78.98 percent. That loss ratio is subsequently split into the loss (60.13 percent), loss adjustment expense (8.79 percent) and federal assessment (10.06 percent) values, as indicated in Exhibit 2.

Classification Analysis and Exhibits

The methodology for the derivation of F-Class rates is unchanged from the process used for developing F-Class rates in each F-Class filing since and including 1997 and is similar to the process used in the calculation of State Act loss costs. Exhibit 10, Rate Formulae, describes the steps used in the classification ratemaking process. Exhibit 9, Derivation of F-Class Rates, shows current and proposed rates by class and the respective percentage changes. No classes were subject to capping at the upper or lower allowable ranges. Expected loss rate factors for use in calculating expected losses for experience rating are derived in Exhibit 11, Calculation of Expected Loss Rate Factors. Proposed rating values are shown in Exhibit 12, Manual Rates and Expected Loss Rates. F-Classification Exhibits, Exhibit 14, and the F-Class Book are also included. The Class Book shows the reported and projected experience for each class and the derivation of proposed rates. The F-Classification Exhibits show various factors used in the class ratemaking process. The per-claim and per-accident loss limits and the credibility table are the same ones used in the April 1, 2013 Pennsylvania State Act Loss Cost Filing.

U. S. Longshore & Harbor Workers Coverage Factor

Exhibit 6 shows the derivation of a USL&HW factor which, when applied to State Act class rating values, provided for the pricing of risks with USL&HW exposure. The USL&HW loading is based on a comparison of average benefit levels by type of injury under the USL&HW Act and the Pennsylvania Workers Compensation Act. These average benefit levels are then weighted by type of injury to get an overall benefit level for each coverage.

It is proposed that the USL&HW factor be decreased from 1.781 to 1.775, representing a 77.5 percent load to State Act rating values.

Other Exhibits

Exhibit 7, Table II, presents a summary of Unit Statistical Plan experience on a reported and projected basis for F-Class business by type of injury.

Exhibit 8, Tax Multiplier, provides a tax multiplier factor applicable to F-Class exposures for use in retrospective rating. It is proposed that the factor decrease from 1.2736 to 1.1729.

Index of Exhibits

A complete list of the enclosed exhibits follows:

- Exhibit 1 Indicated Change in Rate Level
- Exhibit 2 Expense Loading
- Exhibit 3 Expense Study
- Exhibit 4 Internal Rate of Return Model
- Exhibit 5 Analysis of Experience
- Exhibit 6 U. S. Longshore & Harbor Workers Coverage Factor
- Exhibit 7 Table II – Unit Statistical Data
- Exhibit 8 Tax Multiplier
- Exhibit 9 Derivation of F-Class Rates
- Exhibit 10 Rate Formulae
- Exhibit 11 Calculation of Expected Loss Rate Factors
- Exhibit 12 Manual Rates and Expected Loss Rates
- Exhibit 14 F-Class Exhibits and Class Book