

**State:** Pennsylvania **Filing Company:** Allstate Insurance Company  
**TOI/Sub-TOI:** 04.0 Homeowners/04.0001 Condominium Homeowners  
**Product Name:** AIC Condo  
**Project Name/Number:** 4.9% Increase/RITM00374097

## Filing at a Glance

Company: Allstate Insurance Company  
 Product Name: AIC Condo  
 State: Pennsylvania  
 TOI: 04.0 Homeowners  
 Sub-TOI: 04.0001 Condominium Homeowners  
 Filing Type: Rate  
 Date Submitted: 07/31/2015  
 SERFF Tr Num: ALSE-130189364  
 SERFF Status: Assigned  
 State Tr Num:  
 State Status: Received Review in Progress  
 Co Tr Num: R28775: 4.9% INCREASE  
  
 Effective Date: 09/14/2015  
 Requested (New):  
 Effective Date: 10/29/2015  
 Requested (Renewal):  
 Author(s): Bonnie Wittman  
 Reviewer(s): Xiaofeng Lu (primary), Michael McKenney  
 Disposition Date:  
 Disposition Status:  
 Effective Date (New):  
 Effective Date (Renewal):  
  
 State Filing Description:

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## General Information

Project Name: 4.9% Increase	Status of Filing in Domicile:
Project Number: RITM00374097	Domicile Status Comments:
Reference Organization:	Reference Number:
Reference Title:	Advisory Org. Circular:
Filing Status Changed: 08/03/2015	
State Status Changed: 08/03/2015	Deemer Date:
Created By: Bonnie Wittman	Submitted By: Bonnie Wittman
Corresponding Filing Tracking Number:	

### Filing Description:

This filing proposes a 4.9% rate increase for the Pennsylvania Condominium line of business in the Allstate Insurance Company based on an overall 9.3% indicated rate level need. This rate will be accomplished by revising the Rate Adjustment Factor.

This filing company is closed to new business. We have, however, supplied a new business effective date for special business cases, for example, to accommodate a new business policy in the same company to a policyholder that has spun off from the original policy, or if a cancel/re-write is necessary.

We are targeting an implementation date of September 14, 2015 for new business written and renewals processed on or after September 14, 2015 and renewal business effective on or after October 29, 2015.

Please note that this line of business accounts for 1.37% of all Allstate Insurance Company Line 4 premium.

## Company and Contact

### Filing Contact Information

Bonnie Wittman, State Filings Director	bwb4d@allstate.com
2775 Sanders Road	847-402-3144 [Phone] 23144 [Ext]
Suite A2-W	847-402-9757 [FAX]
Northbrook, IL 60062	

### Filing Company Information

Allstate Insurance Company	CoCode: 19232	State of Domicile: Illinois
2775 Sanders Road	Group Code: 8	Company Type: Property and
Suite A2-W	Group Name: Allstate	Casualty
Northbrook, IL 60062	FEIN Number: 36-0719665	State ID Number:
(847) 402-5000 ext. [Phone]		

## Filing Fees

Fee Required?	No
Retaliatory?	No
Fee Explanation:	

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## State Specific

- \*Filing Fee Amount: n/a
- \*Date Filing Fee Mailed: n/a
- \*Filing Fee Check Number: n/a
- \*Filing Fee Check Date: n/a
- \*NAIC Number: 19232

**SERFF Tracking #:**

ALSE-130189364

**State Tracking #:****Company Tracking #:**

R28775: 4.9% INCREASE

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## Rate Information

Rate data applies to filing.

**Filing Method:**

Prior Approval

**Rate Change Type:**

Increase

**Overall Percentage of Last Rate Revision:**

5.000%

**Effective Date of Last Rate Revision:**

03/03/2014

**Filing Method of Last Filing:**

Prior Approval

## Company Rate Information

Company Name:	Overall % Indicated Change:	Overall % Rate Impact:	Written Premium Change for this Program:	Number of Policy Holders Affected for this Program:	Written Premium for this Program:	Maximum % Change (where req'd):	Minimum % Change (where req'd):
Allstate Insurance Company	9.300%	4.900%	\$99,362	5,640	\$2,027,802	6.100%	0.900%

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## Rate/Rule Schedule

Item No.	Schedule Item Status	Exhibit Name	Rule # or Page #	Rate Action	Previous State Filing Number	Attachments
1		Manual Page	Page 1	Replacement	ALSE-129304887	05. Manual - PA AIC Condo R28775.pdf

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**PENNSYLVANIA**  
**RATE PAGE CALCULATION OPTIONS**

The following discounts, credits and surcharges should be applied in the order listed.

