LOSS COSTS – INFORMATION　　　　　　　　　　　　　　　JULY 25, 2018

COMMERCIAL PROPERTY　　　　　LI-CF-2018-083

PENNSYLVANIA COMMERCIAL FIRE AND ALLIED LINES LOSS COST LEVEL ANALYSIS FURNISHED FOR INFORMATION

KEY MESSAGE

This analysis is provided for your information. We are NOT revising the current loss costs based on this analysis.

BACKGROUND

In circular LI-CF-2018-076, we provided you with information about the Commercial Fire and Allied Lines loss cost level experience review.

ISO ACTION

We are NOT implementing any changes, at this time, to the current Commercial Fire and Allied Lines advisory prospective loss costs for this jurisdiction.

SUPPLEMENTARY INFORMATION

We are including the following supplementary information:

- An Actuarial Analysis Supplement which provides discussion and analysis of changes in the experience and adjustments used to derive the loss cost level analysis.

- The loss cost exhibits contained in the loss cost level analysis in a Microsoft® Excel workbook.

NOTE: This supplementary information is not part of the loss cost level analysis.

COMPANY ACTION

You may wish to evaluate your rate level needs.

Some calculations included in the attached analysis involve areas of ISO staff judgment. You should carefully review and evaluate your own experience in order to determine whether the indications are appropriate for your use.

If you decide to independently file a rate or loss cost revision based on this analysis, you must:

- Comply with the applicable regulatory filing requirements; and

- Advise your production forces about implementation of your revised rates or loss cost adjustments.

REFERENCE(S)

LI-CF-2018-076 (06/13/2018) Commercial Fire And Allied Lines Experience Level Indications Reviewed By ISO Staff

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- Loss Cost Level Analysis
- Actuarial Analysis Supplement
- Excel Workbook

FILES AVAILABLE FOR DOWNLOAD

To download all files associated with this circular, including attachments in the full circular PDF and/or any additional files not included in the PDF, search for the circular number on ISOnet Circulars. Then click the Word/Excel link under the Full Circular column on the Search Results screen.

Please note that in some instances, not all files listed in the Attachment(s) block (if applicable) are included in the PDF.

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ACKNOWLEDGMENT OF ACTUARIAL QUALIFICATIONS

The American Academy of Actuaries' "Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States" requires that an actuary issuing a Statement of Actuarial Opinion should include an acknowledgment with the opinion that he/she has met the qualification standards of the AAA. ISO considers this loss cost document a Statement of Actuarial Opinion therefore we are including the following acknowledgment:

I, Rimma Maasbach, am an Actuarial Consultant in Actuarial Operations for ISO and I, Bei Zhou, am an Actuarial Product Director for Commercial Property for ISO. We are jointly responsible for the content of this Statement of Actuarial Opinion. We are both members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

AIR WORLDWIDE CORPORATION

This analysis incorporates the use of AIR Worldwide Corporation's (AIR) tropical cyclone model to produce hurricane modeled loss costs as part of the Basic Group II ratemaking procedure. AIR is the world's premier risk modeling and technology firm specializing in risks associated with natural and man-made catastrophes, weather and climate. AIR has developed models covering all major natural hazards, including hurricanes and earthquakes, and man-made perils (terrorist events) for more than 40 countries throughout North America, the Caribbean, South America, Europe, and the Asia-Pacific region. AIR provides a full suite of integrated products for underwriting, pricing, portfolio management, risk transfer and financing.

For more information concerning AIR Worldwide Corporation, please see the Contact Information block.

XACTWARE SOLUTIONS, INC.

This filing incorporates the use of pricing data from Xactware Solutions, Inc., to estimate trends in building costs for commercial properties. Xactware provides computer software solutions for professionals involved in estimating all phases of building construction and repair. The company has been providing building cost data, estimate tracking and data trending to the insurance repair market since 1986. Insurance carriers using Xactware data are responsible for settlement of the majority of property claims in the USA and Canada.

For more information concerning Xactware Solutions, Inc., please see the Contact Information block.

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If you have any questions concerning:

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Callers outside the United States, Canada, and the Caribbean may contact us using our global toll-free number (International Access Code + 800 48977489). For information on all ISO products, visit us at www.verisk.com/iso. To keep abreast of the latest Insurance Lines Services updates, view www.verisk.com/ils.

PENNSYLVANIA

COMMERCIAL FIRE AND ALLIED LINES INSURANCE PROSPECTIVE LOSS COST LEVEL INFORMATION
EXECUTIVE SUMMARY

PURPOSE	This document:

- provides advisory prospective loss cost information. The indicated loss cost level represents a +1.1% statewide change from the current ISO level.

- provides the analyses used to derive the prospective loss costs based on experience through calendar/accident year ending 06/30/2017, evaluated as of 09/30/2017.

- incorporates hurricane modeled loss costs based on Touchstone Version 5.0 of AIR Worldwide Corporation's (AIR) tropical cyclone model. Changes from the previous version of the model are explained in Section C.

- removes the Rating ID dimension (class vs. specifically-rated) from the Basic Group I relativity analysis on Table 8 since it is not expected that loss cost indications should vary by rating method.

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DEFINITION
OF THE ISO
PROSPECTIVE
LOSS COST

Advisory prospective loss costs in this document are the expected value of that portion of a rate that does not include provisions for expenses (other than loss adjustment expenses) or profit, and are based on historical aggregate losses and loss adjustment expenses adjusted and projected through trending to a future point in time. The hurricane portion of the prospective Basic Group II loss costs are expected hurricane loss costs based on AIR Worldwide Corporation's tropical cyclone model and include a provision for loss adjustment expense.

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LOSS COST
LEVEL
CHANGES

The statewide monoline prospective loss cost level changes are:

Coverage	Indicated
Basic Group I	-1.0%
Basic Group II	-2.2%
Special Causes of Loss	+6.1%
Total	+1.1%

Indicated loss cost level changes are changes from the current loss cost level.

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The latest revisions in this state are:

Reference Document or Filing	CF-2017-RLA1	CF-2016-RLA1
Rates/ Loss Costs	Loss Costs	Loss Costs
Dates Implemented	01/01/2018	02/01/2017
Changes		
Basic Group I	+5.9%	+2.0%
Basic Group II	-2.5%	0.0%
Special Causes of Loss	+7.3%	+10.0%
Total	+4.9%	+4.2%

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HISTORICAL SOURCE DATA

The data used in this review is:

. Voluntary experience for ISO reporting companies.

. Five calendar/accident years ending 06/30/2017 for Basic Group I and Special Causes of Loss.

. Ten calendar/accident years ending 06/30/2017 for Basic Group II.

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DISTRIBUTION OF STATEWIDE MONOLINE LOSS COST CHANGES

ISO has distributed the statewide monoline prospective loss cost changes as follows:

. by rating group and territory (where applicable) for Basic Group I.

. by territory, coverage and symbol (where applicable) for Basic Group II.

. by category (building coverage and occupancy type) for Special Causes of Loss.

This has been done based on the experience of each rating group and territory (where applicable), or category for Basic Group I and Special Causes of Loss, and based on the hurricane model for Basic Group II. Therefore, the resulting changes will vary by rating group and territory (where applicable) for Basic Group I; by territory, coverage, and symbol (where applicable) for Basic Group II; and by category for Special Causes of Loss.

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TREND AND
OTHER
ADJUSTMENTS

Loss Trend

For trend purposes, the period of use for this revision is assumed to begin on 01/01/2019. To adjust the loss experience to the levels expected to prevail while the revised loss costs are in effect, trend factors have been applied to the historical incurred losses. These trend factors are based on:

. external cost indices published by the U.S. Government and information provided by Xactware Solutions, Inc.

. changes in multistate average claim costs through fourth quarter 2016.

The "historic" trend factors based on the external indices, i.e. the factors based on historic changes in the indices, vary by year. The latest annual rates of change based on these indices are:

Coverage	Annual Rate of Change
Buildings	2.5%
Contents	1.2%
Time Element	-0.1%

Incurred losses are also multiplied by loss trend adjustment factors (LTA's) to reflect trends in claim frequency and claim costs that are different from those exhibited by the external indices. The annual loss trend adjustments are:

Line of Business	Buildings	Contents	Time Element
Basic Group I	-0.4%	0.5%	2.5%
Basic Group II	0.5%	0.8%	2.2%
Special Causes of Loss	0.3%	0.5%	2.5%

This produces a total annual loss trend of:

Line of Business	Buildings	Contents	Time Element
Basic Group I	2.0%	1.6%	2.3%
Basic Group II	2.9%	1.9%	2.0%
Special Causes of Loss	2.7%	1.6%	2.3%

Premium Trend

Over time, insureds tend to purchase increased amounts of insurance in order to compensate for inflation, which results in increased premium revenue.

TREND AND OTHER ADJUSTMENTS (cont'd)	In order to reflect this increase in revenue, ISO uses a premium trend procedure. The premium trend factors are based on observed changes in the annual amount of insurance written for BG I renewal policies for a group of selected companies. The selected annual trends in the amount of insurance are:

Buildings	2.0%
Contents	1.7%
Time Element	1.0%

Other Adjustments

Standard actuarial procedures have been used in calculating the loss costs including loss development and the reflection of all loss adjustment expense. In addition, smoothing procedures have been applied to stabilize the effects of large or excess losses.

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TEN LARGEST COMPANY GROUPS IN ISO DATA BASE

COMMERCIAL MULTIPERIL - NON-LIABILITY (ASLOB 51)

1. Travelers Indemnity Company
2. Tokio Marine Companies
3. Cincinnati Insurance Company
4. Nationwide Mutual Insurance Company
5. Millers Capital Insurance Company
6. Hartford Accident & Indemnity Company
7. Harleysville Insurance
8. Liberty Mutual Insurance Company
9. Westfield Insurance Company
10. Zurich American Insurance Company

Insurers are listed in descending order based on the percent of statewide written premium volume from Annual Statement Page 15 for year ending 12/31/2016 for Annual Statement Line of Business (ASLOB) 51, Commercial Multiperil - Non-liability.

Although ASLOB 51 includes coverages in addition to commercial fire and allied lines, e.g., crime, inland marine, fidelity, the largest percentage of premium volume is due to fire and allied lines (Basic Group I, Basic Group II, and Special Causes of Loss coverages). ASLOB 51 does not include data reported under monoline fire and allied lines (ASLOBs 10 and 21), which includes both commercial and personal property experience.

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SIZE OF ISO DATA BASE

The market share of all insurers reporting to ISO in this state and included in the ratemaking experience underlying this review as measured by Annual Statement Page 15 written premium for year ending 12/31/2016 is:

Commercial Multi-peril - Non-liability (ASLOB 51) - 41.9%

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COMPANY
DECISION

We encourage each insurer to decide independently whether the judgments made and the procedures or data used by ISO in developing the loss costs contained herein are appropriate for its use. We have included within this document the information upon which ISO relied in order to enable companies to make such independent judgments.

The data underlying the enclosed material comes from companies reporting to Insurance Services Office, Inc. Therefore, the ISO experience permits the establishment of a much broader statistical ratemaking base than could be employed by using any individual company's data. A broader data base enhances the validity of ratemaking analysis derived therefrom. At the same time, however, an individual company may benefit from comparison of its own experience to the aggregate ISO experience, and may reach valid conclusions with respect to the manner in which its own costs can be expected to differ from ISO's projections based on the aggregate data.

Some calculations included in this document involve areas of ISO staff judgment. Each company should carefully review and evaluate its own experience in order to determine whether the ISO selected loss costs are appropriate for its use.

This material has been developed by ISO staff. ISO staff has relied on information, and unique knowledge and expertise, provided by AIR Worldwide Corporation (a wholly-owned subsidiary of Insurance Services Office, Inc.) for the derivation of the modeled hurricane loss costs used in this document.

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PENNSYLVANIA
COMMERCIAL PROPERTY INSURANCE

PENNSYLVANIA
COMMERCIAL PROPERTY INSURANCE

SECTION A - SCOPE OF REVISION

PENNSYLVANIA

TABLE 1 - SUMMARY OF MONOLINE PROSPECTIVE LOSS COST CHANGES (A)

COVERAGE	INDICATIONS/SELECTED	AGGREGATE LOSS COSTS AT CURRENT LEVEL
BASIC GROUP I	-1.0%	71,411,593
TERRITORY 01	+2.2%	
TERRITORY 02	-6.6%	
TERRITORY 03	-4.5%	
TERRITORY 04	+1.1%	
TERRITORY 05	-6.6%	
TERRITORY 06	+4.7%	
BASIC GROUP II	-2.2%	24,797,958
SPECIAL CAUSES OF LOSS	+6.1%	45,407,766
ALL COVERAGES COMBINED	+1.1%	141,617,317

TERRITORY DEFINITIONS
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  01 Zone 1
  02 Zone 2
  03 Zone 3
  04 Philadelphia
  05 Pittsburgh
  06 Allegheny County Excluding Pittsburgh)

(A) FOR TREND PURPOSES, THE PERIOD OF USE FOR THIS REVISION IS ASSUMED
    TO BEGIN ON 01/01/2019.

PENNSYLVANIA

TABLE 2 - BASIC GROUP I PROSPECTIVE LOSS COST CHANGES
         BY RATING GROUP AND TERRITORY   (A)

RATING GROUP DESCRIPTION	Zone 1	Zone 2
	INDICATED	INDICATED
01 APARTMENTS	-0.8%	-9.3%
02 OTHER HABITATIONAL	+3.9%	-5.0%
03 RESTAURANTS & BARS	-2.7%	-11.1%
04 OTHER MERCANTILE RISKS	+6.1%	-3.1%
05 PUBLIC BUILDINGS	+5.1%	-3.9%
06 CHURCHES	-2.2%	-10.7%
07 SCHOOLS	-0.8%	-9.3%
08 OFFICES AND BANKS	-1.8%	-10.3%
09 RECREATIONAL FACILITIES	+0.2%	-8.4%
10 HOTELS & MOTELS	+0.1%	-8.5%
11 HOSPITALS & NURSING HOMES	+4.1%	-4.9%
12 BLDGS UNDER CONSTRUCTION	+2.3%	-6.5%
13 MOTOR VEHICLE RISKS	+1.2%	-7.5%
14 OTHER NON-MANUFACTURING	+5.1%	-3.9%
15 STORAGE	-1.5%	-10.0%
17 FOOD MANUFACTURING	+4.0%	-5.0%
18 WOOD MANUFACTURING	+3.9%	-5.0%
19 WEARING APPAREL	+2.3%	-6.5%
20 CHEMICAL MANUFACTURING	+2.2%	-6.6%
21 METAL MANUFACTURING	+9.9%	+0.5%
22 OTHER MANUFACTURING	+3.9%	-5.0%
TOTAL	+2.2%	-6.6%

(A) FOR EACH RATING GROUP, THE LOSS COST CHANGE FOR EACH CSP CLASS IN THE RATING GROUP, BY COVERAGE AND
    CONSTRUCTION, IS IDENTICAL TO THE OVERALL CHANGE SHOWN FOR THE RATING GROUP.

PENNSYLVANIA

TABLE 2 - BASIC GROUP I PROSPECTIVE LOSS COST CHANGES
        BY RATING GROUP AND TERRITORY   (A)

RATING GROUP DESCRIPTION	Zone 3	Philadelphia
	INDICATED	INDICATED
01 APARTMENTS	-7.6%	-1.5%
02 OTHER HABITATIONAL	-3.2%	+3.2%
03 RESTAURANTS & BARS	-9.4%	-3.4%
04 OTHER MERCANTILE RISKS	-1.2%	+5.3%
05 PUBLIC BUILDINGS	-2.1%	+4.4%
06 CHURCHES	-8.9%	-2.9%
07 SCHOOLS	-7.6%	-1.5%
08 OFFICES AND BANKS	-8.6%	-2.5%
09 RECREATIONAL FACILITIES	-6.7%	-0.5%
10 HOTELS & MOTELS	-6.8%	-0.6%
11 HOSPITALS & NURSING HOMES	-3.0%	+3.4%
12 BLDGS UNDER CONSTRUCTION	-4.8%	+1.6%
13 MOTOR VEHICLE RISKS	-5.7%	+0.6%
14 OTHER NON-MANUFACTURING	-2.1%	+4.4%
15 STORAGE	-8.3%	-2.2%
17 FOOD MANUFACTURING	-3.1%	+3.3%
18 WOOD MANUFACTURING	-3.2%	+3.2%
19 WEARING APPAREL	-4.8%	+1.6%
20 CHEMICAL MANUFACTURING	-4.9%	+1.5%
21 METAL MANUFACTURING	+2.4%	+9.2%
22 OTHER MANUFACTURING	-3.2%	+3.2%
TOTAL	-4.5%	+1.1%

(A) FOR EACH RATING GROUP, THE LOSS COST CHANGE FOR EACH CSP CLASS IN THE RATING GROUP, BY COVERAGE AND
    CONSTRUCTION, IS IDENTICAL TO THE OVERALL CHANGE SHOWN FOR THE RATING GROUP.

PENNSYLVANIA

TABLE 2 - BASIC GROUP I PROSPECTIVE LOSS COST CHANGES
          BY RATING GROUP AND TERRITORY   (A)

RATING GROUP DESCRIPTION	Pittsburgh	Allegheny Cty(Excl. Pitt)
	INDICATED	INDICATED
01 APARTMENTS	-8.8%	+1.6%
02 OTHER HABITATIONAL	-4.4%	+6.4%
03 RESTAURANTS & BARS	-10.6%	-0.4%
04 OTHER MERCANTILE RISKS	-2.5%	+8.6%
05 PUBLIC BUILDINGS	-3.3%	+7.7%
06 CHURCHES	-10.1%	+0.1%
07 SCHOOLS	-8.8%	+1.6%
08 OFFICES AND BANKS	-9.7%	+0.6%
09 RECREATIONAL FACILITIES	-7.8%	+2.7%
10 HOTELS & MOTELS	-7.9%	+2.5%
11 HOSPITALS & NURSING HOMES	-4.3%	+6.6%
12 BLDGS UNDER CONSTRUCTION	-5.9%	+4.7%
13 MOTOR VEHICLE RISKS	-6.9%	+3.7%
14 OTHER NON-MANUFACTURING	-3.3%	+7.7%
15 STORAGE	-9.4%	+0.9%
17 FOOD MANUFACTURING	-4.3%	+6.5%
18 WOOD MANUFACTURING	-4.4%	+6.4%
19 WEARING APPAREL	-5.9%	+4.7%
20 CHEMICAL MANUFACTURING	-6.0%	+4.6%
21 METAL MANUFACTURING	+1.1%	+12.6%
22 OTHER MANUFACTURING	-4.4%	+6.4%
TOTAL	-6.6%	+4.7%

(A) FOR EACH RATING GROUP, THE LOSS COST CHANGE FOR EACH CSP CLASS IN THE RATING GROUP, BY COVERAGE AND
    CONSTRUCTION, IS IDENTICAL TO THE OVERALL CHANGE SHOWN FOR THE RATING GROUP.

TERRITORY

Entire State

COVERAGE	SYMBOL	
BUILDINGS	AA	+0.0%
	A	+0.0%
	AB	+0.0%
	B	-2.6%
CONTENTS	AA	+0.0%
	A	+0.0%
	AB	+0.0%
	B	-2.1%
	TOTAL	-2.2%

TABLE 3 - SPECIAL CAUSES OF LOSS PROSPECTIVE LOSS COST CHANGES BY CATEGORY

CATEGORY DESCRIPTION	ENTIRE STATE
01 BUILDINGS	+7.6%
02 RES. APTS. AND CONDOS	-7.4%
03 OFFICES	+4.5%
04 MERCANTILE - HIGH	+18.5%
05 MERCANTILE - MEDIUM	+13.3%
06 MERCANTILE - LOW	+4.3%
07 MOTELS AND HOTELS	+0.5%
08 INSTITUTIONAL - HIGH	+12.0%
09 INSTITUTIONAL - LOW	-9.5%
10 INDUST-PROC - HIGH	+0.2%
11 INDUST-PROC - LOW	-7.7%
12 SERVICE - HIGH	-4.4%
13 SERVICE - LOW	+5.1%
14 CONTRACTORS	+6.4%
STATEWIDE TOTAL	+6.1%

POTENTIAL IMPACT OF BG I, BG II, AND SCL MONOLINE REVISIONS
ON COMMERCIAL PACKAGE POLICY

(1)	(2)	(3)	(4)
			SPECIAL
	BASIC	BASIC	CAUSES
TYPE OF POLICY	GROUP I	GROUP II	OF LOSS
31 MOTEL/HOTEL	-4.1%	-1.9%	+6.0%
32 APARTMENT	-1.6%	-2.4%	+3.3%
33 OFFICE	-5.4%	-2.1%	+6.8%
34 MERCANTILE	+0.2%	-2.2%	+9.7%
35 INSTITUTIONAL	-2.9%	-2.1%	+6.0%
36 SERVICES	-2.1%	-2.2%	+4.8%
37 INDUST/PROCESSING	+2.5%	-2.2%	+2.0%
38 CONTRACTORS	+0.6%	-2.3%	+7.1%

BASIC GROUP I, BASIC GROUP II, AND SPECIAL CAUSES OF LOSS MONOLINE CHANGES
BY TYPE OF POLICY (TOP) ARE DISPLAYED. THEY ARE CALCULATED BY TAKING
A WEIGHTED AVERAGE OF THE LOSS COST CHANGES BY TERRITORY AND RATING GROUP
(FOR BG I), BY COVERAGE AND SYMBOL (FOR BG II), AND BY CATEGORY (FOR SCL),
USING THE LATEST YEAR MULTILINE TOP AGGREGATE LOSS COSTS AS WEIGHTS.

SECTION B - CALCULATION OF PROPOSED CHANGES

OVERVIEW OF ISO ACTUARIAL PROCEDURES - COMMERCIAL PROPERTY

INTRODUCTION	Commercial Property prospective loss costs are determined by evaluating the adequacy of the current ISO loss costs to pay for our best estimate of losses and all loss adjustment expenses that will be incurred in the prospective (or future) period. This evaluation is done separately for Basic Group I, Basic Group II, and Special Causes of Loss.

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STEP 1: DETERMINATION OF INDICATED STATEWIDE LOSS COST LEVEL CHANGE	The first step in this process is the determination of the indicated statewide loss cost level change. This indicated statewide loss cost level change is the average percentage change which must be made to the current ISO loss costs in order to achieve adequacy for the prospective conditions. The percentage changes are presented on the exhibits labeled "Statewide Coverage Loss Cost Level Evaluation".

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STEP 2: DISTRIBUTION OF CHANGES	Based on the experience, ISO then distributes the indicated statewide loss cost level change by territory (where applicable), type of policy and rating group for Basic Group I; by type of policy for Basic Group II; and by type of policy and category for Special Causes of Loss.

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STEP 3: CALCULATION OF REVISED LOSS COSTS	The last step is the calculation of the prospective ISO loss costs. This is achieved by applying the indicated monoline changes to the current ISO loss costs. For Basic Group I, for those states without BG I rating territories, the statewide loss cost changes by rating group are applied to the current manual loss costs. For those states with rating territories, the Balance of State loss cost changes by rating group are applied to the current manual loss costs. The revised territory multipliers are calculated by multiplying the current territory multipliers by the indicated territory changes. For specifically-rated properties, the appropriate changes are applied to the current experience level adjustment factors and territory multipliers. For Basic Group II, revised loss costs are calculated by applying the indicated statewide monoline change to the current ISO loss costs, and where applicable, adding the hurricane modeled loss costs. For Special Causes of Loss, revised loss costs are calculated by applying the indicated monoline changes by category to the current ISO loss costs.

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COMMERCIAL PROPERTY INSURANCE
CALCULATION OF STATEWIDE ADVISORY LOSS COST LEVEL CHANGES IN TABLES 5, 6 AND 7

OBJECTIVE

The objective of this procedure is to determine the indicated statewide advisory loss cost level change. This procedure answers the question: What average percentage change must be made to the current ISO loss costs in order for them to be adequate to cover indemnity losses and all loss adjustment expenses incurred in the prospective period in which the revised loss costs are assumed to be in effect?

DESCRIPTION

This procedure compares the trended and developed incurred losses and loss adjustment expenses with the trended aggregate loss costs at current ISO level. The aggregate loss costs at current level are the amounts that would have been collected for losses and all loss adjustment expenses if the current ISO loss costs had been in effect during the experience period.

Experience ratios (losses and all loss adjustment expenses divided by aggregate loss costs, both trended to the prospective experience period) are calculated by year, and a weighted average of the yearly experience ratios is calculated. For Basic Group I (BG I) and Special Causes of Loss (SCL), the five year weights vary by year, giving greater weight to the more recent experience. For Basic Group II (BG II), because of the more volatile nature of the data, the ten individual years are given equal weight.

The average experience ratio is then credibility-weighted with the expected experience ratio in order to minimize the impact of random variation in the observed losses. The resulting credibility-weighted experience ratio is the indicated statewide advisory loss cost level change in decimal form.

EXPERIENCE BASE

The experience used in this review is the latest available data reported under the ISO Commercial Statistical Plan for BG I, BG II and SCL. The data are aggregated on an accident year basis.

STATEWIDE BASIC GROUP I
COVERAGE LOSS COST LEVEL EVALUATION
_____

(1)	(2)	(3)	(4)	(5)
			EXPERIENCE	
	AGGREGATE*	ADJUSTED**	RATIO	
YEAR	LOSS COSTS	INCURRED LOSSES	(3)/(2)	WEIGHTS
2013	68,867,978	60,683,721	0.881	0.10
2014	75,112,525	85,934,591	1.144	0.15
2015	78,813,502	87,905,639	1.115	0.20
2016	79,760,911	71,241,475	0.893	0.25
2017	71,411,593	55,357,838	0.775	0.30

(6) WEIGHTED EXPERIENCE RATIO = 0.939

(7) CREDIBILITY = 0.596

(8) EXPECTED EXPERIENCE RATIO = 1.002

(9) CREDIBILITY WEIGHTED EXPERIENCE RATIO = 0.964
(0.596 X 0.939) + (0.404 X 1.002)

(10) INDICATED COVERAGE LOSS COST CHANGE = 0.964

OR   -3.6%

 * AGGREGATE LOSS COSTS ARE ADJUSTED TO CURRENT ISO LOSS COST LEVEL
   AND 07/01/2019 AMOUNT OF INSURANCE LEVELS.

** INCURRED LOSSES ARE ADJUSTED TO 01/01/2020 COST LEVELS INCLUDING LOSS
   DEVELOPMENT AND ALL LOSS ADJUSTMENT EXPENSES.

PENNSYLVANIA
TABLE 6

STATEWIDE BASIC GROUP II
COVERAGE LOSS COST LEVEL EVALUATION
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(1)	(2)	(3)	(4)	(5)
		NON HURRICANE	ADJUSTED**	NON HURRICANE EXPERIENCE
	AGGREGATE*	AGGREGATE	NON-HURRICANE	RATIO
YEAR	LOSS COSTS	LOSS COSTS	INCURRED LOSSES	(4)/(3)
2008	23,343,968	20,584,860	18,355,295	0.892
2009	23,780,119	20,963,051	23,811,354	1.136
2010	23,697,109	20,900,666	24,346,839	1.165
2011	23,212,033	20,481,356	23,680,471	1.156
2012	24,273,466	21,414,859	17,807,405	0.832
2013	25,041,659	22,086,763	17,602,471	0.797
2014	25,208,895	22,240,247	28,554,195	1.284
2015	25,621,728	22,610,821	19,882,984	0.879
2016	25,718,528	22,694,681	13,935,480	0.614
2017	24,797,958	21,881,743	23,095,307	1.055

(6) WEIGHTED EXPERIENCE RATIO (EQUAL WEIGHTS)   = 0.982

(7) CREDIBILITY   = 0.845

(8) EXPECTED EXPERIENCE RATIO   = 1.008

(9) CREDIBILITY WEIGHTED EXPERIENCE RATIO   = 0.986
    (0.845 x 0.982) + (0.155 x 1.008)

(10) INDICATED COVERAGE LOSS COST CHANGE   = 0.986

                                                    OR   -1.4%

 * AGGREGATE LOSS COSTS ARE ADJUSTED TO CURRENT ISO LOSS COST LEVEL
   AND 07/01/2019 AMOUNT OF INSURANCE LEVELS.

** INCURRED LOSSES ARE ADJUSTED TO 01/01/2020 COST LEVELS INCLUDING LOSS
   DEVELOPMENT AND ALL LOSS ADJUSTMENT EXPENSES.

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TABLE 7

STATEWIDE SPECIAL CAUSES OF LOSS
COVERAGE LOSS COST LEVEL EVALUATION
_____

(1)	(2)	(3)	(4)	(5)
			EXPERIENCE	
	AGGREGATE*	ADJUSTED**	RATIO	
YEAR	LOSS COSTS	INCURRED LOSSES	(3)/(2)	WEIGHTS
2013	47,609,440	44,291,210	0.930	0.10
2014	47,171,003	50,777,523	1.076	0.15
2015	47,326,890	58,188,844	1.230	0.20
2016	47,628,378	37,169,270	0.780	0.25
2017	45,407,766	38,908,659	0.857	0.30

(6) WEIGHTED EXPERIENCE RATIO = 0.952

(7) CREDIBILITY = 0.604

(8) EXPECTED EXPERIENCE RATIO = 1.005

(9) CREDIBILITY WEIGHTED EXPERIENCE RATIO = 0.973
    (0.604 X 0.952) + (0.396 X 1.005)

(10) INDICATED COVERAGE LOSS COST CHANGE = 0.973

                                                  OR   -2.7%

 * AGGREGATE LOSS COSTS ARE ADJUSTED TO CURRENT ISO LOSS COST LEVEL
   AND 07/01/2019 AMOUNT OF INSURANCE LEVELS.

** INCURRED LOSSES ARE ADJUSTED TO 01/01/2020 COST LEVELS INCLUDING LOSS
   DEVELOPMENT AND ALL LOSS ADJUSTMENT EXPENSES.

EXPLANATORY NOTES TO TABLES 5, 6 AND 7

STATEWIDE BASIC GROUP I, BASIC GROUP II AND
SPECIAL CAUSES OF LOSS COVERAGE LOSS COST LEVEL EVALUATION

COLUMN (1) **EXPERIENCE PERIOD**

Experience for the five most recent accident years is used for BG I and SCL. Experience for the ten most recent accident years is used for BG II.

COLUMN (2) **AGGREGATE LOSS COSTS**

Since the objective of the ratemaking procedure is to test the adequacy of the current ISO loss costs, premium data for each year in the experience period are adjusted to the loss cost level which would have been earned had the current loss costs been in effect. This is accomplished by using either an extension-of-exposures (PPR or premium at present rates/loss costs) approach or an on-level approach. Where appropriate, certain reported data elements have been adjusted prior to being used in the calculations.

Extension of Exposures Approach

Where feasible, aggregate loss costs at current level (ALCCL) are developed using an extension-of-exposures approach. That is, the exposure (amount of insurance per $100) for each policy is multiplied by the current manual loss cost for that state, territory, subline, coverage, construction, occupancy and by any other applicable rating factors, such as limit of insurance factors and deductible relativities.

On-level Approach

The on-level approach is applied on an individual policy basis. The first step in the process is to multiply the reported premiums by the product of all loss cost level changes that have become effective subsequent to the inception date of the policy. The premiums are divided by the reported Rating Modification Factors and Loss Cost Multipliers to bring them to current ISO monoline manual loss cost level.

For premium records with inception dates prior to the effective date of the implementation of Limit of Insurance (LOI) curves, premiums are multiplied by off-balance factors and limit of insurance factors to bring them to a post-LOI loss cost level.

The on-level approach is used to adjust those premium records which cannot be adjusted using the extension-of-exposures techniques, for example, premium records for Basic Group I specifically-rated properties, for which manual loss costs do not exist. In addition, records failing an exposure edit which checks for a reasonable relationship between reported premium and exposure amount have also been on-leveled.

COLUMN (2)   Current IPMF and Prospective Amount of Insurance Levels
(cont'd)

Premiums are also adjusted to prospective amount of insurance levels by exposure trend factors to reflect the impact of inflation on the average amount of insurance written (Table 24). After multiline premiums are brought to current ISO monoline manual level, they are further adjusted to implicit package modification factor (IPMF) level by the application of Commercial Package Policy (CPP) IPMF's which vary by the eight CPP types of policy. (Both the adjustments to prospective amount of insurance level and to current IPMF level are done on an aggregate basis.) For a more complete description of the IPMF's and the other premium adjustments, refer to Tables 18 through 20 in the supporting material.

COLUMN (3) - BG II   NON-HURRICANE AGGREGATE LOSS COSTS - BASIC GROUP II ONLY

The non-hurricane aggregate loss costs reflect that portion of the BG II loss cost volume due to perils other than hurricane. These loss costs are calculated by multiplying the total aggregate loss costs for each rating territory, coverage, and symbol by the ratio of the current non-hurricane to current total loss costs found on Table 35.

COLUMN (3) -   ADJUSTED INCURRED LOSSES
BG I, SCL
COLUMN (4) - BG II   In order to assure the adequacy of the proposed loss cost level, incurred losses are adjusted to reflect the effect of inflation and other trends on loss costs. The adjustment of past losses to prospective levels is accomplished on an individual loss basis by application of current cost factors, loss projection factors and loss trend adjustments (Tables 21 through 23). In addition to adjusting losses to prospective cost level, the effect of inflation on the deductible portion of the loss incurred is reflected. For Basic Group II, losses due to hurricanes reflected in the modeled hurricane loss costs have been removed from the experience and replaced with average non-hurricane losses for each rating territory and loss month.

For each subline, incurred losses are further adjusted by an excess loss procedure which smoothes fluctuations due to large loss occurrences. The procedure removes any losses determined to be excess from the total incurred losses, resulting in normal incurred losses. These normal incurred losses (total - excess) are then multiplied by excess loss factors to calculate adjusted incurred losses (Tables 29 through 32). The resulting adjusted incurred losses are then developed to their ultimate settlement value and loaded by a factor to include all loss adjustment expenses. Loss development factors can be found on Table 28, and loss adjustment expense factors on Table 41. Where appropriate, certain reported data elements have been adjusted prior to being used in the calculations.

COLUMN (4) - BG I, SCL   EXPERIENCE RATIO
COLUMN (5) - BG II

The experience ratio is the ratio of adjusted incurred losses to aggregate loss costs for each year. For BG II, the experience ratio is a measure of non-hurricane experience only. It is the ratio of the adjusted non-hurricane incurred losses to the non-hurricane aggregate loss costs.

COLUMN (5) - BG I, SCL   WEIGHTS

For Basic Group I and Special Causes of Loss, the yearly experience ratios are weighted using weights of 10%, 15%, 20%, 25%, and 30% with the greatest weight assigned to the most recent year. These weights recognize the need to balance stability and responsiveness. The ten Basic Group II experience ratios are equally weighted, each given 10% weight.

LINE (6)   WEIGHTED EXPERIENCE RATIO

For Basic Group I and Special Causes of Loss, the weights are applied to the experience ratios to yield the weighted experience ratio. For Basic Group II, the experience ratios are equally weighted. These weighted experience ratios represent a projection of the experience which would result if future policies were written without a loss cost level revision.

LINE (7)   CREDIBILITY

The standards for 100% credibility are discussed in detail in Tables 33, 33A, and 34 for Basic Group I, Basic Group II, and Special Causes of Loss, respectively.

LINE (8)   EXPECTED EXPERIENCE RATIO

The expected experience ratio is ISO's best prediction of the experience ratio if the actual incurred experience were not available. For this review, we have assumed that the current loss costs were adequate when implemented and will be inadequate for the prospective period only to the extent of the net trend. The expected experience ratio is represented by the net (loss / amount of insurance) trend factor.

LINE (9)   CREDIBILITY WEIGHTED EXPERIENCE RATIO

The credibility weighted experience ratio is a weighted average of the weighted experience ratio (line (6)) and the expected experience ratio (line (8)) using the credibility factor and its complement as respective weights. For more detailed information regarding the development of the credibility factors, refer to Tables 33, 33A, and 34.

LINE (10)   INDICATED COVERAGE LOSS COST CHANGE

The credibility weighted experience ratio yields the overall coverage loss cost level change for Basic Group I (see Table 5), Basic Group II (see Table 6), and Special Causes of Loss (see Table 7).

COMPOSITION OF THE RATEMAKING DATA BASE

DATA INCLUDED **BASIC GROUP I**

- CSP Subline 010 (Commercial Fire)
- CSP Subline 015 (Basic Group I, i.e., Fire, Lightning, Explosion, Vandalism, Sprinkler Leakage)
- CSP Subline 016 (BG I excluding Vandalism)
- CSP Subline 017 (BG I excluding Sprinkler Leakage)
- CSP Subline 018 (BG I excluding Vandalism and Sprinkler Leakage)

BASIC GROUP II

- CSP Subline 020 (Extended Coverage)
- CSP Subline 025 (Basic Group II, i.e., Windstorm or Hail, Smoke, Aircraft or Vehicles, Riot or Civil Commotion, Sinkhole Collapse and Volcanic Action)
- CSP Subline 027 (Basic Group II Causes of Loss, i.e., Windstorm or Hail, Smoke, Aircraft or Vehicles, Riot or Civil Commotion, Sinkhole Collapse and Volcanic Action)
- CSP Subline 029 (Basic Group II Causes of Loss excluding Windstorm or Hail)

SPECIAL CAUSES OF LOSS

- CSP Subline 028 (All Other Perils Special Coverage Forms & Endorsements)
- CSP Subline 035 (Causes of Loss Special Form Including Theft)
- CSP Subline 045 (Causes of Loss Special Form Excluding Theft)

NOTES ON DATA INCLUDED

All CSP data are reviewed for CSP Types of Policy 10 (monoline), 3X, 70, and 7X (multiline).

For BG I, BG II and SCL, the reviewed experience is for property damage and time element coverages (coverage codes 1-7, as well as coverage code 9 reported under pre-simplification sublines 010, 020, and 028).

COMPOSITION OF THE RATEMAKING DATA BASE (cont'd)

DATA EXCLUDED	TYPE OF DATA	BG I	BG II	SCL
	· Non-voluntary experience (e.g. FAIR Plans)	X	X	NA
	· Dwelling experience	X	X	X
	· Farm experience	X	X	NA
	· Countrywide rated risks	X	X	X
	· Highly protected risks	X	X	X
	· Experience for policies with large deductibles	X	X	X

X indicates that experience is excluded.

For BG II, losses due to hurricanes with wind speeds of 40 miles per hour or greater have been excluded and replaced with average non-hurricane losses for each BG II rating territory and loss month.

Separately identifiable terrorism premium and loss records have been excluded from the ratemaking experience.

STEP 2 - DISTRIBUTION OF LOSS COST LEVEL CHANGES

OBJECTIVE

The objective of this procedure is to distribute the indicated statewide loss cost level change for Basic Group I, Basic Group II, and Special Causes of Loss among the various rating variables used in each subline. These procedures are used to answer the question: What percentage change for each rating variable must be made to the current ISO loss costs in order to achieve adequacy for the prospective conditions?

_____

BASIC GROUP I

For Basic Group I, a consolidated simultaneous iterative procedure is used to calculate the type of policy, territory and rating group relativities. More detail on this procedure is given in Table 8. The type of policy relativities serve to price Commercial Package policies relative to monoline policies, via the Package Modification Factors (PMF), while the rating group and territory relativities serve to price the various rating groups and territories relative to one another.

The indicated monoline loss cost level changes shown on Table 2 are calculated for each rating group/territory combination by taking the product of the monoline type of policy relativity, the rating group relativity, the territory relativity and the statewide loss cost level change.

The overall monoline loss cost level change is a weighted average of the rating group/territory combination changes. In calculating this weighted average, the latest year aggregate monoline and multiline combined loss costs at current level are used as weights.

_____

BASIC GROUP II

The purpose of the Basic Group II relativity analysis is to determine monoline loss cost level needs, to obtain marginal relativities displayed on Table 12 and to price CPP policies relative to monoline policies via the PMFs. Unlike the BG I and SCL relativity analyses, the BG II relativity analysis does not employ a simultaneous review procedure because the overall loss cost change is distributed across type of policy only.

