

RULES – INFORMATION

APRIL 19, 2019

COMMERCIAL MULTIPLE LINE

LI-ML-2019-010

**GEORGIA COMMERCIAL PACKAGE POLICY PACKAGE
MODIFICATION FACTOR ANALYSIS FURNISHED FOR
INFORMATION; EXCEL WORKBOOK NEWLY INCLUDED**

KEY MESSAGE

This analysis is provided for your information. We are NOT revising the current package modification factors based on this analysis.

BACKGROUND

In circular [LI-ML-2019-004](#), we provided you with information about the package modification factor review.

ISO ACTION

We are:

- NOT making a submission to the Insurance Department based on this analysis.
- NOT implementing any changes, at this time, to the current package modification factors for this jurisdiction.

COMPANY ACTION

You may wish to evaluate your package modification factor needs. The methods described in the attached analysis are based on the judgments of Insurance Services Office, Inc. You should evaluate and substitute your own judgments and procedures where appropriate, and consider your own loss experience when determining your package modification factor needs.

If you decide to independently file a package modification factor revision, you must comply with the applicable regulatory filing requirements.

REFERENCE(S)

[LI-ML-2019-004](#) (04/03/2019) Commercial Package Policy Experience Reviewed By Staff

ATTACHMENT(S)

- Informational Analysis
- 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 rule 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.

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GEORGIA
ADVISORY PACKAGE MODIFICATION FACTOR REVIEW
COMMERCIAL PACKAGE POLICY

EXECUTIVE SUMMARY

PURPOSE

This document:

- presents a review of advisory Package Modification Factors (PMFs). PMFs are relativity factors used to adjust monoline loss costs as appropriate for multiline risks.
- provides the analyses used to derive these advisory PMFs.

PMF CHANGES

The proposed Commercial Package Policy (CPP) Package Modification Factor changes are:

<u>Type of Policy</u>	<u>Property</u>	<u>Liability</u>	<u>Prop. & Liab. Total</u>
Motel/Hotel	0.0%	-6.0%	-4.4%
Apartment	+3.1%	+2.1%	+2.8%
Office	+6.5%	-7.4%	-2.2%
Mercantile	-6.5%	-1.2%	-3.5%
Institutional	0.0%	0.0%	0.0%
Services	+6.4%	-7.2%	-0.5%
Indust./Proc.	0.0%	-1.1%	-0.6%
Contractors	<u>-2.0%</u>	<u>+1.0%</u>	<u>+0.6%</u>
Statewide	-0.2%	-2.1%	-1.3%

INDICATED
VS. CAPPED

Indicated PMF changes are based on standard ISO methodology. Differences between indicated and capped PMF changes are caused by rounding each indicated PMF to the nearest one percent and applying an upper cap of 1.00, where necessary.

GEORGIA
ADVISORY PACKAGE MODIFICATION FACTOR REVIEW
COMMERCIAL PACKAGE POLICY

EXECUTIVE SUMMARY

HISTORICAL
SOURCE DATA

The data used in this review is from ISO reporting companies for:

- Basic Group I: five fiscal accident years ending 12/31/17.
- Basic Group II: ten fiscal accident years ending 12/31/17.
- Special Causes of Loss: five fiscal accident years ending 12/31/17.
- Crime: calendar year ending 06/30/16.
- Inland Marine: five calendar accident years ending 12/31/16.
- Fidelity: policy year ending 12/31/15.
- Owners, Landlords, and Tenants: five fiscal accident years ending 03/31/18.
- Manufacturers and Contractors: five fiscal accident years ending 03/31/18.
- Products: three calendar accident years ending 12/31/17.
- Local Products and Completed Operations: three calendar accident years ending 12/31/17.

PRIOR ISO
REVISIONS

The latest revisions in this state are:

<u>Filing</u>	ML-17-RLA1	ML-13-RLA1	ML-09-RLA1
<u>Dates</u>			
Implemented	12/01/17	02/01/14	04/01/10
<u>Changes</u>			
Indicated	+0.7%	+4.0%	+4.3%
Filed	+0.8%	+4.1%	+4.3%
Implemented	+0.8%	+4.1%	+4.3%

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ADVISORY PACKAGE MODIFICATION FACTOR REVIEW
COMMERCIAL PACKAGE POLICY

EXECUTIVE SUMMARY

ADJUSTMENTS
TO REPORTED
EXPERIENCE

Standard actuarial procedures have been used in the reviews underlying the calculation of the PMFs, including adjusting the fire and liability losses to ultimate settlement level and, for all coverages, reflecting all loss adjustment expenses and trend. Specific procedures vary by subline.

TEN LARGEST
GROUPS IN
ISO DATA BASE

Insurers are listed in descending order based on the percent of statewide written premium volume from Annual Statement Page 15 for the year ending 12/31/17 for the Annual Statement Line of Business (ASLOB) indicated.

COMMERCIAL MULTI PERIL (ASLOB 51 & 52)

1. Travelers Indemnity Company
 2. Cincinnati Insurance Company
 3. Liberty Mutual Insurance Company
 4. Hartford Accident and Indemnity Company
 5. Tokio Marine Companies
 6. Nationwide Mutual Insurance Company
 7. Hanover Insurance Company
 8. Westfield Insurance Company
 9. Continental Casualty Company
 10. Westguard Insurance Company
-

SIZE OF ISO
DATA BASE

The market share of ISO participating insurers as measured by Annual Statement Page 15 written premium for the year ending 12/31/17 is:

Commercial Multi Peril (ASLOB 51 & 52). 51.9%.

ADDITIONAL
SUPPORTING
MATERIAL

Additional supporting material underlying the calculation of the experience review indications used in this PMF analysis may be found in the respective monoline experience review documents for each line.

GEORGIA
ADVISORY PACKAGE MODIFICATION FACTOR REVIEW
COMMERCIAL PACKAGE POLICY

EXECUTIVE SUMMARY

COMPANY DECISION

We encourage each insurer to decide independently whether the judgments made and the procedures or data used by ISO in developing the PMFs contained herein are appropriate for your 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 a 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 projection based on the aggregate data.

Some calculations included in this document involve areas of ISO staff judgment. Each company should carefully review and evaluate whether the ISO selected PMFs are appropriate for its use.

The material has been developed exclusively by the staff of Insurance Services Office, Inc.

COMMERCIAL PACKAGE POLICY

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COMMERCIAL PACKAGE POLICY

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COMMERCIAL PACKAGE POLICY METHODOLOGY OVERVIEW

OBJECTIVE

A Commercial Package Policy (CPP) is essentially a combination of monoline coverages. CPP pricing employs monoline loss costs modified by Package Modification Factors (PMFs). These factors vary by the eight CPP types of policy and are reviewed annually. Monoline and multiline experience are combined and reviewed via a monoline/multiline relativity analysis. The resulting indicated PMFs represent the loss cost for a CPP relative to that for monoline policies providing the same coverages.

STEP 1: THE RELATIVITY ANALYSES

Each line of insurance develops indicated changes to monoline and multiline aggregate loss costs based on an experience ratio relativity analysis for that coverage. The monoline indication represents the needed change to monoline loss costs. The multiline indication represents the needed change to multiline aggregate loss costs, which is implemented through changes to the PMFs. For this PMF analysis, multiline indications are developed for each line of insurance and Type of Policy. Relativity analyses are explained in Section B.

STEP 2: CALCULATION OF THE PMFs

The procedure described above generates indicated Implicit PMFs (IPMFs) which vary by the various lines of insurance and by type of policy. IPMFs represent what the PMF would be for the CPP risk if only a single coverage were written. For each Type of Policy, IPMFs are weighted by CPP aggregate loss costs to determine the indicated property and liability PMFs. These PMFs may be capped, or rounded to the nearest one percent, and certain component IPMFs appropriately adjusted for this change. These calculations are explained in the remainder of Section A.

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TABLE 1
COMMERCIAL PACKAGE POLICY

SUMMARY OF THIS REVIEW

The display below summarizes the review and shows the capped Package Modification Factors for Property and Liability. For each type of risk, the PMFs are determined to be those factors which when applied to the monoline loss costs produce the appropriate CPP aggregate loss cost level as determined by an analysis of the CPP experience.

TYPE OF POLICY	PROPERTY PMFS			LIABILITY PMFS			PROP. & LIAB. TOTAL
	CURRENT	CAPPED	% CHANGE	CURRENT	CAPPED	% CHANGE	% CHANGE
MOTEL/HOTEL (31)	1.00	1.00	0.0%	1.00	0.94	-6.0%	-4.4%
APARTMENT (32)	0.97	1.00	3.1%	0.96	0.98	2.1%	2.8%
OFFICE (33)	0.93	0.99	6.5%	0.94	0.87	-7.4%	-2.2%
MERCANTILE (34)	0.93	0.87	-6.5%	0.85	0.84	-1.2%	-3.5%
INSTITUTION (35)	1.00	1.00	0.0%	1.00	1.00	0.0%	0.0%
SERVICES (36)	0.94	1.00	6.4%	0.97	0.90	-7.2%	-0.5%
IND/PROC (37)	0.85	0.85	0.0%	0.88	0.87	-1.1%	-0.6%
CONTRACTORS (38)	0.98	0.96	-2.0%	0.98	0.99	1.0%	0.6%
STATEWIDE			-0.2%			-2.1%	-1.3%

GEORGIA
TABLE 2
COMMERCIAL PACKAGE POLICY
CALCULATION OF REVISED CPP PACKAGE MODIFICATION FACTORS (PMF)

MOTEL/HOTEL (31) *****	(1) AGGREG- ATE LOSS COSTS	(2) CURRENT IMPLICIT PMF	(3) NET INDICATION	(4) INDIC. PMF	(5) CAPPED PMF
<u>COVERAGE</u>					
PROPERTY-					
BASIC GRP I	757,546	0.886	-5.9%	0.834	0.786
BASIC GRP II	1,170,964	1.367	9.7	1.500	1.414
SP CAUSE/LOSS	414,012	0.700	8.4	0.759	0.715
*CRIME	13,575	0.909	0.0	0.909	0.909
*INL. MAR.	15,858	0.910	0.0	0.910	0.910
*FIDELITY	34,242	1.000	0.0	1.000	1.000
<u>TOTAL</u>	<u>2,406,197</u>	<u>1.00</u>	<u>5.9%</u>	<u>1.059</u>	<u>1.00</u>
LIABILITY-					
OL&T	6,704,967	1.000	-8.5%	0.915	0.936
<u>TOTAL</u>	<u>6,704,967</u>	<u>1.00</u>	<u>-8.5%</u>	<u>0.915</u>	<u>0.94</u>
-----	-----	-----	-----	-----	-----
PROP. & LIAB. TOTAL	9,111,164		-4.7%		

APARTMENT (32) *****	(1) AGGREG- ATE LOSS COSTS	(2) CURRENT IMPLICIT PMF	(3) NET INDICATION	(4) INDIC. PMF	(5) CAPPED PMF
<u>COVERAGE</u>					
PROPERTY-					
BASIC GRP I	2,284,769	0.739	-3.5%	0.713	0.711
BASIC GRP II	1,577,493	1.028	17.9	1.212	1.208
SP CAUSE/LOSS	1,935,941	1.500	-3.2	1.452	1.447
*CRIME	1,953	0.909	0.0	0.909	0.909
*INL. MAR.	1,705	0.910	0.0	0.910	0.910
*FIDELITY	12,647	1.000	0.0	1.000	1.000
<u>TOTAL</u>	<u>5,814,508</u>	<u>0.97</u>	<u>3.5%</u>	<u>1.004</u>	<u>1.00</u>
LIABILITY-					
OL&T	2,217,832	0.957	1.1%	0.968	0.977
<u>TOTAL</u>	<u>2,217,832</u>	<u>0.96</u>	<u>0.8%</u>	<u>0.968</u>	<u>0.98</u>
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PROP. & LIAB. TOTAL	8,032,340		2.7%		

* indicates coverage for which reviews are on a MULTISTATE basis.