1. Multiply the appropriate premium from the rate pages by a Rate Adjustment Factor of 1.367 (Note: Premiums for policies with Coverage C limits less than \$6,000 may be developed by subtracting \$1 per \$1,000 from the \$6,000 premium and then applying the Rate Adjustment Factor.)
2. Not Rented - Multiply by .95  
Rented 1-8 Weeks - Multiply by 1.00  
Rented 9 or More Weeks - Multiply by 1.25
3. \$50, \$500 or \$1,000 Deductible - Multiply \$100 Deductible premium by 1.111, .778 or .700
4. \$250 Theft Deductible - Multiply \$50 or \$100 Deductible premium by .95
5. Home Buyer Discount – Multiply by the appropriate factor (Rule 23)
6. Personal Property Reimbursement Provision - Multiply by 1.25 (Rule 4.B.)
7. Protective Device Discount - Multiply by the appropriate factor (Rule 16)
8. 55 and Retired Discount - Multiply by .75 (Rule 17)
9. Home and Auto Discount - Multiply by .90 (Rule 18)
10. The Good Hands People ® Discount - Multiply by .95 (Rule 19)
11. For Secondary Residence Credit subtract the amount shown on the Supplementary Rate Pages (Rule 8)
12. Rate Transition – Multiply by the Rate Transition Factor (Rule 24)

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## Supporting Document Schedules

<b>Bypassed - Item:</b>	Authorization to File (PC)
<b>Bypass Reason:</b>	n/a
<b>Attachment(s):</b>	
<b>Item Status:</b>	
<b>Status Date:</b>	
<b>Satisfied - Item:</b>	Actuarial Explanatory Memorandum & Supporting Exhibits (PC)
<b>Comments:</b>	
<b>Attachment(s):</b>	03. Actuarial Support - PA AIC Condo R28775.pdf 06. Tracked Changes - PA AIC Condo R28775.pdf
<b>Item Status:</b>	
<b>Status Date:</b>	

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# **ATTACHMENT I**

## **Summary of Disclosures**

**ALLSTATE INSURANCE COMPANY  
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**ACTUARIAL STANDARDS OF PRACTICE**

This document confirms compliance with the Actuarial Standards of Practice that are applicable to the preparation of statewide rate filings performed by casualty actuaries as stated in “Applicability Guidelines for Actuarial Standards of Practice” (American Academy of Actuaries, September 2004).

# **ATTACHMENT II**

## **Summary of Rate Level Indication**

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**SUMMARY OF THE DEVELOPMENT OF STATEWIDE RATE LEVEL INDICATION**

The calculation of the rate level indication is consistent with the Statement of Principles Regarding Property and Casualty Insurance Ratemaking.

A rate level indication is a test of the adequacy of expected revenues versus expected costs during the future policy period. Therefore, to derive the indicated rate level need accurately, Allstate's historical premium and loss experience needs to be adjusted. In accordance with Section 3.1 of Actuarial Standard of Practice No. 13, *Trending Procedures in Property/Casualty Insurance Ratemaking*, Allstate trends the underlying historical experience for premiums, losses, and fixed expenses to appropriately reflect historical and projected changes in these components of the rate level indications. In addition, historical premiums must be adjusted to reflect the current rate level, and historical losses must be adjusted to reflect expected development over time. All hurricane related losses during the experience period were removed and replaced with a provision to reflect those expected losses. Details of these necessary adjustments to the historical data used in the rate level indication are described in this memorandum.

In past rate level indications, the number of paid claims was counted on a per policy, per event, per coverage basis. With this rate level indication, the number of paid claims is counted on a per policy, per event basis. This change provides a more consistent process for counting paid claims because it is not affected by the number of coverages under which claim payments are made. This change applies any time that claim counts are used in the indication.

**Attachment V, Exhibit 1.0** summarizes the indicated and proposed rate changes. The determination of the overall indicated change is included in **Exhibit 1.1**, and described in detail throughout this filing.

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**ADJUSTMENTS TO NON-WEATHER LOSSES**

Underlying Data

The data used in the calculation of the rate level indication was selected in accordance with the considerations listed in Section 3.2 of Actuarial Standard of Practice No. 23, *Data Quality*. Please reference **Exhibit 2** for the fiscal accident years used in developing the rate level indications.

Non-weather losses are defined as those whose primary cause of loss was Fire, Theft, Liability, or All Other perils. Allocated loss adjustment expense (ALAE) is included in the losses.

Please note that Non-Weather losses from both Allstate Insurance Company and Allstate Indemnity Company are used in the development of the provision for Non-Weather losses and LAE since the Allstate Insurance Company data does not, in itself, provide a sufficiently credible basis for evaluation.

Accident Year Weights

In order to develop a credible measure of the indicated rate level, it is sometimes necessary to use more than one year of historical loss experience. A maximum of five accident years is combined to determine the indicated provision for loss and loss adjustment expense. The number of years used is based upon a credibility procedure from the paper "On the Credibility of the Pure Premium" (Proceedings of the Casualty Actuarial Society, Vol. LV, 1968), by Mayerson, Jones and Bowers, and actuarial judgment. The analysis was completed using a  $k$  value of 0.100 and a  $P$  value of 90.0%; these parameters reflect the desire that the observed pure premium should be within 100k% of the expected pure premium with probability  $P$ . Assuming a Poisson frequency, an empirical review of the severity size of loss curve provides a gauge of credibility based on the number of claims closed with a payment.