The statewide monoline non-hurricane loss cost change is the product of the monoline normalized formula relativity, shown on Table 12, and the indicated statewide loss cost level change. This change is applied to the non-hurricane portion of the BG II loss costs to produce indicated non-hurricane loss costs. The indicated loss costs by territory, coverage, and symbol are equal to the sum of the indicated non-hurricane loss costs plus the hurricane modeled loss costs.

STEP 2 - DISTRIBUTION OF LOSS COST LEVEL CHANGES (cont'd)

BASIC GROUP II
(cont'd)

The overall monoline loss cost level change is the weighted average of the loss cost changes by territory, coverage and symbol. In calculating this weighted average, the latest year aggregate monoline and multiline combined loss costs at current level are used as weights.

_____

SPECIAL CAUSES
OF LOSS

For Special Causes of Loss, a simultaneous iterative procedure is used as for BG I to arrive at a set of type of policy and category relativities (as displayed on Table 9) that best represent the experience within each state. The type of policy relativities serve to price CPP policies relative to monoline policies via the PMFs, while the category relativities serve to price the various categories relative to one another.

The indicated monoline loss cost level changes are calculated for each category by taking the product of the monoline type of policy relativity, the category relativity and the statewide coverage loss cost change. See Table 9 for the monoline loss cost indications.

The overall monoline loss cost level change is a weighted average of the 14 monoline category changes. In calculating this weighted average, the latest year monoline and multiline combined loss costs at current level are used as weights.

TABLE 8 - BASIC GROUP I RELATIVITY ANALYSIS

TOP	(1) $ LST SQ FORMULA RELATIVITY	(2) CREDIBILITY Z	(3) Z-WTD. RELATIVITY	(4) BALANCED RELATIVITY	STATEWIDE COVERAGE LOSS COST CHANGE OF 0.964 OR -3.6%
10	1.073	0.443	1.032	1.027	
31	0.860	0.104	0.984	0.980	
32 *	-----	-----	1.028	1.023	
33	0.808	0.111	0.977	0.972	
34	1.179	0.452	1.077	1.072	
35	0.822	0.379	0.928	0.924	
36	1.086	0.330	1.028	1.023	
37	0.875	0.358	0.953	0.949	
38	0.947	0.177	0.990	0.986	

RATING GROUP					(5) INDICATED MONOLINE LOSS COST LEVEL CHANGE
01	0.935	0.453	0.970	0.970	-3.4
02	1.053	0.321	1.017	1.016	+1.0
03	0.854	0.317	0.951	0.951	-5.5
04	1.057	0.668	1.038	1.037	+2.8
05	1.124	0.235	1.028	1.028	+0.6
06	0.852	0.281	0.956	0.956	-5.4
07	0.918	0.354	0.970	0.970	-3.8
08	0.918	0.476	0.960	0.960	-5.0
09	0.944	0.351	0.980	0.980	-3.3
10	0.917	0.243	0.979	0.979	-3.9
11	1.246	0.083	1.018	1.018	+1.2
12	1.008	0.010	1.000	1.000	-1.6
13	0.964	0.276	0.990	0.990	-2.3
14	1.108	0.274	1.028	1.028	+1.8
15	0.855	0.242	0.963	0.963	-4.7
17	1.106	0.166	1.017	1.017	-0.3
18	1.124	0.135	1.016	1.016	+0.9
19	1.005	0.059	1.000	1.000	-1.1
20	0.980	0.025	0.999	0.999	-0.4
21	1.223	0.361	1.075	1.075	+6.2
22	1.062	0.266	1.016	1.016	+0.5

STATEWIDE MONOLINE LOSS COST LEVEL CHANGE   -1.0%

* - TOP 32 IMPLICIT PMF CAPPED AT 0.500.

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TABLE 8 - BASIC GROUP I RELATIVITY ANALYSIS

| | (1) | (2) | (3) | (4) |
| | $ LST SQ FORMULA | CREDIBILITY | Z-WTD. | BALANCED |
TERRITORY	RELATIVITY	Z	RELATIVITY	RELATIVITY
Zone 1	1.046	0.746	1.034	1.033
Zone 2	0.865	0.392	0.945	0.944
Zone 3	0.945	0.673	0.963	0.962
Philadelphia	1.089	0.312	1.027	1.026
Pittsburgh	0.789	0.212	0.951	0.950
Allegheny Cty(Excl. Pitt)	1.207	0.303	1.059	1.058

| | (5) INDICATED MONOLINE LOSS COST LEVEL CHANGE |
TERRITORY	
Zone 1	+2.2
Zone 2	-6.6
Zone 3	-4.5
Philadelphia	+1.1
Pittsburgh	-6.6
Allegheny Cty(Excl. Pitt)	+4.7

LOSS COST CHANGES BY INDIVIDUAL TERRITORY AND RATING GROUP
ARE SHOWN ON TABLE 2.

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TABLE 8 - BASIC GROUP I RELATIVITY ANALYSIS

EXAMPLE OF AN INDIVIDUAL LOSS COST CHANGE CALCULATION
FOR Zone 1

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STATEWIDE COVERAGE LOSS COST LEVEL CHANGE      =    -3.6%

TERRITORIAL RELATIVITY                         =  1.033

MONOLINE (TOP 10) RELATIVITY                   =  1.027

RATING GROUP 01 RELATIVITY                     =  0.970
```

INDICATED MONOLINE LOSS COST LEVEL CHANGE FOR RATING GROUP 01