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TABLE 2
COMMERCIAL PACKAGE POLICY
CALCULATION OF REVISED CPP PACKAGE MODIFICATION FACTORS (PMF)

OFFICE (33) *****	(1)	(2)	(3)	(4)	(5)
	AGGREGATE <u>LOSS COSTS</u>	CURRENT IMPLICIT <u>PMF</u>	NET <u>INDICATION</u>	INDIC. <u>PMF</u>	CAPPED <u>PMF</u>
COVERAGE					
PROPERTY-					
BASIC GRP I	1,614,918	0.847	-6.6%	0.791	0.813
BASIC GRP II	1,575,502	0.812	14.9	0.933	0.959
SP CAUSE/LOSS	1,914,791	1.168	2.8	1.201	1.235
*CRIME	14,441	0.909	0.0	0.909	0.909
*INL. MAR.	56,440	0.910	0.0	0.910	0.910
*FIDELITY	40,552	1.000	0.0	1.000	1.000
TOTAL	5,216,644	0.93	3.6%	0.963	0.99
LIABILITY-					
OL&T	8,157,730	0.952	-8.2%	0.874	0.874
M&C	553,150	0.775	3.6	0.803	0.803
TOTAL	8,710,880	0.94	-7.6%	0.868	0.87
-----	-----	-----	-----	-----	-----
PROP. & LIAB. TOTAL	13,927,524		-3.4%		
MERCANTILE (34) *****	(1)	(2)	(3)	(4)	(5)
	AGGREGATE <u>LOSS COSTS</u>	CURRENT IMPLICIT <u>PMF</u>	NET <u>INDICATION</u>	INDIC. <u>PMF</u>	CAPPED <u>PMF</u>
COVERAGE					
PROPERTY-					
BASIC GRP I	8,547,405	1.074	-16.7%	0.895	0.920
BASIC GRP II	4,948,936	0.837	5.1	0.880	0.905
SP CAUSE/LOSS	4,104,701	0.788	-9.7	0.712	0.732
*CRIME	60,090	0.909	0.0	0.909	0.909
*INL. MAR.	402,334	0.910	0.0	0.910	0.910
*FIDELITY	217,433	1.000	0.0	1.000	1.000
TOTAL	18,280,899	0.93	-9.3%	0.844	0.87
LIABILITY-					
OL&T	18,533,138	0.858	-1.4%	0.846	0.846
M&C	2,402,274	0.833	-5.9	0.784	0.784
LOCAL PRODUCT	797,559	0.917	0.1	0.918	0.918
*MULTI PRODUCT	1,902,483	0.832	2.5	0.853	0.853
TOTAL	23,635,454	0.85	-0.9%	0.842	0.84
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PROP. & LIAB. TOTAL	41,916,353		-4.6%		

* indicates coverage for which reviews are on a MULTISTATE basis.

GEORGIA
TABLE 2
COMMERCIAL PACKAGE POLICY
CALCULATION OF REVISED CPP PACKAGE MODIFICATION FACTORS (PMF)

INSTITUTION (35) *****	(1)	(2)	(3)	(4)	(5)
	AGGREGATE	CURRENT	NET	INDIC.	CAPPED
COVERAGE	<u>LOSS COSTS</u>	<u>IMPLICIT</u>	<u>INDICATION</u>	<u>PMF</u>	<u>PMF</u>
PROPERTY-		PMF			
BASIC GRP I	6,930,682	0.862	-6.3%	0.808	0.748
BASIC GRP II	10,245,699	1.127	12.8	1.271	1.177
SP CAUSE/LOSS	5,370,313	1.016	14.8	1.166	1.080
*CRIME	67,295	0.909	0.0	0.909	0.909
*INL. MAR.	46,601	0.910	0.0	0.910	0.910
*FIDELITY	196,790	1.000	0.0	1.000	1.000
TOTAL	22,857,380	1.00	7.9%	1.079	1.00
LIABILITY-					
OL&T	7,310,962	1.023	-8.9%	0.932	1.016
M&C	170,705	0.552	4.2	0.575	0.627
TOTAL	7,481,667	1.00	-8.3%	0.917	1.00
-----	-----	-----	-----	-----	-----
PROP. & LIAB. TOTAL	30,339,047		3.9%		

SERVICES (36) *****	(1)	(2)	(3)	(4)	(5)
	AGGREGATE	CURRENT	NET	INDIC.	CAPPED
COVERAGE	<u>LOSS COSTS</u>	<u>IMPLICIT</u>	<u>INDICATION</u>	<u>PMF</u>	<u>PMF</u>
PROPERTY-		PMF			
BASIC GRP I	5,418,301	1.083	-5.1%	1.028	1.053
BASIC GRP II	3,430,885	0.933	5.9	0.988	1.013
SP CAUSE/LOSS	2,282,125	0.726	21.4	0.881	0.903
*CRIME	32,185	0.909	0.0	0.909	0.909
*INL. MAR.	69,255	0.910	0.0	0.910	0.910
*FIDELITY	171,270	1.000	0.0	1.000	1.000
TOTAL	11,404,021	0.94	3.9%	0.976	1.00
LIABILITY-					
OL&T	5,819,541	1.005	-12.4%	0.880	0.880
M&C	4,619,014	0.888	-3.9	0.853	0.853
LOCAL PRODUCT	1,044,384	1.383	1.6	1.405	1.405
*MULTI PRODUCT	211,689	0.899	1.8	0.915	0.915
TOTAL	11,694,628	0.97	-7.0%	0.902	0.90
-----	-----	-----	-----	-----	-----
PROP. & LIAB. TOTAL	23,098,649		-1.6%		

* indicates coverage for which reviews are on a MULTISTATE basis.

GEORGIA
TABLE 2
COMMERCIAL PACKAGE POLICY
CALCULATION OF REVISED CPP PACKAGE MODIFICATION FACTORS (PMF)

IND/PROC (37) *****	(1)	(2)	(3)	(4)	(5)
	AGGREGATE <u>LOSS COSTS</u>	CURRENT IMPLICIT <u>PMF</u>	NET <u>INDICATION</u>	INDIC. <u>PMF</u>	CAPPED <u>PMF</u>
COVERAGE					
PROPERTY-					
BASIC GRP I	3,516,853	0.949	-0.4%	0.945	0.972
BASIC GRP II	2,008,053	0.884	-2.4	0.863	0.887
SP CAUSE/LOSS	1,483,977	0.645	-10.4	0.578	0.594
*CRIME	5,481	0.909	0.0	0.909	0.909
*INL. MAR.	10,661	0.910	0.0	0.910	0.910
*FIDELITY	111,182	1.000	0.0	1.000	1.000
TOTAL	7,136,207	0.85	-3.2%	0.823	0.85
LIABILITY-					
M&C	4,668,728	0.862	0.6	0.867	0.867
LOCAL PRODUCT	188,631	1.087	2.1	1.110	1.110
*MULTI PRODUCT	3,213,027	0.884	-2.3	0.864	0.864
TOTAL	8,070,386	0.88	-1.1%	0.870	0.87
-----	-----	-----	-----	-----	-----
PROP. & LIAB. TOTAL	15,206,593		-2.1%		
CONTRACTORS (38) *****	(1)	(2)	(3)	(4)	(5)
	AGGREGATE <u>LOSS COSTS</u>	CURRENT IMPLICIT <u>PMF</u>	NET <u>INDICATION</u>	INDIC. <u>PMF</u>	CAPPED <u>PMF</u>
COVERAGE					
PROPERTY-					
BASIC GRP I	985,250	0.791	-4.9%	0.752	0.774
BASIC GRP II	706,100	0.793	2.6	0.814	0.837
SP CAUSE/LOSS	1,560,645	1.333	-7.9	1.228	1.262
*CRIME	6,353	0.909	0.0	0.909	0.909
*INL. MAR.	5,272	0.910	0.0	0.910	0.910
*FIDELITY	130,681	1.000	0.0	1.000	1.000
TOTAL	3,394,301	0.98	-4.1%	0.939	0.96
LIABILITY-					
M&C	12,943,316	0.839	2.8	0.862	0.862
LOCAL PRODUCT	9,058,819	1.203	4.8	1.261	1.261
TOTAL	22,002,135	0.98	1.3%	0.993	0.99
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PROP. & LIAB. TOTAL	25,396,436		0.6%		

* indicates coverage for which reviews are on a MULTISTATE basis.

GEORGIA
TABLE 2
COMMERCIAL PACKAGE POLICY
CALCULATION OF REVISED CPP PACKAGE MODIFICATION FACTORS (PMF)

STATEWIDE *****	(1)	(2)	(3)	(4)	(5)
	AGGREGATE	CURRENT	NET	INDIC.	CAPPED
COVERAGE	<u>LOSS COSTS</u>	<u>IMPLICIT</u>	<u>INDICATION</u>	<u>PMF</u>	<u>PMF</u>
PROPERTY-		PMF			
BASIC GRP I	30,055,724	0.945	-8.1%	0.868	0.867
BASIC GRP II	25,663,632	0.980	9.2	1.071	1.049
SP CAUSE/LOSS	19,066,505	0.924	3.3	0.955	0.946
*CRIME	201,373	0.909	0.0	0.909	0.909
*INL. MAR.	608,126	0.910	0.0	0.910	0.910
*FIDELITY	914,797	1.000	0.0	1.000	1.000
TOTAL	76,510,157	0.951	0.8%	0.958	0.949
LIABILITY-					
OL&T	48,744,170	0.935	-5.8%	0.880	0.895
M&C	25,357,187	0.847	0.4	0.850	0.850
LOCAL PRODUCT	11,089,393	1.189	4.1	1.238	1.238
*MULTI PRODUCT	5,327,199	0.865	-0.4	0.862	0.862
TOTAL	90,517,949	0.932	-3.0%	0.904	0.912
-----	-----	-----	-----	-----	-----
PROP. & LIAB. TOTAL	167,028,106		-1.3%		

* indicates coverage for which reviews are on a MULTISTATE basis.

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TABLE 2

COMMERCIAL PACKAGE POLICY

COMBINED PMFs

<u>TYPE OF POLICY</u>	<u>CURRENT COMBINED</u>	<u>INDICATED COMBINED</u>	<u>CAPPED COMBINED</u>
MOTEL/HOTEL (31)	1.00	0.953	0.95
APARTMENT (32)	0.97	0.993	0.99
OFFICE (33)	0.94	0.904	0.91
MERCANTILE (34)	0.89	0.843	0.85
INSTITUTION (35)	1.00	1.039	1.00
SERVICES (36)	0.95	0.939	0.95
IND/PROC (37)	0.87	0.848	0.86
CONTRACTORS (38)	0.98	0.986	0.99

NOTE: Combined PMFs are provided for informational purposes only.

EXPLANATORY NOTES TO TABLE 2

CALCULATION OF REVISED PACKAGE MODIFICATION FACTORS

OBJECTIVE	<p>Commercial package policies were introduced in the 1960's as a convenient tool for both insurer and insured to have the many types of insurance needed by commercial risks packaged under one cover. Thus fire, extended coverage, crime, liability insurance, etc. could be written using a single policy instead of several. Today, virtually any type of monoline coverage can also be purchased as part of a package policy such as the CPP.</p> <p>The types of insured which can be written under a CPP are generally categorized into the following Types of Policy:</p> <ul style="list-style-type: none">. Motels and Hotels (TOP 31). Apartments (TOP 32). Offices (TOP 33). Mercantile Operations (TOP 34). Institutions (TOP 35). Service Operations (TOP 36). Industrial and Processing Operations (TOP 37). Contractors (TOP 38)
PRICING OF POLICIES	<p>Since a CPP is essentially a combination of monoline coverages, CPP pricing employs monoline loss costs modified by PMFs (Package Modification Factors). These factors vary by the categories shown above and are reviewed annually.</p>
CPP PMF REVIEW PROCEDURE	<p>The CPP review of Package Modification Factors, which appears in Table 2 of this document, determines the appropriate PMF loss cost level for each of the eight CPP categories. This is done by combining the indications of the simultaneous reviews of monoline and multiline experience for the various lines (or coverages).</p> <p>A detailed explanation of the calculation of the revised PMFs follows.</p>

EXPLANATORY NOTES TO TABLE 2 (Cont'd)

LINES OF INSURANCE (COVERAGES) INCLUDED

The CPP review reflects the contribution from each significant coverage which can be written on a CPP. Included are:

Property Coverages

- . Basic Group I (BGI) - the predominant property coverage included.
- . Basic Group II (BGII) - both Basic Group I and Basic Group II must be purchased under a CPP contract.
- . Special Causes of Loss (SCL) - typically a type of insurance which is purchased in addition to Basic Group I and Basic Group II in order to provide "all risk" property coverage for the insured.
- . Crime (CRIME) - Crime insurance is a commonly purchased CPP coverage.
- . Inland Marine (INL. MAR.) - A highly specialized line of property insurance, Inland Marine coverages can be purchased as part of a package policy.
- . Fidelity (FIDELITY) - Certain forms of fidelity insurance can be part of the CPP package. Various forms of employee dishonesty coverage are available.

Liability Coverages

- . Owners, Landlords and Tenants (OL&T) Liability - this is the prevalent type of Premises/Operations liability for CPP insureds.
- . Manufacturers and Contractors Liability (M&C) - this is the type of Premises/Operations liability insurance for risks whose liability exposure is more heavily off-premises than on.
- . Products/Completed Operations Liability (PROD) - this type of insurance protects against claims for damages arising from products/completed operations in conjunction with an insured's business. For review purposes, this line of insurance is split into the following two categories:
 - Products: experience for this category is reviewed on a multistate basis.
 - Local Products/ Completed Operations: experience for this category reflects an exposure to loss which is local in nature; therefore, individual state experience is used.

EXPLANATORY NOTES TO TABLE 2 (Cont'd)

THE IMPLICIT PACKAGE MODIFICATION FACTOR

For each applicable coverage listed under each of the eight (8) CPP categories, a "current implicit PMF" is shown in column (2). The definition of this factor follows:

For a given CPP category (e.g., apartments) the published Package Modification Factor (PMF) represents the loss cost for a CPP relative to that for monoline policies providing the same coverages. Thus a property (liability) PMF of .80 represents a 20% lower aggregate loss cost for a CPP than for the comparable monoline policies. This PMF, however, represents the CPP "loss cost" for all property (liability) coverages combined. Based on CPP experience, it has been determined that this CPP "loss cost" can differ significantly if it is determined for each property (liability) coverage individually. The IPMF represents what the PMF would be for that CPP risk if only a single coverage were written. The use of the IPMF in monoline/multiline ratemaking and in the determination of revised CPP Package Modification Factors is significant in that it appropriately identifies how different the component parts of the multiline "loss cost" are.

THE MULTILINE INDICATION

Under the CPP ratemaking procedures, monoline and multiline experience are combined for each coverage. The results of these coverage analyses are indicated changes to monoline loss costs and also indicated CPP aggregate loss cost level changes. The CPP indications by coverage are then incorporated in the CPP PMF review. These indications (shown in column (3)) represent the needed adjustments to the IPMFs (shown in column (2)) described above.

The development of these indications is detailed in Section B.

THE INDICATED PMF

For each CPP category (and for property vs. liability), the indicated PMF is calculated as follows:

Each of the current IPMFs in column (2) is multiplied by the indicated percent change shown in column (3). A weighted average of the indicated IPMFs, using weights based on latest year aggregate loss costs at current ISO loss cost level (column (1) divided by column (2)), yields the indicated PMF at the bottom of column (4).

THE CAPPED PMF

The indicated PMF for each category (and for property vs. liability) shown at the bottom of column (4) is limited to a maximum of 1.00 in arriving at the proposed PMF (bottom of column (5)). All indicated PMFs which are below 1.00 are rounded to the nearest .01 in determining the proposed PMF. To the extent that any indicated PMFs are capped at 1.00, indicated PMFs below this value are adjusted in order to minimize any revenue changes which would result from capping.

In addition to the adjustments just described, the IPMFs (for property and liability) shown in column (4) are subject to minimum and maximum values and adjusted in column (5) so that they average to the proposed PMF shown at the bottom of column (5).

COMMERCIAL PACKAGE POLICY

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TABLE 3 - BASIC GROUP I RELATIVITY ANALYSIS

	(1)	(2)	(3)	(4)	(5)
	\$ LST SQ FORMULA RELATIVITY	CREDIBILITY Z	Z-WTD. RELATIVITY	BALANCED RELATIVITY	INDICATED CHANGE *
TOP					
10	1.591	0.118	1.056	1.080	
31	0.834	0.031	0.994	1.016	-5.9%
32	1.216	0.096	1.019	1.042	-3.5%
33	0.820	0.064	0.987	1.009	-6.6%
34	0.648	0.293	0.881	0.900	-16.7%
35	0.962	0.251	0.990	1.012	-6.3%
36	1.012	0.214	1.003	1.025	-5.1%
37	1.383	0.157	1.052	1.076	-0.4%
38	1.108	0.048	1.005	1.027	-4.9%

RATING
GROUP

01	0.975	0.152	0.996	1.013	
02	0.912	0.115	0.989	1.006	
03	2.160	0.189	1.157	1.176	
04	0.930	0.478	0.966	0.982	
05	1.271	0.023	1.006	1.022	
06	0.838	0.306	0.947	0.963	
07	0.492	0.233	0.848	0.862	
08	0.985	0.314	0.995	1.012	
09	1.011	0.180	1.002	1.019	
10	1.038	0.080	1.003	1.020	
11	1.948	0.027	1.018	1.035	
13	1.153	0.176	1.025	1.042	
14	1.077	0.128	1.010	1.026	
15	1.173	0.134	1.022	1.039	
17	0.844	0.062	0.990	1.006	
18	0.722	0.063	0.980	0.996	
19	1.030	0.060	1.002	1.018	
20	0.818	0.016	0.997	1.013	
21	0.838	0.108	0.981	0.997	
22	0.769	0.118	0.969	0.986	

TERRITORY

Atlanta	1.437	0.210	1.079	1.102	
Dekalb County	1.017	0.140	1.002	1.024	
Balance of State	0.955	0.713	0.968	0.988	

* INDICATED CHANGE = (BALANCED RELATIVITY FOR TOP) / (MONOLINE RELATIVITY (TOP 10)) - 1

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TABLE 4 - SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS

	(1)	(2)	(3)	(4)	(5)
	\$ LST SQ FORMULA RELATIVITY	CREDIBILITY Z	Z-WTD. RELATIVITY	BALANCED RELATIVITY	INDICATED CHANGE *
TOP					
10	0.814	0.200	0.960	0.972	
31	2.613	0.042	1.041	1.054	+8.4%
32	0.642	0.166	0.929	0.941	-3.2%
33	0.920	0.162	0.987	0.999	+2.8%
34	0.640	0.318	0.868	0.878	-9.7%
35	1.278	0.398	1.103	1.116	+14.8%
36	2.029	0.217	1.166	1.180	+21.4%
37	0.374	0.153	0.860	0.871	-10.4%
38	0.468	0.162	0.884	0.895	-7.9%
CATEGORY					
01	0.894	0.806	0.914	0.966	
02	0.750	0.090	0.974	1.030	
03	0.326	0.205	0.795	0.840	
04	1.867	0.213	1.142	1.208	
05	1.744	0.160	1.093	1.156	
06	1.503	0.083	1.034	1.094	
07	0.638	0.028	0.987	1.044	
08	1.591	0.258	1.127	1.192	
09	0.586	0.233	0.883	0.933	
10	2.553	0.070	1.068	1.129	
11	1.476	0.145	1.058	1.119	
12	0.462	0.167	0.879	0.929	
13	0.798	0.094	0.979	1.035	
14	1.445	0.225	1.086	1.149	

* INDICATED CHANGE = (BALANCED RELATIVITY FOR TOP) / (MONOLINE RELATIVITY (TOP 10)) - 1

EXPLANATORY NOTES TO TABLES 3 AND 4

BASIC GROUP I AND SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS

OBJECTIVE

The explanations which follow clarify Tables 3 and 4, 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 need for Special Causes of Loss;
- (3) determine indicated changes to the eight property CPP Package Modification Factors 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 PMF); 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, or 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.

EXPLANATORY NOTES TO TABLES 3 AND 4 (Cont'd)

COLUMN (1)
(Cont'd)

The procedure uses 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 5 for Basic Group I and Table 6 for Special Causes of Loss). Specifically, the iteration procedure uses the following formulas:

BASIC GROUP I:

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

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

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

EXPLANATORY NOTES TO TABLES 3 AND 4 (Cont'd)

COLUMN (1)
(Cont'd)

SPECIAL CAUSES OF LOSS:

$$TOP_i = \frac{\sum_{j=1}^n W_{ij}^2 R_{ij} CAT_j}{\sum_{j=1}^n W_{ij}^2 CAT_j^2}, \text{ where } 1 \leq i \leq m;$$

$$CAT_j = \frac{\sum_{i=1}^m W_{ij}^2 R_{ij} TOP_i}{\sum_{i=1}^m W_{ij}^2 TOP_i^2}, \text{ where } 1 \leq j \leq n$$

- TOP_i is the relativity for the i th Type of Policy;
- RG_j is the relativity for the j th Rating Group;
- CAT_j is the relativity for the j th Category;
- TER_k is the relativity for the k th Territory;
- W_{ijk} is the loss cost volume at current level for the i th Type of Policy, j th Rating Group or Category and k th Territory;
- R_{ijk} is the experience ratio relativity for the i th Type of Policy, j th Rating Group or Category and k th Territory;
- R_{ij} is the experience ratio relativity for the i th Type of Policy, j th Rating Group or Category;

EXPLANATORY NOTES TO TABLES 3 AND 4 (Cont'd)

COLUMN (1)
(Cont'd)

- 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 is the 5-year adjusted aggregate 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.

EXPLANATORY NOTES TO TABLES 3 AND 4 (Cont'd)

COLUMN (4)

BALANCED RELATIVITIES

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

MULTILINE
CONSIDERATIONS

The type of policy (TOP) relativities are used to generate multiline indications which apply to the current Implicit Package Modification Factors (IPMFs). The indicated IPMFs are calculated 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 re-performed to take this into account. If an IPMF has been capped it is so noted at the bottom of Table 3 and Table 4.

Loss cost changes for each TOP are calculated as described on Tables 3 and 4.

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BASIC GROUP I RELATIVITY ANALYSIS

TABLE 5 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 12/31/17 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	215,382	766,079	0.369	1.072	1.274
	02 OTHER HABITATIONAL	183,154	837,082	1.042	1.327	1.577
	03 RESTAURANTS & BARS	102,694	352,980	7.220	1.980	2.354
	04 OTHER MERCANTILE RS	608,804	2,982,849	0.267	1.201	1.427
	05 PUBLIC BUILDINGS	8,101	64,207	0.560	1.283	1.525
	06 CHURCHES	61,701	263,307	8.233	2.300	2.734
	07 SCHOOLS	92,228	498,683	0.031	0.790	0.939
	08 OFFICES AND BANKS	421,939	2,005,905	0.258	1.120	1.332
	09 REC. FACILITIES	226,814	1,083,628	1.241	1.337	1.589
	10 HOTELS AND MOTELS	73,072	323,163	0.441	1.325	1.576
	11 HOSPITALS/NURS HOME	82,384	317,295	1.472	1.472	1.750
	13 MOTOR VEHICLE RISKS	135,290	698,470	0.605	1.276	1.518
	14 OTHER NON-MANUF.	269,269	1,141,858	0.913	1.166	1.387
	15 STORAGE	124,746	777,678	2.176	1.499	1.783
	17 FOOD MANUFACTURING	31,994	157,566	0.010	1.205	1.433
	18 WOOD MANUFACTURING	11,766	74,272	0.000	1.191	1.417
	19 WEARING APPAREL	16,156	62,562	22.091	4.564	5.427
	20 CHEM. MANUFACTURING	19,776	132,491	0.000	1.261	1.499
	21 METAL MANUFACTURING	72,656	457,636	6.841	2.283	2.714
	22 OTHER MANUFACTURING	66,928	338,827	1.173	1.267	1.506
	TOTAL*	2,824,854	13,336,538	1.333	1.311	1.558
31 MULTILINE MOTEL/HOTEL	10 HOTELS AND MOTELS	757,546	3,175,839	0.709	0.728	0.866
	TOTAL*	757,546	3,175,839	0.709	0.728	0.866
32 MULTILINE APARTMENT	01 APARTMENTS	1,340,678	6,378,150	1.442	1.085	1.290
	02 OTHER HABITATIONAL	944,091	4,286,544	1.057	0.923	1.097
	TOTAL*	2,284,769	10,664,694	1.283	1.018	1.210
33 MULTILINE OFFICE	08 OFFICES AND BANKS	1,614,918	6,868,895	0.699	0.761	0.905
	TOTAL*	1,614,918	6,868,895	0.699	0.761	0.905
34 MULTILINE MERCANTILE	03 RESTAURANTS & BARS	1,722,960	8,045,309	1.692	1.203	1.431
	04 OTHER MERCANTILE RS	5,152,895	25,734,116	0.490	0.555	0.660
	08 OFFICES AND BANKS	431,218	2,103,091	0.363	0.722	0.858
	13 MOTOR VEHICLE RISKS	395,866	1,252,820	0.238	0.637	0.758
	14 OTHER NON-MANUF.	174,251	820,464	5.122	1.628	1.936
	15 STORAGE	670,215	3,539,777	0.426	0.667	0.792
	TOTAL*	8,547,405	41,495,577	0.803	0.728	0.866

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BASIC GROUP I RELATIVITY ANALYSIS

TABLE 5 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 12/31/17 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	9,585	54,206	0.064	0.625	0.743
	05 PUBLIC BUILDINGS	161,453	875,532	1.796	0.993	1.181
	06 CHURCHES	3,145,423	17,410,388	0.578	0.691	0.821
	07 SCHOOLS	2,724,726	11,674,852	0.161	0.420	0.500
	08 OFFICES AND BANKS	291,897	1,130,387	0.635	0.836	0.994
	09 REC. FACILITIES	290,792	1,002,630	0.077	0.640	0.761
	11 HOSPITALS/NURS HOME	171,983	785,502	6.409	2.057	2.446
	13 MOTOR VEHICLE RISKS	5,829	26,806	0.000	0.677	0.805
	14 OTHER NON-MANUF.	128,994	572,943	1.065	0.832	0.990
	TOTAL*	6,930,682	33,533,246	0.576	0.632	0.752
36 MULTILINE SERVICES	03 RESTAURANTS & BARS	195,195	904,140	1.191	1.010	1.201
	04 OTHER MERCANTILE RS	723,428	3,712,314	0.453	0.861	1.023
	08 OFFICES AND BANKS	689,322	4,003,982	0.444	0.867	1.031
	09 REC. FACILITIES	1,311,627	6,689,089	0.647	0.893	1.062
	13 MOTOR VEHICLE RISKS	1,330,586	6,548,432	1.116	0.973	1.158
	14 OTHER NON-MANUF.	673,723	2,825,427	0.886	0.930	1.105
	15 STORAGE	284,439	1,572,256	0.403	0.868	1.033
	21 METAL MANUFACTURING	52,706	208,143	0.000	0.802	0.954
	22 OTHER MANUFACTURING	157,275	814,969	2.485	1.147	1.364
	TOTAL*	5,418,301	27,278,752	0.794	0.919	1.093
37 MULTILINE INDUST/PROCESS	04 OTHER MERCANTILE RS	202,868	1,204,719	4.501	1.435	1.707
	08 OFFICES AND BANKS	87,607	444,657	1.693	1.036	1.231
	13 MOTOR VEHICLE RISKS	3,725	25,471	0.000	0.804	0.956
	14 OTHER NON-MANUF.	44,147	227,189	0.537	0.873	1.038
	15 STORAGE	57,218	319,863	5.391	1.519	1.807
	17 FOOD MANUFACTURING	538,060	2,491,376	1.028	0.950	1.130
	18 WOOD MANUFACTURING	500,834	2,599,277	0.421	0.856	1.018
	19 WEARING APPAREL	442,753	2,474,695	2.392	1.149	1.366
	20 CHEM. MANUFACTURING	112,007	501,175	0.757	0.900	1.071
	21 METAL MANUFACTURING	812,422	4,164,578	0.884	0.922	1.096
	22 OTHER MANUFACTURING	715,212	4,183,716	0.426	0.847	1.008
	TOTAL*	3,516,853	18,636,716	1.230	0.971	1.155