```
= 0.964   X  1.033   X  1.027   X  0.970   = 0.992
                                    OR    -0.8%
```

TABLE 8 - CALCULATION OF INDICATED TERRITORIAL MULTIPLIERS

(1) TERRITORY	(2) TERRITORY RELATIVITY	(3) OFF-BALANCE FACTOR	(4) CURRENT TERRITORIAL MULTIPLIER
Zone 1	1.033	1.000	1.000
Zone 2	0.944	1.000	0.819
Zone 3	0.962	1.000	1.244
Philadelphia	1.026	1.000	1.453
Pittsburgh	0.950	1.000	1.092
Allegheny Cty(Excl. Pitt)	1.058	1.000	1.296

TERRITORY	(5) INDICATED TERRITORIAL MULTIPLIER ((2)X(3)X(4) / (1.033 X 1.000))
Zone 1	1.000
Zone 2	0.748
Zone 3	1.158
Philadelphia	1.443
Pittsburgh	1.004
Allegheny Cty(Excl. Pitt)	1.327

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TABLE 9 - SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS

TOP	(1) $ LST SQ FORMULA RELATIVITY	(2) CREDIBILITY Z	(3) Z-WTD. RELATIVITY	(4) BALANCED RELATIVITY	STATEWIDE COVERAGE LOSS COST CHANGE OF 0.973 OR -2.7%
10	1.222	0.357	1.074	1.090	
31	1.985	0.091	1.064	1.080	
32	0.862	0.410	0.941	0.955	
33	0.800	0.232	0.950	0.963	
34	0.978	0.497	0.989	1.003	
35	0.885	0.623	0.927	0.940	
36	1.093	0.446	1.040	1.056	
37	1.364	0.309	1.101	1.117	
38	0.784	0.249	0.941	0.955	

CATEGORY					(5) INDICATED MONOLINE LOSS COST LEVEL CHANGE
01	1.025	0.903	1.023	1.015	+7.6
02	0.669	0.320	0.879	0.873	-7.4
03	0.972	0.264	0.993	0.985	+4.5
04	1.424	0.334	1.125	1.117	+18.5
05	1.269	0.305	1.075	1.068	+13.3
06	0.928	0.128	0.990	0.983	+4.3
07	0.541	0.075	0.955	0.948	+0.5
08	1.111	0.585	1.064	1.056	+12.0
09	0.736	0.493	0.860	0.853	-9.5
10	0.673	0.124	0.952	0.945	+0.2
11	0.664	0.322	0.876	0.870	-7.7
12	0.745	0.330	0.907	0.901	-4.4
13	0.993	0.245	0.998	0.991	+5.1
14	1.031	0.336	1.010	1.003	+6.4

OVERALL MONOLINE LOSS COST LEVEL CHANGE   +6.1%

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TABLE 9 – SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS
_____

EXAMPLE OF A LOSS COST CHANGE CALCULATION

STATEWIDE COVERAGE LOSS COST LEVEL CHANGE   =   -2.7%

     MONOLINE (TOP 10) RELATIVITY   = 1.090

     CATEGORY 01 RELATIVITY   = 1.015

INDICATED MONOLINE LOSS COST LEVEL CHANGE FOR CATEGORY 01

      = 0.973   X   1.090   X 1.015   = 1.076
                                        OR   +7.6%

BASIC GROUP I AND SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS

INTRODUCTION

The explanations which follow clarify Tables 8 and 9, the Basic Group I relativity analysis and the Special Causes of Loss relativity analysis, respectively. The purpose of these analyses is to:

(1) determine monoline classification and territorial loss cost level needs for Basic Group I;

(2) determine monoline category loss cost level needs for Special Causes of Loss;

(3) determine indicated changes to the eight CPP package modification factors (PMFs) based on Basic Group I/Special Causes of Loss experience.

COLUMN (1)

LEAST SQUARES FORMULA RELATIVITIES

The least squares formula relativities are the marginal relativities which result from the application of the simultaneous review procedure to the raw experience (where marginal refers to the relativities for a given rating variable, e.g. type of policy, across all subsets of any other rating variables, i.e. rating group and territory for Basic Group I, and category for Special Causes of Loss).

The purpose of such a simultaneous review procedure is to arrive at a set of type of policy relativities (which will serve to price CPP policies relative to monoline policies via the PMFs); a set of rating group/territory relativities for Basic Group I; and a set of category relativities for Special Causes of Loss that best represent the experience. This procedure is in contrast to a review of each rating variable's experience separately. Such one-way types of review do not take into account differing percentages of monoline and multiline experience in each rating variable, nor differing percentages of a particular rating variable's experience in the monoline and multiline types of policy. The simultaneous relativity procedure accounts for these different distributions in generating relativities for the various rating variables.

COLUMN (1)
(Cont'd)

The procedure follows an iterative technique to determine a set of marginal relativities by rating variable that is a best fit to the individual cell relativities, with each cell being defined as the cross-section of specific values of each rating variable. The process uses the relativity of the five year experience ratios by rating cell to the overall statewide experience ratio and the latest year aggregate loss costs for each rating cell. (This experience is shown in Table 10 for Basic Group I and Table 11 for Special Causes of Loss.) Specifically, the iteration procedure uses the following formulas:

BASIC GROUP I:

$$TOP_i = \frac{\displaystyle\sum_{j=1}^{n}\sum_{k=1}^{t} W_{ijk}^2\, R_{ijk}\, RG_j\, TER_k}{\displaystyle\sum_{j=1}^{n}\sum_{k=1}^{t} W_{ijk}^2\, RG_j^2\, TER_k^2}\ , \quad \text{where } 1\le i \le m;$$

$$RG_j = \frac{\displaystyle\sum_{i=1}^{m}\sum_{k=1}^{t} W_{ijk}^2\, R_{ijk}\, TOP_i\, TER_k}{\displaystyle\sum_{i=1}^{m}\sum_{k=1}^{t} W_{ijk}^2\, TOP_i^2\, TER_k^2}\ , \quad \text{where } 1\le j \le n;$$

$$TER_k = \frac{\displaystyle\sum_{i=1}^{m}\sum_{j=1}^{n} W_{ijk}^2\, R_{ijk}\, TOP_i\, RG_j}{\displaystyle\sum_{i=1}^{m}\sum_{j=1}^{n} W_{ijk}^2\, TOP_i^2\, RG_j^2}\ , \quad \text{where } 1\le k \le t;$$

SPECIAL CAUSES OF LOSS:

$$TOP_i = \frac{\displaystyle\sum_{j=1}^{n} w_{ij}^2\, R_{ij}\, CAT_j}{\displaystyle\sum_{j=1}^{n} w_{ij}^2\, CAT_j^2}\ , \qquad \text{where } 1\le i \le m;$$

$$CAT_j = \frac{\displaystyle\sum_{i=1}^{m} w_{ij}^2\, R_{ij}\, TOP_i}{\displaystyle\sum_{i=1}^{m} w_{ij}^2\, TOP_i^2}\ , \qquad \text{where } 1\le j \le n;$$

COLUMN (1)
(cont'd)

. TOP_i is the relativity for the ith type of policy;

. RG_j is the relativity for the jth rating group;

. CAT_j is the relativity for the jth category;

. TER_k is the relativity for the kth territory;

. W_{ijk} is the loss cost volume at current level for the ith type of policy, jth rating group and kth territory;

. R_{ijk} is the experience ratio relativity for the ith type of policy, jth rating group and kth territory;

. R_{ij} is the experience ratio relativity for the ith type of policy, and jth category;

.   m is the number of types of policy in the analysis;

.   n is the number of rating groups or categories in the analysis;

.   t is the number of territories in the analysis.

The procedure determines m type of policy relativities using the above formulas. Then, using those results, a set of n rating group and t territory relativities are determined. These steps form an iterative process which continues until there is no appreciable difference in results from one iteration to the next.

COLUMN (2)

CREDIBILITY

The credibility of the experience for each rating variable is determined from the formula:

$$Z = \frac{P}{P+K} ,$$

where P represents the five-year aggregate adjusted loss costs for a given rating variable, and K is a constant value. For Basic Group I, K equals an aggregate loss cost volume of $55,000,000 for territory, $40,000,000 for rating group, and $100,000,000 for type of policy. For Special Causes of Loss, K equals an aggregate loss cost volume of $15,000,000.

COLUMN (3)   CREDIBILITY-WEIGHTED RELATIVITIES

Credibility-weighted relativities are calculated based on the formula

$$W = R^Z,$$

where Z is the credibility, R is the least squares formula relativity and W is the credibility weighted relativity for a given rating variable.

This formula implicitly assigns the complement of credibility to a relativity of unity.

COLUMN (4)   BALANCED RELATIVITIES

The credibility-weighted relativities are balanced to assure that the average relativity across all rating variables remains at unity.

COLUMN (5)   INDICATED MONOLINE LOSS COST LEVEL CHANGE

For Basic Group I, the indicated monoline loss cost changes are calculated for each rating group and territory by taking the product of the monoline type of policy (TOP 10) relativity, the territory relativity, the rating group relativity and the statewide loss cost level change. (An example of such a calculation appears on Table 8.)

The indicated monoline loss cost changes by rating group shown in Table 8 of this analysis are the aggregate loss cost weighted averages of the monoline loss cost changes for the rating group across all territories.

COLUMN (5)
(cont'd)

Similarly, the indicated monoline loss cost changes by territory shown on the second page are aggregate loss cost-weighted averages of the monoline loss cost changes for the territory across all rating groups. The indicated overall statewide monoline loss cost level change shown at the bottom of the first page of Table 8 is the aggregate loss cost-weighted average of the individual rating group changes across all territories.

For Special Causes of Loss, the indicated monoline loss cost changes are calculated for each category by taking the product of the monoline type of policy (TOP 10) relativity, the category relativity, and the statewide loss cost level change. (An example of such a calculation is included in Table 9.) The indicated overall statewide loss cost level change shown at the bottom of Table 9 is the aggregate loss cost-weighted average of the individual category changes.

In all cases, the loss costs used in these calculations are the latest year's monoline and multiline combined adjusted loss costs.

MULTILINE
CONSIDERATIONS

The type of policy (TOP) relativities are used to generate multiline indications which apply to the current implicit package modification factors (IPMF's). The indicated IPMF's are calculated as follows:

$$\text{TOP y indicated IPMF} = \frac{(\text{TOP y current IPMF})(\text{TOP y relativity})}{\text{monoline relativity}}$$

For each CPP type of policy, the indicated IPMF is subject to a minimum value of 0.50 and a maximum value of 1.50. If an indicated IPMF falls outside one of those limits, it is capped at that amount, the loss costs for that type of policy are adjusted to the capped IPMF level, and the entire relativity review as described above is re-performed to take this into account. If an IPMF has been capped, it is so noted at the bottom of Table 8 and Table 9.

It should be noted that although this procedure generates multiline indications, this filing only addresses monoline loss cost levels. That is, upon implementation of this filing only the monoline loss costs will be revised. The multiline indications developed here will be combined with those of the other component coverages, e.g. GL Premises and Operations in the CPP review for the purpose of revising the package modification factors.

PENNSYLVANIA
BASIC GROUP I RELATIVITY ANALYSIS
TABLE 10 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

		(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
TYPE OF POLICY	CATEGORY					
10 MONOLINE	01 APARTMENTS	98,602	545,608	3.202	1.114	1.154
	02 OTHER HABITATIONAL	148,623	894,900	0.102	0.618	0.640
	03 RESTAURANTS & BARS	158,005	683,683	2.750	1.050	1.088
	04 OTHER MERCANTILE RS	428,669	2,188,181	0.960	0.770	0.798
	05 PUBLIC BUILDINGS	109,933	619,228	0.178	0.635	0.658
	06 CHURCHES	7,208	49,254	2.508	0.980	1.016
	07 SCHOOLS	53,163	141,489	0.439	0.681	0.706
	08 OFFICES AND BANKS	250,004	1,296,941	0.197	0.629	0.652
	09 REC. FACILITIES	203,094	1,099,043	0.462	0.677	0.702
	10 HOTELS AND MOTELS	136,187	700,427	0.000	0.605	0.627
	11 HOSPITALS/NURS H0ME	65,236	210,049	1.457	0.831	0.861
	12 BLDGS UNDER CONST.	8,029	38,017	4.590	1.279	1.325
	13 MOTOR VEHICLE RISKS	105,140	579,928	1.622	0.865	0.896
	14 OTHER NON-MANUF.	235,319	1,147,928	0.252	0.640	0.663
	15 STORAGE	126,584	628,594	0.078	0.619	0.641
	17 FOOD MANUFACTURING	7,431	58,782	0.752	0.727	0.753
	18 WOOD MANUFACTURING	40,267	242,145	0.000	0.614	0.636
	19 WEARING APPAREL	9,340	64,920	0.102	0.632	0.655
	20 CHEM. MANUFACTURING	19,652	99,344	0.000	0.617	0.639
	21 METAL MANUFACTURING	129,316	629,040	0.329	0.659	0.683
	22 OTHER MANUFACTURING	92,196	401,546	0.000	0.611	0.633
	TOTAL*	2,431,998	12,319,047	0.741	0.725	0.751
31 MULTILINE MOTEL/HOTEL	10 HOTELS AND MOTELS	777,651	5,413,706	0.773	0.844	0.875
	TOTAL*	777,651	5,413,706	0.773	0.844	0.875
32 MULTILINE APARTMENT	01 APARTMENTS	2,112,422	14,230,107	0.714	0.774	0.802
	02 OTHER HABITATIONAL	1,516,191	8,082,932	1.017	0.976	1.011
	TOTAL*	3,628,613	22,313,039	0.841	0.858	0.890
33 MULTILINE OFFICE	08 OFFICES AND BANKS	991,996	5,124,919	0.445	0.683	0.708
	TOTAL*	991,996	5,124,919	0.445	0.683	0.708
34 MULTILINE MERCANTILE	03 RESTAURANTS & BARS	1,352,941	7,367,062	1.133	1.040	1.078
	04 OTHER MERCANTILE RS	4,073,864	22,312,140	1.430	1.320	1.368
	08 OFFICES AND BANKS	287,731	1,513,700	0.314	0.738	0.765
	13 MOTOR VEHICLE RISKS	204,628	947,602	0.410	0.790	0.819
	14 OTHER NON-MANUF.	146,633	715,596	0.217	0.756	0.783
	15 STORAGE	638,174	3,561,041	0.914	0.916	0.949
	TOTAL*	6,703,971	36,417,141	1.215	1.171	1.214

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BASIC GROUP I RELATIVITY ANALYSIS
TABLE 10 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
35 MULTILINE INSTITUTIONAL	02 OTHER HABITATIONAL	12,347	31,296	0.000	0.769	0.797
	05 PUBLIC BUILDINGS	661,093	3,497,613	1.294	1.076	1.115
	06 CHURCHES	972,506	5,125,421	0.254	0.588	0.609
	07 SCHOOLS	2,677,904	10,824,079	0.633	0.732	0.759
	08 OFFICES AND BANKS	284,168	1,317,394	1.283	1.020	1.057
	09 REC. FACILITIES	205,704	994,516	0.400	0.785	0.813
	11 HOSPITALS/NURS H0ME	304,575	1,214,323	1.092	0.965	1.000
	13 MOTOR VEHICLE RISKS	4,252	24,221	0.000	0.770	0.798
	14 OTHER NON-MANUF.	246,931	1,340,670	0.277	0.735	0.762
	TOTAL*	5,369,480	24,369,533	0.679	0.779	0.807
36 MULTILINE SERVICES	03 RESTAURANTS & BARS	134,193	642,570	0.103	0.812	0.841
	04 OTHER MERCANTILE RS	316,073	1,719,838	0.832	0.919	0.952
	08 OFFICES AND BANKS	427,170	2,283,927	0.342	0.810	0.839
	09 REC. FACILITIES	1,240,256	6,929,181	0.888	0.921	0.954
	13 MOTOR VEHICLE RISKS	808,650	4,264,776	0.838	0.911	0.944
	14 OTHER NON-MANUF.	397,929	2,138,091	3.069	1.390	1.440
	15 STORAGE	277,191	1,306,191	3.355	1.374	1.424
	21 METAL MANUFACTURING	55,996	311,868	0.000	0.809	0.838
	22 OTHER MANUFACTURING	183,604	926,803	2.925	1.266	1.312
	TOTAL*	3,841,062	20,523,245	1.273	0.999	1.035
37 MULTILINE INDUST/PROCESS	04 OTHER MERCANTILE RS	285,346	1,587,953	0.137	0.787	0.816
	08 OFFICES AND BANKS	95,357	510,293	0.730	0.909	0.942
	13 MOTOR VEHICLE RISKS	0	259,852	0.047	0.818	0.848
	14 OTHER NON-MANUF.	88,051	671,923	0.013	0.797	0.826
	15 STORAGE	21,756	100,849	2.225	1.106	1.146
	17 FOOD MANUFACTURING	501,003	3,550,668	0.743	0.889	0.921
	18 WOOD MANUFACTURING	596,022	3,049,081	0.685	0.878	0.910
	19 WEARING APPAREL	158,768	910,560	0.114	0.804	0.833
	20 CHEM. MANUFACTURING	63,336	375,501	0.261	0.844	0.875
	21 METAL MANUFACTURING	1,513,184	8,657,021	1.231	1.054	1.092
	22 OTHER MANUFACTURING	961,660	5,485,258	0.143	0.687	0.712
	TOTAL*	4,284,483	25,158,959	0.694	0.889	0.922

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BASIC GROUP I RELATIVITY ANALYSIS
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TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
38 MULTILINE	04 OTHER MERCANTILE RS	1,074,196	6,146,655	0.852	0.910	0.943
CONTRACTORS	08 OFFICES AND BANKS	584,835	3,281,417	1.218	1.009	1.046
	12 BLDGS UNDER CONST.	20,282	110,209	0.000	0.818	0.848
	14 OTHER NON-MANUF.	55,250	281,768	0.182	0.835	0.865
	TOTAL*	1,734,563	9,820,049	0.944	0.940	0.974
TOTAL ALL TOPS*	01 APARTMENTS	2,211,024	14,775,715	0.825	0.789	0.818
	02 OTHER HABITATIONAL	1,677,161	9,009,128	0.928	0.943	0.977
	03 RESTAURANTS & BARS	1,645,139	8,693,315	1.204	1.023	1.059
	04 OTHER MERCANTILE RS	6,178,148	33,954,767	1.207	1.165	1.208
	05 PUBLIC BUILDINGS	771,026	4,116,841	1.135	1.013	1.050
	06 CHURCHES	979,714	5,174,675	0.271	0.591	0.612
	07 SCHOOLS	2,731,067	10,965,568	0.629	0.731	0.758
	08 OFFICES AND BANKS	2,921,261	15,328,591	0.641	0.808	0.837
	09 REC. FACILITIES	1,649,054	9,022,740	0.775	0.874	0.906
	10 HOTELS AND MOTELS	913,838	6,114,133	0.658	0.808	0.838
	11 HOSPITALS/NURS HOME	369,811	1,424,372	1.156	0.941	0.976
	12 BLDGS UNDER CONST.	28,311	148,226	1.302	0.948	0.983
	13 MOTOR VEHICLE RISKS	1,122,670	6,076,379	0.830	0.884	0.916
	14 OTHER NON-MANUF.	1,170,113	6,295,976	1.190	0.951	0.985
	15 STORAGE	1,063,705	5,596,675	1.477	1.004	1.040
	17 FOOD MANUFACTURING	508,434	3,609,450	0.743	0.886	0.919
	18 WOOD MANUFACTURING	636,289	3,291,226	0.642	0.861	0.893
	19 WEARING APPAREL	168,108	975,480	0.113	0.795	0.823
	20 CHEM. MANUFACTURING	82,988	474,845	0.199	0.790	0.819
	21 METAL MANUFACTURING	1,698,496	9,597,929	1.122	1.016	1.053
	22 OTHER MANUFACTURING	1,237,460	6,813,607	0.545	0.768	0.795
	TOTAL*	29,763,817	161,459,638	0.913	0.925	0.958

* TOTALS IN COLUMNS (3), (4) & (5) ARE AVERAGES USING COLUMN (1) AS WEIGHTS.

PENNSYLVANIA
BASIC GROUP I RELATIVITY ANALYSIS
TABLE 10 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
10 MONOLINE	01 APARTMENTS	58,922	269,017	0.012	0.294	0.305
	02 OTHER HABITATIONAL	35,459	185,910	0.038	0.387	0.401
	03 RESTAURANTS & BARS	75,610	273,228	0.000	0.282	0.292
	04 OTHER MERCANTILE RS	110,306	523,835	3.783	3.331	3.452
	05 PUBLIC BUILDINGS	41,245	169,659	0.018	0.393	0.407
	06 CHURCHES	880	14,289	0.081	0.826	0.856
	07 SCHOOLS	3,971	13,866	1.081	1.056	1.094
	08 OFFICES AND BANKS	61,954	293,463	0.095	0.339	0.351
	09 REC. FACILITIES	71,016	355,897	0.335	0.494	0.512
	10 HOTELS AND MOTELS	18,353	74,133	3.794	2.317	2.401
	11 HOSPITALS/NURS HOME	19,727	89,437	6.846	3.948	4.091
	12 BLDGS UNDER CONST.	2,386	12,861	0.000	0.815	0.845
	13 MOTOR VEHICLE RISKS	40,136	218,743	0.200	0.465	0.482
	14 OTHER NON-MANUF.	64,804	325,162	2.332	2.026	2.099
	15 STORAGE	70,327	275,676	0.000	0.281	0.291
	17 FOOD MANUFACTURING	149,297	489,096	0.571	0.654	0.678
	18 WOOD MANUFACTURING	4,671	20,230	0.000	0.774	0.802
	19 WEARING APPAREL	2,082	10,588	0.000	0.829	0.859
	20 CHEM. MANUFACTURING	1,832	12,540	0.000	0.817	0.847
	21 METAL MANUFACTURING	30,540	144,051	0.081	0.467	0.484
	22 OTHER MANUFACTURING	36,935	184,007	0.031	0.384	0.398
	TOTAL*	900,453	3,955,688	1.007	1.024	1.061
31 MULTILINE MOTEL/HOTEL	10 HOTELS AND MOTELS	253,582	1,218,961	0.260	0.688	0.713
	TOTAL*	253,582	1,218,961	0.260	0.688	0.713
32 MULTILINE APARTMENT	01 APARTMENTS	476,270	2,707,535	2.273	1.400	1.451
	02 OTHER HABITATIONAL	224,221	1,203,202	0.719	0.815	0.845
	TOTAL*	700,491	3,910,737	1.776	1.213	1.257
33 MULTILINE OFFICE	08 OFFICES AND BANKS	286,206	1,345,134	0.229	0.672	0.696
	TOTAL*	286,206	1,345,134	0.229	0.672	0.696
34 MULTILINE MERCANTILE	03 RESTAURANTS & BARS	256,108	1,398,894	0.190	0.658	0.682
	04 OTHER MERCANTILE RS	939,782	4,733,959	0.610	0.734	0.761
	08 OFFICES AND BANKS	52,488	233,492	0.056	0.706	0.732
	13 MOTOR VEHICLE RISKS	56,663	203,440	0.079	0.713	0.739
	14 OTHER NON-MANUF.	20,576	97,703	0.190	0.740	0.767
	15 STORAGE	162,668	802,392	0.152	0.683	0.708
	TOTAL*	1,488,285	7,469,880	0.442	0.714	0.740

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BASIC GROUP I RELATIVITY ANALYSIS
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		(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
TYPE OF POLICY	CATEGORY					
35 MULTILINE INSTITUTIONAL	02 OTHER HABITATIONAL	6,305	10,834	0.000	0.717	0.743
	05 PUBLIC BUILDINGS	312,159	1,525,574	0.380	0.709	0.735
	06 CHURCHES	210,516	1,136,426	2.468	1.291	1.338
	07 SCHOOLS	486,509	1,939,936	0.266	0.656	0.680
	08 OFFICES AND BANKS	40,448	191,157	0.229	0.741	0.768
	09 REC. FACILITIES	55,117	277,291	0.031	0.697	0.722
	11 HOSPITALS/NURS H0ME	53,326	200,869	7.804	2.107	2.183
	13 MOTOR VEHICLE RISKS	685	4,981	0.000	0.717	0.743
	14 OTHER NON-MANUF.	81,636	444,274	0.633	0.807	0.836
	TOTAL*	1,246,701	5,731,342	1.000	0.853	0.884
36 MULTILINE SERVICES	03 RESTAURANTS & BARS	13,642	77,861	0.082	1.016	1.053
	04 OTHER MERCANTILE RS	66,518	361,039	0.051	1.009	1.046
	08 OFFICES AND BANKS	109,009	596,998	0.031	1.005	1.041
	09 REC. FACILITIES	288,521	1,484,685	1.929	1.258	1.304
	13 MOTOR VEHICLE RISKS	240,098	1,202,339	1.474	1.194	1.237
	14 OTHER NON-MANUF.	103,558	512,552	1.006	1.132	1.173
	15 STORAGE	60,521	312,488	0.388	1.053	1.091
	21 METAL MANUFACTURING	10,121	51,968	0.000	1.006	1.042
	22 OTHER MANUFACTURING	30,727	171,840	0.000	1.005	1.041
	TOTAL*	922,715	4,771,770	1.134	1.151	1.193
37 MULTILINE INDUST/PROCESS	04 OTHER MERCANTILE RS	64,182	373,798	0.892	1.117	1.158
	08 OFFICES AND BANKS	22,120	122,221	0.013	1.007	1.044
	13 MOTOR VEHICLE RISKS	97	40,944	1.032	1.135	1.176
	14 OTHER NON-MANUF.	8,540	39,093	27.126	4.406	4.566
	15 STORAGE	6,987	14,410	0.000	1.006	1.042
	17 FOOD MANUFACTURING	176,933	1,094,161	1.475	1.194	1.237
	18 WOOD MANUFACTURING	138,424	705,539	2.111	1.276	1.322
	19 WEARING APPAREL	27,227	160,670	0.003	1.005	1.041
	20 CHEM. MANUFACTURING	8,937	62,365	0.000	1.006	1.042
	21 METAL MANUFACTURING	247,646	1,433,291	0.212	1.021	1.058
	22 OTHER MANUFACTURING	201,951	1,154,683	0.126	1.012	1.049
	TOTAL*	903,044	5,201,175	1.019	1.130	1.171

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TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
38 MULTILINE	04 OTHER MERCANTILE RS	231,498	1,304,315	0.403	1.048	1.086
CONTRACTORS	08 OFFICES AND BANKS	89,961	471,392	5.808	1.752	1.816
	12 BLDGS UNDER CONST.	3,157	20,148	0.000	1.006	1.042
	14 OTHER NON-MANUF.	11,417	59,897	0.595	1.081	1.120
	TOTAL*	336,033	1,855,752	1.853	1.237	1.282
TOTAL ALL TOPS*	01 APARTMENTS	535,192	2,976,552	2.024	1.278	1.325
	02 OTHER HABITATIONAL	265,985	1,399,946	0.611	0.756	0.783
	03 RESTAURANTS & BARS	345,360	1,749,983	0.144	0.590	0.611
	04 OTHER MERCANTILE RS	1,412,286	7,296,946	0.810	1.019	1.056
	05 PUBLIC BUILDINGS	353,404	1,695,233	0.338	0.672	0.696
	06 CHURCHES	211,396	1,150,715	2.458	1.289	1.336
	07 SCHOOLS	490,480	1,953,802	0.273	0.659	0.683
	08 OFFICES AND BANKS	662,186	3,253,857	0.921	0.861	0.892
	09 REC. FACILITIES	414,654	2,117,873	1.404	1.053	1.091
	10 HOTELS AND MOTELS	271,935	1,293,094	0.499	0.797	0.827
	11 HOSPITALS/NURS HOME	73,053	290,306	7.545	2.604	2.699
	12 BLDGS UNDER CONST.	5,543	33,009	0.000	0.924	0.957
	13 MOTOR VEHICLE RISKS	337,679	1,670,447	1.085	1.026	1.063
	14 OTHER NON-MANUF.	290,531	1,478,681	1.891	1.307	1.354
	15 STORAGE	300,503	1,404,966	0.160	0.671	0.695
	17 FOOD MANUFACTURING	326,230	1,583,257	1.061	0.947	0.981
	18 WOOD MANUFACTURING	143,095	725,769	2.042	1.260	1.305
	19 WEARING APPAREL	29,309	171,258	0.003	0.993	1.028
	20 CHEM. MANUFACTURING	10,769	74,905	0.000	0.974	1.009
	21 METAL MANUFACTURING	288,307	1,629,310	0.191	0.962	0.997
	22 OTHER MANUFACTURING	269,613	1,510,530	0.099	0.925	0.959
	TOTAL*	7,037,510	35,460,439	0.963	0.961	0.996

* TOTALS IN COLUMNS (3), (4) & (5) ARE AVERAGES USING COLUMN (1) AS WEIGHTS.

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BASIC GROUP I RELATIVITY ANALYSIS
TABLE 10 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
10 MONOLINE	01 APARTMENTS	71,602	318,382	7.121	3.778	3.915
	02 OTHER HABITATIONAL	128,095	640,607	1.942	1.934	2.004
	03 RESTAURANTS & BARS	117,325	460,697	3.498	2.588	2.682
	04 OTHER MERCANTILE RS	393,569	2,067,286	0.489	0.879	0.911
	05 PUBLIC BUILDINGS	67,568	370,250	0.226	1.277	1.323
	06 CHURCHES	11,116	57,924	0.822	1.714	1.776
	07 SCHOOLS	12,470	48,825	4.180	2.341	2.426
	08 OFFICES AND BANKS	243,821	1,282,009	1.071	1.385	1.435
	09 REC. FACILITIES	218,374	1,148,292	0.158	0.848	0.879
	10 HOTELS AND MOTELS	53,319	203,543	6.311	3.210	3.326
	11 HOSPITALS/NURS H0ME	54,195	269,198	5.344	3.056	3.167
	12 BLDGS UNDER CONST.	8,670	44,342	0.000	1.578	1.635
	13 MOTOR VEHICLE RISKS	137,088	734,580	1.408	1.659	1.719
	14 OTHER NON-MANUF.	188,032	953,715	3.513	2.831	2.934
	15 STORAGE	131,472	670,966	1.344	1.637	1.696
	17 FOOD MANUFACTURING	43,663	125,711	26.194	7.803	8.086
	18 WOOD MANUFACTURING	10,956	36,175	0.000	1.591	1.649
	19 WEARING APPAREL	880	5,042	0.000	1.642	1.702
	20 CHEM. MANUFACTURING	6,542	38,493	0.000	1.587	1.645
	21 METAL MANUFACTURING	103,739	540,616	0.792	1.414	1.465
	22 OTHER MANUFACTURING	66,655	240,719	0.000	1.320	1.368
	TOTAL*	2,069,151	10,257,372	2.231	1.815	1.881
31 MULTILINE MOTEL/HOTEL	10 HOTELS AND MOTELS	717,960	3,743,434	0.127	0.557	0.577
	TOTAL*	717,960	3,743,434	0.127	0.557	0.577
32 MULTILINE APARTMENT	01 APARTMENTS	843,734	5,941,700	0.548	0.703	0.728
	02 OTHER HABITATIONAL	722,928	3,979,162	2.385	1.511	1.566
	TOTAL*	1,566,662	9,920,862	1.396	1.076	1.115
33 MULTILINE OFFICE	08 OFFICES AND BANKS	819,644	3,809,640	0.757	0.818	0.848
	TOTAL*	819,644	3,809,640	0.757	0.818	0.848
34 MULTILINE MERCANTILE	03 RESTAURANTS & BARS	742,474	3,994,132	0.640	0.767	0.795
	04 OTHER MERCANTILE RS	2,735,539	14,563,403	1.145	1.057	1.095
	08 OFFICES AND BANKS	167,203	781,525	0.932	0.878	0.910
	13 MOTOR VEHICLE RISKS	122,936	628,698	1.933	1.093	1.133
	14 OTHER NON-MANUF.	87,828	474,168	0.098	0.707	0.733
	15 STORAGE	434,614	2,173,600	1.398	1.038	1.076
	TOTAL*	4,290,594	22,615,526	1.076	0.992	1.028

PENNSYLVANIA
BASIC GROUP I RELATIVITY ANALYSIS
TABLE 10 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
35 MULTILINE	02 OTHER HABITATIONAL	12,941	66,053	0.000	0.720	0.746
INSTITUTIONAL	05 PUBLIC BUILDINGS	969,336	5,115,592	0.698	0.784	0.812
	06 CHURCHES	1,059,501	5,686,398	0.427	0.646	0.669
	07 SCHOOLS	1,739,858	6,469,271	0.623	0.737	0.764
	08 OFFICES AND BANKS	191,363	922,592	0.070	0.671	0.695
	09 REC. FACILITIES	146,689	807,184	0.371	0.748	0.775
	11 HOSPITALS/NURS H0ME	203,200	888,139	1.388	0.987	1.023
	13 MOTOR VEHICLE RISKS	12,730	57,401	6.860	1.843	1.910
	14 OTHER NON-MANUF.	206,840	1,104,953	0.326	0.725	0.751
	TOTAL*	4,542,458	21,117,583	0.598	0.737	0.764
36 MULTILINE	03 RESTAURANTS & BARS	75,762	374,898	2.024	1.150	1.192
SERVICES	04 OTHER MERCANTILE RS	279,743	1,470,096	0.495	0.912	0.945
	08 OFFICES AND BANKS	355,759	1,862,678	0.479	0.901	0.934
	09 REC. FACILITIES	1,068,873	5,688,521	0.806	0.942	0.976
	13 MOTOR VEHICLE RISKS	784,441	3,859,161	1.240	1.069	1.108
	14 OTHER NON-MANUF.	374,719	1,830,992	0.134	0.833	0.863
	15 STORAGE	179,861	731,635	0.472	0.923	0.956
	21 METAL MANUFACTURING	44,153	228,558	0.060	0.879	0.911
	22 OTHER MANUFACTURING	55,243	402,976	14.410	2.915	3.021
	TOTAL*	3,218,554	16,449,515	1.004	0.990	1.026
37 MULTILINE	04 OTHER MERCANTILE RS	263,890	1,238,104	0.654	0.944	0.978
INDUST/PROCESS	08 OFFICES AND BANKS	62,517	357,391	0.650	0.956	0.991
	13 MOTOR VEHICLE RISKS	6,349	102,929	3.557	1.337	1.385
	14 OTHER NON-MANUF.	58,038	339,132	1.075	1.016	1.053
	15 STORAGE	22,243	159,520	0.000	0.873	0.905
	17 FOOD MANUFACTURING	349,253	1,734,828	0.267	0.862	0.893
	18 WOOD MANUFACTURING	268,033	1,416,784	2.506	1.281	1.327
	19 WEARING APPAREL	143,740	739,669	0.276	0.892	0.924
	20 CHEM. MANUFACTURING	69,876	203,444	0.000	0.872	0.904
	21 METAL MANUFACTURING	1,499,030	8,199,027	0.923	0.975	1.010
	22 OTHER MANUFACTURING	832,817	4,049,119	1.543	1.153	1.195
	TOTAL*	3,575,786	18,539,947	1.055	1.021	1.058

PENNSYLVANIA
BASIC GROUP I RELATIVITY ANALYSIS
TABLE 10 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

		(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
TYPE OF POLICY	CATEGORY					
38 MULTILINE	04 OTHER MERCANTILE RS	935,391	4,970,568	0.767	0.934	0.968
CONTRACTORS	08 OFFICES AND BANKS	302,242	1,589,188	0.083	0.831	0.861
	12 BLDGS UNDER CONST.	22,751	107,203	0.000	0.876	0.908
	14 OTHER NON-MANUF.	39,003	211,059	1.049	1.012	1.049
	TOTAL*	1,299,387	6,878,018	0.603	0.912	0.944
TOTAL ALL TOPS*	01 APARTMENTS	915,336	6,260,082	1.062	0.944	0.978
	02 OTHER HABITATIONAL	863,964	4,685,822	2.284	1.562	1.619
	03 RESTAURANTS & BARS	935,561	4,829,727	1.110	1.026	1.064
	04 OTHER MERCANTILE RS	4,608,132	24,309,457	0.945	1.002	1.038
	05 PUBLIC BUILDINGS	1,036,904	5,485,842	0.667	0.816	0.846
	06 CHURCHES	1,070,617	5,744,322	0.431	0.657	0.681
	07 SCHOOLS	1,752,328	6,518,096	0.648	0.749	0.776
	08 OFFICES AND BANKS	2,142,549	10,605,023	0.601	0.894	0.926
	09 REC. FACILITIES	1,433,936	7,643,997	0.663	0.908	0.941
	10 HOTELS AND MOTELS	771,279	3,946,977	0.555	0.740	0.767
	11 HOSPITALS/NURS H0ME	257,395	1,157,337	2.221	1.423	1.474
	12 BLDGS UNDER CONST.	31,421	151,545	0.000	1.069	1.109
	13 MOTOR VEHICLE RISKS	1,063,544	5,382,769	1.423	1.159	1.201
	14 OTHER NON-MANUF.	954,460	4,914,019	0.933	1.210	1.254
	15 STORAGE	768,190	3,735,721	1.131	1.109	1.149
	17 FOOD MANUFACTURING	392,916	1,860,539	3.148	1.633	1.693
	18 WOOD MANUFACTURING	278,989	1,452,959	2.408	1.293	1.340
	19 WEARING APPAREL	144,620	744,711	0.274	0.897	0.929
	20 CHEM. MANUFACTURING	76,418	241,937	0.000	0.933	0.967
	21 METAL MANUFACTURING	1,646,922	8,968,201	0.892	1.000	1.036
	22 OTHER MANUFACTURING	954,715	4,692,814	2.180	1.266	1.313
	TOTAL*	22,100,196	113,331,897	1.024	1.002	1.038

* TOTALS IN COLUMNS (3), (4) & (5) ARE AVERAGES USING COLUMN (1) AS WEIGHTS.

PENNSYLVANIA
BASIC GROUP I RELATIVITY ANALYSIS
TABLE 10 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

		(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
TYPE OF POLICY	CATEGORY					
10 MONOLINE	01 APARTMENTS	57,481	251,798	3.791	2.238	2.319
	02 OTHER HABITATIONAL	14,775	53,068	4.115	2.171	2.250
	03 RESTAURANTS & BARS	25,262	98,577	0.811	1.627	1.686
	04 OTHER MERCANTILE RS	87,254	395,015	4.323	2.451	2.540
	05 PUBLIC BUILDINGS	1,418	6,080	0.000	1.539	1.595
	06 CHURCHES	11,570	75,826	0.000	1.498	1.552
	07 SCHOOLS	24,362	108,440	0.112	1.500	1.554
	08 OFFICES AND BANKS	50,127	258,785	0.236	1.453	1.506
	09 REC. FACILITIES	20,163	126,739	0.160	1.499	1.553
	10 HOTELS AND MOTELS	0	304	0.000	1.543	1.599
	11 HOSPITALS/NURS HOME	994	5,370	0.000	1.540	1.596
	12 BLDGS UNDER CONST.	1,455	6,013	0.000	1.539	1.595
	13 MOTOR VEHICLE RISKS	12,966	43,364	1.707	1.785	1.850
	14 OTHER NON-MANUF.	71,049	243,234	0.873	1.598	1.656
	15 STORAGE	19,652	135,922	0.243	1.510	1.565
	17 FOOD MANUFACTURING	1,722	3,538	0.000	1.541	1.597
	18 WOOD MANUFACTURING	1,257	5,112	0.000	1.540	1.596
	19 WEARING APPAREL	2,648	17,944	0.000	1.532	1.588
	20 CHEM. MANUFACTURING	3,780	12,736	4.128	2.142	2.220
	21 METAL MANUFACTURING	6,229	35,491	0.000	1.522	1.577
	22 OTHER MANUFACTURING	3,602	19,939	0.000	1.531	1.587
	TOTAL*	417,766	1,903,295	1.912	1.859	1.927
31 MULTILINE MOTEL/HOTEL	10 HOTELS AND MOTELS	14,366	104,265	0.000	0.739	0.766
	TOTAL*	14,366	104,265	0.000	0.739	0.766
32 MULTILINE APARTMENT	01 APARTMENTS	632,595	2,556,616	1.498	1.066	1.105
	02 OTHER HABITATIONAL	358,482	1,541,797	0.400	0.765	0.793
	TOTAL*	991,077	4,098,413	1.101	0.957	0.992
33 MULTILINE OFFICE	08 OFFICES AND BANKS	112,380	661,375	0.572	0.822	0.852
	TOTAL*	112,380	661,375	0.572	0.822	0.852
34 MULTILINE MERCANTILE	03 RESTAURANTS & BARS	266,968	1,134,870	0.071	0.701	0.726
	04 OTHER MERCANTILE RS	951,889	4,926,901	1.280	1.038	1.076
	08 OFFICES AND BANKS	24,445	177,101	1.018	0.907	0.940
	13 MOTOR VEHICLE RISKS	14,625	85,268	0.000	0.740	0.767
	14 OTHER NON-MANUF.	16,449	113,330	0.078	0.751	0.778
	15 STORAGE	74,750	355,178	0.036	0.731	0.758
	TOTAL*	1,349,126	6,792,648	0.939	0.945	0.979

PENNSYLVANIA
BASIC GROUP I RELATIVITY ANALYSIS
TABLE 10 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
35 MULTILINE	02 OTHER HABITATIONAL	5,206	37,965	0.000	0.742	0.769
INSTITUTIONAL	05 PUBLIC BUILDINGS	17,929	90,351	0.393	0.804	0.833
	06 CHURCHES	454,942	1,965,926	1.023	0.921	0.954
	07 SCHOOLS	200,045	785,318	0.566	0.819	0.849
	08 OFFICES AND BANKS	312,109	1,186,721	0.278	0.746	0.773
	09 REC. FACILITIES	42,504	170,679	0.133	0.757	0.784
	11 HOSPITALS/NURS H0ME	110,409	409,815	0.898	0.887	0.919
	13 MOTOR VEHICLE RISKS	267	900	0.000	0.744	0.771
	14 OTHER NON-MANUF.	52,103	240,795	0.000	0.731	0.758
	TOTAL*	1,195,514	4,888,470	0.650	0.838	0.869
36 MULTILINE	03 RESTAURANTS & BARS	29,118	189,028	0.221	0.789	0.818
SERVICES	04 OTHER MERCANTILE RS	53,776	281,056	0.000	0.606	0.628
	08 OFFICES AND BANKS	94,505	512,319	0.568	0.802	0.831
	09 REC. FACILITIES	146,494	766,204	6.895	5.164	5.351
	13 MOTOR VEHICLE RISKS	128,267	626,951	0.748	0.894	0.926
	14 OTHER NON-MANUF.	66,501	319,697	0.546	0.853	0.884
	15 STORAGE	38,594	220,703	2.583	1.784	1.849
	21 METAL MANUFACTURING	3,013	7,230	0.000	1.008	1.045
	22 OTHER MANUFACTURING	11,535	44,575	0.269	0.981	1.017
	TOTAL*	571,803	2,967,763	2.283	1.998	2.070
37 MULTILINE	04 OTHER MERCANTILE RS	23,930	167,907	0.000	0.725	0.751
INDUST/PROCESS	08 OFFICES AND BANKS	2,932	19,448	0.000	0.979	1.015
	13 MOTOR VEHICLE RISKS	0	27,675	0.115	0.981	1.017
	14 OTHER NON-MANUF.	5,789	52,027	0.000	0.909	0.942
	15 STORAGE	555	673	0.000	1.025	1.062
	17 FOOD MANUFACTURING	92,784	536,418	0.252	0.599	0.621
	18 WOOD MANUFACTURING	61,868	420,377	0.000	0.504	0.522
	19 WEARING APPAREL	18,768	165,132	0.448	0.899	0.932
	20 CHEM. MANUFACTURING	3,895	16,865	0.000	0.985	1.021
	21 METAL MANUFACTURING	110,419	718,794	0.234	0.530	0.549
	22 OTHER MANUFACTURING	116,213	609,908	0.022	0.424	0.439
	TOTAL*	437,153	2,735,224	0.138	0.552	0.572

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BASIC GROUP I RELATIVITY ANALYSIS
TABLE 10 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

		(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
TYPE OF POLICY	CATEGORY					
38 MULTILINE	04 OTHER MERCANTILE RS	116,006	615,376	0.457	0.706	0.732
CONTRACTORS	08 OFFICES AND BANKS	34,458	183,835	0.844	1.042	1.080
	12 BLDGS UNDER CONST.	1,443	20,936	0.389	1.041	1.079
	14 OTHER NON-MANUF.	3,758	23,805	0.000	0.969	1.004
	TOTAL*	155,665	843,952	0.531	0.790	0.818
TOTAL ALL TOPS*	01 APARTMENTS	690,076	2,808,414	1.689	1.163	1.206
	02 OTHER HABITATIONAL	378,463	1,632,830	0.540	0.819	0.849
	03 RESTAURANTS & BARS	321,348	1,422,475	0.143	0.782	0.810
	04 OTHER MERCANTILE RS	1,232,855	6,386,255	1.337	1.082	1.121
	05 PUBLIC BUILDINGS	19,347	96,431	0.364	0.858	0.889
	06 CHURCHES	466,512	2,041,752	0.998	0.936	0.969
	07 SCHOOLS	224,407	893,758	0.517	0.893	0.925
	08 OFFICES AND BANKS	630,956	2,999,584	0.429	0.847	0.878
	09 REC. FACILITIES	209,161	1,063,622	4.872	3.915	4.057
	10 HOTELS AND MOTELS	14,366	104,569	0.000	0.739	0.766
	11 HOSPITALS/NURS HOME	111,403	415,185	0.890	0.892	0.925
	12 BLDGS UNDER CONST.	2,898	26,949	0.194	1.291	1.338
	13 MOTOR VEHICLE RISKS	156,125	784,158	0.756	0.953	0.988
	14 OTHER NON-MANUF.	215,649	992,888	0.462	1.065	1.103
	15 STORAGE	133,551	712,476	0.802	1.151	1.193
	17 FOOD MANUFACTURING	94,506	539,956	0.247	0.616	0.639
	18 WOOD MANUFACTURING	63,125	425,489	0.000	0.524	0.544
	19 WEARING APPAREL	21,416	183,076	0.393	0.977	1.013
	20 CHEM. MANUFACTURING	7,675	29,601	2.033	1.555	1.611
	21 METAL MANUFACTURING	119,661	761,515	0.216	0.594	0.615
	22 OTHER MANUFACTURING	131,350	674,422	0.043	0.503	0.522
	TOTAL*	5,244,850	24,995,405	1.038	1.070	1.109

* TOTALS IN COLUMNS (3), (4) & (5) ARE AVERAGES USING COLUMN (1) AS WEIGHTS.

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BASIC GROUP I RELATIVITY ANALYSIS
TABLE 10 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

		(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
TYPE OF POLICY	CATEGORY					
10 MONOLINE	01 APARTMENTS	27,683	189,807	0.021	0.300	0.311
	02 OTHER HABITATIONAL	47,159	203,687	0.111	0.319	0.331
	03 RESTAURANTS & BARS	13,363	52,845	0.259	0.364	0.377
	04 OTHER MERCANTILE RS	32,714	156,199	0.308	0.368	0.381
	05 PUBLIC BUILDINGS	578	2,060	0.000	0.330	0.342
	06 CHURCHES	5,989	23,188	0.000	0.325	0.337
	07 SCHOOLS	3,530	15,941	0.000	0.327	0.339
	08 OFFICES AND BANKS	35,147	172,678	1.895	0.729	0.755
	09 REC. FACILITIES	12,544	63,785	0.641	0.430	0.446
	10 HOTELS AND MOTELS	2,656	230,413	0.009	0.290	0.301
	11 HOSPITALS/NURS H0ME	1,926	11,715	0.000	0.328	0.340
	12 BLDGS UNDER CONST.	633	4,556	0.000	0.329	0.341
	13 MOTOR VEHICLE RISKS	4,138	16,064	0.000	0.327	0.339
	14 OTHER NON-MANUF.	8,094	55,087	0.519	0.408	0.423
	15 STORAGE	6,231	34,147	0.000	0.323	0.335
	17 FOOD MANUFACTURING	791	3,806	0.000	0.329	0.341
	18 WOOD MANUFACTURING	91	764	0.000	0.330	0.342
	19 WEARING APPAREL	938	4,754	0.000	0.329	0.341
	20 CHEM. MANUFACTURING	0	2,939	0.000	0.330	0.342
	21 METAL MANUFACTURING	13,059	39,692	0.249	0.363	0.376
	22 OTHER MANUFACTURING	246	6,151	0.000	0.329	0.341
	TOTAL*	217,510	1,290,278	0.467	0.406	0.420
31 MULTILINE MOTEL/HOTEL	10 HOTELS AND MOTELS	136,152	849,933	0.093	0.656	0.680
	TOTAL*	136,152	849,933	0.093	0.656	0.680
32 MULTILINE APARTMENT	01 APARTMENTS	406,152	2,663,140	1.213	1.119	1.160
	02 OTHER HABITATIONAL	187,093	989,556	0.768	0.899	0.932
	TOTAL*	593,245	3,652,696	1.073	1.050	1.088
33 MULTILINE OFFICE	08 OFFICES AND BANKS	194,031	758,460	0.139	0.688	0.713
	TOTAL*	194,031	758,460	0.139	0.688	0.713
34 MULTILINE MERCANTILE	03 RESTAURANTS & BARS	118,652	623,393	1.970	1.303	1.350
	04 OTHER MERCANTILE RS	409,547	2,243,876	0.512	0.724	0.750
	08 OFFICES AND BANKS	48,552	231,011	0.028	0.767	0.795
	13 MOTOR VEHICLE RISKS	4,951	22,679	0.000	0.822	0.852
	14 OTHER NON-MANUF.	9,599	50,155	0.000	0.813	0.842
	15 STORAGE	32,344	158,580	0.064	0.794	0.823
	TOTAL*	623,645	3,329,694	0.717	0.843	0.874

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                BASIC GROUP I RELATIVITY ANALYSIS