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BASIC GROUP I RELATIVITY ANALYSIS

TABLE 5 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 12/31/17 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 CONTRACTORS	04 OTHER MERCANTILE RS	574,100	2,977,115	0.483	0.866	1.029
	08 OFFICES AND BANKS	345,994	1,753,110	0.401	0.861	1.024
	14 OTHER NON-MANUF.	65,156	292,585	0.399	0.873	1.038
	TOTAL*	985,250	5,022,810	0.448	0.865	1.028
TOTAL ALL TOPS*	01 APARTMENTS	1,556,060	7,144,229	1.294	1.083	1.288
	02 OTHER HABITATIONAL	1,136,830	5,177,832	1.046	0.985	1.171
	03 RESTAURANTS & BARS	2,020,849	9,302,429	1.924	1.224	1.456
	04 OTHER MERCANTILE RS	7,262,095	36,611,113	0.579	0.689	0.819
	05 PUBLIC BUILDINGS	169,554	939,739	1.737	1.007	1.198
	06 CHURCHES	3,207,124	17,673,695	0.725	0.722	0.858
	07 SCHOOLS	2,816,954	12,173,535	0.156	0.433	0.515
	08 OFFICES AND BANKS	3,882,895	18,310,027	0.560	0.835	0.993
	09 REC. FACILITIES	1,829,233	8,775,347	0.630	0.908	1.080
	10 HOTELS AND MOTELS	830,618	3,499,002	0.686	0.780	0.928
	11 HOSPITALS/NURS HOME	254,367	1,102,797	4.810	1.867	2.221
	13 MOTOR VEHICLE RISKS	1,871,296	8,551,999	0.888	0.923	1.098
	14 OTHER NON-MANUF.	1,355,540	5,880,466	1.418	1.053	1.251
	15 STORAGE	1,136,618	6,209,574	0.862	0.852	1.012
	17 FOOD MANUFACTURING	570,054	2,648,942	0.971	0.965	1.147
	18 WOOD MANUFACTURING	512,600	2,673,549	0.411	0.864	1.027
	19 WEARING APPAREL	458,909	2,537,257	3.085	1.269	1.509
	20 CHEM. MANUFACTURING	131,783	633,666	0.643	0.954	1.135
	21 METAL MANUFACTURING	937,784	4,830,357	1.296	1.020	1.213
	22 OTHER MANUFACTURING	939,415	5,337,512	0.824	0.927	1.103
	TOTAL*	32,880,578	160,013,067	0.860	0.841	1.000

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

GEORGIA

SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS
TABLE 6 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 12/31/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) RELATIVITY
10 MONOLINE	01 BUILDINGS	1,438,782	5,970,515	0.744	0.812
	02 RES. APTS. AND COND	41,436	127,593	0.232	0.253
	03 OFFICES	179,996	867,499	0.578	0.631
	04 MERCANTILE - HIGH	194,713	917,208	0.886	0.967
	05 MERCANTILE - MEDIUM	52,052	220,416	0.246	0.269
	06 MERCANTILE - LOW	50,526	230,949	0.140	0.153
	07 MOTELS AND HOTELS	21,338	107,688	0.105	0.115
	08 INSTITUTIONAL - HIG	37,012	223,729	1.573	1.717
	09 INSTITUTIONAL - LOW	44,831	179,239	1.764	1.926
	10 INDUST-PROC - HIGH	16,493	67,781	0.149	0.163
	11 INDUST-PROC - LOW	82,156	390,757	0.297	0.324
	12 SERVICE - HIGH	47,724	242,812	0.114	0.124
	13 SERVICE - LOW	67,716	339,029	0.518	0.566
	14 CONTRACTORS	18,383	92,955	0.929	1.014
	TOTAL*	2,293,158	9,978,170	0.698	0.762
31 MULTILINE	01 BUILDINGS	343,878	1,423,726	2.287	2.497
MOTEL/HOTEL	07 MOTELS AND HOTELS	70,134	317,849	1.645	1.796
	TOTAL*	414,012	1,741,575	2.178	2.378
32 MULTILINE	01 BUILDINGS	1,620,349	6,589,841	0.562	0.614
APARTMENT	02 RES. APTS. AND COND	315,592	1,362,351	0.480	0.524
	TOTAL*	1,935,941	7,952,192	0.549	0.599
33 MULTILINE	01 BUILDINGS	1,196,557	4,999,773	0.808	0.882
OFFICE	03 OFFICES	701,049	2,675,104	0.273	0.298
	04 MERCANTILE - HIGH	124	2,644	0.000	0.000
	08 INSTITUTIONAL - HIG	1,681	6,771	0.000	0.000
	12 SERVICE - HIGH	15,380	22,053	0.000	0.000
	TOTAL*	1,914,791	7,706,345	0.605	0.660

GEORGIA

SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS
TABLE 6 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 12/31/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) RELATIVITY
34 MULTILINE MERCANTILE	01 BUILDINGS	2,706,930	12,030,262	0.550	0.600
	03 OFFICES	8,951	43,576	1.467	1.602
	04 MERCANTILE - HIGH	573,322	2,743,993	1.263	1.379
	05 MERCANTILE - MEDIUM	545,946	2,608,651	1.106	1.207
	06 MERCANTILE - LOW	241,832	1,072,323	1.002	1.094
	08 INSTITUTIONAL - HIG	75	323	0.000	0.000
	11 INDUST-PROC - LOW	1,008	1,458	0.000	0.000
	12 SERVICE - HIGH	13,970	121,437	1.523	1.663
	13 SERVICE - LOW	6,365	27,901	0.308	0.336
	14 CONTRACTORS	6,302	27,311	0.000	0.000
	TOTAL*	4,104,701	18,677,235	0.754	0.823
35 MULTILINE INSTITUTIONAL	01 BUILDINGS	3,648,583	17,185,611	1.119	1.222
	03 OFFICES	3,798	12,537	0.934	1.020
	04 MERCANTILE - HIGH	105	105	0.000	0.000
	06 MERCANTILE - LOW	409	1,581	0.000	0.000
	08 INSTITUTIONAL - HIG	947,874	4,963,941	1.992	2.175
	09 INSTITUTIONAL - LOW	759,101	4,297,891	0.732	0.799
	12 SERVICE - HIGH	342	3,843	0.000	0.000
	13 SERVICE - LOW	9,455	10,222	0.000	0.000
	14 CONTRACTORS	646	2,631	0.000	0.000
	TOTAL*	5,370,313	26,478,362	1.216	1.328
36 MULTILINE SERVICES	01 BUILDINGS	1,497,145	7,028,641	1.777	1.940
	03 OFFICES	9,352	51,836	1.475	1.610
	04 MERCANTILE - HIGH	12,817	56,163	1.369	1.495
	05 MERCANTILE - MEDIUM	2,343	10,031	21.274	23.225
	06 MERCANTILE - LOW	4,107	11,123	0.184	0.201
	08 INSTITUTIONAL - HIG	5,917	26,526	0.000	0.000
	09 INSTITUTIONAL - LOW	16,771	77,954	0.000	0.000
	10 INDUST-PROC - HIGH	64	398	0.000	0.000
	11 INDUST-PROC - LOW	1,381	5,223	0.000	0.000
	12 SERVICE - HIGH	485,807	2,585,473	0.918	1.002
	13 SERVICE - LOW	229,505	1,164,866	1.592	1.738
	14 CONTRACTORS	16,916	59,352	0.000	0.000
	TOTAL*	2,282,125	11,077,586	1.557	1.700

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SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS
TABLE 6 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 12/31/17 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) RELATIVITY
37 MULTILINE INDUST/PROC	01 BUILDINGS	825,986	3,959,491	0.291	0.318
	03 OFFICES	4,985	22,563	0.891	0.973
	04 MERCANTILE - HIGH	8,647	36,653	2.409	2.630
	05 MERCANTILE - MEDIUM	655	7,231	0.000	0.000
	06 MERCANTILE - LOW	88	122	0.000	0.000
	10 INDUST-PROC - HIGH	222,071	1,063,542	0.958	1.046
	11 INDUST-PROC - LOW	417,520	2,131,872	0.615	0.671
	12 SERVICE - HIGH	1,993	12,541	0.000	0.000
	13 SERVICE - LOW	792	3,954	0.000	0.000
	14 CONTRACTORS	1,240	2,778	0.000	0.000
	TOTAL*	1,483,977	7,240,747	0.495	0.540
38 MULTILINE CONTRACTORS	01 BUILDINGS	590,716	3,006,141	0.392	0.428
	03 OFFICES	35,789	187,035	1.343	1.466
	04 MERCANTILE - HIGH	70,876	300,105	0.802	0.876
	05 MERCANTILE - MEDIUM	438	2,812	0.000	0.000
	06 MERCANTILE - LOW	9,107	41,112	2.321	2.534
	08 INSTITUTIONAL - HIG	168	646	0.000	0.000
	11 INDUST-PROC - LOW	997	4,639	1.043	1.139
	12 SERVICE - HIGH	2,853	10,051	0.000	0.000
	13 SERVICE - LOW	1,574	4,378	0.000	0.000
	14 CONTRACTORS	848,127	4,180,449	0.668	0.729
	TOTAL*	1,560,645	7,737,368	0.593	0.647
TOTAL ALL TOPS*	01 BUILDINGS	13,868,926	62,194,001	0.897	0.979
	02 RES. APTS. AND COND	357,028	1,489,944	0.451	0.492
	03 OFFICES	943,920	3,860,150	0.401	0.438
	04 MERCANTILE - HIGH	860,604	4,056,871	1.152	1.258
	05 MERCANTILE - MEDIUM	601,434	2,849,141	1.108	1.210
	06 MERCANTILE - LOW	306,069	1,357,210	0.886	0.967
	07 MOTELS AND HOTELS	91,472	425,537	1.286	1.404
	08 INSTITUTIONAL - HIG	992,727	5,221,936	1.961	2.141
	09 INSTITUTIONAL - LOW	820,703	4,555,084	0.773	0.844
	10 INDUST-PROC - HIGH	238,628	1,131,721	0.902	0.985
	11 INDUST-PROC - LOW	503,062	2,533,949	0.561	0.612
	12 SERVICE - HIGH	568,069	2,998,210	0.832	0.908
	13 SERVICE - LOW	315,407	1,550,350	1.276	1.393
	14 CONTRACTORS	891,614	4,365,476	0.655	0.715
	TOTAL*	21,359,663	98,589,580	0.916	1.000

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

EXPLANATORY NOTES TO TABLES 5 AND 6

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 in Tables 5 and 6 is the latest five years of accident year data as 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) AGGREGATE LOSS COSTS

The latest year adjusted 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 formulae used in the simultaneous review procedure.

COLUMN (2) 5 - YEAR 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 ratio 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).

EXPLANATORY NOTES TO TABLES 5 AND 6 (Cont'd)

COLUMN (4) (Cont'd)

The important concept underlying empirical Bayesian credibility is that the credibility should depend both on the overall variation of the group of which the cell is a member, in addition to the variation of the yearly experience ratios for each cell. Therefore, if a cell's data is itself very stable then we would assign a relatively high credibility value, 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.

The calculated credibility (Z) is then applied to the five-year experience ratio with the complement of credibility applied to the credibility-weighted average of the individual experience ratios of the group, where group refers to the specified TOP/territory group. In a non-territory state, K values would be determined for the three TOP groups on an entire state basis.

COLUMN (5)

WEIGHTED RELATIVITIES

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 7 - BASIC GROUP II RELATIVITY ANALYSIS

	(1) ACCIDENT YR ENDING 12/31/17	(2) ACCIDENT YRS 2008-2017 NON-HURR.	(3) FORMULA RELATIVITY (2) / 0.783	(4) CREDI- BILITY Z C	(5) Z WEIGHTED RELA- TIVITY D	(6) BALANCED FORMULA RELA- TIVITY E	(7) NORMALIZED FORMULA RELA- TIVITY F	(8) INDICATED CHANGE G
	AGGR. LOSS COSTS AT CURRENT IMPLICIT PMF	EXPER. RATIO AT CURRENT PMF A						
MONOLINE	2,658,300	0.660	0.843	0.423	0.934	0.934	0.9230	
MULTILINE	25,663,632	0.802	1.024	0.850	1.020	1.020	1.0084	
COVERAGE	28,321,932	0.783	1.000			1.0119	B 1.0004	
MULTILINE TOP								
31 MOTEL/HOTEL	1,170,964	*****	*****	*****	*****	1.025	1.0129	+9.7%
32 APARTMENT	1,577,493	1.081	1.381	0.245	1.093	1.101	1.0881	+17.9%
33 OFFICE	1,575,502	1.045	1.335	0.197	1.066	1.073	1.0604	+14.9%
34 MERCANTILE	4,948,936	0.744	0.950	0.496	0.975	0.982	0.9705	+5.1%
35 INSTITUTIONAL	10,245,699	0.834	1.065	0.727	1.047	1.054	1.0416	+12.8%
36 SERVICES	3,430,885	0.752	0.960	0.442	0.982	0.989	0.9774	+5.9%
37 INDUST/PROCESS	2,008,053	0.558	0.713	0.326	0.906	0.912	0.9013	-2.4%
38 CONTRACTORS	706,100	0.516	0.659	0.143	0.951	0.958	0.9467	+2.6%
	25,663,632	0.802 B	1.024		1.013 B	1.020 B	1.0084 B	

A - TOP 31 IMPLICIT PMF CAPPED AT 1.500.

FOR COLUMNS (2) THROUGH (5), MONOLINE INCLUDES TOPS 31

AT THESE CAPPED LEVELS AND MULTILINE EXCLUDES TOPS 31

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 - FOR UNCAPPED MULTILINE TOPS: (6) = (5) * (1.020/1.013)

FOR CAPPED MULTILINE TOPS: (6) = (1 + (8)) * (0.934)

F - (7) = (6) / 1.0119

G - (8) = (NORMALIZED FORMULA RELATIVITY FOR TOP) / (NORMALIZED FORMULA MONOLINE (TOP 10) RELATIVITY) - 1

EXPLANATORY NOTES TO TABLE 7

BASIC GROUP II RELATIVITY ANALYSIS

OBJECTIVE

The explanations which follow clarify Table 7, 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 property Commercial Package Policy (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)

AGGREGATE LOSS COSTS

The latest fiscal 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)

10 - YEAR NON-HURRICANE EXPERIENCE RATIO

These experience ratios are the ratio of the combined ten year CSP adjusted incurred non-hurricane losses (adjusted to current deductible and prospective cost levels and also adjusted to reflect the BGII 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.

EXPLANATORY NOTES TO TABLE 7 (Cont'd)

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 non-hurricane 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 BGI and SCL relativity analyses, the BGII 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 adjusted aggregate 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 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.

EXPLANATORY NOTES TO TABLE 7 (Cont'd)

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 and the monoline balanced formula relativity, divided by the current IPMF.

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)

INDICATED LOSS COST CHANGES

The indicated multiline (by TOP) changes are calculated by taking the ratio of the TOP relativity (Column 7) to the monoline relativity.

For each 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.

CRIME AND FIDELITY

The reviews for Burglary and Theft and for Fidelity are done on a multistate basis, combining both multiline and monoline experience. However, unlike other coverages included in a Commercial Package Policy, there is no simultaneous review procedure for either Burglary and Theft or for Fidelity in which separate loss cost level changes can be determined for multiline and monoline experience. In the absence of a simultaneous review procedure, we are unable to determine Type of Policy relativities with which to price CPP policies relative to monoline policies and therefore have assumed a multiline change of 0.0% and thus no change to the historic Crime or Fidelity IPMFs.

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TABLE 8

COMMERCIAL I.M. RELATIVITY ANALYSIS

(1)	(2)	(3)	(4)	(5)
TOP	BALANCED	CURRENT	INDICATED	SELECTED
10	RELATIVITY	IPMF	IPMF*	IPMF
	1.000	0.910	0.910	0.910
3X & 7X	1.000			

CLASSIFICATION

150	0.923
191	1.100
192	0.785
220	0.789
221	0.755
234	1.202
235	1.088
240	0.789
241	0.715
327	0.757
328	0.932
340	0.646
341	0.757
342	0.751
343	0.767
403	0.640
451	0.946
452	0.778
453	0.811
454	0.713
460	0.479
482	0.889
510	0.662
514	0.631
530	0.628
534	0.757

*COLUMN (4) = COLUMN (3) * (TOP 3X & 7X COLUMN (2) / TOP 10 COLUMN (2))

GEORGIA

COMMERCIAL INLAND MARINE RELATIVITY ANALYSIS
TABLE 9 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

<u>TYPE OF POLICY</u>	<u>RATING</u>	(1) <u>2016 AGGREGATE</u>	(2) <u>2012 - 2016</u>	(3) <u>FIVE-YEAR</u>	(4) <u>RELATIVITY</u>
<u>MONOLINE 10</u>	<u>GROUP</u>	<u>LOSS COSTS</u>	<u>AGGREGATE LOSS COSTS</u>	<u>EXP RATIO</u>	
	150	311,633	1,898,096	1.151	1.353
	191	5,446,492	15,816,054	1.032	1.213
	192	862,002	2,760,886	0.627	0.737
	220	5,112	87,903	5.716	6.717
	221	1,491	2,853	1.199	1.409
	234	5,224,155	20,144,072	0.600	0.705
	235	8,439,000	24,407,283	0.761	0.894
	240	928,183	3,685,254	0.656	0.771
	241	15,553	114,739	0.053	0.062
	327	18,917	91,546	0.000	0.000
	328	2,319,887	11,908,665	0.792	0.931
	340	40,688	87,993	0.000	0.000
	341	0	0	0.000	0.000
	342	19,188	65,375	0.555	0.652
	343	589	3,417	343.665	578.925
	403	1,600,852	5,771,545	0.345	0.405
	451	3,309,677	12,953,836	0.855	1.005
	452	34,702	137,467	1.628	1.913
	453	45,575	212,456	3.203	3.764
	454	164,836	745,300	0.734	0.863
	460	790,198	3,687,530	0.415	0.488
	482	839,364	2,841,134	0.986	1.159
	510	3,252	39,977	0.020	0.024
	514	446,469	1,612,361	0.339	0.398
	530	504,434	2,697,004	0.489	0.575
	534	0	0	0.000	0.000
	TOTAL#	31,372,249	111,772,746	0.785	0.922

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COMMERCIAL INLAND MARINE RELATIVITY ANALYSIS
TABLE 9 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	RATING GROUP	(1) 2016 AGGREGATE LOSS COSTS	(2) 2012 - 2016 AGGREGATE LOSS COSTS	(3) FIVE-YEAR EXP RATIO	(4) RELATIVITY
MULTILINE ## 3X & 7X	150	720,095	3,333,227	0.795	0.934
	191	603,595	2,704,067	0.774	0.910
	192	202,803	783,492	0.826	0.971
	220	6,439	28,512	1.526	1.793
	221	5,606	27,010	0.258	0.303
	234	12,669,443	52,530,286	1.162	1.365
	235	478,171	2,380,353	2.879	3.383
	240	11,651	60,061	1.983	2.330
	241	5,028	15,371	0.019	0.022
	327	2,942	18,862	0.000	0.000
	328	396	2,751	168.726	198.268
	340	32,828	132,609	0.016	0.019
	341	0	0	0.000	0.000
	342	6,082	30,546	0.000	0.000
	343	2,369	7,996	0.000	0.000
	403	479,869	2,417,275	0.739	0.868
	451	95,342	438,635	0.360	0.423
	452	38,096	206,651	0.535	0.629
	453	34,375	104,958	0.147	0.173
	454	228,162	984,183	0.274	0.322
	460	3,613,811	15,118,089	0.318	0.374
	482	127,496	760,961	0.693	0.814
	510	23,290	121,842	0.000	0.000
	514	63,169	300,866	0.073	0.086
	530	1,129,574	4,779,992	0.414	0.486
	534	0	0	0.000	0.000
	TOTAL#	20,580,632	87,288,595	0.952	1.119

REFLECTS CURRENT IPMF OF 0.910.

GEORGIA

COMMERCIAL INLAND MARINE RELATIVITY ANALYSIS
TABLE 9 - SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

<u>TYPE OF POLICY</u>	<u>RATING</u>	(1)	(2)	(3)	(4)
<u>TOTAL ALL TOPS#</u>	<u>GROUP</u>	<u>2016 AGGREGATE LOSS COSTS</u>	<u>2012 - 2016 AGGREGATE LOSS COSTS</u>	<u>FIVE-YEAR EXP RATIO</u>	<u>RELATIVITY</u>
	150	1,031,728	5,231,323	0.903	1.061
	191	6,050,087	18,520,121	1.006	1.182
	192	1,064,805	3,544,378	0.665	0.781
	220	11,551	116,415	3.380	3.972
	221	7,097	29,863	0.456	0.536
	234	17,893,598	72,674,358	0.998	1.173
	235	8,917,171	26,787,636	0.875	1.028
	240	939,834	3,745,315	0.672	0.790
	241	20,581	130,110	0.045	0.053
	327	21,859	110,408	0.000	0.000
	328	2,320,283	11,911,416	0.821	0.965
	340	73,516	220,602	0.007	0.008
	341	0	0	0.000	0.000
	342	25,270	95,921	0.421	0.495
	343	2,958	11,413	267.552	314.397
	403	2,080,721	8,188,820	0.436	0.512
	451	3,405,019	13,392,471	0.841	0.988
	452	72,798	344,118	1.056	1.241
	453	79,950	317,414	1.889	2.220
	454	392,998	1,729,483	0.467	0.549
	460	4,404,009	18,805,619	0.335	0.394
	482	966,860	3,602,095	0.947	1.113
	510	26,542	161,819	0.002	0.002
	514	509,638	1,913,227	0.306	0.360
	530	1,634,008	7,476,996	0.437	0.514
	534	0	0	0.000	0.000
	TOTAL#	51,952,881	199,061,341	0.851	1.000

TOTAL IN COLUMN (3) IS AN AVERAGE USING COLUMN (1) AS WEIGHTS.

EXPLANATORY NOTES TO TABLES 8 AND 9

COMMERCIAL INLAND MARINE RELATIVITY ANALYSIS

EXPERIENCE BASE

The Commercial Inland Marine IPMF review presented in the attached exhibits is based on a review of the latest available five years of monoline and multiline experience through accident year 2016 for all companies reporting data to Insurance Services Office under the Inland Marine Module of the Commercial Statistical Plan (CSP) and the Intermediate Level of the Commercial Minimum Statistical Plan (CMSP).

ADJUSTMENT OF DATA

Aggregate loss costs for each year in the review period have been adjusted to the levels which would have been earned had the current loss costs applied throughout the experience period. Reported premiums are adjusted to current level on an individual policy basis by applying a factor equal to all loss cost level changes that have been implemented subsequent to the policy being written. These adjusted premiums are then converted to a loss cost at current level. In order to eliminate the impact of company deviations from the manual level and individual risk modifications which were in effect at the time the policy was written, aggregate loss costs are further adjusted based on reported Rate Modification and Rate Departure Factors/Loss Cost Multipliers. Multiline aggregate loss costs are further adjusted to the level of the current Implicit Package Modification Factor (IPMF). Incurred losses are loaded for all loss adjustment expenses by applying a factor of 1.105.

RELATIVITY ANALYSIS

For Inland Marine coverage, a multistate IPMF level is determined via a two-way relativity analysis similar to the analysis used in Basic Group I. The experience for all reviewed classes is used to form class group relativities. These relativities for monoline and multiline (all programs combined) are determined through an iterative procedure. The ratio of the multiline relativity to the monoline relativity is multiplied by the current IPMF to yield the indicated IPMF. The indicated IPMF is subject to a minimum value of 0.500 and a maximum value of 1.500. If an indicated IPMF falls outside one of those limits, it is capped at that amount, the premiums for that Type of Policy (i.e., TOP 10 versus TOP 3X) are adjusted to the capped IPMF level, and the entire relativity review is performed again to take this into account.