         TABLE 10 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW
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		(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
TYPE OF POLICY	CATEGORY					
35 MULTILINE	02 OTHER HABITATIONAL	1,466	6,610	0.000	0.827	0.857
INSTITUTIONAL	05 PUBLIC BUILDINGS	66,541	188,871	0.014	0.775	0.803
	06 CHURCHES	72,344	389,853	5.887	2.306	2.390
	07 SCHOOLS	187,221	572,528	0.085	0.704	0.730
	08 OFFICES AND BANKS	39,324	188,368	1.987	1.201	1.245
	09 REC. FACILITIES	24,768	100,472	0.020	0.801	0.830
	11 HOSPITALS/NURS H0ME	15,857	82,912	8.974	2.458	2.547
	13 MOTOR VEHICLE RISKS	132	1,094	0.000	0.829	0.859
	14 OTHER NON-MANUF.	13,130	70,014	0.000	0.807	0.836
	TOTAL*	420,783	1,600,722	1.577	1.112	1.153
36 MULTILINE	03 RESTAURANTS & BARS	10,423	43,760	0.090	0.388	0.402
SERVICES	04 OTHER MERCANTILE RS	15,701	80,462	0.015	0.374	0.388
	08 OFFICES AND BANKS	91,501	371,181	0.000	0.340	0.352
	09 REC. FACILITIES	78,479	395,701	0.020	0.342	0.354
	13 MOTOR VEHICLE RISKS	53,429	244,856	0.244	0.400	0.415
	14 OTHER NON-MANUF.	47,986	226,412	1.625	0.656	0.680
	15 STORAGE	28,182	88,720	0.000	0.371	0.384
	21 METAL MANUFACTURING	2,298	20,625	0.000	0.379	0.393
	22 OTHER MANUFACTURING	2,804	30,791	0.000	0.378	0.392
	TOTAL*	330,803	1,502,508	0.283	0.402	0.417
37 MULTILINE	04 OTHER MERCANTILE RS	15,107	66,689	0.075	0.384	0.398
INDUST/PROCESS	08 OFFICES AND BANKS	3,588	55,207	0.120	0.392	0.406
	13 MOTOR VEHICLE RISKS	0	5,788	0.000	0.381	0.395
	14 OTHER NON-MANUF.	4,746	18,842	0.029	0.383	0.397
	15 STORAGE	6,633	50,993	0.000	0.375	0.389
	17 FOOD MANUFACTURING	47,596	178,463	0.000	0.361	0.374
	18 WOOD MANUFACTURING	28,437	174,365	0.000	0.361	0.374
	19 WEARING APPAREL	36,269	208,518	0.021	0.361	0.374
	20 CHEM. MANUFACTURING	2,776	9,310	0.000	0.380	0.394
	21 METAL MANUFACTURING	77,883	354,800	0.000	0.342	0.354
	22 OTHER MANUFACTURING	42,611	269,327	1.778	0.699	0.724
	TOTAL*	265,646	1,392,302	0.294	0.412	0.427

PENNSYLVANIA
BASIC GROUP I RELATIVITY ANALYSIS
TABLE 10 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
38 MULTILINE	04 OTHER MERCANTILE RS	49,402	264,253	1.810	0.703	0.728
CONTRACTORS	08 OFFICES AND BANKS	26,261	149,259	0.123	0.384	0.398
	12 BLDGS UNDER CONST.	4,927	23,269	0.000	0.379	0.393
	14 OTHER NON-MANUF.	3,434	15,032	1.748	0.606	0.628
	TOTAL*	84,024	451,813	1.174	0.580	0.601
TOTAL ALL TOPS*	01 APARTMENTS	433,835	2,852,947	1.137	1.067	1.105
	02 OTHER HABITATIONAL	235,718	1,199,853	0.632	0.783	0.811
	03 RESTAURANTS & BARS	142,438	719,998	1.672	1.148	1.190
	04 OTHER MERCANTILE RS	522,471	2,811,479	0.594	0.679	0.704
	05 PUBLIC BUILDINGS	67,119	190,931	0.014	0.771	0.799
	06 CHURCHES	78,333	413,041	5.437	2.154	2.233
	07 SCHOOLS	190,751	588,469	0.083	0.697	0.722
	08 OFFICES AND BANKS	438,404	1,926,164	0.403	0.653	0.676
	09 REC. FACILITIES	115,791	559,958	0.087	0.450	0.466
	10 HOTELS AND MOTELS	138,808	1,080,346	0.091	0.649	0.673
	11 HOSPITALS/NURS HOME	17,783	94,627	8.003	2.227	2.308
	12 BLDGS UNDER CONST.	5,560	27,825	0.000	0.373	0.387
	13 MOTOR VEHICLE RISKS	62,650	290,481	0.208	0.429	0.445
	14 OTHER NON-MANUF.	86,989	435,542	1.015	0.656	0.680
	15 STORAGE	73,390	332,440	0.028	0.554	0.574
	17 FOOD MANUFACTURING	48,387	182,269	0.000	0.360	0.374
	18 WOOD MANUFACTURING	28,528	175,129	0.000	0.361	0.374
	19 WEARING APPAREL	37,207	213,272	0.020	0.360	0.373
	20 CHEM. MANUFACTURING	2,776	12,249	0.000	0.380	0.394
	21 METAL MANUFACTURING	93,240	415,117	0.035	0.346	0.358
	22 OTHER MANUFACTURING	45,661	306,269	1.659	0.677	0.702
	TOTAL*	2,865,839	14,828,406	0.753	0.774	0.802

* TOTALS IN COLUMNS (3), (4) & (5) ARE AVERAGES USING COLUMN (1) AS WEIGHTS.

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Allegheny Cty(Excl. Pitt)
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                        PENNSYLVANIA
                  BASIC GROUP I RELATIVITY ANALYSIS
         TABLE 10 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW


                                    (1)              (2)           (3)          (4)           (5)
                                 ACCIDENT YEAR    5 - YEAR      5 - YEAR     Z-WEIGHTED
                                 ENDING 06/30/17  AGGREGATE     EXPERIENCE   EXPERIENCE     Z-WEIGHTED
                                 AGGREGATE LOSS   LOSS COSTS    RATIO        RATIO          RELATIVITY
TYPE OF POLICY        CATEGORY   COSTS
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10 MONOLINE           01 APARTMENTS            11,868       73,350       0.000        1.250          1.295
                      02 OTHER HABITATIONAL    22,227      118,376       1.181        1.432          1.484
                      03 RESTAURANTS & BARS    12,856       61,304       7.294        2.376          2.462
                      04 OTHER MERCANTILE RS   52,004      322,481       2.189        1.601          1.659
                      05 PUBLIC BUILDINGS      15,598       71,718       0.025        1.254          1.299
                      06 CHURCHES               5,290       22,968       0.000        1.255          1.301
                      07 SCHOOLS                  819        7,558       0.190        1.286          1.333
                      08 OFFICES AND BANKS     38,458      217,901       2.101        1.582          1.639
                      09 REC. FACILITIES       25,327      117,450       3.429        1.787          1.852
                      11 HOSPITALS/NURS H0ME    5,095       28,172       0.267        1.295          1.342
                      12 BLDGS UNDER CONST.       226        8,301       0.000        1.257          1.303
                      13 MOTOR VEHICLE RISKS   24,847      107,648       2.455        1.633          1.692
                      14 OTHER NON-MANUF.      77,728      288,885       0.855        1.374          1.424
                      15 STORAGE               29,506      147,053       0.000        1.243          1.288
                      17 FOOD MANUFACTURING       210          447       0.000        1.258          1.304
                      18 WOOD MANUFACTURING     1,060        6,517       0.000        1.257          1.303
                      19 WEARING APPAREL          971       13,642       0.000        1.256          1.302
                      20 CHEM. MANUFACTURING        0        5,992       0.000        1.257          1.303
                      21 METAL MANUFACTURING   22,125      136,956       0.000        1.244          1.289
                      22 OTHER MANUFACTURING    3,472       51,256       0.000        1.253          1.298
                         TOTAL*               349,687    1,807,975       1.518        1.486          1.539

31 MULTILINE          10 HOTELS AND MOTELS     38,092      333,156       0.143        0.719          0.745
   MOTEL/HOTEL           TOTAL*                38,092      333,156       0.143        0.719          0.745

32 MULTILINE          01 APARTMENTS           454,768    3,474,918       2.375        2.138          2.216
   APARTMENT           02 OTHER HABITATIONAL  152,661      967,313       0.556        0.769          0.797
                         TOTAL*               607,429    4,442,231       1.918        1.794          1.859

33 MULTILINE          08 OFFICES AND BANKS    163,246      838,460       0.303        0.645          0.668
   OFFICE                 TOTAL*              163,246      838,460       0.303        0.645          0.668

34 MULTILINE          03 RESTAURANTS & BARS   204,359    1,048,049       0.106        0.491          0.509
   MERCANTILE         04 OTHER MERCANTILE RS  631,292    3,672,748       1.495        1.421          1.473
                      08 OFFICES AND BANKS     25,899      147,285       0.133        0.814          0.844
                      13 MOTOR VEHICLE RISKS   24,309      139,491       0.000        0.783          0.811
                      14 OTHER NON-MANUF.      25,278      138,312       0.002        0.785          0.813
                      15 STORAGE              125,324      634,630       0.108        0.592          0.613
                         TOTAL*             1,036,461    5,780,515       0.948        1.092          1.131
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PENNSYLVANIA
BASIC GROUP I RELATIVITY ANALYSIS
TABLE 10 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

		(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
TYPE OF POLICY	CATEGORY					
35 MULTILINE	02 OTHER HABITATIONAL	2,114	6,990	0.000	0.892	0.924
INSTITUTIONAL	05 PUBLIC BUILDINGS	128,689	635,351	0.293	0.683	0.708
	06 CHURCHES	196,765	1,106,921	0.657	0.816	0.846
	07 SCHOOLS	329,186	1,014,615	0.073	0.478	0.495
	08 OFFICES AND BANKS	27,732	130,893	0.114	0.819	0.849
	09 REC. FACILITIES	30,959	147,521	0.008	0.780	0.808
	11 HOSPITALS/NURS H0ME	58,026	196,603	0.000	0.744	0.771
	13 MOTOR VEHICLE RISKS	974	2,024	0.000	0.896	0.928
	14 OTHER NON-MANUF.	30,774	182,922	0.111	0.786	0.815
	TOTAL*	805,219	3,423,840	0.246	0.649	0.673
36 MULTILINE	03 RESTAURANTS & BARS	4,666	43,064	0.000	0.818	0.848
SERVICES	04 OTHER MERCANTILE RS	55,665	270,910	0.937	0.945	0.979
	08 OFFICES AND BANKS	82,558	368,754	0.167	0.786	0.815
	09 REC. FACILITIES	152,697	938,945	1.996	1.267	1.313
	13 MOTOR VEHICLE RISKS	155,131	743,233	1.230	1.024	1.061
	14 OTHER NON-MANUF.	57,443	297,033	0.936	0.944	0.978
	15 STORAGE	31,761	182,084	0.000	0.788	0.817
	21 METAL MANUFACTURING	3,478	22,118	0.000	0.823	0.853
	22 OTHER MANUFACTURING	8,972	63,650	0.399	0.870	0.902
	TOTAL*	552,371	2,929,791	1.120	1.020	1.057
37 MULTILINE	04 OTHER MERCANTILE RS	31,961	198,077	0.000	0.785	0.813
INDUST/PROCESS	08 OFFICES AND BANKS	22,222	109,746	0.048	0.811	0.840
	13 MOTOR VEHICLE RISKS	1,194	48,610	0.000	0.817	0.847
	14 OTHER NON-MANUF.	8,840	59,536	0.000	0.815	0.845
	15 STORAGE	2,974	12,448	0.000	0.825	0.855
	17 FOOD MANUFACTURING	38,460	204,318	0.000	0.784	0.812
	18 WOOD MANUFACTURING	25,406	154,199	13.472	2.961	3.068
	19 WEARING APPAREL	37,857	194,608	0.006	0.787	0.816
	20 CHEM. MANUFACTURING	40,971	195,478	0.000	0.786	0.815
	21 METAL MANUFACTURING	229,927	1,044,270	0.024	0.650	0.674
	22 OTHER MANUFACTURING	87,405	416,779	0.217	0.789	0.818
	TOTAL*	527,217	2,638,069	0.698	0.834	0.864

Allegheny Cty(Excl. Pitt)
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PENNSYLVANIA
BASIC GROUP I RELATIVITY ANALYSIS
TABLE 10 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

		(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
TYPE OF POLICY	CATEGORY					
38 MULTILINE	04 OTHER MERCANTILE RS	223,713	1,232,899	0.984	0.959	0.994
CONTRACTORS	08 OFFICES AND BANKS	82,139	399,169	0.142	0.776	0.804
	12 BLDGS UNDER CONST.	5,405	23,541	0.000	0.823	0.853
	14 OTHER NON-MANUF.	8,402	41,078	0.000	0.819	0.849
	TOTAL*	319,659	1,696,687	0.725	0.906	0.939
TOTAL ALL TOPS*	01 APARTMENTS	466,636	3,548,268	2.315	2.116	2.192
	02 OTHER HABITATIONAL	177,002	1,092,679	0.628	0.854	0.885
	03 RESTAURANTS & BARS	221,881	1,152,417	0.520	0.607	0.629
	04 OTHER MERCANTILE RS	994,635	5,697,115	1.337	1.279	1.326
	05 PUBLIC BUILDINGS	144,287	707,069	0.264	0.745	0.772
	06 CHURCHES	202,055	1,129,889	0.640	0.828	0.858
	07 SCHOOLS	330,005	1,022,173	0.073	0.480	0.497
	08 OFFICES AND BANKS	442,254	2,212,208	0.369	0.806	0.836
	09 REC. FACILITIES	208,983	1,203,916	1.875	1.258	1.303
	10 HOTELS AND MOTELS	38,092	333,156	0.143	0.719	0.745
	11 HOSPITALS/NURS HOME	63,121	224,775	0.022	0.789	0.817
	12 BLDGS UNDER CONST.	5,631	31,842	0.000	0.840	0.871
	13 MOTOR VEHICLE RISKS	206,455	1,041,006	1.220	1.067	1.106
	14 OTHER NON-MANUF.	208,465	1,007,766	0.593	1.051	1.089
	15 STORAGE	189,565	976,215	0.071	0.730	0.756
	17 FOOD MANUFACTURING	38,670	204,765	0.000	0.786	0.815
	18 WOOD MANUFACTURING	26,466	160,716	12.933	2.892	2.998
	19 WEARING APPAREL	38,828	208,250	0.006	0.799	0.828
	20 CHEM. MANUFACTURING	40,971	201,470	0.000	0.786	0.815
	21 METAL MANUFACTURING	255,530	1,203,344	0.022	0.704	0.729
	22 OTHER MANUFACTURING	99,849	531,685	0.226	0.813	0.842
	TOTAL*	4,399,381	23,890,724	0.943	1.066	1.104

* TOTALS IN COLUMNS (3), (4) & (5) ARE AVERAGES USING COLUMN (1) AS WEIGHTS.

PENNSYLVANIA
BASIC GROUP I RELATIVITY ANALYSIS
TABLE 10 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
10 MONOLINE	01 APARTMENTS	326,158	1,647,962	3.203	1.685	1.746
	02 OTHER HABITATIONAL	396,338	2,096,548	0.902	1.091	1.130
	03 RESTAURANTS & BARS	402,421	1,630,334	2.392	1.410	1.461
	04 OTHER MERCANTILE RS	1,104,516	5,652,997	1.378	1.225	1.269
	05 PUBLIC BUILDINGS	236,340	1,238,995	0.152	0.822	0.852
	06 CHURCHES	42,053	243,449	0.649	1.255	1.300
	07 SCHOOLS	98,315	336,119	0.841	1.102	1.142
	08 OFFICES AND BANKS	679,511	3,521,777	0.700	0.994	1.030
	09 REC. FACILITIES	550,518	2,911,206	0.455	0.797	0.826
	10 HOTELS AND MOTELS	210,515	1,208,820	1.929	1.410	1.461
	11 HOSPITALS/NURS H0ME	147,173	613,941	3.541	2.083	2.158
	12 BLDGS UNDER CONST.	21,399	114,090	1.722	1.338	1.386
	13 MOTOR VEHICLE RISKS	324,315	1,700,327	1.402	1.240	1.285
	14 OTHER NON-MANUF.	645,026	3,014,011	1.556	1.609	1.667
	15 STORAGE	383,772	1,892,358	0.499	0.995	1.031
	17 FOOD MANUFACTURING	203,114	681,380	6.078	2.201	2.280
	18 WOOD MANUFACTURING	58,302	310,943	0.000	0.842	0.872
	19 WEARING APPAREL	16,859	116,890	0.057	0.870	0.901
	20 CHEM. MANUFACTURING	31,806	172,044	0.491	1.009	1.046
	21 METAL MANUFACTURING	305,008	1,525,846	0.428	0.944	0.978
	22 OTHER MANUFACTURING	203,106	903,618	0.006	0.829	0.859
	TOTAL*	6,386,565	31,533,655	1.371	1.225	1.269
31 MULTILINE MOTEL/HOTEL	10 HOTELS AND MOTELS	1,937,803	11,663,455	0.401	0.701	0.726
	TOTAL*	1,937,803	11,663,455	0.401	0.701	0.726
32 MULTILINE APARTMENT	01 APARTMENTS	4,925,941	31,574,016	1.131	1.014	1.051
	02 OTHER HABITATIONAL	3,161,576	16,763,962	1.202	1.049	1.086
	TOTAL*	8,087,517	48,337,978	1.159	1.028	1.065
33 MULTILINE OFFICE	08 OFFICES AND BANKS	2,567,503	12,537,988	0.494	0.729	0.755
	TOTAL*	2,567,503	12,537,988	0.494	0.729	0.755
34 MULTILINE MERCANTILE	03 RESTAURANTS & BARS	2,941,502	15,566,400	0.792	0.880	0.911
	04 OTHER MERCANTILE RS	9,741,913	52,453,027	1.222	1.143	1.185
	08 OFFICES AND BANKS	606,318	3,084,114	0.460	0.786	0.815
	13 MOTOR VEHICLE RISKS	428,112	2,027,178	0.762	0.865	0.896
	14 OTHER NON-MANUF.	306,363	1,589,264	0.149	0.745	0.772
	15 STORAGE	1,467,874	7,685,421	0.841	0.887	0.919
	TOTAL*	15,492,082	82,405,404	1.040	1.039	1.077

PENNSYLVANIA
BASIC GROUP I RELATIVITY ANALYSIS
TABLE 10 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

		(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
TYPE OF POLICY	CATEGORY					
35 MULTILINE INSTITUTIONAL	02 OTHER HABITATIONAL	40,379	159,748	0.000	0.750	0.777
	05 PUBLIC BUILDINGS	2,155,747	11,053,352	0.787	0.857	0.888
	06 CHURCHES	2,966,574	15,410,945	0.755	0.767	0.794
	07 SCHOOLS	5,620,723	21,605,747	0.545	0.714	0.740
	08 OFFICES AND BANKS	895,144	3,937,125	0.620	0.839	0.869
	09 REC. FACILITIES	505,741	2,497,663	0.286	0.763	0.790
	11 HOSPITALS/NURS H0ME	745,393	2,992,661	1.707	1.055	1.094
	13 MOTOR VEHICLE RISKS	19,040	90,621	4.587	1.492	1.546
	14 OTHER NON-MANUF.	631,414	3,383,628	0.302	0.745	0.772
	TOTAL*	13,580,155	61,131,490	0.681	0.780	0.808
36 MULTILINE SERVICES	03 RESTAURANTS & BARS	267,804	1,371,181	0.656	0.899	0.932
	04 OTHER MERCANTILE RS	787,476	4,183,401	0.581	0.893	0.926
	08 OFFICES AND BANKS	1,160,502	5,995,857	0.334	0.817	0.846
	09 REC. FACILITIES	2,975,320	16,203,237	1.289	1.173	1.215
	13 MOTOR VEHICLE RISKS	2,170,016	10,941,316	1.062	0.994	1.030
	14 OTHER NON-MANUF.	1,048,136	5,324,777	1.473	1.073	1.112
	15 STORAGE	616,110	2,841,821	1.847	1.160	1.202
	21 METAL MANUFACTURING	119,059	642,367	0.022	0.849	0.880
	22 OTHER MANUFACTURING	292,885	1,640,635	4.574	1.518	1.573
	TOTAL*	9,437,308	49,144,592	1.185	1.052	1.090
37 MULTILINE INDUST/PROCESS	04 OTHER MERCANTILE RS	684,416	3,632,528	0.395	0.867	0.899
	08 OFFICES AND BANKS	208,736	1,174,306	0.537	0.915	0.948
	13 MOTOR VEHICLE RISKS	7,640	485,798	2.969	1.253	1.299
	14 OTHER NON-MANUF.	174,004	1,180,553	1.697	1.040	1.078
	15 STORAGE	61,148	338,893	0.792	0.916	0.949
	17 FOOD MANUFACTURING	1,206,029	7,298,856	0.622	0.879	0.911
	18 WOOD MANUFACTURING	1,118,190	5,920,345	1.533	1.037	1.075
	19 WEARING APPAREL	422,629	2,379,157	0.159	0.812	0.841
	20 CHEM. MANUFACTURING	189,791	862,963	0.087	0.845	0.876
	21 METAL MANUFACTURING	3,678,089	20,407,203	0.905	0.964	0.998
	22 OTHER MANUFACTURING	2,242,657	11,985,074	0.689	0.880	0.912
	TOTAL*	9,993,329	55,665,676	0.818	0.928	0.962

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BASIC GROUP I RELATIVITY ANALYSIS
TABLE 10 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

		(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) Z-WEIGHTED EXPERIENCE RATIO	(5) Z-WEIGHTED RELATIVITY
TYPE OF POLICY	CATEGORY					
38 MULTILINE	04 OTHER MERCANTILE RS	2,630,206	14,534,066	0.794	0.922	0.955
CONTRACTORS	08 OFFICES AND BANKS	1,119,896	6,074,260	1.164	0.990	1.026
	12 BLDGS UNDER CONST.	57,965	305,306	0.010	0.819	0.849
	14 OTHER NON-MANUF.	121,264	632,639	0.526	0.912	0.945
	TOTAL*	3,929,331	21,546,271	0.880	0.940	0.974
TOTAL ALL TOPS*	01 APARTMENTS	5,252,099	33,221,978	1.260	1.056	1.094
	02 OTHER HABITATIONAL	3,598,293	19,020,258	1.155	1.050	1.088
	03 RESTAURANTS & BARS	3,611,727	18,567,915	0.961	0.940	0.974
	04 OTHER MERCANTILE RS	14,948,527	80,456,019	1.086	1.085	1.124
	05 PUBLIC BUILDINGS	2,392,087	12,292,347	0.724	0.853	0.884
	06 CHURCHES	3,008,627	15,654,394	0.753	0.774	0.802
	07 SCHOOLS	5,719,038	21,941,866	0.550	0.721	0.747
	08 OFFICES AND BANKS	7,237,610	36,325,427	0.605	0.832	0.862
	09 REC. FACILITIES	4,031,579	21,612,106	1.049	1.070	1.109
	10 HOTELS AND MOTELS	2,148,318	12,872,275	0.550	0.770	0.798
	11 HOSPITALS/NURS HOME	892,566	3,606,602	2.009	1.225	1.269
	12 BLDGS UNDER CONST.	79,364	419,396	0.471	0.959	0.994
	13 MOTOR VEHICLE RISKS	2,949,123	15,245,240	1.083	1.006	1.043
	14 OTHER NON-MANUF.	2,926,207	15,124,872	1.074	1.077	1.116
	15 STORAGE	2,528,904	12,758,493	1.033	0.970	1.006
	17 FOOD MANUFACTURING	1,409,143	7,980,236	1.408	1.070	1.109
	18 WOOD MANUFACTURING	1,176,492	6,231,288	1.457	1.028	1.065
	19 WEARING APPAREL	439,488	2,496,047	0.155	0.814	0.843
	20 CHEM. MANUFACTURING	221,597	1,035,007	0.145	0.869	0.901
	21 METAL MANUFACTURING	4,102,156	22,575,416	0.844	0.959	0.994
	22 OTHER MANUFACTURING	2,738,648	14,529,327	1.054	0.944	0.979
	TOTAL*	71,411,593	373,966,509	0.957	0.965	1.000

* TOTALS IN COLUMNS (3), (4) & (5) ARE AVERAGES USING COLUMN (1) AS WEIGHTS.

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SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS
TABLE 11 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) RELATIVITY
10 MONOLINE	01 BUILDINGS	2,724,665	14,064,060	1.273	1.304
	02 RES. APTS. AND COND	25,033	131,706	0.463	0.474
	03 OFFICES	220,044	1,232,954	0.869	0.890
	04 MERCANTILE - HIGH	329,585	1,658,786	0.362	0.371
	05 MERCANTILE - MEDIUM	118,579	629,910	0.635	0.651
	06 MERCANTILE - LOW	44,478	222,428	3.331	3.413
	07 MOTELS AND HOTELS	25,947	157,884	0.144	0.148
	08 INSTITUTIONAL - HIG	83,636	409,967	0.934	0.957
	09 INSTITUTIONAL - LOW	135,149	702,493	2.898	2.969
	10 INDUST-PROC - HIGH	74,298	340,066	0.096	0.098
	11 INDUST-PROC - LOW	192,056	990,177	0.293	0.300
	12 SERVICE - HIGH	92,155	462,731	0.995	1.019
	13 SERVICE - LOW	165,053	1,006,464	0.746	0.764
	14 CONTRACTORS	48,879	178,320	0.904	0.926
	TOTAL*	4,279,557	22,187,946	1.124	1.152
31 MULTILINE MOTEL/HOTEL	01 BUILDINGS	486,903	2,955,206	2.016	2.066
	07 MOTELS AND HOTELS	146,883	1,061,134	1.074	1.100
	TOTAL*	633,786	4,016,340	1.798	1.842
32 MULTILINE APARTMENT	01 BUILDINGS	3,326,308	20,842,337	0.876	0.898
	02 RES. APTS. AND COND	1,347,922	6,928,293	0.572	0.586
	TOTAL*	4,674,230	27,770,630	0.788	0.807
33 MULTILINE OFFICE	01 BUILDINGS	1,764,458	8,575,294	0.807	0.827
	03 OFFICES	702,804	3,487,011	0.810	0.830
	04 MERCANTILE - HIGH	607	3,387	0.000	0.000
	08 INSTITUTIONAL - HIG	5,159	29,800	0.000	0.000
	12 SERVICE - HIGH	666	5,392	0.000	0.000
	14 CONTRACTORS	539	1,624	0.000	0.000
	TOTAL*	2,474,233	12,102,508	0.806	0.826

SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS
TABLE 11 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) RELATIVITY
34 MULTILINE	01 BUILDINGS	5,245,549	26,011,941	0.984	1.008
MERCANTILE	03 OFFICES	24,998	116,959	0.383	0.392
	04 MERCANTILE - HIGH	1,061,124	5,329,789	1.550	1.588
	05 MERCANTILE - MEDIUM	1,132,293	5,903,639	1.242	1.273
	06 MERCANTILE - LOW	404,156	1,857,103	0.866	0.887
	08 INSTITUTIONAL - HIG	109	2,652	0.000	0.000
	09 INSTITUTIONAL - LOW	48	163	0.000	0.000
	10 INDUST-PROC - HIGH	0	59	0.000	0.000
	11 INDUST-PROC - LOW	1,326	6,492	0.000	0.000
	12 SERVICE - HIGH	13,747	85,321	1.409	1.444
	13 SERVICE - LOW	19,898	93,734	0.449	0.460
	14 CONTRACTORS	42,791	172,243	0.566	0.580
	TOTAL*	7,946,039	39,580,095	1.085	1.112
35 MULTILINE	01 BUILDINGS	6,460,392	32,077,202	0.900	0.922
INSTITUTIONAL	03 OFFICES	10,183	41,041	1.482	1.518
	04 MERCANTILE - HIGH	28	121	0.000	0.000
	06 MERCANTILE - LOW	53	277	0.000	0.000
	08 INSTITUTIONAL - HIG	4,107,575	20,553,858	0.975	0.999
	09 INSTITUTIONAL - LOW	2,299,074	13,479,060	0.637	0.653
	12 SERVICE - HIGH	2,388	14,006	0.313	0.321
	13 SERVICE - LOW	1,526	4,120	0.000	0.000
	14 CONTRACTORS	14,835	52,592	0.000	0.000
	TOTAL*	12,896,054	66,222,277	0.876	0.898
36 MULTILINE	01 BUILDINGS	4,061,530	20,342,115	1.110	1.137
SERVICES	03 OFFICES	49,729	184,493	0.569	0.583
	04 MERCANTILE - HIGH	38,677	176,253	0.193	0.198
	05 MERCANTILE - MEDIUM	12,859	49,175	6.803	6.970
	06 MERCANTILE - LOW	11,206	51,903	1.021	1.046
	08 INSTITUTIONAL - HIG	28,143	139,934	0.056	0.057
	09 INSTITUTIONAL - LOW	69,488	387,354	0.000	0.000
	10 INDUST-PROC - HIGH	1,822	1,977	0.000	0.000
	11 INDUST-PROC - LOW	16,462	83,987	0.000	0.000
	12 SERVICE - HIGH	1,233,351	6,799,654	0.806	0.826
	13 SERVICE - LOW	767,757	3,725,831	1.099	1.126
	14 CONTRACTORS	44,494	199,563	0.872	0.893
	TOTAL*	6,335,518	32,142,239	1.029	1.054

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SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS
TABLE 11 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 06/30/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) RELATIVITY
37 MULTILINE	01 BUILDINGS	1,888,680	9,844,009	1.383	1.417
INDUST/PROC	03 OFFICES	8,531	40,183	0.992	1.016
	04 MERCANTILE - HIGH	25,573	88,544	0.055	0.056
	05 MERCANTILE - MEDIUM	1,263	6,142	0.000	0.000
	06 MERCANTILE - LOW	182	1,103	0.000	0.000
	08 INSTITUTIONAL - HIG	2	17	0.000	0.000
	10 INDUST-PROC - HIGH	365,543	1,776,815	0.937	0.960
	11 INDUST-PROC - LOW	1,074,182	6,023,123	0.913	0.935
	12 SERVICE - HIGH	888	3,970	0.374	0.383
	13 SERVICE - LOW	3,001	17,327	0.416	0.426
	14 CONTRACTORS	15,688	49,918	0.393	0.403
	TOTAL*	3,383,533	17,851,151	1.168	1.197
38 MULTILINE	01 BUILDINGS	1,074,985	5,671,253	0.792	0.811
CONTRACTORS	03 OFFICES	59,717	266,280	2.352	2.410
	04 MERCANTILE - HIGH	72,001	272,352	0.588	0.602
	05 MERCANTILE - MEDIUM	1,250	5,386	4.036	4.135
	06 MERCANTILE - LOW	17,940	69,277	1.017	1.042
	08 INSTITUTIONAL - HIG	408	1,986	4.313	4.419
	11 INDUST-PROC - LOW	2,974	8,346	0.604	0.619
	12 SERVICE - HIGH	1,463	7,257	0.000	0.000
	13 SERVICE - LOW	3,479	15,127	0.501	0.513
	14 CONTRACTORS	1,550,599	6,953,027	0.803	0.823
	TOTAL*	2,784,816	13,270,291	0.829	0.849
TOTAL ALL TOPS*	01 BUILDINGS	27,033,470	140,383,417	1.026	1.051
	02 RES. APTS. AND COND	1,372,955	7,059,999	0.570	0.584
	03 OFFICES	1,076,006	5,368,921	0.894	0.916
	04 MERCANTILE - HIGH	1,527,595	7,529,232	1.188	1.217
	05 MERCANTILE - MEDIUM	1,266,244	6,594,252	1.243	1.274
	06 MERCANTILE - LOW	478,015	2,202,091	1.104	1.131
	07 MOTELS AND HOTELS	172,830	1,219,018	0.934	0.957
	08 INSTITUTIONAL - HIG	4,225,032	21,138,214	0.967	0.991
	09 INSTITUTIONAL - LOW	2,503,759	14,569,070	0.741	0.759
	10 INDUST-PROC - HIGH	441,663	2,118,917	0.792	0.811
	11 INDUST-PROC - LOW	1,287,000	7,112,125	0.807	0.827
	12 SERVICE - HIGH	1,344,658	7,378,331	0.823	0.843
	13 SERVICE - LOW	960,714	4,862,603	1.019	1.044
	14 CONTRACTORS	1,717,825	7,607,287	0.791	0.810
	TOTAL*	45,407,766	235,143,477	0.976	1.000

 * TOTALS IN COLUMNS (3) & (4) ARE AVERAGES USING COLUMN (1) AS WEIGHTS.

EXPLANATORY NOTES TO TABLES 10 AND 11

BASIC GROUP I/SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

INTRODUCTION
The experience used in the relativity analysis and displayed on Tables 10 and 11 is the latest five accident years of data reported under the Commercial Statistical Plan. As in the overall review, loss costs have been adjusted to current ISO loss cost and prospective amount of insurance levels (with multiline aggregate loss costs adjusted additionally by the current implicit package modification factors). Incurred losses are adjusted to prospective cost levels, and are further adjusted by the Basic Group I large loss procedure and the Special Causes of Loss excess procedure. Losses have also been developed to their ultimate settlement value by application of loss development factors.

COLUMN (1)   2017 AGGREGATE LOSS COSTS

The latest accident year aggregate loss costs (adjusted as described above) are used as weights both in the calculation of any totals shown in this table and in the iterative formulas used in the simultaneous review procedure.

COLUMN (2)   2013-2017 AGGREGATE LOSS COSTS

The combined five-year adjusted aggregate loss costs (adjusted as described above) are used to calculate the experience ratios in column (3).

COLUMN (3)   FIVE-YEAR EXPERIENCE RATIOS

These are the ratios of the combined five-year adjusted incurred losses (adjusted as described above) to the combined five-year adjusted aggregate loss costs as shown in column (2). Any totals which are shown are weighted averages using the adjusted aggregate loss costs in column (1).

COLUMN (4)   CREDIBILITY (Z) WEIGHTED EXPERIENCE RATIO

A credibility procedure is applied to the initial experience ratios in column (3) on a cell-by-cell basis prior to the simultaneous review procedure. The credibility values are calculated using an empirical Bayesian credibility procedure. In the following discussion, cell refers to an individual combination of TOP, rating group or category, and territory (where applicable).

COLUMN (4) (cont'd)	The important concept underlying empirical Bayesian credibility is that credibility should depend both on the overall variation of the group of which the cell is a member and the variation of the yearly experience ratios for the cell. Therefore, if a cell's data is very stable then a relatively high credibility value is assigned, and vice versa.

The empirical Bayesian credibility formula for individual cell credibility is $Z = ((C-3)/C) (P/(P+K)) + (3/C)$. P equals the cell's five-year adjusted aggregate loss costs and C equals the number of unique combinations of rating variables (Territory, TOP and Rating Group/Category) within a class group. The K value is estimated from the underlying data using the empirical Bayes method and varies by TOP group and by territory where applicable. The three TOP groups used in this analysis are: Monoline (TOP 10), Premises (TOP's 31-35), and Operations (TOP's 36-38). The 3/C term corrects for the statistical bias associated with the credibility process. The minimum credibility that is possible is 3/C.

COLUMN (5)	<u>WEIGHTED RELATIVITIES</u>

The relativities are the ratios of the five-year credibility-weighted experience ratios shown in column (4) to the average five-year credibility-weighted experience ratio for all TOP's, rating groups and territories (where applicable) combined. These relativities represent how much better or worse than average the experience for a given cell is. They are used along with the aggregate loss costs in column (1) as input for the simultaneous review procedure.

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TABLE 12 - BASIC GROUP II RELATIVITY ANALYSIS

INDICATED TOTAL LOSS COST ADJUSTMENT: -3.7%

	(1) ACCIDENT YR ENDING 06/30/17 AGGR. LOSS COSTS AT CURRENT IMPLICIT PMF	(2) ACCIDENT YRS 2008-2017 NON-HURR. EXPER. RATIO AT CURRENT PMF	(3) FORMULA RELATIVITY (2)/ 0.856	(4) CREDI- BILITY Z C	(5) Z WEIGHTED RELA- TIVITY D	(6) BALANCED FORMULA RELA- TIVITY E	(7) NORMALIZED FORMULA RELA- TIVITY F	(8) CURRENT IMPLICIT PMF	(9) INDICATED IMPLICIT PMF G	(10) INDIC. TOTAL LOSS COST ADJUST
MONOLINE	2,223,574	0.889	1.039	0.325	1.013	1.013	1.0146			-2.2%
MULTILINE	22,574,384	0.853	0.996	0.832	0.997	0.997	0.9982			-3.8%
COVERAGE	24,797,958	0.856	1.000			0.9984 B	0.9997			-3.7%
MULTILINE TOP										
31 MOTEL/HOTEL	308,159	0.892	1.042	0.072	1.003	0.997	0.9986	0.917	0.903	-3.7%
32 APARTMENT	2,038,579	0.784	0.916	0.321	0.973	0.967	0.9685	0.803	0.767	-6.6%
33 OFFICE	920,452	0.784	0.916	0.152	0.987	0.981	0.9826	0.775	0.751	-5.3%
34 MERCANTILE	4,689,861	0.862	1.007	0.501	1.004	0.998	0.9996	1.008	0.993	-3.6%
35 INSTITUTIONAL	7,242,080	0.877	1.025	0.603	1.015	1.009	1.0106	0.695	0.692	-2.6%
36 SERVICES	3,894,240	0.907	1.060	0.467	1.028	1.022	1.0236	1.121	1.131	-1.3%
37 INDUST/PROCESS	2,349,345	0.722	0.843	0.355	0.944	0.938	0.9395	0.913	0.845	-9.4%
38 CONTRACTORS	1,131,668	0.928	1.084	0.217	1.018	1.012	1.0136	0.993	0.992	-2.3%
	22,574,384	0.853 B	0.996		1.003 B	0.997 B	0.9982 B			-3.8%

B - AVERAGE WEIGHTED BY COLUMN (1)
C - CREDIBILITY = P/(P+K) WHERE P REPRESENTS THE TOTAL 10 YEAR ADJUSTED LOSS COSTS AND K =   45,000,000
D - (5) = (3) * (4) + (1.000 - (4))
E - (6) = (5) * (0.997/1.003)
F - (7) = (6) / 0.9984
G - (9) = (7) * (8) / (1.0146)

EXPLANATORY NOTES TO TABLE 12

BASIC GROUP II RELATIVITY ANALYSIS

INTRODUCTION

The explanations which follow clarify Table 12, the Basic Group II (BG II) relativity analysis. The purpose of this analysis is to:

(1)   determine the monoline loss cost level need;

(2)   determine indicated changes to the eight CPP package modification factors (PMFs) based on Basic Group II experience.

The BG II relativity analysis is based on non-hurricane loss experience only, as it is assumed that type of policy relativities are the same for both non-hurricane and hurricane perils. The resulting relativities apply to the total (hurricane plus non-hurricane) BG II loss costs.

COLUMN (1)   2017 AGGREGATE LOSS COSTS

The latest accident year adjusted aggregate loss costs (adjusted in the same manner as in the overall review, i.e. to current manual loss cost and prospective amount of insurance levels, with multiline aggregate loss costs further adjusted to current IPMF level) are used as weights in the calculation of any totals shown in this table.

COLUMN (2)   2008 - 2017 NON-HURRICANE EXPERIENCE RATIO

These experience ratios are the ratios of the combined ten-year CSP adjusted incurred non-hurricane losses (adjusted to current deductible and prospective cost levels including loss development, and smoothed by the BG II excess loss procedure) to the combined ten year CSP adjusted aggregate loss costs. Any totals which are shown are weighted averages using the aggregate loss costs in column (1). When a dash is displayed in the column, it indicates that the indicated IPMF which resulted from this procedure was capped. The procedure which follows when capping occurs is described below.

COLUMN (3)   FORMULA RELATIVITY

The formula relativities are the ratios of the ten year non-hurricane experience ratios for the type of policy (either monoline vs. multiline or individual multiline programs) to the average ten year experience ratio for monoline and multiline combined. These relativities represent how much better or worse than average the experience for a given type of policy is. Again, any totals which are shown are weighted averages and the display of a dash indicates that the resulting IPMF was capped. Unlike the BG I and SCL relativity analyses, the BG II analysis does not employ a simultaneous review procedure since a one way review is involved. That is, the overall loss cost change is only distributed across type of policy; no other rating variables are considered.

COLUMN (4)   CREDIBILITY

The credibility of the experience for each type of policy is determined from the formula:

$$Z = \frac{P}{P + K}$$

where P is the ten year aggregate adjusted loss costs for a given type of policy, and K is a constant loss cost volume of $45,000,000.

COLUMN (5)   Z - WEIGHTED RELATIVITY

The weighted relativity is a weighted average of the individual TOP formula relativity and the overall (coverage) formula relativity using credibility and its complement as the respective weights. Therefore, to the extent that the indication for a type of policy is not fully credible, the complement of credibility is assigned to the statewide coverage level change.

COLUMN (6)   BALANCED FORMULA RELATIVITY

The individual multiline weighted relativities are balanced to the multiline weighted relativity level by applying a factor equal to the overall multiline relativity (i.e. the weighted relativity for all multiline combined which is shown on the top of the exhibit directly under the corresponding monoline relativity) divided by the average multiline relativity (i.e. the weighted average of the individual multiline weighted relativities which is shown on the bottom of the exhibit). When the indicated IPMF for a type of policy is capped, the balanced relativity is set equal to the product of the capped IPMF in column (9) and the monoline balanced formula relativity in column (6), divided by the current IPMF in column (8).

COLUMN (7)   NORMALIZED FORMULA RELATIVITY

The normalized relativity is equal to the balanced formula relativity divided by the average monoline/multiline combined relativity. This balances the average monoline/multiline relativity to unity.

COLUMN (8)   CURRENT IMPLICIT PMF

This is the current IPMF for each multiline type of policy.

COLUMN (9)   INDICATED IMPLICIT PMF

The indicated IPMF is calculated from the normalized relativities as follows:

$$\text{TOP y indicated IPMF} = \frac{(\text{TOP y current IPMF}) \times (\text{TOP y relativity})}{(\text{monoline relativity})}$$

For each CPP type of policy the indicated IPMF is subject to a minimum value of 0.50 and a maximum value of 1.50. If an indicated IPMF falls outside one of those limits, it is capped at that amount, the aggregate loss costs for that type of policy are adjusted to the capped IPMF level, and the entire relativity review as described above is redone to take this into account. If an IPMF has been capped it is so noted in footnote A.

COLUMN (10)   INDICATED LOSS COST CHANGES

The indicated monoline change is the statewide BG II total (hurricane and non-hurricane combined) monoline loss cost change found on Table 35. The multiline change for each TOP is the product of the statewide monoline loss cost change times the ratio of the TOP y relativity divided by the monoline relativity found in column (7).

The overall multiline loss cost level change is a weighted average of the individual multiline TOP changes based on the aggregate loss cost volume shown in column (1). The coverage change is a weighted average of the monoline and average multiline TOP changes based on the aggregate loss cost volume shown in column (1).

MULTILINE   It should be noted that although this procedure generates multiline indications, this
CONSIDERATIONS   filing only addresses monoline loss cost levels. That is, upon implementation of this filing only the monoline loss costs will be revised. The multiline indications developed here will be combined with those of the other component coverages, e.g. GL Premises and Operations in the CPP review for the purpose of revising the package modification factors.

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SECTION C - SUPPORTING MATERIAL

AGGREGATE LOSS COSTS AT CURRENT LEVEL	Tables 13, 14 and 15 provide the overall loss cost/rate level histories for Basic Group I, Basic Group II, and Special Causes of Loss respectively. These tables, along with Tables 16, 16A and 17, provide information on the on-level factors needed to bring collected aggregate loss costs to current loss cost level.

Table 16 provides rate level/loss cost level histories by rating id (class vs. specific), rating group, and territory (where applicable) for Basic Group I, Table 16A provides rate level/loss cost level histories by territory, coverage, and symbol (where applicable) for Basic Group II, and Table 17 provides rate level/loss cost level histories by category for Special Causes of Loss. These tables can be used to develop on-level factors appropriate to bring collected aggregate loss costs up to current loss cost level. Factors based on these tables are more appropriate for company use than the overall factors shown on Tables 13, 14 and 15 if the company's mix of business differs substantially from the industrywide average. For example, if a company's business is very heavily concentrated in a single class or territory, it is more appropriate to use the rate level/loss cost history for that class rather than the overall average to develop on-level factors.