TABLE 10
GEORGIA
OWNERS, LANDLORDS AND TENANTS
BASIC LIMIT RELATIVE CHANGE ANALYSIS

TOP	(1) BAILEY FORMULA RELATIV.	(2) CREDIBILITY Z	(3) Z-WTD RELATIV.	(4) BALANCED RELATIV.	(5) INDICATED CHANGE *
10	1.158	0.346	1.052	1.048	
31	0.834	0.210	0.963	0.959	-8.5%
32	1.733	0.113	1.064	1.060	+1.1%
33	0.855	0.226	0.965	0.962	-8.2%
34	1.103	0.372	1.037	1.033	-1.4%
35	0.837	0.237	0.959	0.955	-8.9%
36	0.639	0.184	0.921	0.918	-12.4%

CLASS
GROUP

01	1.082	0.170	1.014	1.015
02	0.935	0.299	0.980	0.982
03	0.795	0.125	0.972	0.973
04	0.920	0.042	0.997	0.998
05	0.585	0.068	0.964	0.966
06	0.573	0.087	0.953	0.954
07	1.709	0.183	1.103	1.105
08	5.602	0.038	1.068	1.069
09	0.797	0.252	0.944	0.946
10	1.053	0.242	1.013	1.014
11	0.695	0.132	0.953	0.955
12	1.047	0.348	1.016	1.018
13	0.883	0.094	0.988	0.990
16	0.793	0.062	0.986	0.987

TERRITORY	(1) BAILEY FORMULA RELATIV.	(2) CREDIBILITY Z	(3) Z-WTD RELATIV.	(4) BALANCED RELATIV.
502	1.081	0.381	1.030	1.033
503	0.963	0.558	0.979	0.982

* INDICATED CHANGE = (BALANCED RELATIVITY FOR TOP) / (MONOLINE RELATIVITY (TOP 10)) - 1

TABLE 11
GEORGIA
MANUFACTURERS AND CONTRACTORS
BASIC LIMIT RELATIVE CHANGE ANALYSIS

TOP	(1) BAILEY FORMULA RELATIV.	(2) CREDIBILITY Z	(3) Z-WTD RELATIV.	(4) BALANCED RELATIV.	(5) INDICATED CHANGE *
10	1.003	0.316	1.001	0.998	
33	1.909	0.056	1.037	1.034	+3.6%
34	0.558	0.103	0.942	0.939	-5.9%
35	3.260	0.036	1.043	1.040	+4.2%
36	0.802	0.174	0.962	0.959	-3.9%
37	1.067	0.110	1.007	1.004	+0.6%
38	1.108	0.279	1.029	1.026	+2.8%
CLASS GROUP					
30	1.108	0.156	1.016	1.014	
31	1.052	0.203	1.010	1.008	
32	1.005	0.289	1.002	1.000	
33	1.000	0.146	1.000	0.998	
34	1.264	0.165	1.039	1.037	
35	1.018	0.046	1.001	0.999	
36	0.619	0.098	0.954	0.952	
37	0.307	0.057	0.935	0.933	
38	1.143	0.149	1.020	1.018	

* INDICATED CHANGE = (BALANCED RELATIVITY FOR TOP) / (MONOLINE RELATIVITY (TOP 10)) - 1

TABLE 12
GEORGIA
OWNERS, LANDLORDS AND TENANTS
BASIC LIMIT RELATIVE CHANGE ANALYSIS

SUMMARY OF EXPERIENCE USED IN RELATIVE CHANGE ANALYSIS

TERRITORY	ALL	(1)	(2)	(3)	(4)	(5)	(6)
		FISCAL A.Y.E. 03/31/2018 AGGREGATE	FISCAL A.Y.E. 2014 - 2018	FIVE YEAR EXPERIENCE	RELATIV.	NUMBER OF OCCURRENCES	BAL CELL RELATIV.
TYPE OF POLICY	CLASS GROUP	LOSS COSTS AT CURRENT LEVEL	AGG LOSS COST CURRENT LEVEL	RATIO			
10 MONOLINE	01 FOOD&BEV. (RETAIL)	\$745,892	\$3,125,820	1.317		129	
	02 RESTAURANTS	1,058,914	5,162,016	0.767		275	
	03 STORES	352,435	1,780,189	1.319		94	
	04 VENDING & RENTAL	16,206	63,161	0.526		2	
	05 FOOD & BEV. DIST.	140,738	786,809	0.478		27	
	06 NON-FOOD&BEV.DIST	253,267	1,473,123	0.519		53	
	07 CLUBS, AMSMT & SPRTS	748,177	3,147,364	2.615		256	
	08 HEALTH CARE FACIL	24,230	225,724	4.588		5	
	09 HOTELS AND MOTELS	1,707,573	7,557,937	0.867		350	
	10 SCHLS & CHURCHES	655,994	3,005,590	1.128		157	
	11 APARTMENTS	1,953,501	6,855,536	1.032		157	
	12 BUILDINGS&OFFICES	3,492,654	16,467,461	0.925		563	
	13 MISC. PREMISES	437,932	1,727,096	0.721		99	
	16 GOVT SUBDIVISIONS	23,368	25,023	0.000		0	
	TOTAL *	\$11,610,881	\$51,402,849	1.061		2,167	
31 MULT MOTEL/HOTEL	09 HOTELS AND MOTELS	\$4,078,447	\$15,474,623	0.629		798	
	TOTAL *	\$4,078,447	\$15,474,623	0.629		798	
32 MULT APARTMENT	11 APARTMENTS	\$1,048,302	\$4,816,306	0.641		160	
	12 BUILDINGS&OFFICES	300,744	1,171,097	3.525		72	
	TOTAL *	\$1,349,046	\$5,987,403	1.284		232	
33 MULT OFFICE	12 BUILDINGS&OFFICES	\$4,900,053	\$25,347,912	0.855		918	
	13 MISC. PREMISES	62,070	276,489	0.475		9	
	TOTAL *	\$4,962,123	\$25,624,401	0.850		927	
34 MULT MERCANTILE	01 FOOD&BEV. (RETAIL)	\$2,191,915	\$11,088,112	1.043		395	
	02 RESTAURANTS	4,889,127	23,178,705	1.033		1,339	
	03 STORES	1,161,363	5,190,537	0.592		162	
	04 VENDING & RENTAL	34,228	136,712	0.169		2	
	05 FOOD & BEV. DIST.	313,074	1,602,221	0.676		57	
	06 NON-FOOD&BEV.DIST	783,335	3,779,389	0.622		86	
	12 BUILDINGS&OFFICES	1,900,156	9,993,286	1.132		455	
	TOTAL *	\$11,273,198	\$54,968,962	0.965		2,496	

TABLE 12
GEORGIA
OWNERS, LANDLORDS AND TENANTS
BASIC LIMIT RELATIVE CHANGE ANALYSIS

SUMMARY OF EXPERIENCE USED IN RELATIVE CHANGE ANALYSIS

TERRITORY	ALL	(1) FISCAL A.Y.E. 03/31/2018 AGGREGATE LOSS COSTS AT CURRENT LEVEL	(2) FISCAL A.Y.E. 2014 - 2018 AGG LOSS COST CURRENT LEVEL	(3) FIVE YEAR EXPERIENCE RATIO	(4) RELATIV.	(5) NUMBER OF OCCURRENCES	(6) BAL CELL RELATIV.
TYPE OF POLICY	CLASS GROUP						
35 MULT INSTITUT.	07 CLUBS, AMSMT&SPRTS	\$62,425	\$207,002	0.311		3	
	08 HEALTH CARE FACIL	157,217	590,771	4.786		21	
	10 SCHLS & CHURCHES	3,699,762	17,582,217	0.827		896	
	12 BUILDINGS&OFFICES	32,804	161,977	0.557		23	
	13 MISC. PREMISES	8,546	47,225	0.073		0	
	16 GOVT SUBDIVISIONS	486,303	3,152,935	0.645		71	
	TOTAL *	\$4,447,057	\$21,742,127	0.936		1,014	
36 MULT SERVICES	03 STORES	\$241,359	\$919,388	0.859		29	
	04 VENDING & RENTAL	108,115	618,601	0.861		29	
	07 CLUBS, AMSMT&SPRTS	2,317,361	10,603,331	0.818		349	
	08 HEALTH CARE FACIL	4,428	18,230	0.000		0	
	09 HOTELS AND MOTELS	73,916	392,322	0.575		3	
	10 SCHLS & CHURCHES	11,510	36,005	2.464		2	
	12 BUILDINGS&OFFICES	517,159	3,516,936	1.062		152	
	13 MISC. PREMISES	266,019	1,079,322	1.076		52	
	TOTAL *	\$3,539,867	\$17,184,135	0.877		616	
TOTAL ALL	TOP						
	01 FOOD&BEV. (RETAIL)	\$2,937,807	\$14,213,932	1.113		524	
	02 RESTAURANTS	5,948,041	28,340,721	0.985		1,614	
	03 STORES	1,755,157	7,890,114	0.775		285	
	04 VENDING & RENTAL	158,549	818,474	0.678		33	
	05 FOOD & BEV. DIST.	453,812	2,389,030	0.615		84	
	06 NON-FOOD&BEV.DIST	1,036,602	5,252,512	0.597		139	
	07 CLUBS, AMSMT&SPRTS	3,127,963	13,957,697	1.238		608	
	08 HEALTH CARE FACIL	185,875	834,725	4.646		26	
	09 HOTELS AND MOTELS	5,859,936	23,424,882	0.698		1,151	
	10 SCHLS & CHURCHES	4,367,266	20,623,812	0.877		1,055	
	11 APARTMENTS	3,001,803	11,671,842	0.895		317	
	12 BUILDINGS&OFFICES	11,143,570	56,658,669	1.005		2,183	
	13 MISC. PREMISES	774,567	3,130,132	0.816		160	
	16 GOVT SUBDIVISIONS	509,671	3,177,958	0.615		71	
	TOTAL *	\$41,260,619	\$192,384,500	0.945		8,250	

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

TABLE 13
GEORGIA
MANUFACTURERS AND CONTRACTORS
BASIC LIMIT RELATIVE CHANGE ANALYSIS

SUMMARY OF EXPERIENCE USED IN RELATIVE CHANGE ANALYSIS

TYPE OF POLICY	CLASS GROUP	(1) FISCAL A.Y.E. 03/31/2018 AGGREGATE LOSS COSTS AT CURRENT LEVEL	(2) FISCAL A.Y.E. 2014 - 2018 AGG LOSS COST CURRENT LEVEL	(3) FIVE YEAR EXPERIENCE RATIO	(4) RELATIV.	(5) NUMBER OF OCCURRENCES	(6) BAL CELL RELATIV.
10 MONOLINE	30 SERVICE	\$869,516	\$3,159,135	0.903	0.949	130	1.012
	31 LIGHT CONTRACTING	697,421	3,158,438	1.020	1.072	298	1.006
	32 MEDIUM CONTRCTING	5,966,283	29,382,456	0.938	0.987	879	0.997
	33 HEAVY CONTRACTING	1,372,185	5,829,252	0.959	1.009	132	0.996
	34 DEALER OR DISTRIB	797,119	3,576,281	1.472	1.548	107	1.035
	35 LGT. MANUFACTURER	179,637	916,639	1.019	1.072	12	0.997
	36 MED. MANUFACTURER	927,077	4,253,978	0.465	0.488	57	0.950
	37 HVY. MANUFACTURER	390,217	1,792,544	0.201	0.211	14	0.931
	38 MISC. OPERATION	792,624	3,549,172	1.308	1.376	170	1.016
	TOTAL *	\$11,992,079	\$55,617,895	0.943		1,799	
33 MULT OFFICE	31 LIGHT CONTRACTING	\$13,924	\$87,599	0.087	0.091	1	1.042
	32 MEDIUM CONTRCTING	22,556	100,104	0.000	0.000	0	1.033
	33 HEAVY CONTRACTING	80,094	413,792	2.011	2.115	17	1.032
	38 MISC. OPERATION	219,892	1,006,742	2.306	2.425	39	1.052
	TOTAL *	\$336,466	\$1,608,237	1.989		57	
34 MULT MERCANTILE	30 SERVICE	\$60,974	\$310,999	0.352	0.370	4	0.952
	32 MEDIUM CONTRCTING	145,937	711,350	1.162	1.222	22	0.938
	34 DEALER OR DISTRIB	1,136,009	5,376,826	0.646	0.679	150	0.974
	36 MED. MANUFACTURER	619	3,237	0.000	0.000	0	0.894
	38 MISC. OPERATION	117,698	504,187	0.193	0.203	15	0.956
	TOTAL *	\$1,461,237	\$6,906,599	0.649		191	
35 MULT INSTITUT.	31 LIGHT CONTRACTING	\$6,546	\$41,903	0.935	0.984	3	1.049
	32 MEDIUM CONTRCTING	97,289	539,240	3.273	3.442	21	1.040
	TOTAL *	\$103,835	\$581,143	3.126		24	
36 MULT SERVICES	30 SERVICE	\$73,967	\$406,141	1.881	1.979	42	0.973
	31 LIGHT CONTRACTING	227,532	1,278,999	1.051	1.105	80	0.967
	32 MEDIUM CONTRCTING	258,014	1,207,834	0.802	0.843	28	0.959
	33 HEAVY CONTRACTING	23,282	110,226	0.693	0.728	7	0.957
	34 DEALER OR DISTRIB	1,282,091	6,068,066	0.905	0.951	225	0.995
	36 MED. MANUFACTURER	30,340	159,950	0.637	0.670	4	0.913
	38 MISC. OPERATION	914,393	3,433,204	0.795	0.836	159	0.977
	TOTAL *	\$2,809,619	\$12,664,420	0.892		545	

TABLE 13
GEORGIA
MANUFACTURERS AND CONTRACTORS
BASIC LIMIT RELATIVE CHANGE ANALYSIS

SUMMARY OF EXPERIENCE USED IN RELATIVE CHANGE ANALYSIS

TYPE OF POLICY	CLASS GROUP	(1) FISCAL A.Y.E. 03/31/2018 AGGREGATE LOSS COSTS AT CURRENT LEVEL	(2) FISCAL A.Y.E. 2014 - 2018 AGG LOSS COST CURRENT LEVEL	(3) FIVE YEAR EXPERIENCE RATIO	(4) RELATIV.	(5) NUMBER OF OCCURRENCES	(6) BAL CELL RELATIV.
37 MULT INDUST/PROC.	31 LIGHT CONTRACTING	\$647	\$4,069	0.000	0.000	0	1.012
	32 MEDIUM CONTRCTING	130,445	646,637	0.753	0.792	12	1.004
	33 HEAVY CONTRACTING	27,469	142,605	0.940	0.988	6	1.002
	34 DEALER OR DISTRIB	115,790	514,553	0.348	0.366	11	1.041
	35 LGT. MANUFACTURER	250,533	1,069,219	0.999	1.050	27	1.003
	36 MED. MANUFACTURER	1,446,418	6,871,833	0.706	0.742	112	0.956
	37 HVY. MANUFACTURER	844,465	3,952,586	0.354	0.373	45	0.937
	38 MISC. OPERATION	24,092	104,566	1.424	1.497	7	1.022
	TOTAL *	\$2,839,859	\$13,306,068	0.623		220	
38 MULT CONTRACTORS	30 SERVICE	\$1,316,296	\$6,519,550	1.221	1.284	264	1.040
	31 LIGHT CONTRACTING	1,016,221	4,918,962	1.082	1.138	363	1.034
	32 MEDIUM CONTRCTING	3,653,836	17,271,637	1.083	1.139	549	1.025
	33 HEAVY CONTRACTING	1,759,831	8,363,737	1.043	1.097	224	1.024
	38 MISC. OPERATION	126,879	462,001	0.324	0.341	10	1.044
	TOTAL *	\$7,873,063	\$37,535,887	1.085		1,410	
TOTAL ALL TOP	30 SERVICE	\$2,320,753	\$10,395,825	1.100		440	
	31 LIGHT CONTRACTING	1,962,291	9,489,970	1.048		745	
	32 MEDIUM CONTRCTING	10,274,360	49,859,258	1.007		1,511	
	33 HEAVY CONTRACTING	3,262,861	14,859,612	1.028		386	
	34 DEALER OR DISTRIB	3,331,009	15,535,726	0.933		493	
	35 LGT. MANUFACTURER	430,170	1,985,858	1.007		39	
	36 MED. MANUFACTURER	2,404,454	11,288,998	0.612		173	
	37 HVY. MANUFACTURER	1,234,682	5,745,130	0.306		59	
	38 MISC. OPERATION	2,195,578	9,059,872	1.079		400	
	TOTAL *	\$27,416,158	\$128,220,249	0.951		4,246	

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

TABLE 14
 GEORGIA
 PRODUCTS
 BASIC LIMIT RELATIVE CHANGE ANALYSIS

TOP	(1) BAILEY FORMULA RELATIV.	(2) CREDIBILITY Z	(3) Z-WTD RELATIV.	(4) BALANCED RELATIV.	(5) INDICATED CHANGE *
10	0.988	0.372	0.995	0.996	
34	1.036	0.371	1.013	1.014	+ 1.8%
36	1.005	0.187	1.001	1.002	+ 0.6%
37	0.988	0.507	0.994	0.994	- 0.2%
CLASS GROUP					
3	0.924	0.500	0.961	0.965	
4	1.048	0.406	1.019	1.024	
5	1.107	0.132	1.014	1.018	
6	1.007	0.320	1.002	1.006	
7	1.006	0.182	1.001	1.005	

* INDICATED CHANGE =
 (BALANCED RELATIVITY FOR TOP) / (BALANCED MONOLINE (TOP 10) RELATIVITY) - 1

NOTE: THE INDICATED CHANGES BY TOP WERE FURTHER ADJUSTED BY THE FOLLOWING
 DIFFERENTIALS:

TOP 34: 1.007
 TOP 36: 1.012
 TOP 37: 0.979

TABLE 15
MULTISTATE
PRODUCTS
BASIC LIMIT RELATIVE CHANGE ANALYSIS

SUMMARY OF EXPERIENCE USED IN RELATIVE CHANGE ANALYSIS

TYPE OF POLICY	CLASS GROUP	(1) CALENDAR A.Y.E. 12/31/2017 AGGREGATE LOSS COSTS AT CURRENT LEVEL	(2) CALENDAR A.Y.E. 2013 - 2017 AGG LOSS COST CURRENT LEVEL	(3) FIVE YEAR EXPERIENCE RATIO	(4) RELATIV.	(5) NUMBER OF OCCURRENCES	(6) BAL CELL RELATIV.
10 MONOLINE	03 MAN,DLR,DSTFD/DRG	\$18,227,491	\$79,500,211	0.856	0.869	1,461	0.961
	04 DLR,DST-NOTFD/DRG	9,616,743	42,155,667	1.119	1.136	640	1.019
	05 MAN.NTFD/DRG (LOW)	1,605,615	6,748,634	1.039	1.055	84	1.014
	06 MAN.NTFD/DRG (MED)	9,640,686	42,498,903	0.958	0.972	466	1.002
	07 MAN.NTFD/DRG (HGH)	2,568,561	11,286,663	1.018	1.033	129	1.001
	TOTAL *	\$41,659,096	\$182,190,078	0.957		2,780	
34 MULT MERCANTILE	03 MAN,DLR,DSTFD/DRG	\$5,166,155	\$25,851,441	1.131	1.148	791	0.979
	04 DLR,DST-NOTFD/DRG	29,011,611	140,165,685	1.037	1.052	1,972	1.038
	06 MAN.NTFD/DRG (MED)	7,625	57,567	0.000	0.000	0	1.020
	TOTAL *	\$34,185,391	\$166,074,693	1.051		2,763	
36 MULT SERVICES	04 DLR,DST-NOTFD/DRG	\$3,197,904	\$14,609,890	1.041	1.057	699	1.025
	06 MAN.NTFD/DRG (MED)	54,898	258,512	0.781	0.793	1	1.008
	TOTAL *	\$3,252,802	\$14,868,402	1.037		700	
37 MULT INDUST/PROC.	03 MAN,DLR,DSTFD/DRG	\$16,474,514	\$81,117,947	0.888	0.901	2,761	0.960
	05 MAN.NTFD/DRG (LOW)	4,070,679	20,897,437	1.092	1.108	269	1.012
	06 MAN.NTFD/DRG (MED)	28,248,516	131,744,418	0.987	1.002	1,582	1.001
	07 MAN.NTFD/DRG (HGH)	7,346,721	36,933,393	0.965	0.980	537	1.000
	TOTAL *	\$56,140,430	\$270,693,195	0.963		5,149	
TOTAL ALL TOP	03 MAN,DLR,DSTFD/DRG	\$39,868,160	\$186,469,599	0.905		5,013	
	04 DLR,DST-NOTFD/DRG	41,826,258	196,931,242	1.056		3,311	
	05 MAN.NTFD/DRG (LOW)	5,676,294	27,646,071	1.077		353	
	06 MAN.NTFD/DRG (MED)	37,951,725	174,559,400	0.979		2,049	
	07 MAN.NTFD/DRG (HGH)	9,915,282	48,220,056	0.979		666	
	TOTAL *	\$135,237,719	\$633,826,368	0.985		11,392	

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

TABLE 16
GEORGIA
LOCAL PRODUCTS/COMPLETED OPERATIONS
BASIC LIMIT RELATIVE CHANGE ANALYSIS

	(1) BAILEY FORMULA RELATIV.	(2) CREDIBILITY Z	(3) Z-WTD RELATIV.	(4) BALANCED RELATIV.	(5) INDICATED CHANGE *
TOP					
10	0.969	0.752	0.977	0.973	
34	0.959	0.541	0.978	0.974	+ 0.1%
36	0.986	0.516	0.993	0.989	+ 1.6%
37	0.972	0.138	0.996	0.993	+ 2.1%
38	1.025	0.962	1.024	1.020	+ 4.8%
CLASS GROUP					
1	0.918	0.550	0.954	0.948	
2	1.037	0.495	1.018	1.012	
11	1.095	0.352	1.032	1.026	
12	1.016	1.000	1.016	1.010	
13	0.785	0.266	0.938	0.932	

* INDICATED CHANGE =
(BALANCED RELATIVITY FOR TOP) / (BALANCED MONOLINE (TOP 10) RELATIVITY) - 1

TABLE 16C
MULTISTATE
LOCAL PRODUCTS/COMPLETED OPERATIONS
BASIC LIMIT RELATIVE CHANGE ANALYSIS *

STATE	(1) BAILEY FORMULA RELATIV	(2) CREDIBILITY Z	(3) Z-WTD RELATIV	(4) BALANCED RELATIV.
	1.418	0.386	1.144	1.144
	1.202	0.623	1.122	1.121
	1.425	0.229	1.085	1.084
	1.144	0.427	1.059	1.059
	1.413	0.160	1.057	1.057
	1.437	0.153	1.057	1.057
	1.197	0.263	1.049	1.048
	1.096	0.505	1.048	1.047
	1.135	0.345	1.045	1.044
	1.122	0.368	1.043	1.043
	1.191	0.231	1.041	1.041
	1.128	0.326	1.040	1.040
	1.173	0.239	1.039	1.039
	1.148	0.224	1.031	1.031
	1.059	0.435	1.025	1.025
	1.052	0.453	1.023	1.023
	1.257	0.100	1.023	1.023
	1.083	0.227	1.018	1.018
	1.101	0.187	1.018	1.018
	1.090	0.192	1.017	1.016
	1.045	0.369	1.016	1.016
	1.037	0.307	1.011	1.011
	1.019	0.449	1.008	1.008
	1.027	0.143	1.004	1.003
	1.002	0.494	1.001	1.000
	1.002	0.131	1.000	1.000
	0.994	0.097	0.999	0.999
	0.992	0.402	0.997	0.997
	0.989	0.377	0.996	0.995
	0.975	0.190	0.995	0.995
Georgia	0.965	0.458	0.984	0.983
	0.924	0.241	0.981	0.981
	0.933	0.349	0.976	0.976
	0.895	0.260	0.972	0.971
	0.892	0.285	0.968	0.968
	0.788	0.160	0.963	0.962
	0.693	0.104	0.963	0.962
	0.889	0.364	0.958	0.958
	0.759	0.154	0.958	0.958
	0.843	0.288	0.952	0.952
	0.720	0.158	0.949	0.949
	0.765	0.195	0.949	0.949
	0.906	0.547	0.948	0.947
	0.793	0.238	0.946	0.946
	0.512	0.084	0.945	0.945
	0.639	0.136	0.941	0.941
	0.813	0.308	0.938	0.938
	0.889	0.581	0.934	0.933
	0.846	0.470	0.924	0.924
	0.756	0.321	0.914	0.914
	0.602	0.179	0.913	0.913
	0.804	0.575	0.882	0.882

* Sorted by balanced relative change.

TABLE 17
GEORGIA
LOCAL PRODUCTS/COMPLETED OPERATIONS
BASIC LIMIT RELATIVE CHANGE ANALYSIS

SUMMARY OF EXPERIENCE USED IN RELATIVE CHANGE ANALYSIS

TYPE OF POLICY	CLASS GROUP	(1) CALENDAR A.Y.E. 12/31/2017 AGGREGATE LOSS COSTS AT CURRENT LEVEL	(2) CALENDAR A.Y.E. 2013 - 2017 AGG LOSS COST CURRENT LEVEL	(3) FIVE YEAR EXPERIENCE RATIO	(4) RELATIV.	(5) NUMBER OF OCCURRENCES	(6) BAL CELL RELATIV.
10 MONOLINE	01 RET. STRS-FOOD/DRG	\$62,034	\$198,503	1.127	1.040	18	0.908
	02 RET. STRS-NTFD/DRG	59,070	345,006	1.296	1.195	20	0.969
	11 COMP. OPS. (LOW)	89,459	413,427	1.363	1.257	11	0.982
	12 COMP. OPS. (MED)	2,160,799	9,912,626	1.346	1.242	250	0.967
	13 COMP. OPS. (HGH)	230,126	1,267,486	0.224	0.207	3	0.892
	TOTAL *	\$2,601,488	\$12,137,048	1.241		302	
34 MULT MERCANTILE	01 RET. STRS-FOOD/DRG	\$235,499	\$1,065,208	1.650	1.522	222	0.909
	02 RET. STRS-NTFD/DRG	147,584	691,513	0.821	0.758	22	0.970
	12 COMP. OPS. (MED)	87,453	484,509	0.136	0.126	3	0.968
	TOTAL *	\$470,536	\$2,241,230	1.109		247	
36 MULT SERVICES	01 RET. STRS-FOOD/DRG	\$46,341	\$181,669	0.049	0.045	4	0.923
	02 RET. STRS-NTFD/DRG	373,191	1,226,099	1.766	1.630	140	0.985
	11 COMP. OPS. (LOW)	30,622	140,057	0.094	0.086	1	0.998
	12 COMP. OPS. (MED)	129,506	645,469	0.521	0.481	23	0.982
	13 COMP. OPS. (HGH)	36,496	147,195	0.433	0.400	3	0.907
	TOTAL *	\$616,156	\$2,340,489	1.213		171	
37 MULT INDUST/PROC.	01 RET. STRS-FOOD/DRG	\$0	\$267	0.000	0.000	0	0.926
	11 COMP. OPS. (LOW)	2,459	10,583	0.000	0.000	0	1.002
	12 COMP. OPS. (MED)	108,828	536,582	1.169	1.079	8	0.986
	TOTAL *	\$111,287	\$547,432	1.144		8	
38 MULT CONTRACTORS	11 COMP. OPS. (LOW)	\$219,038	\$892,201	0.713	0.658	10	1.030
	12 COMP. OPS. (MED)	4,226,456	20,011,639	1.009	0.931	392	1.014
	13 COMP. OPS. (HGH)	898,942	4,081,639	0.464	0.428	24	0.935
	TOTAL *	\$5,344,436	\$24,985,479	0.905		426	
TOTAL ALL TOP	01 RET. STRS-FOOD/DRG	\$343,874	\$1,445,647	1.340		244	
	02 RET. STRS-NTFD/DRG	579,845	2,262,618	1.478		182	
	11 COMP. OPS. (LOW)	341,578	1,456,268	0.823		22	
	12 COMP. OPS. (MED)	6,713,042	31,590,825	1.099		676	
	13 COMP. OPS. (HGH)	1,165,564	5,496,320	0.416		30	
	TOTAL *	\$9,143,903	\$42,251,678	1.035		1,154	