Tables 18, 19 and 20 provide the current implicit package modification factors (IPMFs) and IPMF caps for Basic Group I, Basic Group II and Special Causes of Loss.

ADJUSTMENTS TO LOSSES	The loss projection factors, current cost factors, and loss trend adjustments shown on Tables 21, 22 and 23 reflect the combined impact of all economic influences on Commercial Property underwriting results and are used to project past underwriting results to future loss levels. They are intended to reflect the impact of inflation on loss payments, the impact of higher costs due to repairs done on an "emergency" basis, the impact of coinsurance and relative insurance to value on loss payments, and any other economic influences which can affect underwriting losses but for which specific provisions are not made. Losses have also been developed to their ultimate settlement value using factors shown on Table 28.

CREDIBILITY	Credibility, Z, is a weight given to the most recent body of data. The complement of credibility, 1-Z, is the weight assigned to net trend. The final estimate is a weighted average obtained by using the formula $C = Z \times R + (1-Z) \times N$, where

Z = credibility
C = final estimate
R = estimate based on the most recent data
N = net trend

CREDIBILITY
(cont'd)

Credibility may range from 0 to 1, where Z=1 is full credibility and Z=0 is no credibility. The actual numerical value of Z is calculated by considering how the state's volume of experience compares with the full credibility standard. Credibility is capped at 25% if the credibility calculated is less than 25%. See Tables 33, 33A, and 34 for a complete explanation of the credibility standards for Basic Group I, Basic Group II, and Special Causes of Loss.

LOSS COST/RATE LEVEL HISTORY

Loss cost/rate level histories are provided for Basic Group I, Basic Group II and Special Causes of Loss. The loss cost/rate level changes are then further split out by rating territory, rating group or category since a company's business may be more heavily concentrated in a single class. These histories can be used to develop on-level factors appropriate to bring collected aggregate loss costs up to current loss cost levels.

_____

LOSS COST/RATE LEVEL HISTORY

(1)	(2)	(3)	(4)	(5)
EFFECTIVE DATE	LOSS COST/ RATE LEVEL CHANGE (%)	LOSS COST/ RATE LEVEL INDEX	ADJUSTMENT FACTOR	WEIGHT*
2000-07-01	-6.1	0.939	0.420	0.504
2001-07-01	11.1	1.043	0.378	0.504
2004-01-01	9.0	1.137	0.347	1.000
2004-07-01	-14.2	0.976	0.404	0.503
2005-04-01	7.3	1.047	0.376	0.753
2006-10-01	-25.1	0.784	0.503	0.252
2007-10-01	-16.8	0.652	0.604	0.252
2008-10-01	-8.2	0.599	0.658	0.251
2011-09-01	-4.8	0.570	0.691	0.334
2012-10-01	-18.8	0.463	0.851	0.251
2013-10-01	-9.3	0.420	0.938	0.252
2014-10-01	-13.2	0.364	1.082	0.252
2017-02-01	2.0	0.372	1.059	0.915
2018-01-01	5.9	0.394	1.000	1.000

TIME ELEMENT ONLY LOSS COST LEVEL HISTORY

(1)	(2)	(3)	(4)	(5)
EFFECTIVE DATE	LOSS COST/ RATE LEVEL CHANGE (%)	LOSS COST/ RATE LEVEL INDEX	ADJUSTMENT FACTOR	WEIGHT*
2013-04-01	-13.1	0.869	1.000	0.753

* WEIGHT DENOTES THE PORTION OF THE EFFECTIVE YEAR FOR WHICH THE ADJUSTMENT FACTORS APPLY.

PENNSYLVANIA

TABLE 14

BASIC GROUP II

HISTORY OF STATEWIDE LOSS COST/RATE LEVEL CHANGES
_____

LOSS COST/RATE LEVEL HISTORY

(1)	(2)	(3)	(4)	(5)
EFFECTIVE DATE	LOSS COST/ RATE LEVEL CHANGE (%)	LOSS COST/ RATE LEVEL INDEX	ADJUSTMENT FACTOR	WEIGHT*
2000-07-01	-21.6	0.784	0.903	0.504
2001-07-01	24.7	0.978	0.724	0.504
2004-01-01	-1.4	0.964	0.734	1.000
2004-07-01	4.9	1.011	0.700	0.503
2005-04-01	-7.1	0.939	0.754	0.753
2006-10-01	-6.8	0.876	0.808	0.252
2007-10-01	-11.3	0.777	0.911	0.252
2008-10-01	-6.1	0.729	0.971	0.251
2011-09-01	-2.6	0.710	0.997	0.334
2012-10-01	2.9	0.731	0.969	0.251
2013-10-01	2.2	0.747	0.948	0.252
2014-10-01	-2.8	0.726	0.975	0.252
2017-02-01	0.0	0.726	0.975	0.915
2018-01-01	-2.5	0.708	1.000	1.000

TIME ELEMENT ONLY LOSS COST LEVEL HISTORY

(1)	(2)	(3)	(4)	(5)
EFFECTIVE DATE	LOSS COST/ RATE LEVEL CHANGE (%)	LOSS COST/ RATE LEVEL INDEX	ADJUSTMENT FACTOR	WEIGHT*
2013-04-01	-13.3	0.867	1.000	0.753

* WEIGHT DENOTES THE PORTION OF THE EFFECTIVE YEAR FOR WHICH THE
  ADJUSTMENT FACTORS APPLY.

PENNSYLVANIA

TABLE 15

SPECIAL CAUSES OF LOSS

HISTORY OF STATEWIDE LOSS COST/RATE LEVEL CHANGES
_____

LOSS COST/RATE LEVEL HISTORY

(1)	(2)	(3)	(4)	(5)
EFFECTIVE DATE	LOSS COST/ RATE LEVEL CHANGE (%)	LOSS COST/ RATE LEVEL INDEX	ADJUSTMENT FACTOR	WEIGHT*
2000-07-01	-17.8	0.822	1.038	0.504
2001-07-01	10.9	0.912	0.935	0.504
2004-01-01	-7.0	0.848	1.006	1.000
2004-07-01	-2.0	0.831	1.026	0.503
2005-04-01	2.2	0.849	1.005	0.753
2006-10-01	-9.8	0.766	1.114	0.252
2007-10-01	-19.0	0.620	1.376	0.252
2008-10-01	-2.8	0.603	1.415	0.251
2011-09-01	3.1	0.622	1.371	0.334
2012-10-01	15.8	0.720	1.185	0.251
2013-10-01	2.8	0.740	1.153	0.252
2014-10-01	-2.3	0.723	1.180	0.252
2017-02-01	10.0	0.795	1.073	0.915
2018-01-01	7.3	0.853	1.000	1.000

TIME ELEMENT ONLY LOSS COST LEVEL HISTORY

(1)	(2)	(3)	(4)	(5)
EFFECTIVE DATE	LOSS COST/ RATE LEVEL CHANGE (%)	LOSS COST/ RATE LEVEL INDEX	ADJUSTMENT FACTOR	WEIGHT*
2013-04-01	-25.0	0.750	1.000	0.753

* WEIGHT DENOTES THE PORTION OF THE EFFECTIVE YEAR FOR WHICH THE
  ADJUSTMENT FACTORS APPLY.

EXPLANATORY NOTES TO TABLES 13, 14 AND 15

LOSS COST/RATE LEVEL HISTORIES

COLUMN (1)   EFFECTIVE DATE

The effective dates of the latest loss cost/rate level changes are shown.

COLUMN (2)   LOSS COST/RATE LEVEL CHANGE

The overall loss cost/rate level change is shown in percent form.

COLUMN (3)   LOSS COST/RATE LEVEL INDEX

The product of all loss cost/rate level changes up to and including the loss cost/rate change for that effective date is used to calculate on level factors.

COLUMN (4)   WRITTEN ADJUSTMENT (ON LEVEL) FACTORS

These factors are used to bring individual policies with inception dates prior to the effective date up to current loss cost level. The actual loss cost/rate changes vary by rating id, rating group, and territory (where applicable) for Basic Group I, by territory, coverage, and symbol (where applicable) for Basic Group II, and by category for Special Causes of Loss. Consequently, these on-level factors represent average factors and are not the factors actually used to adjust the aggregate loss costs on an individual policy basis. For complete loss cost/rate level histories in detail, refer to Tables 16, 16A and 17.

COLUMN (5)   WEIGHT

The weight indicates the portion of the effective year for which the on level factors apply. These can be used to calculate average yearly factors.

PENNSYLVANIA
TABLE 16

HISTORY OF BASIC GROUP I

LOSS COST CHANGES BY TERRITORY, RATING ID AND RATING GROUP
_____

TERRITORY: Zone 1

EFFECTIVE DATE	RATING ID	RATING GROUP																				
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	17	18	19	20	21	22
10-01-2006	SPEC.	-34.3	-32.1	-29.5	-44.2	-37.7	-31.3	-35.3	-43.1	-36.8	-36.9	-37.1	-38.4	-39.6	-38.2	-42.3	-41.2	-40.4	-38.9	-39.0	-40.4	-42.3
	CLASS	-21.3	-18.5	-15.5	-33.1	-25.3	-17.7	-22.4	-31.8	-24.3	-24.3	-24.6	-26.2	-27.6	-25.9	-30.9	-29.6	-40.4	-26.7	-39.0	-40.4	-30.9
10-01-2007	SPEC.	-23.9	-17.5	-18.0	-22.3	-18.9	-30.2	-20.7	-21.3	-20.8	-23.2	-21.7	-21.2	-21.2	-21.9	-23.5	-20.7	-21.7	-22.2	-22.2	-18.8	-20.8
	CLASS	-20.3	-13.6	-14.1	-18.7	-15.1	-26.9	-17.0	-17.6	-17.0	-19.6	-18.0	-17.4	-17.4	-18.3	-19.9	-17.0	-21.7	-18.5	-22.2	-18.8	-17.1
10-01-2008	SPEC.	-18.7	-16.7	-8.8	-16.9	-14.8	-18.5	-18.2	-15.4	-13.6	-16.9	-14.7	-15.0	-14.1	-15.5	-18.5	-15.7	-16.3	-16.3	-16.3	-17.2	-17.9
	CLASS	-7.6	-5.2	3.7	-5.5	-3.1	-7.3	-7.0	-3.8	-1.7	-5.5	-3.0	-3.3	-2.3	-3.9	-7.3	-4.1	-16.3	-4.8	-16.3	-17.2	-6.6
09-01-2011	SPEC.	-6.8	-5.7	-10.6	-11.6	-8.2	-10.7	-10.4	-8.1	-8.8	-4.1	-7.2	-7.2	-8.2	-10.8	-13.9	-4.3	-3.3	-8.2	-7.2	-2.1	-8.1
	CLASS	1.4	2.6	-2.8	-3.9	-0.1	-2.9	-2.5	0.0	-0.8	4.4	1.0	1.0	-0.1	-3.0	-6.5	4.2	-3.3	-0.1	-7.2	-2.1	0.0
10-01-2012	SPEC.	-24.3	-24.3	-31.7	-28.4	-31.3	-32.0	-30.7	-29.2	-27.7	-22.3	-26.8	-27.3	-29.0	-29.7	-33.1	-26.9	-27.6	-28.5	-26.4	-25.7	-26.4
	CLASS	-19.7	-19.7	-27.5	-24.0	-27.1	-27.8	-26.4	-24.9	-23.2	-17.6	-22.3	-22.9	-24.7	-25.4	-29.0	-22.5	-27.6	-24.1	-26.4	-25.7	-22.0
10-01-2013	SPEC.	-0.5	5.7	-15.2	-7.6	-6.1	-6.9	-9.4	-9.9	-7.4	-4.6	-3.9	-6.8	-7.2	-8.2	-12.4	-8.6	-6.5	-7.9	-6.2	-8.3	-4.6
	CLASS	4.3	10.8	-12.0	-3.1	-1.5	-2.4	-5.0	-5.6	-2.9	0.0	0.8	-2.3	-2.7	-3.8	-8.1	-4.2	-6.5	-3.4	-6.2	-8.3	0.0
10-01-2014	SPEC.	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7
	CLASS	2.1	8.6	-10.6	-0.7	-0.1	-5.4	-8.2	-4.4	-5.2	-2.7	-0.3	-2.1	-2.3	-3.5	-6.2	-4.0	-25.7	-2.4	-25.7	-25.7	1.6
02-01-2017	SPEC.	5.6	13.3	3.5	11.8	13.7	0.7	3.9	6.3	7.9	15.9	10.1	7.6	8.1	7.6	2.8	8.1	10.6	8.6	9.9	12.7	15.0
	CLASS	1.5	8.9	-0.6	7.4	9.2	-3.2	-0.2	2.1	3.7	11.4	5.8	3.4	3.9	3.4	-1.2	3.9	10.6	4.3	9.9	12.7	10.5
01-01-2018	SPEC.	-1.0	14.9	4.7	10.9	18.0	6.4	8.6	7.1	9.7	16.1	12.4	13.1	9.0	13.1	5.2	13.1	12.7	10.4	10.2	16.9	19.0
	CLASS	-1.8	14.0	3.9	10.0	17.0	5.5	7.7	6.3	8.8	15.2	11.5	12.2	8.1	12.2	4.3	12.2	12.7	9.5	10.2	16.9	18.0

HISTORY OF BASIC GROUP I

LOSS COST CHANGES BY TERRITORY, RATING ID AND RATING GROUP
_____

TERRITORY: Zone 2

EFFECTIVE DATE	RATING ID	RATING GROUP																				
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	17	18	19	20	21	22
10-01-2006	SPEC.	-24.1	-21.4	-18.5	-35.5	-28.0	-20.6	-25.2	-34.2	-27.0	-27.0	-27.3	-28.8	-30.1	-28.5	-33.3	-32.1	-31.1	-29.3	-29.5	-31.1	-33.3
	CLASS	-8.9	-5.8	-2.3	-22.6	-13.6	-4.8	-10.3	-21.1	-12.4	-12.5	-12.9	-14.6	-16.3	-14.3	-20.1	-18.5	-31.1	-15.2	-29.5	-31.1	-20.1
10-01-2007	SPEC.	-16.1	-9.0	-9.5	-14.3	-10.6	-23.0	-12.5	-13.2	-12.6	-15.3	-13.6	-13.0	-13.0	-13.9	-15.6	-12.5	-13.6	-14.2	-14.2	-10.5	-12.7
	CLASS	-12.1	-4.7	-5.3	-10.3	-6.3	-19.4	-8.4	-9.1	-8.5	-11.3	-9.6	-8.9	-8.9	-9.8	-11.6	-8.4	-13.6	-10.1	-14.2	-10.5	-8.6
10-01-2008	SPEC.	-6.3	-3.9	5.1	-4.2	-1.8	-6.1	-5.8	-2.5	-0.4	-4.2	-1.7	-2.0	-0.9	-2.6	-6.1	-2.8	-3.5	-3.5	-3.5	-4.6	-5.4
	CLASS	6.5	9.3	19.6	8.9	11.7	6.8	7.2	10.9	13.3	8.9	11.8	11.5	12.7	10.8	6.8	10.6	-3.5	9.7	-3.5	-4.6	7.6
09-01-2011	SPEC.	-18.6	-17.7	-22.0	-22.8	-19.8	-22.0	-21.7	-19.7	-20.4	-16.2	-18.9	-18.9	-19.8	-22.1	-24.8	-16.4	-15.5	-19.8	-18.9	-14.5	-19.7
	CLASS	-11.5	-10.4	-15.1	-16.1	-12.8	-15.2	-14.8	-12.7	-13.4	-8.9	-11.8	-11.8	-12.8	-15.3	-18.4	-9.0	-15.5	-12.8	-18.9	-14.5	-12.7
10-01-2012	SPEC.	-12.6	-12.6	-21.1	-17.3	-20.7	-21.5	-20.0	-18.3	-16.5	-10.4	-15.5	-16.1	-18.1	-18.8	-22.7	-15.7	-16.4	-17.4	-15.1	-14.3	-15.1
	CLASS	-7.3	-7.3	-16.3	-12.3	-15.9	-16.7	-15.1	-13.3	-11.4	-4.9	-10.3	-11.0	-13.1	-13.9	-18.0	-10.5	-16.4	-12.4	-15.1	-14.3	-9.9
10-01-2013	SPEC.	-17.0	-11.9	-29.3	-22.9	-21.7	-22.4	-24.4	-24.9	-22.8	-20.4	-19.8	-22.3	-22.6	-23.5	-26.9	-23.8	-22.0	-23.2	-21.8	-23.6	-20.4
	CLASS	-13.0	-7.6	-26.6	-19.2	-17.9	-18.6	-20.8	-21.2	-19.0	-16.6	-15.9	-18.5	-18.9	-19.8	-23.4	-20.1	-22.0	-19.4	-21.8	-23.6	-16.6
10-01-2014	SPEC.	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1
	CLASS	1.6	8.0	-11.0	-1.2	-0.6	-5.9	-8.5	-4.9	-5.7	-3.2	-0.8	-2.6	-2.8	-4.0	-6.6	-4.4	-26.1	-2.9	-26.1	-26.1	1.1
02-01-2017	SPEC.	-5.3	1.6	-7.2	0.3	1.9	-9.6	-6.8	-4.7	-3.2	4.0	-1.3	-3.5	-3.0	-3.5	-7.8	-3.0	-0.8	-2.6	-1.5	1.1	3.1
	CLASS	-9.0	-2.3	-10.8	-3.6	-2.1	-13.2	-10.5	-8.4	-7.0	-0.1	-5.1	-7.3	-6.8	-7.3	-11.4	-6.8	-0.8	-6.5	-1.5	1.1	-0.9
01-01-2018	SPEC.	-12.8	1.2	-7.8	-2.3	3.9	-6.3	-4.4	-5.6	-3.4	2.3	-1.0	-0.4	-4.0	-0.4	-7.4	-0.4	-0.7	-2.7	-2.9	3.0	4.8
	CLASS	-13.5	0.4	-8.5	-3.1	3.1	-7.1	-5.1	-6.4	-4.2	1.5	-1.8	-1.2	-4.8	-1.2	-8.1	-1.2	-0.7	-3.5	-2.9	3.0	4.0

HISTORY OF BASIC GROUP I

LOSS COST CHANGES BY TERRITORY, RATING ID AND RATING GROUP
_____

TERRITORY: Zone 3

EFFECTIVE DATE	RATING ID	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	17	18	19	20	21	22
10-01-2006	SPEC.	-17.4	-14.5	-11.3	-29.8	-21.6	-13.6	-18.6	-28.4	-20.5	-20.6	-20.9	-22.5	-24.0	-22.2	-27.5	-26.1	-25.1	-23.1	-23.3	-25.1	-27.5
	CLASS	-0.9	2.5	6.3	-15.8	-6.0	3.6	-2.4	-14.1	-4.7	-4.8	-5.2	-7.1	-8.9	-6.7	-13.0	-11.4	-25.1	-7.8	-23.3	-25.1	-13.0
10-01-2007	SPEC.	-17.3	-10.4	-10.9	-15.6	-11.9	-24.2	-13.9	-14.5	-13.9	-16.6	-15.0	-14.4	-14.4	-15.2	-16.9	-13.9	-15.0	-15.5	-15.5	-11.8	-14.0
	CLASS	-13.4	-6.2	-6.7	-11.6	-7.7	-20.6	-9.8	-10.5	-9.9	-12.6	-10.9	-10.3	-10.3	-11.2	-13.0	-9.8	-15.0	-11.5	-15.5	-11.8	-10.0
10-01-2008	SPEC.	-19.6	-17.5	-9.7	-17.7	-15.7	-19.3	-19.1	-16.3	-14.4	-17.7	-15.6	-15.8	-14.9	-16.3	-19.3	-16.5	-17.2	-17.2	-17.2	-18.1	-18.7
	CLASS	-8.5	-6.2	2.7	-6.5	-4.1	-8.2	-8.0	-4.8	-2.7	-6.5	-4.0	-4.3	-3.3	-4.9	-8.2	-5.0	-17.2	-5.8	-17.2	-18.1	-7.6
09-01-2011	SPEC.	-3.6	-2.5	-7.6	-8.6	-5.1	-7.7	-7.3	-5.0	-5.7	-0.8	-4.0	-4.0	-5.1	-7.8	-11.0	-1.0	0.0	-5.1	-4.0	1.3	-5.0
	CLASS	4.8	6.1	0.5	-0.6	3.3	0.4	0.8	3.4	2.6	7.9	4.4	4.4	3.3	0.3	-3.4	7.7	0.0	3.3	-4.0	1.3	3.4
10-01-2012	SPEC.	-10.0	-10.0	-18.8	-14.8	-18.3	-19.1	-17.6	-15.9	-14.0	-7.7	-12.9	-13.5	-15.6	-16.4	-20.4	-13.1	-13.9	-14.9	-12.5	-11.7	-12.5
	CLASS	-4.5	-4.5	-13.8	-9.6	-13.3	-14.2	-12.5	-10.7	-8.7	-2.0	-7.6	-8.3	-10.4	-11.3	-15.5	-7.8	-13.9	-9.7	-12.5	-11.7	-7.2
10-01-2013	SPEC.	-6.6	-0.9	-20.5	-13.3	-11.9	-12.7	-15.0	-15.5	-13.1	-10.5	-9.8	-12.6	-12.9	-13.9	-17.8	-14.3	-12.2	-13.6	-12.0	-14.0	-10.5
	CLASS	-2.1	3.9	-17.4	-9.1	-7.6	-8.4	-10.8	-11.4	-8.9	-6.2	-5.4	-8.4	-8.7	-9.7	-13.8	-10.1	-12.2	-9.4	-12.0	-14.0	-6.2
10-01-2014	SPEC.	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3
	CLASS	-0.1	6.2	-12.6	-2.8	-2.2	-7.4	-10.1	-6.4	-7.2	-4.8	-2.4	-4.2	-4.4	-5.6	-8.2	-6.1	-27.3	-4.5	-27.3	-27.3	-0.6
02-01-2017	SPEC.	-0.6	6.7	-2.6	5.2	7.0	-5.2	-2.2	0.0	1.6	9.1	3.6	1.3	1.8	1.3	-3.2	1.8	4.1	2.2	3.4	6.1	8.2
	CLASS	-4.5	2.5	-6.4	1.1	2.8	-8.9	-6.0	-3.9	-2.4	4.9	-0.4	-2.7	-2.2	-2.7	-7.0	-2.2	4.1	-1.8	3.4	6.1	4.0
01-01-2018	SPEC.	-6.1	9.0	-0.6	5.2	11.9	0.9	3.0	1.6	4.0	10.2	6.6	7.2	3.4	7.2	-0.2	7.2	6.9	4.8	4.5	10.9	12.9
	CLASS	-6.8	8.1	-1.4	4.3	11.0	0.1	2.2	0.8	3.2	9.3	5.8	6.4	2.6	6.4	-1.0	6.4	6.9	3.9	4.5	10.9	12.0

PENNSYLVANIA
TABLE 16

HISTORY OF BASIC GROUP I

LOSS COST CHANGES BY TERRITORY, RATING ID AND RATING GROUP
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TERRITORY: Philadelphia

EFFECTIVE DATE	RATING ID	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	17	18	19	20	21	22
10-01-2006	SPEC.	-20.9	-18.2	-15.2	-32.8	-25.0	-17.3	-22.1	-31.5	-23.9	-24.0	-24.3	-25.9	-27.3	-25.6	-30.6	-29.3	-28.3	-26.4	-26.6	-28.3	-30.6
	CLASS	-5.2	-1.9	1.7	-19.4	-10.1	-0.9	-6.6	-17.8	-8.8	-8.9	-9.3	-11.1	-12.8	-10.8	-16.8	-15.2	-28.3	-11.7	-26.6	-28.3	-16.8
10-01-2007	SPEC.	-22.4	-15.9	-16.3	-20.8	-17.3	-28.8	-19.1	-19.8	-19.2	-21.7	-20.2	-19.6	-19.6	-20.4	-22.0	-19.1	-20.2	-20.6	-20.6	-17.2	-19.3
	CLASS	-18.7	-11.9	-12.4	-17.1	-13.4	-25.5	-15.3	-16.0	-15.4	-18.0	-16.4	-15.8	-15.8	-16.6	-18.3	-15.3	-20.2	-16.9	-20.6	-17.2	-15.5
10-01-2008	SPEC.	-24.0	-22.0	-14.7	-22.3	-20.3	-23.8	-23.5	-20.9	-19.2	-22.3	-20.2	-20.5	-19.6	-21.0	-23.8	-21.1	-21.7	-21.7	-21.7	-22.6	-23.2
	CLASS	-13.6	-11.3	-3.0	-11.6	-9.4	-13.3	-13.0	-10.0	-8.1	-11.6	-9.3	-9.6	-8.6	-10.1	-13.3	-10.3	-21.7	-11.0	-21.7	-22.6	-12.7
09-01-2011	SPEC.	-10.9	-9.9	-14.6	-15.5	-12.2	-14.6	-14.3	-12.1	-12.8	-8.3	-11.2	-11.2	-12.2	-14.7	-17.7	-8.5	-7.5	-12.2	-11.2	-6.4	-12.1
	CLASS	-3.1	-1.9	-7.1	-8.1	-4.5	-7.1	-6.8	-4.4	-5.2	-0.2	-3.4	-3.4	-4.5	-7.2	-10.7	-0.4	-7.5	-4.5	-11.2	-6.4	-4.4
10-01-2012	SPEC.	-24.0	-24.0	-31.4	-28.1	-31.0	-31.7	-30.4	-28.9	-27.3	-22.0	-26.5	-27.0	-28.7	-29.4	-32.8	-26.6	-27.3	-28.1	-26.1	-25.4	-26.1
	CLASS	-19.3	-19.3	-27.2	-23.7	-26.8	-27.5	-26.1	-24.6	-22.9	-17.2	-22.0	-22.5	-24.4	-25.1	-28.7	-22.1	-27.3	-23.8	-26.1	-25.4	-21.6
10-01-2013	SPEC.	-9.3	-3.7	-22.7	-15.7	-14.4	-15.2	-17.4	-17.9	-15.6	-13.0	-12.3	-15.1	-15.4	-16.3	-20.1	-16.7	-14.7	-16.0	-14.5	-16.4	-13.0
	CLASS	-4.9	1.0	-19.8	-11.7	-10.2	-11.0	-13.4	-13.9	-11.5	-8.8	-8.1	-11.0	-11.3	-12.3	-16.2	-12.6	-14.7	-11.9	-14.5	-16.4	-8.8
10-01-2014	SPEC.	-33.2	-33.2	-33.2	-33.2	-33.2	-33.2	-33.2	-33.2	-33.2	-33.2	-33.2	-33.2	-33.2	-33.2	-33.2	-33.2	-33.2	-33.2	-33.2	-33.2	-33.2
	CLASS	-8.2	-2.3	-19.6	-10.7	-10.2	-14.9	-17.4	-14.0	-14.8	-12.5	-10.3	-12.0	-12.2	-13.2	-15.6	-13.6	-33.2	-12.3	-33.2	-33.2	-8.6
02-01-2017	SPEC.	-2.2	4.9	-4.2	3.5	5.2	-6.7	-3.8	-1.6	-0.1	7.3	1.9	-0.4	0.1	-0.4	-4.8	0.1	2.4	0.5	1.7	4.3	6.4
	CLASS	-6.0	0.8	-8.0	-0.5	1.1	-10.4	-7.6	-5.5	-4.0	3.1	-2.1	-4.3	-3.8	-4.3	-8.6	-3.8	2.4	-3.4	1.7	4.3	2.3
01-01-2018	SPEC.	-4.7	10.6	0.8	6.7	13.5	2.4	4.5	3.1	5.5	11.7	8.2	8.8	4.9	8.8	1.2	8.8	8.5	6.3	6.0	12.5	14.5
	CLASS	-5.5	9.7	0.0	5.8	12.6	1.5	3.6	2.3	4.7	10.8	7.3	7.9	4.0	7.9	0.4	7.9	8.5	5.4	6.0	12.5	13.6

HISTORY OF BASIC GROUP I

LOSS COST CHANGES BY TERRITORY, RATING ID AND RATING GROUP
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TERRITORY: Pittsburgh

EFFECTIVE DATE	RATING ID	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	17	18	19	20	21	22
10-01-2006	SPEC.	-22.2	-19.6	-16.6	-33.9	-26.2	-18.7	-23.4	-32.6	-25.2	-25.3	-25.6	-27.1	-28.5	-26.8	-31.7	-30.4	-29.5	-27.6	-27.8	-29.5	-31.7
	CLASS	-6.8	-3.5	0.0	-20.8	-11.6	-2.5	-8.2	-19.2	-10.3	-10.4	-10.8	-12.6	-14.2	-12.2	-18.2	-16.6	-29.5	-13.2	-27.8	-29.5	-18.2
10-01-2007	SPEC.	-19.0	-12.2	-12.7	-17.3	-13.7	-25.7	-15.6	-16.2	-15.7	-18.2	-16.7	-16.1	-16.1	-16.9	-18.6	-15.6	-16.7	-17.2	-17.2	-13.6	-15.7
	CLASS	-15.2	-8.0	-8.6	-13.4	-9.6	-22.2	-11.6	-12.3	-11.7	-14.4	-12.7	-12.1	-12.1	-13.0	-14.7	-11.6	-16.7	-13.2	-17.2	-13.6	-11.8
10-01-2008	SPEC.	-16.9	-14.7	-6.7	-15.0	-12.8	-16.6	-16.3	-13.4	-11.5	-15.0	-12.7	-13.0	-12.1	-13.5	-16.6	-13.7	-14.4	-14.4	-14.4	-15.3	-16.0
	CLASS	-5.4	-3.0	6.1	-3.3	-0.9	-5.2	-4.9	-1.5	0.6	-3.3	-0.8	-1.1	0.0	-1.6	-5.2	-1.8	-14.4	-2.6	-14.4	-15.3	-4.5
09-01-2011	SPEC.	-5.4	-4.3	-9.3	-10.3	-6.8	-9.4	-9.0	-6.7	-7.4	-2.6	-5.8	-5.8	-6.8	-9.5	-12.6	-2.8	-1.8	-6.8	-5.8	-0.6	-6.7
	CLASS	2.9	4.1	-1.3	-2.4	1.4	-1.4	-1.0	1.5	0.7	5.9	2.5	2.5	1.4	-1.5	-5.1	5.7	-1.8	1.4	-5.8	-0.6	1.5
10-01-2012	SPEC.	-14.8	-14.8	-23.1	-19.4	-22.7	-23.4	-22.0	-20.3	-18.6	-12.6	-17.6	-18.2	-20.1	-20.8	-24.6	-17.8	-18.5	-19.5	-17.2	-16.4	-17.2
	CLASS	-9.6	-9.6	-18.4	-14.4	-18.0	-18.7	-17.2	-15.5	-13.6	-7.2	-12.6	-13.2	-15.2	-16.0	-20.0	-12.7	-18.5	-14.5	-17.2	-16.4	-12.1
10-01-2013	SPEC.	-0.3	5.9	-15.1	-7.4	-5.9	-6.8	-9.2	-9.8	-7.2	-4.4	-3.7	-6.7	-7.0	-8.1	-12.2	-8.4	-6.3	-7.7	-6.0	-8.2	-4.4
	CLASS	4.5	11.0	-11.9	-2.9	-1.4	-2.2	-4.8	-5.4	-2.7	0.2	1.0	-2.1	-2.5	-3.6	-7.9	-4.0	-6.3	-3.2	-6.0	-8.2	0.2
10-01-2014	SPEC.	-28.9	-28.9	-28.9	-28.9	-28.9	-28.9	-28.9	-28.9	-28.9	-28.9	-28.9	-28.9	-28.9	-28.9	-28.9	-28.9	-28.9	-28.9	-28.9	-28.9	-28.9
	CLASS	-2.2	4.0	-14.4	-4.9	-4.3	-9.4	-12.0	-8.5	-9.2	-6.8	-4.5	-6.2	-6.4	-7.6	-10.2	-8.1	-28.9	-6.5	-28.9	-28.9	-2.7
02-01-2017	SPEC.	-1.8	5.4	-3.8	4.0	5.7	-6.3	-3.4	-1.2	0.3	7.8	2.3	0.0	0.5	0.0	-4.4	0.5	2.8	0.9	2.1	4.8	6.9
	CLASS	-5.6	1.2	-7.6	-0.1	1.5	-10.0	-7.2	-5.1	-3.6	3.6	-1.7	-3.9	-3.4	-3.9	-8.2	-3.4	2.8	-3.0	2.1	4.8	2.7
01-01-2018	SPEC.	-11.9	2.2	-6.8	-1.4	5.0	-5.4	-3.4	-4.7	-2.5	3.3	0.0	0.6	-3.0	0.6	-6.4	0.6	0.3	-1.8	-2.0	4.0	5.8
	CLASS	-12.6	1.4	-7.6	-2.2	4.1	-6.1	-4.2	-5.5	-3.2	2.5	-0.8	-0.2	-3.8	-0.2	-7.2	-0.2	0.3	-2.6	-2.0	4.0	5.0

HISTORY OF BASIC GROUP I

LOSS COST CHANGES BY TERRITORY, RATING ID AND RATING GROUP
_____

TERRITORY: Allegheny Cty(Excl. Pitt)

EFFECTIVE DATE	RATING ID	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	17	18	19	20	21	22
10-01-2006	SPEC.	-32.6	-30.2	-27.7	-42.7	-36.0	-29.5	-33.6	-41.6	-35.2	-35.2	-35.5	-36.8	-38.0	-36.5	-40.8	-39.7	-38.9	-37.2	-37.4	-38.9	-40.8
	CLASS	-19.2	-16.4	-13.3	-31.3	-23.3	-15.5	-20.4	-29.9	-22.3	-22.3	-22.6	-24.2	-25.6	-23.9	-29.0	-27.7	-38.9	-24.7	-37.4	-38.9	-29.0
10-01-2007	SPEC.	-26.6	-20.4	-20.9	-25.1	-21.8	-32.7	-23.5	-24.1	-23.6	-25.9	-24.5	-23.9	-23.9	-24.7	-26.2	-23.5	-24.5	-24.9	-24.9	-21.7	-23.6
	CLASS	-23.1	-16.7	-17.1	-21.5	-18.1	-29.5	-19.9	-20.5	-20.0	-22.4	-20.9	-20.4	-20.4	-21.1	-22.7	-19.9	-24.5	-21.4	-24.9	-21.7	-20.0
10-01-2008	SPEC.	-16.4	-14.2	-6.1	-14.5	-12.3	-16.1	-15.8	-12.9	-11.0	-14.5	-12.2	-12.5	-11.5	-13.0	-16.1	-13.2	-13.9	-13.9	-13.9	-14.8	-15.5
	CLASS	-4.9	-2.4	6.8	-2.7	-0.3	-4.6	-4.3	-1.0	1.2	-2.7	-0.2	-0.5	0.6	-1.1	-4.6	-1.3	-13.9	-2.0	-13.9	-14.8	-3.9
09-01-2011	SPEC.	10.2	11.5	5.7	4.5	8.6	5.6	6.0	8.7	7.8	13.4	9.8	9.8	8.6	5.5	1.8	13.2	14.4	8.6	9.8	15.8	8.7
	CLASS	19.9	21.3	15.0	13.7	18.1	14.9	15.3	18.3	17.3	23.4	19.4	19.4	18.1	14.7	10.5	23.2	14.4	18.1	9.8	15.8	18.3
10-01-2012	SPEC.	-6.1	-6.1	-15.3	-11.2	-14.9	-15.7	-14.1	-12.3	-10.3	-3.7	-9.3	-9.9	-12.0	-12.8	-17.0	-9.4	-10.2	-11.3	-8.8	-7.9	-8.8
	CLASS	-0.4	-0.4	-10.1	-5.8	-9.7	-10.5	-8.8	-6.9	-4.9	2.1	-3.7	-4.4	-6.7	-7.5	-11.9	-3.9	-10.2	-5.9	-8.8	-7.9	-3.2
10-01-2013	SPEC.	-7.8	-2.1	-21.4	-14.3	-13.0	-13.7	-16.0	-16.5	-14.2	-11.6	-10.9	-13.7	-14.0	-14.9	-18.8	-15.3	-13.3	-14.6	-13.0	-15.0	-11.6
	CLASS	-3.3	2.7	-18.4	-10.2	-8.7	-9.6	-11.9	-12.5	-10.0	-7.3	-6.6	-9.5	-9.8	-10.8	-14.8	-11.2	-13.3	-10.5	-13.0	-15.0	-7.3
10-01-2014	SPEC.	-24.4	-24.4	-24.4	-24.4	-24.4	-24.4	-24.4	-24.4	-24.4	-24.4	-24.4	-24.4	-24.4	-24.4	-24.4	-24.4	-24.4	-24.4	-24.4	-24.4	-24.4
	CLASS	3.9	10.5	-9.0	1.1	1.7	-3.7	-6.5	-2.7	-3.5	-1.0	1.5	-0.4	-0.6	-1.8	-4.5	-2.3	-24.4	-0.7	-24.4	-24.4	3.4
02-01-2017	SPEC.	8.9	16.8	6.7	15.3	17.2	3.9	7.1	9.6	11.2	19.5	13.5	10.9	11.5	10.9	6.0	11.5	14.0	11.9	13.3	16.2	18.5
	CLASS	4.6	12.3	2.5	10.8	12.6	-0.2	2.9	5.3	6.9	14.8	9.0	6.6	7.1	6.6	1.8	7.1	14.0	7.5	13.3	16.2	13.9
01-01-2018	SPEC.	4.5	21.3	10.6	17.0	24.6	12.3	14.6	13.1	15.8	22.6	18.6	19.3	15.1	19.3	11.1	19.3	19.0	16.6	16.3	23.4	25.6
	CLASS	3.7	20.4	9.7	16.2	23.5	11.5	13.8	12.2	14.8	21.6	17.7	18.5	14.1	18.5	10.1	18.5	19.0	15.7	16.3	23.4	24.6

EXPLANATORY NOTES TO TABLE 16

HISTORY OF BASIC GROUP I LOSS COST/RATE CHANGES
BY TERRITORY, RATING ID AND RATING GROUP

TERRITORY

The loss cost/rate level changes shown apply to the rating territory shown here.

EFFECTIVE DATE

The effective dates of the latest loss cost/rate level changes are shown.

LOSS COST/RATE LEVEL CHANGES

Loss cost/rate level changes are shown in percent form for each rating group.

TABLE 16A

BASIC GROUP II

HISTORY OF LOSS COST/RATE LEVEL CHANGES
BY TERRITORY, SYMBOL AND COVERAGE

(1) TERRITORY	(2) EFFECTIVE DATE	(3) SYMBOL	(4) BUILDING	(5) CONTENTS
Entire State	07/01/2000	AA	-25.0%	-25.0%
		A	-23.1%	-23.1%
		AB	-20.0%	-20.0%
		B	-21.3%	-21.3%
	07/01/2001	AA	22.2%	22.2%
		A	20.0%	20.0%
		AB	25.0%	25.0%
		B	24.3%	24.3%
	01/01/2004	AA	0.0%	0.0%
		A	0.0%	0.0%
		AB	33.3%	33.3%
		B	-4.3%	-4.3%
	07/01/2004	AA	0.0%	0.0%
		A	8.3%	8.3%
		AB	5.0%	5.0%
		B	4.7%	4.7%
	04/01/2005	AA	-9.1%	-9.1%
		A	-15.4%	-15.4%
		AB	14.3%	14.3%
		B	-11.1%	-11.1%
	10/01/2006	AA	0.0%	0.0%
		A	0.0%	0.0%
		AB	-4.2%	-4.2%
		B	-7.5%	-7.5%
	10/01/2007	AA	-20.0%	-20.0%
		A	-18.2%	-18.2%
		AB	-13.0%	-13.0%
		B	-10.8%	-10.8%
	10/01/2008	AA	0.0%	0.0%
		A	-11.1%	-11.1%
		AB	-5.0%	-5.0%
		B	-6.1%	-6.1%
	09/01/2011	AA	-4.3%	-9.4%
		A	-4.0%	-8.3%
		AB	-6.1%	-4.7%
		B	-2.6%	0.0%
	10/01/2012	AA	4.5%	3.4%
		A	4.2%	3.0%
		AB	3.2%	2.4%
		B	2.6%	4.2%
	10/01/2013	AA	0.0%	0.0%
		A	0.0%	0.0%
		AB	0.0%	2.4%
		B	2.6%	2.0%

PENNSYLVANIA

TABLE 16A

BASIC GROUP II

HISTORY OF LOSS COST/RATE LEVEL CHANGES
BY TERRITORY, SYMBOL AND COVERAGE

(1) TERRITORY	(2) EFFECTIVE DATE	(3) SYMBOL	(4) BUILDING	(5) CONTENTS
Entire State	10/01/2014	AA	0.0%	0.0%
		A	0.0%	0.0%
		AB	-3.1%	-4.7%
		B	-2.5%	-3.9%
	02/01/2017	AA	0.0%	0.0%
		A	0.0%	0.0%
		AB	0.0%	0.0%
		B	0.0%	0.0%
	01/01/2018	AA	0.0%	-3.3%
		A	0.0%	-2.9%
		AB	-3.2%	-2.4%
		B	-2.6%	-2.0%

EXPLANATORY NOTES TO TABLE 16A

HISTORY OF BASIC GROUP II LOSS COST CHANGES BY TERRITORY

COLUMN (1)   TERRITORY

The loss cost level changes shown apply to the rating territory shown here.

COLUMN (2)   EFFECTIVE DATE

The effective dates of the latest loss cost level changes are shown.

COLUMN (3)   SYMBOL

The construction group symbol is shown here. Refer to the explanatory notes to Table 35 for the symbol definitions.

COLUMN (4)   BUILDING

Building loss cost changes are shown in percent form.

COLUMN (5)   CONTENTS

Contents loss cost changes are shown in percent form.

SPECIAL CAUSES OF LOSS

HISTORY OF LOSS COST/RATE LEVEL CHANGES BY CATEGORY
_____

(1) EFFECTIVE DATE	(2) CATEGORY													
	01	02	03	04	05	06	07	08	09	10	11	12	13	14
10-01-2006	-9.3	-16.3	-9.0	-7.8	-16.6									
10-01-2007	-19.5	-24.6	-16.6	-16.7	-17.9									
10-01-2008	-3.5	-6.5	-5.1	3.4	-0.9									
09-01-2011	5.2	2.3	-6.4	-3.0	2.2	1.7	6.2	-13.6	2.2	6.1	5.8	7.1	2.6	12.5
10-01-2012	20.0	5.4	7.4	9.7	18.8	13.3	18.2	-6.1	5.0	18.6	18.3	17.7	14.0	21.5
10-01-2013	4.5	-7.2	-4.7	-1.2	8.9	11.1	4.0	-5.9	-16.5	7.2	10.9	2.3	1.7	15.5
10-01-2014	-2.1	-8.6	-4.8	-1.6	4.5	3.5	-2.4	-4.3	-13.7	-1.7	2.0	-3.0	-3.7	4.6
02-01-2017	14.1	-0.5	9.9	11.5	6.1	5.6	6.5	12.2	-10.5	7.4	14.0	-7.3	5.9	8.0
01-01-2018	10.2	-1.9	4.7	13.8	10.0	3.4	2.9	8.3	-12.5	6.5	8.8	-3.1	4.3	9.3

EXPLANATORY NOTES TO TABLE 17

HISTORY OF SPECIAL CAUSES OF LOSS
LOSS COST/RATE LEVEL CHANGES BY CATEGORY

COLUMN (1)　　　　　　EFFECTIVE DATE

The effective dates of the latest loss cost/rate level changes are shown.

COLUMN (2)　　　　　　LOSS COST/RATE LEVEL CHANGES BY CATEGORY

Loss cost/rate changes are shown in percent form for each category. Refer to Table 37 for definitions of the current 14 categories.

The prior category definitions (before implementation of the revised rating for Special Causes of Loss) are:

01 - Buildings
02 - Apartments Contents
03 - Office Contents
04 - Mercantile, Motel/Hotel and Institutional Contents
05 - Service, Industrial/Processing, and Contractors Contents

COMMERCIAL PACKAGE POLICY IMPLICIT PACKAGE MODIFICATION FACTORS (IPMF's) AND IPMF CAPS

IMPLICIT PACKAGE MODIFICATION FACTORS

Since multiline experience is included in the loss cost level evaluations, an additional adjustment is made to multiline aggregate loss costs after they have been brought to current ISO loss cost level. This adjustment is the application of <u>implicit</u> CPP package modification factors which vary for each of the eight CPP types of policy.

The loss costs used to price a Commercial Package Policy (CPP) are the monoline loss costs multiplied by the PMF to reflect the package policy discount for the particular type of CPP policy relative to the individual monoline policies. However, these PMF's measure the amount of multiline discount for <u>all property coverages combined</u>. A more accurate measure of the amount of multiline discount for each subline (e.g., Basic Group I, Basic Group II, or Special Causes of Loss) is the implicit package modification factor that was used to calculate the overall PMF for all property coverages combined.

For example, the published PMF for Apartments (all property coverages combined) may be .85, but the implicit PMF for Apartments, Commercial Basic Group I coverage only, may be .80. The average of the implicit PMF's for the various coverages is equal to the published PMF for each type of policy.

The current IPMF's by coverage for each CPP type of policy are applied to multiline aggregate loss costs at current level for Basic Group I, Basic Group II and Special Causes of Loss.

IPMF CAPS

For Basic Group I, Basic Group II, and Special Causes of Loss, the IPMF's lower caps are set at 0.50 and the upper caps are set at 1.50 for all TOP's.

PENNSYLVANIA
TABLE 18
BASIC GROUP I IMPLICIT PACKAGE
MODIFICATION FACTORS (IPMFS) AND IPMF CAPS

CPP IMPLICIT PACKAGE MODIFICATION FACTORS (IPMFS) AND IPMF CAPS

TOP	DESCRIPTION	IPMF	LOW CAP	HIGH CAP
31	MOTEL/HOTEL	0.928	0.500	1.500
32	APARTMENT	0.502	0.500	1.500
33	OFFICE	0.762	0.500	1.500
34	MERCANTILE	1.105	0.500	1.500
35	INSTITUTIONAL	0.709	0.500	1.500
36	SERVICES	1.056	0.500	1.500
37	INDUST/PROCESSING	1.239	0.500	1.500
38	CONTRACTORS	1.099	0.500	1.500

CPP IMPLICIT PACKAGE MODIFICATION FACTORS (IPMFS) AND IPMF CAPS

TOP	DESCRIPTION	IPMF	LOW CAP	HIGH CAP
31	MOTEL/HOTEL	0.917	0.500	1.500
32	APARTMENT	0.803	0.500	1.500
33	OFFICE	0.775	0.500	1.500
34	MERCANTILE	1.008	0.500	1.500
35	INSTITUTIONAL	0.695	0.500	1.500
36	SERVICES	1.121	0.500	1.500
37	INDUST/PROCESSING	0.913	0.500	1.500
38	CONTRACTORS	0.993	0.500	1.500

CPP IMPLICIT PACKAGE MODIFICATION FACTORS (IPMFS) AND IPMF CAPS

TOP	DESCRIPTION	IPMF	LOW CAP	HIGH CAP
31	MOTEL/HOTEL	0.899	0.500	1.500
32	APARTMENT	0.976	0.500	1.500
33	OFFICE	0.941	0.500	1.500
34	MERCANTILE	0.739	0.500	1.500
35	INSTITUTIONAL	0.689	0.500	1.500
36	SERVICES	0.864	0.500	1.500
37	INDUST/PROCESSING	0.544	0.500	1.500
38	CONTRACTORS	0.713	0.500	1.500

EXPLANATORY NOTES TO TABLES 18, 19, AND 20

IMPLICIT PACKAGE MODIFICATION
FACTORS (IPMF's) AND IPMF CAPS

TABLES 18, 19, AND 20   These tables provide the current IPMF's and IPMF caps for Basic Group I, Basic Group II, and Special Causes of Loss. The IPMF's shown here are those which resulted from the most recent CPP revision. The IPMF lower caps are set at .50 and the upper caps are set at 1.50 for all TOP's.

TREND PROCEDURE

INTRODUCTION The prospective loss cost levels established in this document reflect the anticipated claim cost and claim frequency levels and changes in revenue due to increased amounts of insurance purchased for the period when the new loss costs are assumed to be in effect.

LOSS TREND ### EXTERNAL LOSS DATA

For Commercial Property, the loss trend factors are referred to as current cost factors (CCF's) and loss projection factors (LPF's). These CCF's and LPF's are based on the following accepted economic indices:

1. Xactware Commercial Index (XCI) for buildings loss projection factors and current cost factors
2. Producer Price Index (PPI) published by the US Department of Labor (Finished Goods Less Energy, Not Seasonally Adjusted) for contents factors
3. Index for Manufacturers' Sales Exposure (IMSEP) developed by ISO using indices published by the Department of Commerce and Chain-Type Price Index for Retail Sales (RSALES) produced by the Bureau of the Census, Bureau of Economic Analysis for time element factors

The CCF's adjust losses for actual inflationary changes which have taken place between the accident date and the midpoint of the latest period of external trend information, i.e. February 15, 2018 for property damage and time element. The LPF's adjust losses for projected inflationary changes from the midpoint of the latest period of external trend information to the anticipated average date of accident for policies written under the proposed loss costs (assumed to be 12 months after the assumed revision date based on all one-year policies).

The CCF's and LPF's are calculated separately for buildings, contents, and time element coverages. For coverage 3 (buildings and contents on a combined basis), combined trend factors are calculated using the following weights for buildings and contents: 70%/30% for Basic Group I, 75%/25% for Basic Group II, and 50%/50% for Special Causes of Loss. For time element (coverages 4-9) the combined trend factors are calculated using 70%/30% weights for RSALES/IMSEP. The factors are applied by coverage to the losses reported under CSP and CMSP on an individual occurrence basis.

LOSS TREND (cont'd)

LOSS TREND ADJUSTMENT - SEVERITY

An evaluation of the latest Commercial Property insurance data shows that the cost levels inherent in the property damage coverages are increasing at a different rate than those measured by the external indices. Therefore, to insure adequate prospective loss cost levels during the period for which loss costs are to be determined, loss trend adjustments (LTA's) have been applied. These factors were developed by comparing the annual rate of change in average claim costs to the annual rate of change in the external indices. (Refer to Table 23 for the calculations.)

LOSS TREND ADJUSTMENT - FREQUENCY

In order to reflect total trend more precisely, a frequency component is included in the loss trend adjustment factors (LTA's) separately for buildings and contents for Basic Group I and contents only for Special Causes of Loss. No frequency component is used for Basic Group II and Special Causes of Loss buildings due to the extremely volatile nature of the coverages.

AMOUNT-OF-
INSURANCE
TREND

Cost changes over time to both real and personal property result in insureds purchasing increased amounts of insurance. To reflect the impact of this phenomenon, amount of insurance trend factors are applied to collected loss costs to bring them to prospective amount of insurance levels. These factors are developed by measuring amount of insurance trends on a sample of renewal policies.

The application and development of these factors parallels loss trend factors in that separate factors are developed for buildings, contents, and time element, and the adjustment to prospective amount of insurance levels is done in two steps. The current written factors adjust loss costs to the amount of insurance level for the midpoint of the latest period of renewal information, i.e. July 1, 2017. Total amount of insurance trend factors are then calculated by projecting these current factors to the average date of writing (i.e. to the amount of insurance level six months beyond the assumed effective date).

TABLE 21

Development of Current Cost Factors and Loss Projection Factors
For Commercial Property Building and Contents Experience
Period ending March 31, 2018

Part A: Quarterly Indices for Buildings, Contents and Time Element

Building Loss Projection Factors - Xactware Commercial Index (XCI) (Base: 2009 = 100.0)
Contents - Producer Price Index (PPI) - U.S. Dept. of Labor (Finished Goods Less Energy) (Base: 2009 = 100.0)
Time Element Combined Index - Weighted average of IMSEP and RSALES indices [a]

Quarter	XCI	PPI	IMSEP	RSALES	Time Element Combined Index
Q2-2015	108.8	113.7	1.050	1.055	1.054
Q3-2015	109.5	114.0	1.052	1.054	1.053
Q4-2015	110.0	113.9	1.051	1.044	1.046
Q1-2016	110.5	114.4	1.046	1.034	1.038
Q2-2016	110.7	114.3	1.051	1.035	1.040
Q3-2016	111.3	114.3	1.049	1.033	1.038
Q4-2016	111.9	114.6	1.053	1.036	1.041
Q1-2017	112.7	115.5	1.055	1.043	1.047
Q2-2017	114.0	116.5	1.052	1.035	1.040
Q3-2017	115.0	116.3	1.059	1.037	1.044
Q4-2017	115.5	117.2	1.060	1.043	1.048
Q1-2018	116.6	117.6	1.061	1.047	1.051

Part B: Computation of Loss Projection Factor (LPF) for Buildings based on 12 points

Annual Rate of Change = 0.0250 = 2.5% $R^2 = 0.972$

Loss Projection Factor for Buildings = $1.0250^{22.5/12}$ [b]   =   1.0474

Part C: Computation of Loss Projection Factor (LPF) for Contents based on 12 points

Annual Rate of Change = 0.0124 = 1.24% $R^2 = 0.895$

Loss Projection Factor for Contents = $1.0124^{22.5/12}$ [b]   =   1.0234

Part D: Computation of Loss Projection Factor (LPF) for Time Element Based on 12 points

Annual Rate of Change = -0.0008 = - 0.08% $R^2 = 0.016$

Loss Projection Factor for Time Element = $0.9992^{22.5/12}$ [b]   =   0.9985

(a)   30% weight for IMSEP and 70% weight for RSALES. IMSEP & RSALES indices were rescaled to a 2009 year base.
(b)   Assuming a rate or loss cost revision date of January 1 2019, and all one year policies, the time interval between the midpoint of the latest period (02/15/2018) and the average date of accident (01/01/2020) would be 22.5 months.

TABLE 21

Development of Current Cost Factors and Loss Projection Factors

Part E: Calculation of Current Cost Factors (CCF)

	Calendar Year Averages			Current Cost Factors Based on Average Index Values for Period ending March 31, 2018					
Year	XCI	PPI	Time Element Index	Buildings		Contents		Time Element	
2007	92.6	94.5	0.989	116.6/ 92.6 = 1.259		117.6 / 94.5 = 1.245		1.051 / 0.989 =	1.063
2008	97.0	98.5	1.008	116.6/ 97.0 = 1.203		117.6 / 98.5 = 1.194		1.051 / 1.008 =	1.043
2009	100.0	100.0	1.000	116.6/ 100.0 = 1.166		117.6/ 100.0 = 1.176		1.051 / 1.000 =	1.051
2010	99.3	101.8	1.015	116.6/ 100.0 = 1.175		117.6 / 101.8 = 1.155		1.051 / 1.015 =	1.035
2011	100.0	105.2	1.048	116.6/ 100.0 = 1.166		117.6 / 105.2 = 1.118		1.051 / 1.048 =	1.003
2012	101.0	108.0	1.064	116.6/ 101.0 = 1.154		117.6 / 108.0 = 1.089		1.051 / 1.064 =	0.988
2013	102.7	109.8	1.067	116.6/ 102.7 = 1.135		117.6 / 109.8 = 1.072		1.051 / 1.067 =	0.985
2014	104.7	112.5	1.069	116.6/ 104.7 = 1.114		117.6 / 112.5 = 1.045		1.051 / 1.069 =	0.983
2015	109.1	113.8	1.051	116.6/ 109.1 = 1.068		117.6 / 113.8 = 1.033		1.051 / 1.051 =	1.000
2016	111.1	114.4	1.039	116.6/ 111.1 = 1.050		117.6 / 114.4 = 1.028		1.051 / 1.039 =	1.012
2017	114.3	116.4	1.045	116.6/ 114.3 = 1.020		117.6 / 116.4 = 1.011		1.051 / 1.045 =	1.006

PART A: XACTWARE, PRODUCER PRICE, IMSEP, RSALES INDICES AND COMBINED TIME ELEMENT

QUARTER   The quarter for which the indices shown apply.

XACTWARE   The Xactware Commercial Index measures the costs of building material and repairs
COMMERCIAL   for commercial properties. The index, which is available since 1st Quarter 2005,
INDEX (XCI)   is based on regular surveys of over 42,000 material and equipment suppliers and over
                       9,500 contractors, in addition to claims settlement data. The index values are created
                       by estimating the cost to rebuild a sample set of different structures ranging in size,
                       style, and quality in each economic market. The Xactware index is used in this filing
                       to adjust for current cost from 1/1/05 to the midpoint of the latest index point and for
                       determining the loss projection factor.

PRODUCER PRICE   The Producer Price Index is a time series which measures the price level for a
INDEX (PPI)   predetermined group of goods produced relative to the price level for an earlier point
                       in time (2009). The PPI Finished Goods Less Energy is published by the U.S.
                       Department of Labor.

PRICE DEFLATOR   The price deflator index for manufacturers' sales exposure is a quarter's model of
INDEX FOR   Manufacturers' Sales Exposure Proxy (MSEP) for the period in question relative to
MANUFACTURERS'   MSEP measured in chained 2009 dollars. The price deflator is defined as the GNP
SALES EXPOSURE   (Gross National Product) price deflator with government expenditures, investment in
(IMSEP)   intellectual property products, inventory changes, and all services except food
                       services removed.

$$MSEP = (CD + CN + FS) + (EXD\&N - IMD\&N) + (IFIX - IPP), \text{ where}$$

                       CD and CN represent consumption of durables and nondurables, respectively;
                       EXD&N and IMD&N represent exports and imports of merchandise, respectively;
                       FS represents food services and IFIX represents gross private domestic fixed
                       investment (including residential fixed investment as well as nonresidential fixed
                       investment in structures, equipment, and intellectual property products); and IPP
                       represents nonresidential fixed investment in intellectual property products.

CHAIN-TYPE   The Chain-Type Price Index for Retail Sales measures changes in losses due
PRICE INDEX   solely to inflation.
FOR RETAIL SALES
 (RSALES)

PARTS B, C and D: COMPUTATION OF THE LOSS PROJECTION FACTOR

LOSS PROJECTION
FACTOR

The loss projection factor is calculated by fitting a least squares exponential curve to the appropriate number of points (where the appropriate number of points is determined based on judgment and an examination of the goodness of fit as determined by the R-squared values subject to a maximum of 12 quarterly points for property damage and time element).

The table displays the indices for those points used in fitting the curve. The relevant equations are shown and the annual rate of change in the indices based on the exponential fit is developed. This annual rate of change is projected over the period which extends from the latest period of cost information to the average accident date of the projection period.

PART E: CALCULATION OF CURRENT COST FACTORS (CCF'S)

CALENDAR YEAR
AVERAGES

The calendar year averages are the averages of the Xactware, PPI and Time Element indices for the given year. These average indices measure the average cost level of each year relative to the base.

CURRENT COST
FACTORS

The current cost factors are the ratios of the indices for the latest period of cost information divided by the average indices for each calendar year. These factors measure the changes in cost levels which have occurred from the midpoint of the given year to the latest point of cost information. In this regard, they represent average factors which would result if each year's losses were distributed evenly throughout the year.

For buildings, the index for the latest point is based on the latest available Xactware point.

Since losses are trended on a record by record basis, these calendar year factors are not actually used in ISO's trend calculations. Instead, factors are calculated from the bi-monthly or quarterly indices and applied to the unit losses based on the date of occurrence.

TABLE 22

SUMMARY OF LOSS TREND ADJUSTMENTS (LTA'S)

BUILDINGS	5 YEAR INCURRED LOSSES	LTA'S*
BASIC GROUP I	2,963,900,922	-0.4
BASIC GROUP II	3,110,504,121	0.5
SPECIAL CAUSES OF LOSS	1,645,968,334	0.3
TOTAL	7,720,373,377	0.1

CONTENTS		
BASIC GROUP I	930,719,601	0.5
BASIC GROUP II	303,611,682	0.8
SPECIAL CAUSES OF LOSS	677,516,051	0.5
TOTAL	1,911,847,334	0.5

TIME ELEMENT		
BASIC GROUP I	335,351,732	2.5
BASIC GROUP II	80,288,943	2.2
SPECIAL CAUSES OF LOSS	112,591,087	2.5
TOTAL	528,231,762	2.5

GRAND TOTAL	10,160,452,473	0.3

* The LTA's are based on internal severity and frequency data. They apply to both the historical period and projection period.

EXPLANATORY NOTES TO TABLE 22

SUMMARY OF LOSS TREND ADJUSTMENTS (LTA'S)

COLUMN (1)   <u>COVERAGE</u>

The LTA's vary by coverage (buildings, contents, and time element) and line of business (BG I, BG II, and SCL).

COLUMN (2)   <u>FIVE-YEAR INCURRED LOSSES</u>

The five-year multistate incurred losses are used as weights to determine the annual LTA for all lines of business and coverages combined.

COLUMN (3)   <u>ANNUAL LTA's</u>

The LTA's are the factors which are applied to losses to supplement the external indices in order to correctly reflect cost level and claim frequency changes. These are shown here as annual factors. However, they are applied over the entire length of the trend period, i.e. from the date of loss occurrence to the anticipated average accident date under the revised loss costs. The severity portion of the LTA is applied on an individual record basis in the same manner as the CCF's and LPF's. The frequency portion of the LTA is applied to the aggregate losses.

OVERVIEW

DEVELOPMENT OF LOSS TREND ADJUSTMENTS

INTRODUCTION

In order to supplement the external indices reflected in CCF's and LPF's, loss trend adjustments (LTA's) have been developed based on internal loss data. This is necessary because the external indices alone have been insufficient in reflecting cost level and claim frequency changes in Commercial Property Insurance. The following tables show the calculations used to develop these LTA's. Please note the development of the LTA's for the 2018 COMFAL reviews is based on internal commercial property experience through 12/31/2016 and external cost indices through 12/31/2016. Therefore, the CCF's and LPF's shown on Table 23 will not necessarily match those shown on Table 21. ISO has determined that the selected LTAs are appropriate to be used with the latest external indices shown on Table 21.

TABLE 23
DEVELOPMENT OF LTA'S

I. EXTERNAL RATE OF CHANGE[a]

Calendar Year	(1) Buildings Current Cost Factor	(2) Contents Current Cost Factor	(3) Time Element Cost Factor	(4) Basic Group I (BGI)& Special Causes of Loss (SCL) Weights	(5) Basic Group II (BGII) Weights
2007	1.208	1.213	1.053		0.10
2008	1.154	1.163	1.033		0.10
2009	1.119	1.146	1.041		0.10
2010	1.127	1.126	1.026		0.10
2011	1.119	1.089	0.993		0.10
2012	1.108	1.062	0.978	0.10	0.10
2013	1.090	1.044	0.976	0.15	0.10
2014	1.069	1.018	0.974	0.20	0.10
2015	1.025	1.007	0.990	0.25	0.10
2016	1.007	1.001	1.002	0.30	0.10

(6) AVERAGE CURRENT COST FACTORS

	Buildings	Contents	Time Element
Basic Group I and Special Causes of Loss (Weighted on Column (4))	1.047	1.019	0.987
Basic Group II (Weighted on Column (5))	1.103	1.087	1.007

(7) LOSS PROJECTION FACTORS

	Buildings	Contents	Time Element
Annual Rate of Change	0.030	0.008	-0.013
Loss Projection Factor:[b] $(1.0 + $ Annual Rate of Change$)^{(X/12)}$	1.081	1.022	0.967

(8) TOTAL TREND FACTOR (Average Current Cost Factor $\times$ Loss Projection Factor)

	Buildings	Contents	Time Element
Basic Group I and Special Causes of Loss	1.132	1.042	0.954
Basic Group II	1.193	1.111	0.974

(9) EXTERNAL ANNUAL RATE OF CHANGE[c]

	Buildings	Contents	Time Element
Basic Group I and Special Causes of Loss: (Total Trend Factor)$^{12/54}$	1.028	1.009	0.990
Basic Group II: (Total Trend Factor)$^{12/90}$	1.024	1.014	0.996

(a) The Current Cost Factors and Loss Projection Factors on this exhibit are based on external economic indices through December 31, 2016 for Buildings, Contents and Time Element.

(b) Assuming a loss cost revision date of July 1, 2018, the time interval between the midpoint of the latest period of external trend information (November 15, 2016) and the prospective average date of loss (July 1, 2019) is 31.5 months for Buildings, Contents and Time Element.

(c) The time interval from the weighted midpoint of the experience period to the prospective average date of loss (July 1, 2019) is 54 months for BG I and SCL, and 90 months for BG II. The weighted midpoint is January 1, 2015 for BG I and SCL, and January 1, 2012 for BG II.

TABLE 23
DEVELOPMENT OF LTA'S

II. INTERNAL ANNUAL RATES OF CHANGE:

(10) SELECTED COMFAL

	Buildings	Contents	Time Element
Basic Group I (BGI)	1.040	1.050	1.040
Basic Group II (BGII)	1.035	1.030	1.040
Special Causes of Loss	1.035	1.030	1.040

III. LTA CALCULATION:

CALCULATION OF LTAs - BUILDINGS

	(11) External Rate of Change[d]	(12) Internal Rate of Change	(13) Indicated Severity LTA [(12)/(11)-1.0]	(14) Formula Severity LTA[e]	(15) Frequency Effect	(16) Final LTA[f]
Basic Group I (BGI)	1.028	1.040	1.2	0.6	-1.0	-0.4
Basic Group II (BGII)	1.024	1.035	1.1	0.5	0.0	0.5
Special Causes of Loss	1.028	1.035	0.7	0.3	0.0	0.3

CALCULATION OF LTAs - CONTENTS

	(11) External Rate of Change[d]	(12) Internal Rate of Change	(13) Indicated Severity LTA [(12)/(11)-1.0]	(14) Formula Severity LTA[e]	(15) Frequency Effect	(16) Final LTA[f]
Basic Group I (BGI)	1.009	1.050	4.1	2.0	-1.5	0.5
Basic Group II (BGII)	1.014	1.030	1.6	0.8	0.0	0.8
Special Causes of Loss	1.009	1.030	2.1	1.0	-0.5	0.5

CALCULATION OF LTAs - TIME ELEMENT

	(11) External Rate of Change[d]	(12) Internal Rate of Change	(13) Indicated Severity LTA [(12)/(11)-1.0]	(14) Formula Severity LTA[e]	(15) Frequency Effect	(16) Final LTA[f]
Basic Group I (BGI)	0.990	1.040	5.1	2.5	0.0	2.5
Basic Group II (BGII)	0.996	1.040	4.4	2.2	0.0	2.2
Special Causes of Loss	0.990	1.040	5.1	2.5	0.0	2.5

(d) The external rates of change are based on external economic indices through December 31, 2016 for Buildings, Contents and Time Element.

(e) The formula severity LTA for Buildings, Contents and Time Element is calculated as one-half of the indicated severity LTA. This is equivalent to calculating the overall severity trend giving 50% weight to the external trend and 50% weight to the selected internal trend.

(f) The final LTA is calculated as the product (in factor form) of the formula severity LTA and frequency effect.

DEVELOPMENT OF LOSS TREND ADJUSTMENTS (LTA'S)

I. EXTERNAL RATE OF CHANGE

COLUMN (1), (2)
AND (3)

CURRENT COST FACTORS

The CCF's underlying the LTA analysis are based on external cost indices through 12/31/2016 for buildings, contents and time element.

COLUMNS (4)
AND (5)

WEIGHTS

The standard review weights are shown for each line of business.

LINES (6)

AVERAGE CURRENT COST FACTORS

The average CCF's for the experience period are calculated based on the weights shown in columns (4) and (5).

LINE (7)

LOSS PROJECTION FACTORS

The LPF's underlying the LTA analysis are shown here.

LINE (8)

TOTAL TREND

The total trend is the product of the average CCF and the LPF.

LINE (9)

EXTERNAL ANNUAL RATE OF CHANGE

The total trend is converted to an annual basis by raising it to the reciprocal of the number of years between the weighted midpoint of the experience period and the anticipated average accident date. For BG I and SCL the weighted midpoint of the experience period is 1/1/2015, for BG II it is 1/1/2012. Accordingly, there are 54 and 90 months, respectively, to the anticipated average accident date of 7/1/2019.

II. INTERNAL ANNUAL RATES OF CHANGES

LINE (10)

SELECTED COMFAL

The displayed annual rates of change in the average claim costs for BG I, BG II, and SCL were selected based on several least squares exponential fits of the annual claim costs for each subline. This was done to the most recent ten years of Commercial Property data using all companies in the ratemaking data base.

III. LTA CALCULATION

COLUMN (11)   ANNUAL EXTERNAL

The annual external rates of change from column (9) are shown here.

COLUMN (12)   ANNUAL INTERNAL

The adjusted annual internal rates of change in average loss from line (10) are shown here.

COLUMN (13)   INDICATED SEVERITY LTA

The indicated severity LTA's are calculated by dividing the annual internal rates of change by the annual external rates of change.

COLUMN (14)   FORMULA SEVERITY LTA

The severity LTA's in column (13) are then selected to temper the full effect of internal trend data. Without such tempering, full weight would in effect be given to the internal data without any consideration of the external cost indices.

COLUMN (15)   FREQUENCY EFFECT

The displayed annual rates of change in claim frequency for BG I and SCL were selected based on several least squares exponential fits of the claim frequency by subline. No frequency trend was selected for BG II and SCL buildings due to the extremely volatile nature of the coverage.

COLUMN (16)   FINAL LTA

The final LTA is the combination of the severity and frequency trend adjustments, calculated as column (14) times column (15), in factor form.

EXPOSURE TREND
DEVELOPMENT OF CURRENT AND PROJECTED EARNED EXPOSURE FACTORS

	Buildings				Contents			
	(1)[a]	(2)[a]	(3)[b]	(4)[c]	(5)[a]	(6)[a]	(7)[b]	(8)[c]
	Annual	07-01-2017	07-01-2019	07-01-2019	Annual	07-01-2017	07-01-2019	07-01-2019
	Written	Written	Projected	Earned	Written	Written	Projected	Earned
Year	Increase	Factors	Factors	Factors	Increase	Factors	Factors	Factors
2005	3.4%	1.393	1.449	1.498	2.1%	1.267	1.310	1.338
2006	3.8%	1.342	1.396	1.449	2.1%	1.241	1.284	1.310
2007	3.9%	1.292	1.344	1.396	2.4%	1.212	1.254	1.284
2008	3.5%	1.248	1.298	1.345	2.4%	1.184	1.225	1.254
2009	3.3%	1.208	1.257	1.299	2.2%	1.159	1.199	1.225
2010	2.5%	1.179	1.227	1.258	1.7%	1.140	1.179	1.200
2011	2.5%	1.150	1.196	1.227	1.8%	1.120	1.158	1.179
2012	2.7%	1.120	1.165	1.196	1.8%	1.100	1.138	1.158
2013	2.6%	1.092	1.136	1.165	2.1%	1.077	1.114	1.138
2014	2.5%	1.065	1.108	1.136	2.1%	1.055	1.091	1.114
2015	2.3%	1.041	1.083	1.108	1.9%	1.035	1.070	1.091
2016	2.1%	1.020	1.061	1.083	1.8%	1.017	1.052	1.070
2017	2.0%	1.000	1.040	1.061	1.7%	1.000	1.034	1.052

Notes

a   The percentages in columns (1) and (5) represent the change in written exposures from 07/01/n-1 to 07/01/n. Columns (2) and (6) contain the cumulative changes in written exposures for each year relative to the latest year.

b   The selected average annual changes in Amount of Insurance for projection purposes are 2.0% and 1.7% for Buildings and Contents, respectively. Consequently, the written factors at 07/01/2017 levels in column (2) and column (6) are brought to the level of the average date of writing in the effective period, 07/01/2019 (i.e., 6 months beyond an assumed revision date of 01/01/2019), by applying a factor of $(1.020)^{24/12}$ for Buildings and $(1.017)^{24/12}$ for Contents.

c   Written factors are earned into each accident year ending 12/31 using the following factors which assume all one year policies:

	Earning Factors
Year	All Years
n-2	1/8
n-1	3/4
n	1/8

For example, the factors used to adjust earned exposures for the period from 01/01/2017 to 12/31/2017 to the projected level are 1.061 for Buildings and 1.052 for Contents.

EXPOSURE TREND
DEVELOPMENT OF CURRENT AND PROJECTED EARNED EXPOSURE FACTORS

Time Element

Year	(1)[a] Annual Written Increase	(2)[a] 07-01-2017 Written Factors	(3)[b] 07-01-2019 Projected Factors	(4)[c] 07-01-2019 Earned Factors
2005	1.3%	1.127	1.150	1.165
2006	1.4%	1.111	1.133	1.150
2007	1.3%	1.097	1.119	1.133
2008	1.3%	1.083	1.105	1.119
2009	0.8%	1.074	1.096	1.106
2010	0.7%	1.067	1.088	1.096
2011	0.8%	1.059	1.080	1.088
2012	0.8%	1.051	1.072	1.080
2013	0.9%	1.042	1.063	1.072
2014	1.0%	1.032	1.053	1.063
2015	1.1%	1.021	1.042	1.053
2016	1.1%	1.010	1.030	1.042
2017	1.0%	1.000	1.020	1.030

Notes

a   The percentage in column (1) represents the change in written exposures from 07/01/n-1 to 07/01/n. Column (2) is the cumulative change in written exposures for each year relative to the latest year.

b   The selected average annual change in Net Income (Time Element exposure) for projection purposes is 1.0%. Consequently, the written factors at 07/01/2017 levels in column (2) are brought to the level of the average date of writing in the effective period, 07/01/2019 (i.e., 6 months beyond an assumed revision date of 01/01/2019), by applying a factor of $(1.010)^{24/12}$ for Time Element.

c   Written factors are earned into each accident year ending 12/31 using the following factors which assume all one year policies:

Year	Earning Factors All Years
n-2	1/8
n-1	3/4
n	1/8

For example, the factor used to adjust earned exposures for the period from 01/01/2017 to 12/31/2017 to the projected level is 1.030.

TABLE 24B

PREMIUM TREND - BASIC GROUP I
DEVELOPMENT OF CURRENT AND PROJECTED EARNED PREMIUM FACTORS

	Buildings				Contents			
	(1)[a]	(2)[a]	(3)[b]	(4)[c]	(5)[a]	(6)[a]	(7)[b]	(8)[c]
	Annual	07-01-2017	07-01-2019	07-01-2019	Annual	07-01-2017	07-01-2019	07-01-2019
	Written	Written	Projected	Earned	Written	Written	Projected	Earned
Year	Increase	Factors	Factors	Factors	Increase	Factors	Factors	Factors
2005	2.7%	1.308	1.350	1.386	1.8%	1.219	1.253	1.276
2006	3.1%	1.269	1.310	1.350	1.8%	1.197	1.231	1.253
2007	3.1%	1.231	1.271	1.310	2.0%	1.174	1.207	1.231
2008	2.8%	1.197	1.236	1.272	2.0%	1.151	1.183	1.207
2009	2.7%	1.166	1.204	1.236	1.8%	1.131	1.163	1.184
2010	2.0%	1.143	1.180	1.205	1.4%	1.115	1.146	1.163
2011	2.0%	1.121	1.157	1.180	1.5%	1.099	1.130	1.146
2012	2.2%	1.097	1.132	1.157	1.5%	1.083	1.114	1.130
2013	2.1%	1.074	1.109	1.132	1.8%	1.064	1.094	1.114
2014	2.0%	1.053	1.087	1.109	1.8%	1.045	1.074	1.094
2015	1.9%	1.033	1.066	1.087	1.6%	1.029	1.058	1.075
2016	1.7%	1.016	1.049	1.067	1.5%	1.014	1.043	1.058
2017	1.6%	1.000	1.032	1.049	1.4%	1.000	1.028	1.043

Notes

a   The percentages in columns (1) and (5) represent the change in written premium (reflecting the combined effect of change in exposures and limit of insurance factors) from 07/01/n-1 to 07/01/n. Columns (2) and (6) contain the cumulative changes in written premiums for each year relative to the latest year.

b   The average annual changes in Premium for projection purposes are 1.6% and 1.4% for Buildings and Contents, respectively. Consequently, the written factors at 07/01/2017 levels in column (2) and column (6) are brought to the level of the average date of writing in the effective period, 07/01/2019 (i.e., 6 months beyond an assumed revision date of 01/01/2019), by applying a factor of $(1.016)^{24/12}$ for Buildings and $(1.014)^{24/12}$ for Contents.

c   Written factors are earned into each accident year ending 12/31 using the following factors which assume all one year policies:

	Earning Factors
Year	All Years
n-2	1/8
n-1	3/4
n	1/8

For example, the factors used to adjust earned premium for the period from 01/01/2017 to 12/31/2017 to the projected level are 1.049 for Buildings and 1.043 for Contents.

PREMIUM TREND - BASIC GROUP II - OTHER THAN SOUTHEAST
DEVELOPMENT OF CURRENT AND PROJECTED EARNED PREMIUM FACTORS

	Buildings				Contents			
	(1)[a]	(2)[a]	(3)[b]	(4)[c]	(5)[a]	(6)[a]	(7)[b]	(8)[c]
	Annual	07-01-2017	07-01-2019	07-01-2019	Annual	07-01-2017	07-01-2019	07-01-2019
	Written	Written	Projected	Earned	Written	Written	Projected	Earned
Year	Increase	Factors	Factors	Factors	Increase	Factors	Factors	Factors
2005	2.5%	1.283	1.322	1.355	1.6%	1.198	1.229	1.249
2006	2.8%	1.248	1.286	1.322	1.6%	1.179	1.210	1.229
2007	2.9%	1.213	1.250	1.286	1.8%	1.158	1.188	1.210
2008	2.6%	1.182	1.218	1.251	1.8%	1.138	1.168	1.188
2009	2.4%	1.154	1.189	1.218	1.7%	1.119	1.148	1.168
2010	1.9%	1.132	1.166	1.190	1.3%	1.105	1.134	1.149
2011	1.9%	1.111	1.145	1.166	1.4%	1.090	1.119	1.134
2012	2.0%	1.089	1.122	1.145	1.4%	1.075	1.103	1.119
2013	1.9%	1.069	1.101	1.122	1.6%	1.058	1.086	1.103
2014	1.9%	1.049	1.081	1.101	1.6%	1.041	1.068	1.086
2015	1.7%	1.031	1.062	1.081	1.4%	1.027	1.054	1.069
2016	1.6%	1.015	1.046	1.062	1.4%	1.013	1.040	1.054
2017	1.5%	1.000	1.030	1.046	1.3%	1.000	1.026	1.040

Notes

a   The percentages in columns (1) and (5) represent the change in written premium (reflecting the combined effect of change in exposures and limit of insurance factors) from 07/01/n-1 to 07/01/n. Columns (2) and (6) contain the cumulative changes in written premiums for each year relative to the latest year.

b   The average annual changes in Premium for projection purposes are 1.5% and 1.3% for Buildings and Contents, respectively. Consequently, the written factors at 07/01/2017 levels in column (2) and column (6) are brought to the level of the average date of writing in the effective period, 07/01/2019 (i.e., 6 months beyond an assumed revision date of 01/01/2019), by applying a factor of $(1.015)^{24/12}$ for Buildings and $(1.013)^{24/12}$ for Contents.

c   Written factors are earned into each accident year ending 12/31 using the following factors which assume all one year policies:

	Earning Factors
Year	All Years
n-2	1/8
n-1	3/4
n	1/8

For example, the factors used to adjust earned premium for the period from 01/01/2017 to 12/31/2017 to the projected level are 1.046 for Buildings and 1.040 for Contents.

PREMIUM TREND - SPECIAL CAUSES OF LOSS
DEVELOPMENT OF CURRENT AND PROJECTED EARNED PREMIUM FACTORS

	Buildings				Contents			
	(1)[a]	(2)[a]	(3)[b]	(4)[c]	(5)[a]	(6)[a]	(7)[b]	(8)[c]
	Annual	07-01-2017	07-01-2019	07-01-2019	Annual	07-01-2017	07-01-2019	07-01-2019
	Written	Written	Projected	Earned	Written	Written	Projected	Earned
Year	Increase	Factors	Factors	Factors	Increase	Factors	Factors	Factors
2005	2.6%	1.291	1.330	1.365	1.4%	1.169	1.195	1.211
2006	2.9%	1.255	1.293	1.330	1.4%	1.153	1.179	1.195
2007	3.0%	1.218	1.255	1.293	1.6%	1.135	1.160	1.179
2008	2.7%	1.186	1.222	1.256	1.6%	1.117	1.142	1.160
2009	2.5%	1.157	1.192	1.222	1.4%	1.102	1.126	1.142
2010	1.9%	1.135	1.169	1.193	1.1%	1.090	1.114	1.127
2011	1.9%	1.114	1.148	1.169	1.2%	1.077	1.101	1.114
2012	2.1%	1.091	1.124	1.148	1.2%	1.064	1.088	1.101
2013	2.0%	1.070	1.102	1.124	1.4%	1.049	1.072	1.088
2014	1.9%	1.050	1.082	1.102	1.4%	1.035	1.058	1.072
2015	1.8%	1.031	1.062	1.082	1.2%	1.023	1.046	1.058
2016	1.6%	1.015	1.046	1.063	1.2%	1.011	1.033	1.046
2017	1.5%	1.000	1.030	1.046	1.1%	1.000	1.022	1.033

Notes

a   The percentages in columns (1) and (5) represent the change in written premium (reflecting the combined effect of change in exposures and limit of insurance factors) from 07/01/n-1 to 07/01/n. Columns (2) and (6) contain the cumulative changes in written premiums for each year relative to the latest year.

b   The average annual changes in Premium for projection purposes are 1.5% and 1.1% for Buildings and Contents, respectively. Consequently, the written factors at 07/01/2017 levels in column (2) and column (6) are brought to the level of the average date of writing in the effective period, 07/01/2019 (i.e., 6 months beyond an assumed revision date of 01/01/2019), by applying a factor of $(1.015)^{24/12}$ for Buildings and $(1.011)^{24/12}$ for Contents.

c   Written factors are earned into each accident year ending 12/31 using the following factors which assume all one year policies:

	Earning Factors
Year	All Years
n-2	1/8
n-1	3/4
n	1/8

        For example, the factors used to adjust earned premium for the period from 01/01/2017 to 12/31/2017 to the projected level are 1.046 for Buildings and 1.033 for Contents.

EXPLANATORY NOTES TO TABLES 24A - 24D
EXPOSURE AND PREMIUM TREND FACTORS

Table 24A contains Exposure trend factors.

Tables 24B, 24C and 24D contain Premium trend factors for Basic Group I, Basic Group II and Special Causes of Loss respectively, building and contents. As annual written exposures increase (decrease), the resulting limit of insurance factors used for rating decrease (increase) and the combined effect should be reflected when trending premiums to future level. There are separate premium trend factor tables for Basic Group I, Basic Group II and Special Causes of Loss since there are separate limit of insurance curves for BG I, BG II and SCL.

For Time Element, exposure trend factors are also used to trend premiums, i.e., there are not separate Time Element premium trend factors because Time Element does not use limit of insurance factors for rating.

COLUMNS (1) AND (5)	**ANNUAL WRITTEN INCREASE**
	The annual written increases for buildings, contents, and time element are calculated from the actual changes in amount of insurance from one year to the next for a sample of renewal policies (based on BG I experience). The change in amount of insurance for each policy in the sample was weighted with its prior year's premiums to obtain a weighted average change for each year. The Annual Written Increase in Premiums (Tables 24B, 24C and 24D) are calculated as the Annual Written Increase in Exposure tempered by the change in Limit of Insurance factor.
COLUMNS (2) AND (6)	**07-01-2017 WRITTEN FACTORS**
	The written factors for a given year are the product of the written annual changes for all years subsequent to that year. Although the 2017 written changes are based on two quarters of data, the consistency of this experience allows for the assumption that written changes for the first half of 2017 are applicable for the entire year.
COLUMNS (3) AND (7)	**07-01-2019 PROJECTED FACTORS**
	The 07-01-2019 factors are calculated by applying a factor to adjust the 07-01-2017 written factors to the amount of insurance level at the average date of writing, 07-01-2019. This is done using the selected annual changes in exposure or premium.
COLUMNS (4) AND (8)	**07-01-2019 EARNED EXPOSURES/PREMIUM FACTORS**
	The projected earned factors at the 07-01-2019 level (where 07-01-2019 is the average date of writing in the effective period) are calculated by earning the written factors assuming all one-year policies. The earning factors are shown in footnote (c).

BASIC GROUP I

ADDITIONAL INFORMATION ON TREND ADJUSTMENTS
_____

	(1)	(2)	(3)	(4)		
			AVERAGE TOTAL	SPLIT %		
	UNADJUSTED	TRENDED	LOSS TREND	------------------------------		
	INCURRED	INCURRED	FACTOR			TIME
YEAR	LOSSES	LOSSES	(2)/(1)	BUILDINGS	CONTENTS	ELEMENT
2013	75,820,404	95,403,487	1.258	31.5%	58.7%	9.8%
2014	72,654,351	88,808,388	1.222	69.1%	24.5%	6.4%
2015	70,947,895	83,274,800	1.174	77.3%	17.9%	4.8%
2016	82,582,430	93,930,500	1.137	48.1%	38.6%	13.3%
2017	50,486,456	55,711,724	1.103	67.8%	22.3%	9.9%

BASIC GROUP II

ADDITIONAL INFORMATION ON TREND ADJUSTMENTS

	(1)	(2)	(3)	(4)		
			AVG. TOTAL		SPLIT %	
	UNADJUSTED** NON-HURRICANE INCURRED	TRENDED** NON-HURRICANE INCURRED	LOSS TREND FACTOR			TIME
YEAR	LOSSES	LOSSES	(2)/(1)	BUILDINGS	CONTENTS	ELEMENT
2008	9,409,395	13,329,918	1.417	83.4%	15.3%	1.3%
2009	13,093,407	17,292,189	1.321	77.6%	18.8%	3.6%
2010	19,836,439	25,721,881	1.297	86.2%	10.4%	3.4%
2011	24,421,868	31,381,776	1.285	93.7%	6.0%	0.3%
2012	10,248,023	12,932,039	1.262	85.5%	10.5%	4.0%
2013	10,346,452	12,783,201	1.236	89.0%	8.5%	2.5%
2014	27,187,072	32,585,116	1.199	93.2%	5.4%	1.4%
2015	12,249,163	14,211,959	1.160	87.7%	8.1%	4.2%
2016	8,662,464	9,815,883	1.133	88.8%	10.5%	0.7%
2017	13,907,045	15,303,092	1.100	78.6%	18.2%	3.2%

** LOSSES INCURRED DURING THE MONTH OF A HURRICANE HAVE BEEN EXCLUDED AND
   REPLACED WITH AVERAGE NON-HURRICANE LOSSES.

SPECIAL CAUSES OF LOSS

ADDITIONAL INFORMATION ON TREND ADJUSTMENTS
_____

| | (1) | (2) | (3) | (4) SPLIT % | | |
| | UNADJUSTED INCURRED | TRENDED INCURRED | AVERAGE TOTAL LOSS TREND FACTOR | ------------------------------- | | |
YEAR	LOSSES	LOSSES	(2)/(1)	BUILDINGS	CONTENTS	TIME ELEMENT
2013	26,293,334	31,743,774	1.207	66.5%	32.1%	1.4%
2014	42,979,905	51,016,886	1.187	82.2%	16.6%	1.2%
2015	38,662,637	44,218,252	1.144	82.0%	15.0%	3.0%
2016	24,027,901	26,757,774	1.114	72.7%	23.6%	3.7%
2017	25,493,389	27,867,915	1.093	77.9%	19.2%	2.9%

EXPLANATORY NOTES TO TABLES 25, 26 AND 27

BG I, BG II, AND SCL ADDITIONAL INFORMATION ON TREND ADJUSTMENTS

COLUMN (1)   UNADJUSTED INCURRED LOSSES

The unadjusted incurred losses are the reported losses prior to any adjustment.

COLUMN (2)   TRENDED INCURRED LOSSES

The trended incurred losses are the aggregate of the individual losses trended on a unit record basis.

COLUMN (3)   AVERAGE TREND FACTOR

The average trend factors are the trended incurred losses in column (2) divided by the unadjusted incurred losses in column (1). Although average factors could be calculated from the information contained in Tables 21 through 23, they would differ from the factors shown in this table for the following reasons:

(1)   In calculating such averages, the usual assumption is that the losses are spread evenly throughout the year, yielding the midpoint of each year as the average date of loss. A predominance of losses at a certain time of the year could shift the average accident date away from the midpoint.

(2)   The average trend factors will be slightly higher due to the impact of trend on the deductible.

COLUMN (4)   PERCENTAGE SPLIT BETWEEN BUILDINGS, CONTENTS, AND TIME ELEMENT

The current cost factors and loss projection factors are different for buildings, contents, and time element. Therefore, in addition to the reasons cited above, the average trend factors will differ from state to state depending on the buildings/contents/time element split. Companies with splits substantially different from the industrywide averages shown here may find it appropriate to develop trend factors which reflect their own coverage mix.

INTRODUCTION

For Commercial Property, losses are evaluated as of September 30, 2017, three months after the end of the latest experience year used in the review. In order to account for development of losses beyond fifteen months and to reflect overall loss development patterns, loss development was incorporated into the adjustment process of incurred losses to their ultimate settlement value.

LOSS
DEVELOPMENT
PROCEDURES

The application of loss development factors recognizes the fact that not all of the Commercial Property losses for a particular accident year have been finally determined at the time the experience is compiled.

The incurred losses underlying the statewide loss cost level indications were evaluated as of September 30, 2017.

Accident year ended June 30, 2017 includes all losses paid on accidents from July 1, 2016 to June 30, 2017 and all losses outstanding on those accidents as of September 30, 2017, fifteen months after the inception of the accident year. Similarly, accident years ended June 30, 2016, 2015, 2014 and 2013 include all losses paid and outstanding as of 27, 39, 51 and 63 months, respectively, after the inception of the accident year.

Thus, the immature experience reported as of 15, 27, 39 or 51 months must be adjusted to an ultimate settlement basis. This adjustment is accomplished through the use of loss development factors based on the historic multistate Basic Group I, Basic Group II, and Special Causes of Loss incurred losses as shown in Table 28.

TABLE 28
BASIC GROUP I
INCURRED LOSSES
LOSS YEARS 2008-2017
EVALUATED AS OF 9/2017

LOSSES
AS OF

YEAR ENDING	15 MONTHS	27 MONTHS	39 MONTHS	51 MONTHS	63 MONTHS
6/30/2008	994,609,406	975,404,218	954,737,819	944,974,908	944,636,580
6/30/2009	1,008,300,664	988,768,735	980,981,839	989,204,832	985,052,424
6/30/2010	906,361,204	902,368,456	889,257,372	881,582,804	877,070,716
6/30/2011	948,503,064	935,077,081	919,279,122	907,187,665	906,549,853
6/30/2012	889,957,913	863,678,700	845,501,437	841,057,009	835,400,314
6/30/2013	1,000,019,666	969,353,148	954,352,511	943,248,206	928,541,164
6/30/2014	943,608,016	945,151,909	933,908,976	920,661,140	
6/30/2015	853,108,324	852,350,972	834,940,315		
6/30/2016	865,847,748	851,643,965			
6/30/2017	898,636,541				

RATIOS

YEAR ENDING	27:15 MONTHS	39:27 MONTHS	51:39 MONTHS	63:51 MONTHS
6/30/2008	0.981	0.979	0.990	1.000
6/30/2009	0.981	0.992	1.008	0.996
6/30/2010	0.996	0.985	0.991	0.995
6/30/2011	0.986	0.983	0.987	0.999
6/30/2012	0.970	0.979	0.995	0.993
6/30/2013	0.969	0.985	0.988	0.984
6/30/2014	1.002	0.988	0.986	
6/30/2015	0.999	0.980		
6/30/2016	0.984			
5 POINT AVERAGE	0.985	0.983	0.989	0.993

DEVELOPMENT FACTORS TO ULTIMATE

15 MONTHS TO ULTIMATE = 0.985 X 0.983 X 0.989 X 0.993 = 0.951
27 MONTHS TO ULTIMATE = 0.983 X 0.989 X 0.993 = 0.965
39 MONTHS TO ULTIMATE = 0.989 X 0.993 = 0.982
51 MONTHS TO ULTIMATE = 0.993 = 0.993

TABLE 28
BASIC GROUP II
INCURRED LOSSES
LOSS YEARS 2008-2017
EVALUATED AS OF 9/2017

LOSSES
AS OF

YEAR ENDING	15 MONTHS	27 MONTHS	39 MONTHS	51 MONTHS	63 MONTHS
6/30/2008	677,467,895	683,057,291	681,971,041	683,584,884	684,579,882
6/30/2009	570,866,010	619,299,390	624,786,993	625,623,326	627,333,856
6/30/2010	568,490,178	589,294,316	592,598,950	594,315,038	595,741,771
6/30/2011	1,145,579,772	1,246,309,027	1,257,852,494	1,267,255,542	1,281,503,962
6/30/2012	852,477,348	904,761,039	917,193,236	930,161,791	933,917,299
6/30/2013	737,267,457	782,620,671	795,526,727	808,558,539	816,407,573
6/30/2014	633,774,241	664,483,911	671,866,958	678,502,826	
6/30/2015	425,754,507	457,056,489	468,185,864		
6/30/2016	631,706,969	676,612,052			
6/30/2017	777,647,460				

RATIOS

YEAR ENDING	27:15 MONTHS	39:27 MONTHS	51:39 MONTHS	63:51 MONTHS
6/30/2008	1.008	0.998	1.002	1.001
6/30/2009	1.085	1.009	1.001	1.003
6/30/2010	1.037	1.006	1.003	1.002
6/30/2011	1.088	1.009	1.007	1.011
6/30/2012	1.061	1.014	1.014	1.004
6/30/2013	1.062	1.016	1.016	1.010
6/30/2014	1.048	1.011	1.010	
6/30/2015	1.074	1.024		
6/30/2016	1.071			
5 POINT AVERAGE	1.063	1.015	1.010	1.006

DEVELOPMENT FACTORS TO ULTIMATE

15 MONTHS TO ULTIMATE = 1.063 X 1.015 X 1.010 X 1.006 = 1.096
27 MONTHS TO ULTIMATE = 1.015 X 1.010 X 1.006 = 1.031
39 MONTHS TO ULTIMATE = 1.010 X 1.006 = 1.016
51 MONTHS TO ULTIMATE = 1.006 = 1.006

TABLE 28

SPECIAL CAUSES OF LOSS
INCURRED LOSSES
LOSS YEARS 2008-2017
EVALUATED AS OF 9/2017

LOSSES
AS OF

YEAR ENDING	15 MONTHS	27 MONTHS	39 MONTHS	51 MONTHS	63 MONTHS
6/30/2008	498,354,072	501,829,140	497,076,645	497,330,527	496,907,109
6/30/2009	615,935,697	610,009,666	613,904,839	607,812,020	607,492,213
6/30/2010	644,332,409	633,870,658	633,435,250	631,291,415	631,548,599
6/30/2011	723,395,475	708,675,010	700,127,297	699,739,322	697,996,062
6/30/2012	447,855,550	435,341,947	430,108,625	431,084,328	427,848,117
6/30/2013	471,369,992	477,082,981	470,204,917	471,874,455	473,224,992
6/30/2014	674,570,887	671,019,778	666,229,538	668,025,666	
6/30/2015	634,216,064	639,584,693	637,294,873		
6/30/2016	390,665,157	400,815,044			
6/30/2017	431,124,372				

RATIOS

YEAR ENDING	27:15 MONTHS	39:27 MONTHS	51:39 MONTHS	63:51 MONTHS
6/30/2008	1.007	0.991	1.001	0.999
6/30/2009	0.990	1.006	0.990	0.999
6/30/2010	0.984	0.999	0.997	1.000
6/30/2011	0.980	0.988	0.999	0.998
6/30/2012	0.972	0.988	1.002	0.992
6/30/2013	1.012	0.986	1.004	1.003
6/30/2014	0.995	0.993	1.003	
6/30/2015	1.008	0.996		
6/30/2016	1.026			
5 POINT AVERAGE	1.003	0.990	1.001	0.998

DEVELOPMENT FACTORS TO ULTIMATE

15 MONTHS TO ULTIMATE = 1.003 X 0.990 X 1.001 X 0.998 = 0.992
27 MONTHS TO ULTIMATE = 0.990 X 1.001 X 0.998 = 0.989
39 MONTHS TO ULTIMATE = 1.001 X 0.998 = 0.999
51 MONTHS TO ULTIMATE = 0.998 = 0.998

LOSS DEVELOPMENT

INTRODUCTION

Table 28 shows multistate incurred loss development exhibits for Basic Group I, Basic Group II and Special Causes of Loss. The exhibits on Table 28 are arranged identically for each subline and can be summarized as listing the following information: incurred losses by accident year and age, age-to-age factors by accident year, and age-to-ultimate factors.

INCURRED LOSSES

The multistate incurred losses are shown by accident year and age at the top of Table 28. The multistate incurred losses are evaluated as of 15, 27, 39, 51 and 63 months. For Basic Group II, losses due to hurricanes reflected in the modeled hurricane loss costs have been removed from the experience for each rating territory and loss month.

AGE-TO-AGE DEVELOPMENT FACTORS

Age-to-age development factors or link ratios are calculated for each accident year. These age-to-age factors are calculated by dividing the incurred losses evaluated at each age by the incurred losses evaluated at the immediately preceding age. For example, 27:15 month age-to-age factors are calculated by taking the losses evaluated as of 27 months and dividing them by the losses evaluated as of 15 months, for each accident year. Age-to-age development factors are also calculated for 39:27 months, 51:39 months and 63:51 months. Latest five-year averages are then determined for each age-to-age interval.