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

TABLE 18
MULTISTATE
LOCAL PRODUCTS/COMPLETED OPERATIONS
BASIC LIMIT RELATIVE CHANGE ANALYSIS

SUMMARY OF EXPERIENCE USED IN RELATIVE CHANGE ANALYSIS

TYPE OF POLICY	CLASS GROUP	(1) CALENDAR A.Y.E. 12/31/2017 AGGREGATE LOSS COSTS AT CURRENT LEVEL	(2) CALENDAR A.Y.E. 2013 - 2017 AGG LOSS COST CURRENT LEVEL	(3) FIVE YEAR EXPERIENCE RATIO	(4) RELATIV.	(5) NUMBER OF OCCURRENCES	(6) BAL CELL RELATIV.
10 MONOLINE	01 RET. STRS-FOOD/DRG	\$2,570,942	\$11,000,189	0.978		762	
	02 RET. STRS-NTFD/DRG	2,629,603	11,663,817	1.219		494	
	11 COMP. OPS. (LOW)	4,024,036	18,069,271	1.329		705	
	12 COMP. OPS. (MED)	82,107,926	364,826,722	1.080		6,242	
	13 COMP. OPS. (HGH)	7,801,373	39,341,081	0.703		282	
	TOTAL *	\$99,133,880	\$444,901,080	1.062		8,485	
34 MULT MERCANTILE	01 RET. STRS-FOOD/DRG	\$8,002,266	\$37,342,335	0.940		3,591	
	02 RET. STRS-NTFD/DRG	5,186,195	23,434,483	1.012		665	
	12 COMP. OPS. (MED)	2,043,786	10,139,349	1.186		140	
	TOTAL *	\$15,232,247	\$70,916,167	0.997		4,396	
36 MULT SERVICES	01 RET. STRS-FOOD/DRG	\$729,961	\$3,439,653	1.065		197	
	02 RET. STRS-NTFD/DRG	12,256,900	48,452,562	1.088		2,518	
	11 COMP. OPS. (LOW)	3,094,937	14,012,389	1.111		510	
	12 COMP. OPS. (MED)	4,447,208	21,021,492	0.941		694	
	13 COMP. OPS. (HGH)	989,332	5,061,195	1.199		87	
	TOTAL *	\$21,518,338	\$91,987,291	1.065		4,006	
37 MULT INDUST/PROC.	01 RET. STRS-FOOD/DRG	\$26,867	\$90,627	2.388		1	
	11 COMP. OPS. (LOW)	114,535	530,208	1.229		19	
	12 COMP. OPS. (MED)	3,550,014	17,334,430	1.039		268	
	13 COMP. OPS. (HGH)	40,532	307,938	0.580		0	
	TOTAL *	\$3,731,948	\$18,263,203	1.050		288	
38 MULT CONTRACTORS	11 COMP. OPS. (LOW)	\$8,122,432	\$37,446,153	1.157		634	
	12 COMP. OPS. (MED)	143,209,202	677,397,379	1.125		12,565	
	13 COMP. OPS. (HGH)	14,631,915	67,788,410	0.919		693	
	TOTAL *	\$165,963,549	\$782,631,942	1.108		13,892	
TOTAL ALL TOP	01 RET. STRS-FOOD/DRG	\$11,330,036	\$51,872,804	0.960		4,551	
	02 RET. STRS-NTFD/DRG	20,072,698	83,550,862	1.086		3,677	
	11 COMP. OPS. (LOW)	15,355,940	70,058,021	1.193		1,868	
	12 COMP. OPS. (MED)	235,358,136	1,090,719,372	1.105		19,909	
	13 COMP. OPS. (HGH)	23,463,152	112,498,624	0.858		1,062	
	TOTAL *	\$305,579,962	\$1,408,699,683	1.084		31,067	

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

EXPLANATORY NOTES TO GENERAL LIABILITY
RELATIVITY ANALYSIS - TABLES 10 THROUGH 18.

OBJECTIVES

The objectives of this procedure are to:

- 1) determine monoline loss cost level needs for the appropriate rating variables;
- 2) determine indicated changes to the eight liability Commercial Package Policy (CPP) Package Modification Factors (PMFs) based on Premises/Operations and Products/Completed Operations data.

EXPERIENCE
BASE

The experience used in this relativity analysis is the latest five (5) years of accident year data, as reported under the Commercial Statistical Plan with aggregate loss costs adjusted to current loss cost level (multiline aggregate loss costs adjusted additionally by the current Implicit Package Modification Factors). Losses have been trended and developed in the Relativity Analysis. ALCCCL have been trended.

SIMULTANEOUS
DETERMINATION
OF RATING
VARIABLE
RELATIVITIES

Once the aggregate loss costs at current level and incurred losses used in the analysis have been appropriately adjusted, the 5-year experience ratios are calculated for each combination of the appropriate rating variables. From these ratios, relativities to the statewide 5-year experience ratio are calculated. These relativities are then used in a minimum bias iterative review procedure, which simultaneously determines the relativities for each rating variable.

The purpose of a simultaneous review procedure is to arrive at a set of relativities for each rating variable that best represent the experience. For example, the type of policy relativities will serve to derive the relationship of CPP policies relative to monoline policies, via the PMF, while the class group and territory (if applicable) relativities will serve to derive the relationship of the various classification and territories relative to one another. An iterative technique is used to derive relativities for each rating variable. This procedure is in contrast to a one-way type of review, wherein relativities for each rating variable would each be reviewed separately.

Such one-way types of review do not take into account differing percentages of experience of each rating variable within the other rating variables. The simultaneous review procedure accounts for these different distributions in generating relativities for each rating variable.

RATING
VARIABLES
USED

For Premises/Operations and Products/Completed Operations, the rating variables used in the relativity analysis are as follows:

Manufacturers and Contractors -	type of policy and class group
Owners, Landlords and Tenants -	type of policy, territory and class group
Products -	type of policy and class group
Local Products/Completed Operations-	type of policy, state and class group

EXPLANATORY NOTES TO GENERAL LIABILITY
RELATIVITY ANALYSIS - TABLES 10 THROUGH 18.

ITERATIVE
PROCEDURE

The iterative technique referred to in the previous paragraph solves for a set of relativities for each rating variable based on the experience for the cells; that is, based on the experience ratio and latest year adjusted aggregate loss cost volume for each combination of rating variables relative to the experience ratio and adjusted aggregate loss cost volume for all combinations of rating variables combined. Specifically, the iterative procedure uses the following formulas:

For Owners, Landlords and Tenants:

$$TOP_i = \frac{\sum_j \sum_k W_{ijk} r_{ijk}}{\sum_j \sum_k W_{ijk} CG_j TER_k} \quad \text{where } 1 \leq i \leq m$$

$$CG_j = \frac{\sum_i \sum_k W_{ijk} r_{ijk}}{\sum_i \sum_k W_{ijk} TOP_i TER_k} \quad \text{where } 1 \leq j \leq n$$

$$TER_k = \frac{\sum_i \sum_j W_{ijk} r_{ijk}}{\sum_i \sum_j W_{ijk} TOP_i CG_j} \quad \text{where } 1 \leq k \leq p$$

TOP_i is the relative change for the i^{th} type of policy;

CG_j is the relative change for the j^{th} class group;

TER_k is the relative change for the k^{th} territory;

W_{ijk} is the aggregate loss costs at current level for the i^{th}

type of policy, j^{th} class group and k^{th} territory;

r_{ijk} is the relative change for the i^{th} type of policy,

j^{th} class group and k^{th} territory;

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

n is the number of class groups in the analysis;

p is the number of territories in the analysis;

EXPLANATORY NOTES TO GENERAL LIABILITY
RELATIVITY ANALYSIS - TABLES 10 THROUGH 18.

For Manufacturers and Contractors, and Products:

$$TOP_i = \frac{\sum_j W_{ij} r_{ij}}{\sum_j W_{ij} CG_j} \quad \text{where } 1 \leq i \leq m$$

$$CG_j = \frac{\sum_i W_{ij} r_{ij}}{\sum_i W_{ij} TOP_i} \quad \text{where } 1 \leq j \leq n$$

TOP_i is the relative change for the i^{th} type of policy;

CG_j is the relative change for the j^{th} class group;

W_{ij} is the aggregate loss costs at current level for the i^{th}

type of policy and j^{th} class group;

r_{ij} is the relative change for the i^{th} type of policy

and j^{th} class group;

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

n is the number of class groups in the analysis;

EXPLANATORY NOTES TO GENERAL LIABILITY
RELATIVITY ANALYSIS - TABLES 10 THROUGH 18.

For Local Products/Completed Operations:

$$TOP_i = \frac{\sum_j \sum_k W_{ijk} r_{ijk}}{\sum_j \sum_k W_{ijk} CG_j ST_k} \quad \text{where } 1 \leq i \leq m$$

$$CG_j = \frac{\sum_i \sum_k W_{ijk} r_{ijk}}{\sum_i \sum_k W_{ijk} TOP_i ST_k} \quad \text{where } 1 \leq j \leq n$$

$$ST_k = \frac{\sum_i \sum_j W_{ijk} r_{ijk}}{\sum_i \sum_j W_{ijk} TOP_i CG_j} \quad \text{where } 1 \leq k \leq p$$

TOP_i is the relative change for the i^{th} type of policy;

CG_j is the relative change for the j^{th} class group;

ST_k is the relative change for the k^{th} state;

W_{ijk} is the aggregate loss costs at current level for the i^{th}

type of policy, j^{th} class group and k^{th} state;

r_{ijk} is the relative change for the i^{th} type of policy,

j^{th} class group and k^{th} state;

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

n is the number of class groups in the analysis;

p is the number of states in the analysis;

EXPLANATORY NOTES TO GENERAL LIABILITY
RELATIVITY ANALYSIS - TABLES 10 THROUGH 18.

ITERATIVE
PROCEDURE
(Cont'd)

For example, for Owners, Landlords and Tenants, the procedure starts by inserting the actual relativities for type of policy and class group into the third formula to get a territory relativity. This result is then used with the class group relativity in the first formula to get a new type of policy relativity, which in turn is substituted along with the territory relativity into the second formula to get a new class group relativity. The process continues on in that fashion until there is no appreciable difference from one iteration to the next.

APPLICATION OF
CREDIBILITY

Consideration is then given to the credibility of the experience for each rating variable. The credibility of each of these categories is based on the formula $Z = \sqrt{P/18,000}$ for Owners, Landlords and Tenants, $Z = \sqrt{P/18,000}$ for Manufacturers and Contractors and $Z = \sqrt{P/20,000}$ for Products, where P is the 5 year occurrence total for a given class group, territory or type of policy. For Local Products/Completed Operations, separate formulas are used to calculate the credibility of the experience for each type of policy and class group versus the credibility of the experience for each state, namely $Z = \sqrt{P/15,000}$ for type of policy and class group, and $Z = \sqrt{P/5,500}$ for state (in this case, P is the 5 year occurrence total for a given state). Credibility-weighted relativities are then calculated as follows:

$$W = R^Z \quad \text{where:}$$

Z is the class group, territory, state or type of policy credibility;

R is the class group, territory, state or type of policy relativity;

W is the credibility-weighted relativity.

The resulting credibility-weighted relativities are then balanced to assure that the average relativity remains at unity.

EXPLANATORY NOTES TO GENERAL LIABILITY
RELATIVITY ANALYSIS - TABLES 10 THROUGH 18.

MULTILINE
CONSIDERATIONS

The monoline relativities and the class group, territory (if applicable) and state relativities which result from the aforementioned procedures are then used to generate indicated monoline classification loss cost changes. The multiline relativities are used to generate multiline indications that apply to the current Implicit Package Modification Factors. The indicated IPMFs are calculated 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 re-performed to take this into account.