AGE-TO-ULTIMATE DEVELOPMENT FACTORS

Age-to-ultimate factors are then calculated for the latest four years by multiplying the five-year average age-to-age development factors. These age-to-ultimate factors are then used in the adjustment of incurred losses to develop losses to their ultimate settlement value.

<u>EXCESS LOSS PROCEDURES</u>

INTRODUCTION If not addressed, the presence or absence of large losses during the review period can produce significant fluctuations in loss cost levels. In order to develop a more stable body of experience, large losses have been smoothed. This procedure removes any excess losses from the experience and applies excess loss factors to the resultant state normal losses to generate the adjusted incurred losses. The adjusted losses developed in this manner replace the incurred losses in the loss cost level evaluation.

BASIC GROUP I First, the excess portion of each large loss is removed from the trended loss experience.

Individual claim amounts that result from the same occurrence are grouped together, and if the total loss for one occurrence exceeds the normal loss cutoff (at 2005 cost levels), the total loss is identified as a large loss. Each large loss is then split into its normal and excess portions based on the normal loss cutoff.

The Basic Group I normal loss cutoff begins at $250,000 and varies with the size of loss up to a maximum normal amount (approached asymptotically) of $1,250,000. (The formula and a graph are shown on Table 29.) The portion of each large loss exceeding the cutoff is considered excess and the portion of any loss up to the cutoff is considered normal.

As noted above, the excess loss procedure is performed on trended loss experience (i.e. loss experience adjusted to prospective cost levels by the current cost factors, loss projection factors, and loss trend adjustment factors (for claim cost only) shown in Tables 21 through 22). The loss trend adjustment for frequency trend is not reflected at this step in the process. The normal breakpoint of $250,000 for BG I and the parameters in the normal loss formula are at 2005 cost levels and therefore have been similarly adjusted to prospective cost levels.

Both the normal and total incurred losses are aggregated over all states and years in the experience period by construction, protection, and amount of insurance intervals. Excess loss factors by construction, protection and amount of insurance are then calculated as the ratios of the ten-year multistate incurred losses to the ten-year multistate normal losses.

These factors are then smoothed by fitting curves (by amount of insurance intervals) to the indicated factors. The resulting factors are then balanced so that the original ten-year multistate incurred loss level is maintained.

The excess factors are then applied to the state normal losses, which are maintained in the same detail (construction, protection and amount of insurance) as well as by year, territory, rating group and TOP. The state normal losses used in this calculation have also been trended for frequency.

The excess loss factors vary by construction, protection and the amount of insurance because these are the most significant severity-related rating variables.

BASIC GROUP II

Since wind caused by non-hurricane events can cause large and unexpected losses, a long-term excess procedure is used for Basic Group II. The purpose of this procedure is to avoid the shifts in loss costs which would result from reflecting large, unexpected losses only in the year in which they occur.

The Basic Group II excess procedure identifies periods of overall adverse experience, rather than individual large losses, since catastrophic non-hurricane wind losses affect both the frequency and the severity of losses. Also, due to the extreme volatility of these losses, a long-term review period (1950 - present) is used. Losses reflected in the hurricane model are not included in this procedure. For those years reported under the Commercial Statistical Plan (CSP), 1982 and later, hurricane losses have been replaced with average non-hurricane losses. For years prior to CSP reporting, any year in which a hurricane occurred has been excluded.

A loss ratio cutoff is used to determine normal and excess losses in the excess procedure. The application of this cutoff is described in the explanatory notes to Table 31. The excess losses are used to determine the excess multiplier. The excess multiplier is derived in such a manner as to provide an estimate of the expected excess non-hurricane loss dollars per normal non-hurricane loss dollar.

The excess multiplier is applied to the normal non-hurricane losses for each accident year in the ten-year experience period used in the review. In this way, a review database is created reflecting both the current normal non-hurricane loss experience and the average excess non-hurricane loss experience based on the long-term review. This allows a concurrent evaluation of both the normal and the excess components of the BG II non-hurricane loss cost level.
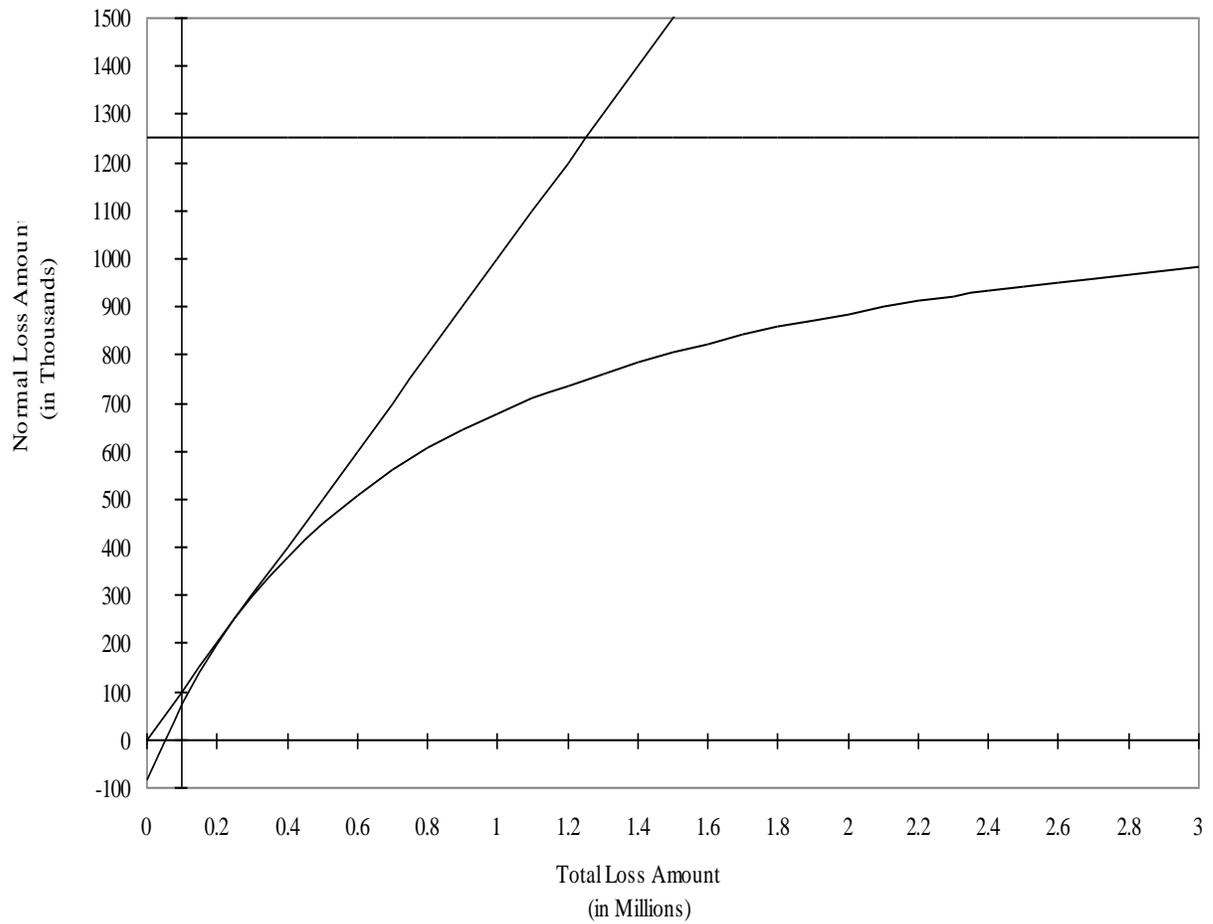
SPECIAL CAUSES
OF LOSS

Similar to Basic Group II, the Special Causes of Loss (SCL) smoothing procedure uses a loss ratio approach to reflect both the frequency and severity of unusual loss events which may produce significant fluctuations in loss cost levels. The excess procedure uses longer term statewide SCL experience (1985 - present) to account for the volatile nature of weather related losses (water damage from bursting pipes, or the weight of ice, sleet, or snow) which are the predominant cause of large SCL losses in a given experience period. A monthly normal loss ratio cutoff of 2.0 is used to define normal and excess losses. The resulting ratio of excess to normal losses over the long-term experience period is then applied to the normal losses used in the loss cost level review. The calculations underlying the smoothing procedure are described in the Explanatory Notes to Table 32.

TABLE 29 - COUNTRYWIDE BASIC GROUP I EXCESS LOSS FACTORS
BY CONSTRUCTION, PROTECTION AND EXPOSURE

		Amount of Insurance *										
		1	2	3	4	5	6	7	8	9	10	11
Const. 1-3	Prot. 1-4	1.000	1.045	1.092	1.141	1.192	1.246	1.302	1.360	1.421	1.485	2.002
	Prot. 5-7	1.000	1.057	1.118	1.182	1.250	1.322	1.397	1.478	1.562	1.652	2.414
	Prot. 8-10	1.000	1.059	1.121	1.187	1.256	1.330	1.408	1.490	1.578	1.670	2.461

		Amount of Insurance *										
		1	2	3	4	5	6	7	8	9	10	11
Const. 4-6	Prot. 1-4	1.000	1.039	1.081	1.123	1.167	1.214	1.261	1.311	1.363	1.417	1.844
	Prot. 5-7	1.000	1.052	1.106	1.164	1.224	1.288	1.354	1.425	1.499	1.576	2.223
	Prot. 8-10	1.000	1.053	1.109	1.168	1.230	1.296	1.364	1.437	1.513	1.594	2.267

*   Amount of
Insurance   Intervals

1	0-403,000
2	403,001-500,000
3	500,001-700,000
4	700,001-1,000,000
5	1,000,001-1,500,000
6	1,500,001-2,500,000
7	2,500,001-3,500,000
8	3,500,001-5,500,000
9	5,500,001-7,500,000
10	7,500,001-10,000,000
11	10,000,001 and over

Table 29 (cont'd)

Countrywide Basic Group I
Normal vs. Total Loss Amount

Normal Loss = $1,250,000 × (1 - ($800,000 ÷ (Total Loss + $750,000)))

Total Loss Amount
(in Millions)

EXPLANATORY NOTES TO TABLES 29

COUNTRYWIDE BASIC GROUP I EXCESS LOSS FACTORS

EXCESS LOSS
FACTORS

The multistate excess loss factors are the ratios of the ten-year multistate adjusted incurred losses to the ten-year multistate adjusted normal losses (both adjusted for severity trend). They are determined separately by construction, protection and amount of insurance range. Due to credibility considerations, both constructions and protections have been consolidated as shown. The amount of insurance ranges are also shown.

BASIC GROUP I
ADDITIONAL EXCESS LOSS INFORMATION
_____

YEAR	(1) TRENDED INCURRED LOSSES	(2) TRENDED NORMAL LOSSES	(3) STATE NORMAL % (2)/(1)	(4) MULTI- STATE NORMAL %	(5) ADJUSTED INCURRED LOSSES	(6) STATE AVERAGE EXCESS FACTOR (5)/(2)
2013	95,403,487	44,133,833	46.3%	70.8%	59,587,994	1.350
2014	88,808,388	57,231,599	64.4%	72.0%	83,876,695	1.466
2015	83,274,800	59,667,332	71.7%	75.0%	85,720,372	1.437
2016	93,930,500	46,726,069	49.7%	70.3%	70,042,974	1.499
2017	55,711,724	39,404,184	70.7%	73.3%	54,601,063	1.386

EXPLANATORY NOTES TO TABLE 30

BASIC GROUP I ADDITIONAL EXCESS LOSS INFORMATION

COLUMN (1)   TRENDED INCURRED LOSSES

The trended incurred losses are the aggregate of all individually-trended loss records prior to any adjustment for large losses. They are shown here fully trended for severity.

COLUMN (2)   TRENDED NORMAL LOSSES

The normal losses are the aggregate of the normal portions of each loss occurrence. These are also fully trended.

COLUMN (3)   STATE NORMAL PERCENTAGE

The state normal percentages are the statewide normal losses divided by the statewide trended incurred losses. These percentages can be used in conjunction with the multistate percentages and actual dollar amounts of normal losses to assess the state loss experience. For example, consistently lower state normal percentages relative to multistate normal percentages could indicate that the state has a greater propensity for large losses.

COLUMN (4)   MULTISTATE NORMAL PERCENTAGES

The multistate normal percentages are the multistate normal losses divided by the multistate trended incurred losses. As noted above these can be used as a yardstick against which the statewide experience can be measured.

COLUMN (5)   ADJUSTED INCURRED LOSSES

The adjusted incurred losses are the totals across all constructions, protections and exposures of the fully trended normal losses multiplied by the excess loss factors.

COLUMN (6)   STATE AVERAGE EXCESS FACTOR

The state average excess factors are the adjusted incurred losses in column (5) divided by the normal losses in column (2). These factors represent the annual averages of the factors calculated separately by construction, protection and amount of insurance. The average excess factor reflects the normal loss mix by construction, protection and exposure. Heavy concentration in those subsets of the data with high excess factors will result in large average factors.

DEVELOPMENT OF BASIC GROUP II EXCESS MULTIPLIER*

(1)	(2)	(3)	(4)	(5)	(6)
YEAR	EARNED PREMIUMS	NON-HURRICANE INCURRED LOSSES	NORMAL INCURRED LOSSES	NORMAL LOSS RATIO	EXCESS LOSS RATIO
1950	3,890,117	721,477	721,477	0.185	
1951	4,210,738	6,423,015	2,105,369	0.500	1.025
1952	4,780,309	1,887,124	1,887,124	0.395	
1953	5,498,545	1,389,408	1,389,408	0.253	
1956	6,603,658	3,627,058	3,301,829	0.500	0.049
1957	7,090,986	1,323,701	1,323,701	0.187	
1958	7,558,773	1,477,799	1,477,799	0.196	
1959	8,081,551	1,411,782	1,411,782	0.175	
1960	8,607,293	2,098,694	2,098,694	0.244	
1961	8,299,151	2,254,501	2,254,501	0.272	
1962	8,458,597	1,692,893	1,692,893	0.200	
1963	8,342,195	3,361,115	3,361,115	0.403	
1964	7,792,817	2,854,192	2,854,192	0.366	
1965	7,226,141	1,761,811	1,761,811	0.244	
1966	6,680,700	969,086	969,086	0.145	
1967	6,492,182	2,255,868	2,255,868	0.347	
1968	6,254,538	1,851,167	1,851,167	0.296	
1969	7,065,906	1,881,937	1,881,937	0.266	
1970	10,261,999	2,866,681	2,866,681	0.279	
1971	10,818,493	4,000,170	4,000,170	0.370	
1972	11,695,931	1,943,398	1,943,398	0.166	
1973	11,792,523	3,613,519	3,613,519	0.306	
1974	12,401,911	6,334,402	6,200,956	0.500	0.011
1975	14,747,866	9,091,071	7,373,933	0.500	0.116
1976	15,373,993	7,197,564	7,197,564	0.468	
1977	16,024,176	10,061,951	8,012,088	0.500	0.128
1978	16,571,916	11,408,286	8,285,958	0.500	0.188
1979	17,267,271	8,339,062	8,339,062	0.483	
1980	18,151,555	14,950,251	9,075,778	0.500	0.324
1981	17,440,658	8,808,014	8,720,329	0.500	0.005
1982	18,646,152	12,618,741	9,323,076	0.500	0.177
1983	19,408,476	16,450,641	9,704,238	0.500	0.348
1984	19,063,392	10,955,860	9,531,696	0.500	0.075
1985	24,459,420	20,698,421	12,229,710	0.500	0.346
1986	33,871,860	7,224,220	7,224,220	0.213	
1987	37,787,706	6,060,691	6,060,691	0.160	
1988	39,600,366	18,999,614	18,999,614	0.480	
1989	31,618,530	10,057,445	10,057,445	0.318	
1990	27,288,150	6,386,884	6,386,884	0.234	

PENNSYLVANIA
TABLE 31

DEVELOPMENT OF BASIC GROUP II EXCESS MULTIPLIER*

(1)	(2)	(3)	(4)	(5)	(6)
		NON-HURRICANE	NORMAL	NORMAL	EXCESS
	EARNED	INCURRED	INCURRED	LOSS	LOSS
YEAR	PREMIUMS	LOSSES	LOSSES	RATIO	RATIO
1991	25,744,737	6,700,886	6,700,886	0.260	
1992	25,219,206	13,170,951	12,609,603	0.500	0.022
1993	25,553,040	10,536,496	10,536,496	0.412	
1994	24,921,066	19,310,396	12,460,533	0.500	0.275
1995	22,707,450	7,129,022	7,129,022	0.314	
1996	19,081,104	19,532,021	9,540,552	0.500	0.524
1997	16,957,887	6,676,680	6,676,680	0.394	
1998	15,892,839	14,759,975	7,946,420	0.500	0.429
1999	14,764,806	12,213,643	7,382,403	0.500	0.327
2000	13,831,365	6,749,765	6,749,765	0.488	
2001	13,868,958	6,029,895	6,029,895	0.435	
2002	19,147,647	12,127,754	9,573,824	0.500	0.133
2003	23,531,601	10,891,793	10,891,793	0.463	
2004	26,762,781	7,298,024	7,298,024	0.273	
2005	26,994,450	5,112,535	5,112,535	0.189	
2007	40,911,426	18,304,365	18,304,365	0.447	
2008	27,167,125	9,409,395	9,409,395	0.346	
2009	27,331,206	13,093,407	13,093,407	0.479	
2010	27,270,904	19,836,439	13,635,452	0.500	0.227
2011	26,766,275	24,421,868	13,383,138	0.500	0.412
2012	28,620,894	10,248,019	10,248,019	0.358	
2013	31,590,696	10,346,448	10,346,448	0.328	
2014	34,603,543	27,350,913	17,301,772	0.500	0.290
2015	37,857,700	12,462,408	12,462,408	0.329	
2016	40,170,200	8,931,000	8,931,000	0.222	
2017	40,731,499	15,269,521	15,269,521	0.375	
TOTALS				24.263	5.431

(7) STATE EXCESS COMPONENT = (EXLR / NLR)   =   0.224

(8) STATE EXCESS MULTIPLIER = (1 + SEC)   =   1.224

* HURRICANE YEARS BEFORE 1982 HAVE BEEN EXCLUDED. FOR THE YEARS 1982
  THROUGH 2017, LOSSES INCURRED DURING THE MONTH OF A HURRICANE HAVE BEEN
  REPLACED WITH AVERAGE MONTHLY NON-HURRICANE LOSSES.

  NOTE: FOR YEARS PRIOR TO 2006, THE DISPLAYED YEAR INCLUDES DATA FOR
  ACCIDENT YEAR ENDING 12/31. FOR YEARS 2008 TO 2017, THE DISPLAYED YEAR
  INCLUDES DATA FOR ACCIDENT YEAR ENDING 06/30. THE DISPLAYED YEAR 2007
  INCLUDES DATA FOR FIRST QUARTER 2006 THROUGH FIRST QUARTER 2007.

EXPLANATORY NOTES TO TABLE 31

BASIC GROUP II EXCESS MULTIPLIER

COLUMN (2)   **EARNED PREMIUMS**

The unadjusted earned premiums are shown for each year.

COLUMN (3)   **INCURRED NON-HURRICANE LOSSES**

The unadjusted non-hurricane incurred losses are shown for each year. Note that any year prior to 1982 (pre-CSP) in which a hurricane occurred has been excluded from the excess review period. The incurred losses have been adjusted to reflect loss development.

COLUMN (4)   **NORMAL INCURRED NON-HURRICANE LOSSES**

The normal incurred losses for each year are those non-hurricane losses which do not exceed 0.500 times the earned premium for that year.

COLUMN (5)   **NORMAL LOSS RATIO**

For each year in the excess review period, the normal loss ratio is the ratio of the normal incurred losses to the earned premium for the same year.

COLUMN (6)   **STATE EXCESS LOSS RATIO**

The state excess loss ratio for each year is the ratio of the excess losses to the earned premium for the year. The excess losses are calculated as the incurred losses minus the normal incurred losses for each year.

LINE (7)   **STATE EXCESS COMPONENT**

The state excess component is determined by dividing the sum of the state excess loss ratios by the sum of all normal loss ratios (where each sum is taken across all non-hurricane accident years in the excess review period).

LINE (8)   **STATE EXCESS MULTIPLIER**

The state excess multiplier is derived by adding unity to the state excess component.

TABLE 32 – DEVELOPMENT OF SPECIAL CAUSES OF LOSS EXCESS MULTIPLIER

	(1)	(2)	(3)	(4)	(5)
			NORMAL	NORMAL	STATE EXCESS
YEAR	EARNED PREMIUMS	INCURRED LOSSES	INCURRED LOSSES	LOSS RATIO	LOSS RATIO
1986	14,857,980	11,602,862	11,602,862	0.781	
1987	18,208,170	11,288,787	11,288,787	0.620	
1988	20,575,386	13,895,560	13,895,560	0.675	
1989	22,269,840	15,242,163	15,242,163	0.684	
1990	27,195,528	25,101,081	24,755,470	0.910	0.013
1991	32,435,286	22,370,001	22,370,001	0.690	
1992	33,923,166	19,929,245	19,929,245	0.587	
1993	33,104,043	31,020,173	24,514,972	0.741	0.196
1994	31,365,381	115,698,613	27,393,661	0.873	2.816
1995	29,011,743	20,376,067	20,376,067	0.702	
1996	27,803,628	61,130,664	25,289,080	0.910	1.289
1997	24,515,355	16,132,917	16,132,917	0.658	
1998	24,935,181	14,251,232	14,251,232	0.572	
1999	25,533,897	20,552,470	16,602,508	0.650	0.155
2000	25,142,574	16,967,076	16,967,076	0.675	
2001	25,397,844	14,397,761	14,397,761	0.567	
2002	29,146,635	11,179,182	11,179,182	0.384	
2003	34,277,751	17,450,700	17,450,700	0.509	
2004	39,154,035	18,889,966	18,889,966	0.482	
2005	39,926,820	18,696,238	18,696,238	0.468	
2006	38,063,364	14,054,818	14,054,818	0.369	
2007	43,620,774	22,678,913	21,774,488	0.499	0.021
2008	41,529,396	21,764,371	21,764,371	0.524	
2009	43,670,637	29,040,663	29,040,663	0.665	
2010	44,044,482	52,159,785	37,416,447	0.850	0.334
2011	43,928,706	29,952,877	29,952,877	0.682	
2012	44,428,749	27,172,282	27,172,282	0.612	
2013	46,052,734	26,293,334	26,293,334	0.571	
2014	50,133,636	43,004,347	30,554,618	0.609	0.249
2015	55,016,725	38,863,081	36,420,154	0.662	0.044
2016	60,442,510	24,059,233	24,059,233	0.398	
2017	62,173,882	25,582,595	25,582,595	0.411	
TOTALS		850,799,057	685,311,328	19.990	5.117

(6) STATE EXCESS COMPONENT = (SELR / NLR)　　=　　0.256

(7) STATE EXCESS MULTIPLIER = (1 + SEC)　　=　　1.256

EXPLANATORY NOTES TO TABLE 32

SPECIAL CAUSES OF LOSS ADDITIONAL EXCESS LOSS FACTOR

COLUMN (1)   <u>EARNED PREMIUMS</u>

These are the unadjusted earned premiums for each year.

COLUMN (2)   <u>INCURRED LOSSES</u>

These are the unadjusted incurred losses for each year.

COLUMN (3)   <u>NORMAL INCURRED LOSSES</u>

The normal incurred losses are shown for each year. The normal incurred losses are defined to be that portion of each month's losses which does not exceed 2.0 times the monthly earned premiums.

COLUMN (4)   <u>NORMAL LOSS RATIO</u>

The normal loss ratio for each year is the ratio of the normal incurred losses for each year divided by the earned premiums for the year.
Column (4) = Column (3) ÷ Column (1)

COLUMN (5)   <u>EXCESS LOSS RATIO</u>

The excess loss ratio for each year is the ratio of the excess losses to the earned premium for the year. The excess losses are calculated as the incurred losses minus the normal incurred losses for each year.

LINE (6)   <u>EXCESS COMPONENT</u>

The excess component is determined by dividing the sum of the excess loss ratios by the sum of the normal loss ratios, where the sums are taken across all years in the excess review period.

LINE (7)   <u>EXCESS MULTIPLIER</u>

The excess multiplier is derived by adding unity to the excess component.

<div align="center">OVERVIEW</div>

<div align="center">APPLICATION OF CREDIBILITY</div>

INTRODUCTION   Credibility, Z, is a weight given to the most recent body of data. The complement of credibility, 1-Z, is the weight assigned to net trend. The final estimate is a weighted average obtained by using the formula $C = Z \times R + (1-Z) \times N$, where:

Z = credibility
C = final estimate
R = estimate based on the most recent data
N = net trend

Credibility may range from 0 to 1, where Z=1 is full credibility and Z=0 is no credibility. The actual numerical value of Z is calculated by considering how the state's volume of experience compares with an established full credibility standard. Credibility is capped at 25% if the credibility calculated is below 25%. See Tables 33, 33A, and 34 for a complete explanation of the credibility standards for Basic Group I, Basic Group II, and Special Causes of Loss.

PENNSYLVANIA

TABLE 33 - BASIC GROUP I STATEWIDE CREDIBILITY CALCULATION

(1a) FULL CREDIBILITY CLAIMS STANDARD FOR FREQUENCY
    WITH (P,K) = (95.00% , 5.00%)   1,537

(1b) SEVERITY MODIFICATION FACTOR   9.149

(1c) FULL CREDIBILITY CLAIMS STANDARD ADJUSTED
    FOR SEVERITY ((1a) X (1b))   14,062

(2) MULTISTATE FIVE YEAR RATIO OF EARNED
     RISKS TO CLAIMS   329.290

(3) FULL CREDIBILITY EARNED RISKS STANDARD (1c)X(2)   4,630,476

(4) FIVE YEAR STATEWIDE EARNED RISKS   1,643,505

(5) FIVE YEAR AGGREGATE LOSS COSTS   373,966,509

(6) AGGREGATE LOSS COSTS PER EARNED RISK (5)/(4)   227.542

(7) AGGREGATE LOSS COSTS FOR 100% CREDIBILITY   1,053,627,770
    (3) X (6)

(8) STATEWIDE CREDIBILITY   59.6%
    ((5)/(7))**(.5)

TABLE 33A - BASIC GROUP II STATEWIDE CREDIBILITY CALCULATION
----

(1) FULL CREDIBILITY CLAIMS STANDARD   30,000

(2) MULTISTATE TEN YEAR RATIO OF EARNED
    RISKS TO CLAIMS   140.799

(3) FULL CREDIBILITY EARNED RISKS STANDARD (1)X(2)   4,223,970

(4) TEN YEAR STATEWIDE EARNED RISKS   3,014,101

(5) TEN YEAR AGGREGATE LOSS COSTS   244,695,463

(6) AGGREGATE LOSS COSTS PER EARNED RISK (5)/(4)   81.184

(7) AGGREGATE LOSS COSTS FOR 100% CREDIBILITY   342,918,780
    (3) X (6)

(8) STATEWIDE CREDIBILITY   84.5%
    ((5)/(7))**(.5)

TABLE 34 – SPECIAL CAUSES OF LOSS STATEWIDE CREDIBILITY CALCULATION
----

(1) FULL CREDIBILITY CLAIMS STANDARD   25,000

(2) MULTISTATE FIVE YEAR RATIO OF EARNED
    RISKS TO CLAIMS   171.876

(3) FULL CREDIBILITY EARNED RISKS STANDARD (1)X(2)   4,296,900

(4) FIVE YEAR STATEWIDE EARNED RISKS   1,566,978

(5) FIVE YEAR AGGREGATE LOSS COSTS   235,143,477

(6) AGGREGATE LOSS COSTS PER EARNED RISK   (5)/(4)   150.062

(7) AGGREGATE LOSS COSTS FOR 100% CREDIBILITY   644,801,408
    (3) X (6)

(8) STATEWIDE CREDIBILITY   60.4%
    ((5)/(7))**(.5)

EXPLANATORY NOTES TO TABLES 33, 33A AND 34

BASIC GROUP I, BASIC GROUP II, AND SPECIAL CAUSES OF LOSS
STATEWIDE CREDIBILITY CALCULATION

LINE (1a)
(BGI only)

Full Credibility Claims Standard of Frequency

Based on a Poisson distribution, the minimum sample size of claims is determined such that the probability that the actual number of claims will be within 5% of the expected number of claims is greater than 95%.

LINE (1b)
(BGI only)

Severity Modification Factor

This factor, defined as $(1 + S^2 / M^2)$, is used to modify the claims standard to reflect variance due to severity, where S is the standard deviation and M is the mean of the loss severity distribution (on a normal loss basis).

LINE (1c) - BGI
LINE (1) - BGII, SCL

Full Credibility Claims Standard

For Basic Group I, this standard is the product of the frequency standard in line (1a) and the severity modification factor in line (1b). For Basic Group II and Special Causes of Loss, standards for full credibility of 30,000 claims for BGII and 25,000 claims for SCL were selected to balance stability and responsiveness.

LINE (2)

Multistate Experience Period Ratio of Earned Risks to Claims

This ratio was determined based on Commercial Statistical Plan data for the latest experience period (Five years for Basic Group I and Special Causes of Loss; Ten years for Basic Group II).

LINE (3)

Full Credibility Earned Risks Standard

To translate the claims standard to an equivalent standard based on earned risks, the claims standard (line (1c) for BGI, (1) for BGII and SCL) is multiplied by the multistate experience period ratio of earned risks to claims (line (2)).

LINE (4)

Experience Period Statewide Earned Risks

This is the number of earned risks in the state for the experience period.

LINE (5)   Experience Period Aggregate Loss Costs

These are the state's experience period adjusted aggregate loss costs.

LINE (6)   Statewide Experience Period Ratio of Aggregate Loss Costs to Earned Risks

This ratio is determined by dividing the state's experience period adjusted aggregate loss costs by its experience period earned risks.

LINE (7)   Full Credibility Aggregate Loss Costs Standard

To translate the risk standard into an aggregate loss cost standard on a state by state basis, the ratio (line (6)) is multiplied by the full credibility earned risks standard (line (3)).

LINE (8)   Credibility

The state's credibility is calculated by using the square root credibility formula:

$$Z = \sqrt{\frac{P}{C}}$$

where $Z =$ credibility,
             $P =$ statewide five-year adjusted aggregate loss costs (line (5)), and
             $C =$ full credibility aggregate loss costs standard (line (7)).

BASIC GROUP II

HURRICANE PROCEDURES

INTRODUCTION   The Basic Group II ratemaking procedures in hurricane-prone states incorporate the use of a computerized hurricane model which can estimate hurricane losses more accurately and with greater geographic specificity than traditional experience-based techniques. The model uses a meteorological database of both landfalling and nonlandfalling tropical cyclones since 1900, a sophisticated wind field model, and engineering and insurance-based damage relationships to develop reliable estimates of expected hurricane losses. The model evaluates the probability of a hurricane at a specific location, the duration of the wind speeds at that location and the relative damageability by type of structure for the current distribution of exposures.

REVISED
HURRICANE
MODEL   As noted in the Executive Summary, the hurricane loss costs contained in this filing are based on Touchstone Version 5.0 of AIR Worldwide Corporation's Atlantic Tropical Cyclone Model. This model version includes historical catalog upates based on the most recent release of the North Atlantic Hurricane Database (HURDAT2), stochastic updates to the Standard and the Warm Sea Surface Temperature (WSST) 10K, 50K, and 100K stochastic catalogs, and wind vulnerability and damage estimation updates due to updated building code adoption and enforcement at the local level.

OVERVIEW OF
THE USE OF
HURRICANE
MODELS IN
RATEMAKING   The model provides hurricane loss costs (expected hurricane losses per $100 of replacement cost value) by ZIP code, construction class, and coverage (building vs. contents). These loss costs are weighted together using the latest year Basic Group II premium distribution to calculate expected hurricane loss costs by BG II rating territory, symbol (construction grouping) and coverage (building vs. contents). The hurricane loss costs are then adjusted to an 80% coinsurance, base deductible, and base limit of insurance level, and a factor is applied to reflect all loss adjustment expenses.

The non-hurricane portion of the prospective loss costs is calculated by applying the statewide non-hurricane monoline change, based on the latest ten years of non-hurricane experience, to the non-hurricane portion of the current BG II loss costs.

The revised BG II loss costs are then equal to the sum of the modeled hurricane loss costs and the non-hurricane portion of the prospective loss costs.

BASIC GROUP II

DESCRIPTION OF THE HURRICANE MODEL

HURRICANE
DEFINED

A hurricane is a tropical cyclone technically defined as a non-frontal, low pressure synoptic-scale system in which the maximum sustained surface wind speed is at least 74 miles per hour.

HURRICANE
MODEL

The model consists of several components or modules - an event generation module, local intensity module, and damage module.

The event generation module is used to create the stochastic storm catalog. Over 100 years of historical data on the frequency of hurricanes and their meteorological characteristics were used to fit statistical distributions for each parameter used. These parameters include storm track, landfall location and track angle at landfall, and the intensity variables of central pressure, radius of maximum winds, and forward speed. By stochastically drawing from these statistical distributions, the fundamental characteristics of each simulated storm are generated. The result is a large, representative catalog of potential events.

Once the model generates the characteristics of a simulated event, it propagates the event along its track. Peak gust wind speeds and wind duration are estimated for each geographical location affected by the storm, and the local intensity is estimated as a function of the magnitude of the event, distance from the source of the event, and a variety of local conditions.

Damageability functions are then used to determine the relationship between the local intensity and the resulting damage to buildings and contents. Expected hurricane losses are calculated by applying the appropriate damage functions to the replacement value of the insured properties.

Following is a discussion of those elements reflected in the AIR tropical cyclone model for the Gulf and Atlantic Coasts of the continental United States.

EVENT
GENERATION
MODULE

The following storm characteristics are modeled as part of the event generation module:

Frequency of Occurrence - The model estimates frequency of occurrence based on tropical cyclones occurring since 1900.

Landfall Location - The model estimates the probability of a hurricane occurring at points along the smoothed coastline from Texas to Maine.

Central Pressure - Central pressure is the primary determinant of hurricane wind speed and therefore of intensity. All else being equal, as central pressure decreases, wind speeds increase or, more precisely, wind speed is an increasing function of the difference between the central and peripheral pressure.

Radius of Maximum Winds (Rmax) - The radius of maximum winds is the distance from the storm's center, or eye, to where the strongest winds are found. On average, the radius of maximum winds tends to be larger at higher latitudes. Similarly, the radius will be smaller, on average, for more intense storms. These relationships are explicitly accounted for in the model. While a smaller radius of maximum winds corresponds to greater storm intensity, it does not necessarily follow that losses will be greater. This is because a smaller radius usually results in a smaller affected area.

Forward Speed - Forward, or translational, speed is the rate at which a hurricane moves from point to point along its track. In general, the higher the latitude, the faster the hurricane's translational speed. Faster moving storms result in higher losses further inland. On the other hand, the faster a storm travels, the shorter the duration that a building is subjected to high wind speeds. In some areas, particularly along the coast, this can lead to lower losses than would otherwise be the case.

Track Angle at Landfall - Separate distributions for track angle at landfall are estimated for segments of coastline that are variable in length, depending upon the coastal orientation of that segment.

Storm Track - Once landfall location and the track angle at landfall are identified, the simulated storm track is generated using conditional probability matrices which resemble the curving and recurving tracks actually observed from the stochastic storm database.

Multiple-Landfalling Storms - In order to model multiple landfalling events as single storms, simulated storm tracks are joined statistically based on consistency of certain storm parameters.

LOCAL INTENSITY MODULE	Once the model probabilistically generates the hurricane's meteorological characteristics, it simulates the storm's movement along its track. Calculations of local intensity begin with the maximum over-water windspeed, and then adjustments are made for the asymmetric nature of the hurricane windfield, storm filling over land, surface friction, and relative wind speed profiles. Asymmetry Effect - In the Northern Hemisphere, hurricane winds rotate in a counter-clockwise direction. The combined effects of hurricane winds and forward motion produce higher wind speeds on the right side of the storm, as viewed facing the storm's forward direction. The model accounts for the dynamic interaction of the forward (translational) and rotational speeds, as well as the inflow angle. Filling Effect - As the storm moves inland its intensity begins to dissipate. Central pressure rises and the eye of the hurricane begins to "fill" as it moves away from its energy source, i.e., warm ocean water. The model filling equations are a function of the geographic location (particularly distance form coastline) and the time elapsed since landfall. Rates of filling vary by region, consistent with historical observations. Surface Friction Effect - Differences in surface terrain (or land use/land cover) also affect windspeeds. Wind velocity profiles typically show higher wind speeds at higher elevations. Winds travel more slowly at ground-level because of the horizontal drag force of the earth's surface, or surface friction. The addition of obstacles such as buildings will further degrade wind speed. In general, the rougher the terrain, due to both natural and man-made obstacles, the more quickly wind speeds dissipate. Relative Wind Speeds - The wind speed at any particular location is dependent on the radial distance between the eye of the storm and the location of interest.

DAMAGE ESTIMATION MODULE	The tropical cyclone model develops a complete time profile of wind speeds for each location affected by the storm, thus capturing the effect of wind duration on structures as well as the effect of peak wind speed. Damage estimation for hurricanes begins at sustained wind speeds of 40 mph and is calculated cumulatively until sustained winds are once again below 40 mph. Separate damageability estimates exist by construction type (e.g., frame, joisted masonry, masonry non-combustible) and coverage (buildings vs. contents). Estimated hurricane damage is measured as the ratio of repair cost (i.e., expected hurricane losses) to the replacement cost of the property, capped at 80% of the replacement cost. 80% replacement cost is the exposure base, or limit of insurance, used in ISO's commercial property program.

BASIC GROUP II

RATEMAKING PROCEDURES AND LOSS COST CALCULATIONS

The following is an overview of the Basic Group II ratemaking procedures incorporating computer modeled hurricane loss costs in the hurricane-prone states.

REMOVAL OF HURRICANE LOSSES	Losses due to hurricanes reflected in the modeled hurricane loss costs are excluded from the Basic Group II loss database. Storm track data from several meteorological sources are analyzed to determine the date, location, and wind speed of each hurricane during the BG II experience period, and those losses incurred during the month of a hurricane reflected in the model are replaced with the average monthly non-hurricane losses for each rating territory. The resulting non-hurricane losses are used in the calculation of the statewide non-hurricane coverage change, the excess procedure (for CSP years, 1982 and later), and the type of policy relativities.
EXCESS PROCEDURE	The excess procedure smoothes catastrophic BG II losses due to perils other than hurricane. The procedure is based on long-term (1950 to present) statewide BG II non-hurricane experience. For those years prior to 1982 (pre-CSP), any year in which a hurricane occurred has been excluded from the excess procedure. For 1982 and later, losses incurred during the month of a hurricane have been replaced by average non-hurricane losses as described above. The normal loss ratio cutoff for each year included in the excess procedure is 0.500. From this follows the following definitions:

The Normal incurred losses for each year are those losses which do not exceed 0.500 times the earned premium for the year. The Excess incurred losses for each year are equal to the Incurred losses minus the Normal losses for the year.

$$\text{Normal Loss Ratio (NLR)} = \frac{\text{Normal Losses}}{\text{Earned Premium}}, \text{ for each year}$$

$$\text{Excess Loss Ratio (ELR)} = \frac{\text{Excess Losses}}{\text{Earned Premium}}, \text{ for each year}$$

$$\text{Excess Component} = \frac{\text{Sum of ELR's}}{\text{Sum of NLR's}}, \text{ over the long-term non-hurricane experience period}$$

The Excess Multiplier is equal to the excess component plus 1.000, and is applied to the normal non-hurricane losses used in the statewide experience review.

STATEWIDE EXPERIENCE LEVEL REVIEW	The statewide experience review (Table 6) is based on the latest ten years of non-hurricane loss experience. The losses are normal non-hurricane losses (i.e., hurricane losses reflected by the model have been replaced by average non-hurricane losses and the resulting losses have been capped at 0.500 times the earned premium for each year), multiplied by the excess multiplier, loss adjustment expense factor, trend factors, and loss development factors. The non-hurricane aggregate loss costs are at current manual level and have been trended to the average date of writing in the assumed effective period.

NON-HURRICANE LOSS COST PROVISION

The non-hurricane portion of the revised BG II loss costs for each territory (where applicable), coverage, and symbol is calculated as:

Current Non-Hurricane Loss Cost × Statewide Monoline Non-Hurr. Change

where the statewide monoline non-hurricane change is the product of the statewide non-hurricane coverage change (Table 6) and the indicated monoline relativity found on Table 12, Column (7).

MODELED HURRICANE LOSS COSTS

The model produces hurricane loss costs (expected hurricane losses per $100 of replacement cost) including demand surge and truncated at 80% of value in ZIP code, coverage, and construction detail. These loss costs are weighted together to derive expected hurricane loss costs for each rating territory, coverage, and symbol, using the latest BG II premium distribution. The hurricane loss costs are then adjusted to an 80% coinsurance, base deductible, and base limit of insurance level, and a factor is applied to reflect all loss adjustment expenses.

REVISED BASIC GROUP II LOSS COSTS

The revised BG II loss costs are the sum of the non-hurricane portion of the revised loss costs plus the modeled hurricane loss costs.

The statewide BG II monoline change shown on Table 1 is calculated as a weighted average of the individual loss cost changes for each territory (where applicable), coverage, and symbol. This monoline change (based on hurricane plus non-hurricane experience combined) is then used to determine the indicated loss cost adjustments by type of policy as described on Table 12.

			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TERRITORY	COVERAGE	SYMBOL	ACCIDENT YEAR ENDING 06/30/17 BG II AGG. LOSS COSTS	CURRENT LOSS COST	CURRENT NON-HURR LOSS COST	STATEWIDE MONOLINE NON-HURR. CHANGE	INDICATED NON-HURR. LOSS COST (3) * (4)	HURRICANE MODELED LOSS COST	INDICATED TOTAL LOSS COST (5) + (6)	INDICATED PERCENT CHANGE (7)/(2) - 1
Entire State	BUILDINGS	OA	4,042	0.024	0.022	1.000	0.022	0.002	0.024	+0.0%
		OAB	22,205	0.029	0.027	1.000	0.027	0.002	0.029	+0.0%
		OB	694,814	0.037	0.032	1.000	0.032	0.004	0.036	-2.7%
		AA	26,563	0.023	0.021	1.000	0.021	0.002	0.023	+0.0%
		A	224,647	0.025	0.023	1.000	0.023	0.002	0.025	+0.0%
		AB	2,025,912	0.030	0.028	1.000	0.028	0.002	0.030	+0.0%
		B	14,719,080	0.038	0.033	1.000	0.033	0.004	0.037	-2.6%
	CONTENTS	OA	1,849	0.032	0.030	1.000	0.030	0.002	0.032	+0.0%
		OAB	4,796	0.039	0.037	1.000	0.037	0.002	0.039	+0.0%
		OB	169,344	0.046	0.041	1.000	0.041	0.004	0.045	-2.2%
		AA	5,686	0.029	0.027	1.000	0.027	0.002	0.029	+0.0%
		A	33,678	0.033	0.031	1.000	0.031	0.002	0.033	+0.0%
		AB	524,774	0.040	0.038	1.000	0.038	0.002	0.040	+0.0%
		B	3,220,392	0.048	0.043	1.000	0.043	0.004	0.047	-2.1%
	SUB-TOTAL		21,677,782							-2.2%
STATE TOTAL			21,677,782							-2.2%

EXPLANATORY NOTES TO TABLE 35

CALCULATION OF REVISED BASIC GROUP II LOSS COSTS

SYMBOL
DEFINITIONS

The Basic Group II (BG II) symbol definitions are:

Symbol	Definition
AA	Superior Wind Resistive
A	Wind Resistive
AB	Semi-Wind Resistive
B	Ordinary

The OA, OAB, and OB construction symbols are based on the old construction definitions and are included for weighting purposes since not all of the experience has been reported under the revised construction definitions.

COLUMN (1)   2017 Aggregate Loss Costs

The latest accident year statewide aggregate loss costs for each symbol.

COLUMN (2)   Current Loss Costs

The current manual loss costs are shown here.

COLUMN (3)   Current Non-Hurricane Loss Costs

These are the current manual loss costs minus their hurricane component.

COLUMN (4)   Statewide Monoline Non-Hurricane Loss Cost Change

The statewide monoline non-hurricane loss cost change is the product of the indicated statewide coverage change shown on Table 6, line (10), times the monoline normalized formula relativity shown on Table 12, column (7).

COLUMN (5)   Indicated Non-Hurricane Loss Costs

The indicated non-hurricane loss costs are calculated as the current non-hurricane loss costs times the statewide non-hurricane monoline change, and reflect that portion of the indicated BG II loss costs due to non-hurricane perils.

CALCULATION OF REVISED BASIC GROUP II LOSS COSTS (Cont'd)

COLUMN (6)   Hurricane Modeled Loss Costs

These are the expected hurricane loss costs based on the computer simulation model. The model produces hurricane loss costs (expected hurricane loss per $100 of replacement cost) by ZIP code, coverage (building vs. contents) and construction. These loss costs are weighted together using the latest year written premium to calculate expected hurricane loss costs by territory, coverage and symbol. The loss costs are then adjusted to reflect the 80% coinsurance clause, $500 base deductible level, base limit of insurance ($250,000 for buildings and $50,000 for contents), and all loss adjustment expenses.

COLUMN (7)   Indicated Total Loss Costs

The indicated total loss costs are equal to the sum of the revised non-hurricane loss costs plus the hurricane modeled loss costs.

COLUMN (8)   Percent Change

The percentage change is the ratio of the indicated loss cost to current loss cost, minus one. The overall statewide change is a weighted average of the percent changes for each symbol based on the aggregate loss costs shown in column (1).

SECTION D - ADDITIONAL SUPPORTING MATERIAL

TABLE 36

BASIC GROUP I RATING GROUP DEFINITIONS

THE FOLLOWING CSP CLASSES COMPRISE THE BASIC GROUP I RATING GROUPS

01   APARTMENTS

0311   Apartments without Mercantile Occupancies - Up to 10 Units
0312   Apartments without Mercantile Occupancies - 11 to 30 Units
0313   Apartments without Mercantile Occupancies - Over 30 Units
0321   Apartments with Mercantile Occupancies - Up to 10 Units
0322   Apartments with Mercantile Occupancies - 11 to 30 Units
0323   Apartments with Mercantile Occupancies - Over 30 Units
0331   Residential Condominiums without Mercantile Occupancies - Up to 10 Units
0332   Residential Condominiums without Mercantile Occupancies - 11 to 30 Units
0333   Residential Condominiums without Mercantile Occupancies - Over 30 Units
0341   Residential Condominiums with Mercantile Occupancies - Up to 10 Units
0342   Residential Condominiums with Mercantile Occupancies - 11 to 30 Units
0343   Residential Condominiums with Mercantile Occupancies - Over 30 Units

02   OTHER HABITATIONAL

0074   Boarding and Lodging Houses, Rooming Houses, Fraternities and Sororities, Dormitories - Up to 10 Units
0075   Boarding and Lodging Houses, Rooming Houses, Fraternities and Sororities, Dormitories - 11 to 30 Units
0076   Boarding and Lodging Houses, Rooming Houses, Fraternities and Sororities, Dormitories - Over 30 Units
0077   Convents, Monasteries and Rectories, Orphan Homes, Nurses' Homes, Sisters' Homes - Up to 10 Units
0078   Convents, Monasteries and Rectories, Orphan Homes, Nurses' Homes, Sisters' Homes - 11 to 30 Units
0079   Convents, Monasteries and Rectories, Orphan Homes, Nurses' Homes, Sisters' Homes - Over 30 Units
0196   Dwellings Written in Conjunction with Commercial Risks from the Commercial Lines Manual - 1 Family
0197   Dwellings Written in Conjunction with Commercial Risks from the Commercial Lines Manual - 2 Family
0198   Dwellings Written in Conjunction with Commercial Risks from the Commercial Lines Manual - 3 and 4 Family
0300   Large Area Housing Developments (Special Rating Treatment)

03   RESTAURANTS & BARS

0541   Bars and Taverns
0542   Restaurants with Commercial Cooking
0545   Restaurants with Limited Cooking

04   OTHER MERCANTILES

0431   Sole Occupancy Mercantile, Over 15,000 Square Feet, Building Coverage, Other than Food Risks
0432   Sole Occupancy Mercantile, Over 15,000 Square Feet, Food Risks, Buildings and Personal Property
0433   Multiple Occupancy Mercantile, Over 15,000 Square Feet, Building Coverage Only, Not Fire Class Rated
0434   Multiple Occupancy Mercantile, Less than 15,000 Square Feet, Building Coverage Only, Not Fire Class
        Rated
0511   Risks Having Low Susceptibility Personal Property, NOC
0512   Tire, Battery and Accessory Dealers Without Tire Recapping and Vulcanizing
0520   Wearing Apparel, Textiles, Shoes
0531   Alcoholic Beverages other than Bars
0532   Food Products including Retail Bakeries (no baking and no cooking on premises; sales only); Beverages
        other than Alcoholic
0533   Retail Bakeries - Baking on Premises (No delivery to other outlets)
0534   Food Products with Limited Cooking, Excluding Bakeries
0550   Motor Vehicle (Auto, Aircraft, Marine) Sales, No Repair
0561   Boat and Marine Supply Dealers
0562   Drugs
0563   Electrical Goods, Hardware and Machinery
0564   Furniture and Home Furnishings other than Appliances
0565   Jewelry
0566   Sporting Goods
0567   Risks Having Moderate Susceptibility Personal Property, NOC
0570   Risks Having High Susceptibility Personal Property, NOC
0580   Greenhouses
0581   Multiple Occupancy Mercantile, Fire Class Rated, without furniture Occupant
0582   Multiple Occupancy Mercantile, Fire Class Rated, with furniture Occupant

05   PUBLIC BUILDINGS

0701   Governmental Offices
1000   Penal Institutions
1051   Museums, Libraries, Art Galleries (non-profit)
1070   Other Public Buildings, Fire Dept., Police, Water/Sewer

06   CHURCHES

0900   Churches and Synagogues

07   SCHOOLS

1052   Schools, Academic

08   OFFICE AND BANKS

0702   Non-Governmental Offices and Banks

09   RECREATIONAL FACILITIES

0755   Golf Clubs, Tennis Clubs and Similar Sports Facilities with Cooking
0756   Golf Clubs, Tennis Clubs and Similar Sports Facilities without Cooking
0757   Clubs, NOC, Including Fraternal and Union Halls
0831   Motion Picture Studios
0832   Theaters
0833   Drive-in Theaters
0834   Skating Rinks--Roller Rinks
0841   Bowling Alleys
0843   Halls and Auditoriums
0844   Recreational Facilities, NOC
0845   Boys' and Girls' Camps
0846   Dance Halls, Ballrooms & Discotheques
0951   Gambling Casinos with Restaurants
0952   Gambling Casinos without Restaurants

10   HOTELS & MOTELS

0742   Motels and Hotels with Restaurant - Up to 10 Units
0743   Motels and Hotels with Restaurant - 11 to 30 Units
0744   Motels and Hotels with Restaurant - Over 30 Units
0745   Motels and Hotels without Restaurant - Up to 10 Units
0746   Motels and Hotels without Restaurant - 11 to 30 Units
0747   Motels and Hotels without Restaurant - Over 30 Units

11   HOSPITALS & NURSING HOMES

0851   Hospitals
0852   Nursing and Convalescent Homes

12   BUILDINGS UNDER CONSTRUCTION

1150   Buildings Under Construction

13   MOTOR VEHICLE RISKS

0931   Auto Parking Garages, Car Washes
0932   Gasoline Service Stations
0933   Aircraft Hangars with Repairing, Motor Vehicle Repairing Including Auto Body Shops, with or without Sales
0934   Tire Recapping and Vulcanizing with or without Sales
0940   Aircraft Hangars without Repairing

14   OTHER NON-MANUFACTURING

0911   Dry Cleaner and Dyeing Plants, other than Self-Service
0912   Laundries, other than Self-Service
0913   Self-Service Laundries and Dry Cleaners
0921   Light Hazard Service Occupancies
0922   Services Occupancies, Other than Light Hazard, NOC
0923   Funeral Homes
1180   Vacant Buildings
1185   Billboards and Signs
1190   Yard Property, NOC, Including Property in the Open

15   STORAGE

1200   Piers, Wharves, Bridges
1211   Freight Terminals
1212   General Storage Warehouses - Bailee
1213   Miscellaneous Products Storage - (other than Retail or Wholesale or Cold Storage)
1220   Household Goods Storage
1230   Cold Storage Warehouses
1251   Farm Products (other than Grain, Cotton, Tobacco)
1252   Grain, Seed, Bean Warehouses
1300   Cotton Compresses and Storage
1400   Waste and Reclaimed Material, including Yards
1450   Whiskey and Liquor Warehouses in Connection with Distilleries
1501   Tobacco Warehouses, Storage
1502   Tobacco Sales Warehouses
1550   Grain Elevators - Terminal
1610   Grain Elevators - Country
1650   Building Supply Yards, including Retail Lumberyards, Coal and Coke Yards
1700   Mill Yards
1751   Oil Distributing, Oil Terminals and LPG Tank Farms, Including Stock
1752   Oil Distributing, Oil Terminals and LPG Tank Farms, Excluding Stock

17   FOOD MANUFACTURING

2000   Dairy Products
2059   Meat, Poultry and Fish Products
2150   Grain Milling, Including Feed, Stock, Flour Mills
2200   Bakeries and Bakery Products
2250   Fruit, Nut and Vegetable Products
2300   Sugar, Molasses and Syrup Refining
2350   Beverages excluding Alcoholic Beverages
2400   Breweries
2459   Distilleries and Wineries
2550   Tobacco and Tobacco Products
2600   Food Products, NOC

18   WOOD MANUFACTURING

3809   Basic Wood Production including Veneer and Plywood Plants
3959   Furniture and Other Wood Products, NOC

19   WEARING APPAREL

2800   Textile Mill Products - Natural and Synthetic
3009   Clothing and Apparel including Furs and Finished Products

20   CHEMICAL MANUFACTURING

5000   Chemicals and Pharmaceuticals - Low Hazard
5050   Chemicals and Pharmaceuticals - Moderate Hazard
5100   Chemicals and Pharmaceuticals - High Hazard

21   METAL MANUFACTURING

6810   Heavy Metalworking including Basic Metalwork
6850   Metalworking, NOC

22   OTHER MANUFACTURING

2750   Cotton Gins
3409   Leather and Leather Products
4400   Paper Manufacturing
4450   Paper and Paper Products Processing
4809   Printing
5500   Plastic Products
5759   Rubber Products
6009   Stone, Glass, Concrete, Gypsum, Brick, Tile and Clay Products, Abrasives, Plaster and Other Mineral, NOC
6210   Mining Other than Coal
6250   Coal Mining
6900   Precision Products, Electronic, Radio and Television Manufacturing

TABLE 37

SPECIAL CAUSES OF LOSS CATEGORY DEFINITIONS

CATEGORY 01 - BUILDING AND TIME ELEMENT COVERAGE

CATEGORY 02 - APARTMENT AND CONDOMINIUM CONTENTS COVERAGE

CATEGORY 03 - OFFICE CONTENTS COVERAGE

CATEGORIES 04, 05, & 06 - MERCANTILE CONTENTS COVERAGE

An establishment in which the principal business is the retail or wholesale buying or selling of goods, wares and merchandise. Included are bars, grills and restaurants.

CATEGORY 04 - MERCANTILE CONTENTS COVERAGE (HIGH)

Occupancy classes 0511, 0520, 0550, 0562, 0566, 0567, 0581, 0702, 1180, 1185, 1190, 1200, 1211, 1212, 1213, 1251, 1300, 1400, 1751, or 1752

CATEGORY 05 - MERCANTILE CONTENTS COVERAGE (MEDIUM)

Occupancy classes not listed in Category 04 or Category 06

CATEGORY 06 - MERCANTILE CONTENTS COVERAGE (LOW)

Occupancy classes 0512, 0541, 0563, 0921, 0922, 0933, 0940, or 1230

CATEGORY 07 - MOTEL & HOTEL CONTENTS COVERAGE

Hotels, motels, motor inns, motor lodges, tourist courts and similar risks whose business is principally the providing of lodging accommodations for transients, including premises and operations necessary or incidental to such lodging accommodations.

TABLE 37

SPECIAL CAUSES OF LOSS CATEGORY DEFINITIONS

CATEGORIES 08 & 09 - INSTITUTIONAL CONTENTS COVERAGE

An establishment principally occupied by an educational, religious, sanitary, charitable or governmental organization. It does not include buildings containing manufacturing of any kind, or sale, storage, processing, or repair of clothing or furniture, or paper or rag storage, or sorting or supplying of food or lodging to itinerants.

CATEGORY 08 - INSTITUTIONAL CONTENTS COVERAGE (HIGH)

Occupancy classes 0701, 0702, 0851, 0921, 1051, or 1052

CATEGORY 09 - INSTITUTIONAL CONTENTS COVERAGE (LOW)

Occupancy classes not listed in Category 08

CATEGORIES 10 & 11 - INDUSTRIAL & PROCESSING CONTENTS COVERAGE

An establishment in which the principal activity is the manufacturing of goods and wares or processing of raw materials or finished goods.

CATEGORY 10 - INDUSTRIAL & PROCESSING CONTENTS COVERAGE (HIGH)

Occupancy classes 1252, 1300, 1400, 1700, 2000, 2059, 2150, 2200, 2250, 2300, 2350, 2400, 2459, 2550, 2600, 2750, 2800, 2805, 3009, 3409, 3809, 3959, or 4400

CATEGORY 11 - INDUSTRIAL & PROCESSING CONTENTS COVERAGE (LOW)

Occupancy classes not listed in Category 10

TABLE 37

SPECIAL CAUSES OF LOSS CATEGORY DEFINITIONS

CATEGORIES 12 & 13 - SERVICE CONTENTS COVERAGE

An establishment in which the principal operation is the providing of a personal or commercial service. Included are establishments providing entertainment or recreation; warehousing of property of others; and automobile risks, such as service, repair or garaging of automobiles and parking lots.

CATEGORY 12 - SERVICE CONTENTS COVERAGE (HIGH)

Occupancy classes 0520, 0542, 0545, 0550, 0567, 0702, 0755, 0831, 0832, 0911, 0912, 0913, 0921, 0931, 0932, 0934, 1213, or 4809

CATEGORY 13 - SERVICE CONTENTS COVERAGE (LOW)

Occupancy classes not listed in Category 12

CATEGORY 14 - CONTRACTOR CONTENTS COVERAGE

An establishment in which the principal operation is that of installation, construction, demolition or maintenance. This includes any owner/contractor, general contractor or sub-contractor whether or not he or she actually performs any part of such work or has employees on the site.

BASIC GROUP I

UNADJUSTED AGGREGATE LOSS COSTS, LOSSES, AND EXPERIENCE RATIOS

YEAR	TOTAL UNADJUSTED LOSS COSTS	TOTAL UNADJUSTED INCURRED LOSSES	EXPERIENCE RATIO
2013	63,605,882	75,820,404	1.192
2014	66,088,988	72,654,351	1.099
2015	66,817,403	70,947,895	1.062
2016	64,096,944	82,582,430	1.288
2017	59,304,668	50,486,456	0.851

BASIC GROUP II

UNADJUSTED AGGREGATE LOSS COSTS, LOSSES, AND EXPERIENCE RATIOS
_____

YEAR	TOTAL UNADJUSTED LOSS COSTS	TOTAL ** UNADJUSTED NON-HURRICANE INCURRED LOSSES	EXPERIENCE RATIO
2008	15,517,940	9,409,395	0.606
2009	15,611,848	13,093,407	0.839
2010	15,584,818	19,836,439	1.273
2011	15,291,680	24,421,868	1.597
2012	16,349,380	10,248,023	0.627
2013	18,049,167	10,346,452	0.573
2014	19,772,145	27,187,072	1.375
2015	21,600,622	12,249,163	0.567
2016	22,870,388	8,662,464	0.379
2017	23,202,545	13,907,045	0.599

** LOSSES INCURRED DURING THE MONTH OF A HURRICANE HAVE BEEN
   EXCLUDED AND REPLACED WITH AVERAGE NON-HURRICANE LOSSES.

SPECIAL CAUSES OF LOSS

UNADJUSTED AGGREGATE LOSS COSTS, LOSSES, AND EXPERIENCE RATIOS

YEAR	TOTAL UNADJUSTED LOSS COSTS	TOTAL UNADJUSTED INCURRED LOSSES	EXPERIENCE RATIO
2013	26,285,713	26,293,334	1.000
2014	28,626,479	42,979,905	1.501
2015	31,243,188	38,662,637	1.237
2016	34,386,332	24,027,901	0.699
2017	35,387,089	25,493,389	0.720

OVERVIEW

LOSS ADJUSTMENT EXPENSE FACTORS

OBJECTIVE	The reported indemnity losses must be loaded for any loss adjustment expenses (LAE) that are not reported in statistical detail to ISO.
PROPERTY COVERAGES	For the property coverages, only the incurred indemnity losses are reported to ISO under the Commercial Statistical Plan. All loss adjustment expenses must be loaded in. A factor representing the ratio of incurred losses plus all LAE to incurred losses was selected based on multistate financial data (see Table 41 for the underlying data).
EXPERIENCE INCLUDED	Fire and Allied Lines incurred loss and loss adjustment expense experience for 2012-2016 is displayed on Table 41. The experience is based on Insurance Expense Exhibit information compiled by A.M. Best. For Allied Lines, the loss adjustment expense ratios [Table 41, line (3)(b)] for several years are distorted by unusual catastrophe-related losses and loss adjustment expenses. The selected Allied Lines loss adjustment expense factor used for this review was selected after consideration of this distortion and based on a review of average loss adjustment expense ratios over a longer time period.
SELECTED FACTORS	The following factors have been used in this review to load incurred losses for all loss adjustment expenses:

Basic Group I	1.100
Basic Group II	1.125
Special Causes of Loss	1.125

TABLE 41

FIRE AND ALLIED LINES INSURANCE
COUNTRYWIDE LOSS ADJUSTMENT EXPENSE EXPERIENCE (A)

		2012	2013	2014	2015	2016	Selected
(1)	Fire						
	(a) Direct Losses Incurred	5,023,106	4,688,160	5,453,055	5,307,898	5,625,399	
	(b) Direct Loss Adjustment Expense Incurred	483,790	467,349	541,303	522,374	538,861	
(2)	Allied Lines						
	(a) Direct Losses Incurred	8,611,569	4,802,876	4,490,338	4,730,020	6,303,537	
	(b) Direct Loss Adjustment Expense Incurred	807,626	702,307	617,997	650,322	701,782	
(3)	Loss Adjustment Expense as a Ratio to Losses						
	(a) Fire (1b) / (1a)	9.6%	10.0%	9.9%	9.8%	9.6%	10.0%
	(b) Allied Lines (2b) / (2a)	9.4%	14.6%	13.8%	13.7%	11.1%	12.5%

NOTE: All dollar amounts are displayed in thousands.

(A)   Items (1) and (2) are based on Insurance Expense Exhibit information compiled by A. M. Best.

PURPOSE

This document provides discussion and analysis of changes in the experience and adjustments used to derive the advisory prospective loss cost level indications.

MONOLINE
INDICATIONS

The indicated statewide monoline changes are:

Subline	Current Review	Prior Review	
		Indicated	Selected
Basic Group I	-1.0%	+6.2%	+5.9%
Basic Group II	-2.2%	-2.5%	-2.5%
Special Causes of Loss	+6.1%	+7.3%	+7.3%
All Coverages Combined	+1.1%	+5.0%	+4.9%

The prior review indications were filed and implemented. There has been a change in the Implicit Package Modification Factors since the prior review.

Special Causes of Loss (SCL) Indications on an Old Category Basis

Given below are the current SCL review indications on an old category basis for those companies that have not yet adopted the current SCL rating that was introduced in conjunction with the limit of insurance curves.

Category	Loss Cost Change
01 Buildings	+7.6%
02 Apartment and Condominium Contents	-7.4%
03 Office Contents	+4.9%
04 Mercantile, Motel-Hotel, and Institutional Contents	+9.2%
05 Service, Industrial-Processing and Contractors Contents	-2.4%
Personal Property (Contents) Excluding Theft	+4.5%

Given below is a brief discussion and comparison of the multistate factors (premium and loss trend, loss adjustment expense, and loss development) used in this year's and last year's reviews. The discussion is followed by a state specific analysis by subline and a list of events occurring during the experience period in this state that have been identified as catastrophes by ISO's Property Claims Services.

| DATA QUALITY | Statistical plan data reported to ISO is first processed through a system of rigorous automated data verification processes so that only valid data is used for ratemaking. Subsequent to this initial data submission review, additional analyses involving an even more customized data review for this line were performed by staff. During these processes, various data records were excluded from the review, corrected or adjusted. Specifically, an on-leveling approach was used to determine aggregate loss costs at current level rather than the extension-of-exposures method for some reported exposures, and various loss cost multipliers have been adjusted prior to their use in the calculations. The ISO staff responsible for this loss cost review also reviewed the data for reasonableness. |

LOSS ADJUSTMENT EXPENSE/LOSS DEVELOPMENT FACTORS

Loss adjustment expense factors have remained the same at 1.100 for BG I and 1.125 for BG II and SCL. Loss development factors changed slightly but are still relatively close to unity for all sublines and years.

LOSS TREND FACTORS

Given below is a comparison of the external trend factors, loss trend adjustments (LTAs) and total loss trend factors for the current and prior reviews.

External Trend
The prospective annual rates of change based on the external indices (Xactware for Buildings, PPI for Contents, and IMSEP/RSALES for Time Element) for the current and prior year reviews are:

Coverage	Current Review	Prior Review	Change
Buildings	+2.5%	+2.8%	-0.3%
Contents	+1.2%	+0.8%	+0.4%
Time Element	-0.1%	-1.0%	+0.9%

Loss Trend Adjustments (LTAs)
The loss trend adjustment factors underlying the current and prior reviews are:

	Current Review			Prior Review		
Subline	Bldg.	Cnts.	TE	Bldg.	Cnts.	TE
Basic Group I	-0.4%	+0.5%	+2.5%	-0.7%	+0.4%	+1.9%
Basic Group II	+0.5%	+0.8%	+2.2%	+0.5%	+0.5%	+1.5%
Special Causes of Loss	+0.3%	+0.5%	+2.5%	+0.3%	+0.9%	+1.9%

Total Annual Loss Trend
The prospective total annual loss trend factors are given below and are calculated as the product of the external trend factors and loss trend adjustment factors.

	Current Review			Prior Review		
Subline	Bldg.	Cnts.	TE	Bldg.	Cnts.	TE
Basic Group I	+2.1%	+1.7%	+2.4%	+2.1%	+1.2%	+0.9%
Basic Group II	+3.0%	+2.0%	+2.8%	+3.3%	+1.3%	+0.5%
Special Causes of Loss	+2.8%	+1.7%	+2.4%	+3.1%	+1.7%	+0.9%

CHANGE IN AVERAGE LOSS TREND	The changes in average loss trend from current year to prior year are:

Subline	Change in Average Trend
Basic Group I	+2.1%
Basic Group II	+1.8%
Special Causes of Loss	+0.5%

Average loss trend is calculated as a weighted average of the total loss trend from the midpoint of the experience year to one year past the assumed effective date for each year in the experience period based on the statewide loss cost level review year weights (.10, .15, .20, .25, .30 for BG I and SCL, and 0.10 for all years for BG II). Total loss trend includes the effect of Current Cost Factors to bring losses to the latest level of external cost information, Loss Projection Factors to project from the external cost level to one year past the assumed effective date, and Loss Trend Adjustment factors over the entire trend period.

PREMIUM TREND FACTORS

The prospective annual premium trend factors, based on annual changes in amounts of insurance written, for the current and prior reviews are:

Coverage	Current Review	Prior Review	Change
Buildings	+2.0%	+2.2%	-0.2%
Contents	+1.7%	+1.9%	-0.2%
Time Element	+1.0%	+1.2%	-0.2%

NET TREND

The prospective annual net (loss ÷ premium) trend factors for the current and prior year reviews are:

Subline	Current Review	Prior Review	Change
Basic Group I	+0.2%	-0.3%	+0.5%
Basic Group II	+0.8%	+0.5%	+0.3%
Special Causes of Loss	+0.5%	+0.3%	+0.2%

BASIC GROUP I

The statewide five-year weighted average experience ratio, before credibility weighting, decreased by 4.5%, from 0.983 in the prior review to 0.939 in the current review. The decrease reflects the implementation of last year's 5.9% monoline increase, a higher than average experience ratio of 1.144 for 2012 leaving the experience period and a a lower than average experience ratio of 0.775 for 2017 entering the experience period. It was partially off set by a 2.4% increase in average Loss Trend Factors and a 5.5% decrease in average Implicit Package Modification Factors (IPMFs). The monoline relativity decreased by 3.8%.

Statewide Loss Cost Level Review

	Current Review	Prior Review	Ratio
Weighted Experience Ratio	0.939	0.983	0.955
Credibility	0.596	0.607	0.982
Expected Experience Ratio	1.002	0.997	1.005
Coverage Change	0.964	0.989	0.975
Monoline Relativity	1.027	1.068	0.962
Monoline Change	0.990	1.062	0.932

BASIC GROUP II   The statewide ten-year average non-hurricane experience ratio, before credibility weighting increased by 1.0%, from 0.972 in the prior review to 0.982 in the current review. The increase is due to the implementation of last year's 2.5% monoline decrease, and a higher than average ratio of 1.055 for 2017 entering the experience period. It was partially off set by a higher than average adjusted experience ratio of 1.304 for 2006 leaving the experience period. The monoline relativity increased by 1.3% since the prior review.

Statewide Loss Cost Level Review

	Current Review	Prior Review	Ratio
Weighted Experience Ratio	0.982	0.972	1.010
Credibility	0.845	0.824	1.025
Expected Experience Ratio	1.008	1.005	1.003
Coverage Change	0.986	0.978	1.008
Monoline Relativity	1.0146	1.0018	1.013
Monoline Change	1.000	0.980	1.020
Monoline Change incl. Hurricane	0.978	0.975	1.003

SPECIAL CAUSES OF LOSS   The statewide five-year weighted experience ratio, before credibility weighting, decreased by 3.5%, from 0.987 in the prior review to 0.952 in the current review. The decrease reflects the implementation of last year's +7.3% monoline change and a lower than average experience ratio of 0.857 for 2017 entering the experience period. It was partially off set by a 7.8% decrease in average IPMFs. The monoline relativity increased by 0.8%.

Statewide Loss Cost Level Review

	Current Review	Prior Review	Ratio
Weighted Experience Ratio	0.952	0.987	0.965
Credibility	0.604	0.635	0.951
Expected Experience Ratio	1.005	1.003	1.002
Coverage Change	0.973	0.993	0.980
Monoline Relativity	1.090	1.081	1.008
Monoline Change	1.061	1.073	0.989

PROPERTY CLAIMS SERVICES INFORMATION   The following events have been identified by Property Claims Services as catastrophes occurring in this state from 1/1/1990 through 12/31/2017.

Date From	Date To	Perils
10/18/90	10/19/90	Wind, Hail, Tornadoes, Flooding
12/18/90	12/25/90	Wind, Hail, Tornadoes, Flooding, Snow, Freezing
3/26/91	3/28/91	Wind, Hail, Tornadoes, Flooding
4/8/91	4/10/91	Wind, Hail, Tornadoes, Flooding
7/6/92	7/15/92	Wind, Hail, Tornadoes, Flooding
11/12/92	11/13/92	Wind, Flooding
3/4/93	3/5/93	Wind, Flooding, Ice, Snow
3/11/93	3/14/93	Wind, Hail, Tornadoes, Freezing, Ice, Snow

PROPERTY	6/7/93	6/9/93	Wind, Hail, Tornadoes, Flooding
CLAIMS SERVICES	7/28/93	7/29/93	Wind, Hail
INFORMATION	9/27/93	9/27/93	Wind, Hail, Tornadoes
(cont'd)	1/6/94	1/9/94	Wind, Snow, Ice, Freezing
	1/14/94	1/16/94	Wind, Snow, Ice, Freezing
	1/17/94	1/20/94	Wind, Snow, Ice, Freezing
	1/27/94	1/29/94	Wind, Ice, Flooding
	2/10/94	2/12/94	Wind, Snow, Ice, Freezing, Flooding
	3/1/94	3/3/94	Wind, Snow, Ice, Freezing, Flooding
	6/29/94	6/29/94	Wind, Hail, Tornadoes, Flooding
	7/14/94	7/17/94	Wind, Hail, Tornadoes, Flooding
	7/26/94	7/28/94	Wind, Hail, Tornadoes, Flooding
	8/12/94	8/14/94	Wind, Tornadoes, Flooding
	9/25/94	9/25/94	Wind, Hail, Tornadoes, Flooding
	4/9/95	4/11/95	Wind, Hail, Flooding
	5/22/95	5/25/95	Wind, Hail, Tornadoes, Flooding
	5/27/95	5/30/95	Wind, Hail, Tornadoes, Flooding
	7/13/95	7/16/95	Wind, Hail, Tornadoes, Flooding
	11/11/95	11/12/95	Wind, Hail, Tornadoes
	1/6/96	1/9/96	Wind, Snow, Ice, Freezing, Flooding
	1/12/96	1/13/96	Wind, Snow, Ice, Freezing
	1/17/96	1/20/96	Wind, Snow, Hail, Tornadoes, Flooding
	1/26/96	1/28/96	Wind, Hail, Flooding
	1/31/96	2/6/96	Wind, Snow, Ice, Tornadoes, Flooding
	2/24/96	2/25/96	Wind
	3/16/96	3/21/96	Wind, Hail, Tornadoes, Flooding
	5/3/96	5/9/96	Wind, Hail, Tornadoes, Flooding
	6/22/96	6/22/96	Wind, Hail, Tornadoes, Flooding
	9/5/96	9/8/96	Hurricane Fran - Wind, Tornadoes, Flooding
	10/18/96	10/21/96	Wind, Flooding
	3/4/97	3/6/97	Wind, Hail, Tornadoes, Flooding
	3/31/97	4/1/97	Wind, Snow, Flooding
	5/2/97	5/3/97	Wind, Hail, Tornadoes, Flooding
	5/17/97	5/19/97	Wind, Hail, Tornadoes
	7/18/97	7/18/97	Wind, Hail, Tornadoes, Flooding
	8/15/97	8/17/97	Wind, Hail, Tornadoes, Flooding
	11/1/97	11/2/97	Wind, Hail, Tornadoes, Flooding
	12/5/97	12/7/97	Wind, Flooding
	2/2/98	2/5/98	Hail, Snow, Wind, Flooding, Tornadoes
	5/30/98	6/1/98	Hail, Wind, Tornadoes
	6/2/98	6/2/98	Hail, Wind, Flooding, Tornadoes
	6/11/98	6/15/98	Hail, Wind, Flooding, Tornadoes
	6/24/98	6/30/98	Hail, Wind, Flooding, Tornadoes
	8/22/98	8/25/98	Hail, Wind, Tornadoes
	9/6/98	9/8/98	Hail, Wind, Flooding, Tornadoes
	1/1/99	1/4/99	Hail, Snow, Wind, Flooding, Freezing
	1/13/99	1/16/99	Ice, Hail, Snow, Wind, Flooding, Freezing
	1/17/99	1/18/99	Hail, Wind, Flooding, Tornadoes
	7/28/99	7/29/99	Hail, Wind, Flooding
	7/30/99	8/1/99	Hail, Wind
	9/14/99	9/17/99	Hurricane Floyd - Wind, Flooding, Tornadoes

PROPERTY CLAIMS SERVICES INFORMATION (cont'd)	1/14/00	1/19/00	Ice, Snow, Wind, Freezing
	5/8/00	5/11/00	Hail, Wind, Flooding, Tornadoes
	5/12/00	5/14/00	Hail, Wind, Flooding, Tornadoes
	5/17/00	5/19/00	Hail, Wind, Flooding, Tornadoes
	6/2/00	6/3/00	Hail, Wind, Flooding, Tornadoes
	6/11/00	6/11/00	Hail, Wind, Flooding, Tornadoes
	12/11/00	12/12/00	Snow, Wind, Freezing
	12/16/00	12/17/00	Hail, Wind, Flooding, Tornadoes
	4/6/01	4/12/01	Hail, Wind, Flooding, Tornadoes
	6/11/01	6/17/01	Tropical Storm Allison - Wind, Flooding
	9/24/01	9/24/01	Hail, Wind, Tornadoes
	3/8/02	3/10/02	Hail, Tornadoes, Wind
	4/27/02	5/3/02	Flooding, Hail, Tornadoes, Wind
	5/30/02	6/1/02	Flooding, Hail, Tornadoes, Wind
	8/2/02	8/3/02	Flooding, Hail, Tornadoes, Wind
	11/9/02	11/10/02	Flooding, Hail, Tornadoes, Wind
	12/4/02	12/5/02	Freezing, Ice, Snow, Wind
	1/13/03	1/25/03	Freezing, Ice, Snow, Wind
	2/14/03	2/18/03	Flooding, Freezing, Ice, Snow, Wind
	2/21/03	2/23/03	Flooding, Hail, Tornadoes, Wind
	7/4/03	7/10/03	Flooding, Hail, Tornadoes, Wind
	7/21/03	7/23/03	Flooding, Hail, Tornadoes, Wind
	8/14/03	8/17/03	Power Outage
	9/18/03	9/19/03	Hurricane Isabel - Flooding, Wind
	10/14/03	10/16/03	Flooding, Wind
	11/12/03	11/14/03	Flooding, Hail, Tornadoes, Wind
	1/9/04	1/12/04	Freezing, Wind
	1/14/04	1/17/04	Freezing, Ice, Snow, Wind
	5/17/04	5/19/04	Flooding, Hail, Tornadoes, Wind
	5/21/04	5/27/04	Flooding, Hail, Tornadoes, Wind
	6/8/04	6/9/04	Flooding, Hail, Tornadoes, Wind
	7/12/04	7/14/04	Flooding, Hail, Tornadoes, Wind
	8/9/04	8/12/04	Flooding, Hail, Tornadoes, Wind
	9/15/04	9/21/04	Hurricane Ivan - Flooding, Tornadoes, Wind
	9/15/04	9/29/04	Hurricane Jeanne - Flooding, Tornadoes, Wind
	1/4/05	1/6/05	Flooding, Freezing, Ice, Snow, Wind
	1/22/05	1/23/05	Freezing, Ice, Snow, Wind
	3/30/05	4/3/05	Flooding, Hail, Tornadoes, Wind
	10/7/05	10/15/05	Flooding, Wind
	1/14/06	1/15/06	Flooding, Freezing, Wind
	1/18/06	1/19/06	Freezing, Ice, Wind
	6/25/06	6/28/06	Flooding, Wind
	7/17/06	7/19/06	Flooding, Hail, Wind
	11/30/06	12/3/06	Freezing, Hail, Ice, Snow, Tornadoes, Wind
	2/13/07	2/15/07	Flooding, Freezing, Ice, Snow, Wind
	4/13/07	4/17/07	Flooding, Hail, Tornadoes, Wind
	6/7/07	6/9/07	Flooding, Hail, Tornadoes, Wind
	8/7/07	8/9/07	Flooding, Hail, Tornadoes, Wind
	3/8/08	3/9/08	Flooding, Hail, Wind
	6/10/08	6/11/08	Hail, Wind
	9/12/08	9/14/08	Hurricane Ike - Flooding, Tornadoes, Wind

PROPERTY	2/10/09	2/13/09	Flooding, Hail, Tornadoes, Wind
CLAIMS SERVICES	6/10/09	6/18/09	Flooding, Hail, Tornadoes, Wind
INFORMATION	2/4/10	2/6/10	Ice, Snow, Wind
(cont'd)	2/9/10	2/11/10	Ice, Snow, Wind
	2/23/10	2/28/10	Flooding, Freezing, Ice, Snow, Wind
	3/13/10	3/15/10	Flooding, Hail, Wind
	5/7/10	5/8/10	Hail, Tornadoes, Wind
	5/12/10	5/16/10	Flooding, Hail, Tornadoes, Wind
	6/21/10	6/24/10	Flooding, Hail, Tornadoes, Wind
	7/20/10	7/25/10	Flooding, Hail, Tornadoes, Wind
	9/29/10	10/1/10	Flooding, Tornadoes, Wind
	1/31/11	2/3/11	Flooding, Freezing, Ice, Snow, Wind
	2/24/11	2/25/11	Flooding, Hail, Tornadoes, Wind
	3/8/11	3/11/11	Flooding, Hail, Tornadoes, Wind
	4/14/11	4/16/11	Flooding, Hail, Tornadoes, Wind
	5/20/11	5/27/11	Flooding, Hail, Tornadoes, Wind
	8/26/11	8/28/11	Hurricane Irene - Flooding, Tornadoes, Wind
	9/3/11	9/9/11	Flooding, Tornadoes, Wind
	10/28/11	10/31/11	Freezing, Ice, Snow, Wind
	5/25/12	5/30/12	Flooding, Hail, Tornadoes, Wind
	7/2/12	7/4/12	Flooding, Hail, Wind
	7/26/12	7/27/12	Flooding, Hail, Tornadoes, Wind
	9/7/12	9/8/12	Flooding, Hail, Tornadoes, Wind
	10/28/12	10/31/12	Hurricane Sandy - Flooding, Snow, Wind
	1/29/13	1/31/13	Flooding, Tornadoes, Wind
	6/24/13	6/27/13	Flooding, Hail, Tornadoes, Wind
	7/9/13	7/11/13	Flooding, Hail, Tornadoes, Wind
	7/19/13	7/21/13	Flooding, Hail, Tornadoes, Wind
	1/3/14	1/5/14	Freezing, Ice, Snow, Wind
	1/5/14	1/8/14	Freezing, Ice, Snow, Wind
	2/4/14	2/6/14	Flooding, Freezing, Ice, Snow, Wind
	2/11/14	2/14/14	Freezing, Ice, Wind
	4/27/14	5/1/14	Flooding, Hail, Tornadoes, Wind
	5/18/14	5/23/14	Flooding, Hail, Wind
	7/7/14	7/9/14	Flooding, Hail, Wind
	2/14/15	2/15/15	Freezing, Ice, Snow, Wind
	2/16/15	2/22/15	Freezing, Ice, Snow, Wind
	3/3/15	3/5/15	Flooding, Freezing, Ice, Snow, Wind
	4/7/15	4/10/15	Flooding, Hail, Tornadoes, Wind
	4/18/15	4/21/15	Flooding, Hail, Tornadoes, Wind
	6/21/15	6/25/15	Flooding, Hail, Tornadoes, Wind
	6/29/15	6/30/15	Flooding, Hail, Tornadoes, Wind
	1/22/16	1/24/16	Flooding, Freezing, Ice, Snow, Wind
	2/13/16	2/15/16	Freezing, Ice, Snow, Wind
	2/22/16	2/25/16	Flooding, Hail, Tornadoes, Wind
	4/2/16	4/3/16	Hail, Wind
	7/30/16	8/1/16	Flooding, Hail, Wind
	2/25/17	2/25/17	Hail, Tornadoes, Wind
	4/28/17	5/1/17	Flooding, Hail, Tornadoes, Wind

PROPERTY
CLAIMS SERVICES
INFORMATION
(cont'd)

ISO's Property Claims Services defines a catastrophe as an event that:

- reaches a threshold dollar amount of total insured property losses, and
- affects a significant number of property and casualty insurance policyholders and property and casualty insurers.

From 1949 to 1981, the threshold was $1 million. From 1982 to 1996, it was $5 million, and since January 1, 1997, the threshold has been $25 million.

All of the events listed above may not have resulted in unexpected loss experience for commercial property coverage in this state since catastrophes are defined based on total insured property losses spreading across state lines and lines of business.

For more information concerning Catastrophe Claims Services, please see "Persons to Contact" in the circular cover letter.