The weights applied to the loss experience for the accident years are determined by the distribution of earned exposures over those years. The weights are based on the exposure distribution rather than the claim distribution in order to lessen the impact of volatility that can occur in the claim distribution. The initial calculated weight for a given year is limited to the weight for the subsequent year and the final weights are calculated proportionate to the limited weights to total 100%.

This approach for incorporating credibility in determination of the accident year weights is consistent with the Current Practices and Alternatives detailed in Section 3 of Actuarial Standard of Practice No. 25, *Credibility Procedures Applicable to Accident and Health, Group Term Life, and Property/Casualty Coverages*.

### Loss Development

Allstate has developed accident year losses (including allocated loss adjustment expense) to ultimate settlement levels using the Link Ratio method. The link ratio method assumes that future development is proportional to losses that have already emerged as of a given evaluation date.

To calculate estimated ultimate losses using the Link Ratio method, historical age-to-age link ratios are calculated, which represent loss development between different evaluation periods. An average of the historical link ratios is then used to estimate the ultimate level of paid losses to be used in ratemaking. This method assumes that historical loss development patterns can be used to estimate future loss development on current immature claims.

Loss development factors were based on Countrywide Allstate Insurance Group data. Loss development patterns for Allstate Insurance Company and Allstate Indemnity Company are expected to be similar since claims settlement practices are the same for each company.

Refer to **Exhibits 3.1-3.2** for the loss development using the Link Ratio method of loss development.

### Loss Adjustment Expenses

Allocated loss adjustment expenses (ALAE) are included in the losses. Losses in the experience period have been adjusted to account for non-hurricane unallocated loss adjustment expenses (ULAE). A provision is developed using Countrywide Allstate Insurance Group data. A three-year average of the ratios of Countrywide, combined-lines, calendar year non-hurricane ULAE to Countrywide, combined-lines, calendar year non-hurricane incurred losses and allocated loss adjustment expense is used to determine the ULAE provision. The average ratio is then applied to the losses for each year used in the formula calculation. The ULAE ratio that has been used in this filing is shown in **Exhibit 5**.

### Loss Trend

The past changes in actual frequency and severity on a twelve-month-moving basis (evaluated at each quarter) were analyzed. The data has been adjusted as described below.

Frequency and severity amounts are calculated using the methodology in “The Effect of changing Exposure Levels on Calendar Year Loss Trends” (*Casualty Actuarial Society Forum*, Winter 2005) by Chris Styrsky. This methodology helps to more consistently match losses and claims paid with the exposures that produced the claims.

**Exhibit 7** displays the paid pure premium trends. The credibility level of Allstate loss trend data was analyzed based on the number of claims paid in the latest experience year, which is consistent with the criteria for selecting a credibility procedure outlined in Section 3 of Actuarial Standard of Practice No. 25, *Credibility Procedures Applicable to Accident and Health, Group Term Life, and Property/Casualty Coverages*.

After considering past results, credibility level of Allstate data, and actuarial judgment, annual pure premium trends were selected. The selected trends and projections are displayed in **Exhibit 6**. These annual selections are used to project the data from the average occurrence date of the experience period to the average occurrence date of the future policy period.

This approach for selecting pure premium trends and projections is consistent with the Current Practices and Alternatives detailed in *Appendix 1 – Background and Current Practices of Actuarial Standard of Practice No. 13, Trending Procedures in Property/Casualty Insurance Ratemaking*.

#### Credibility for Losses

##### State Credibility:

The available accident year data used in the indication is not fully credible. Therefore, we determine the partial credibility of the provision for Non-Weather loss and LAE using the credibility procedure referenced in the Accident Year Weight section in **Attachment II, Page 2**. State accident year data is given a minimum weight of 50%. The Non-Weather loss and LAE is then weighted with a credibility complement, the development of which is included on **Exhibit 9**.

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**ADJUSTMENTS TO WEATHER LOSSES**

The indicated provision for weather losses is determined based on individual frequency and severity components. Allstate has found that separate analyses of frequency and severity for weather losses provide a better estimate of pure premium given the inherent complication of process variance in these losses. The specific base data and methodology for weather losses is explained in detail below.

Underlying Data

Weather losses are defined as those whose primary cause of loss was Water, Wind, Hail, or Lightning perils. Allocated loss adjustment expense (ALAE) is included in the losses. Please note that although Water claims arise from both weather and non-weather events, data limitations currently prevent separate classifications of claims within this peril. All Water claims have been classified as weather events for purposes of this analysis. Please reference **Exhibit 2** for the fiscal accident years used for the severity analysis.

Please note that Weather losses from both Allstate Insurance Company and Allstate Indemnity Company are used in the development of the provision for Weather losses and LAE since the Allstate Insurance Company data does not, in itself, provide a sufficiently credible basis for evaluation.

Severity Accident Year Weights

A maximum of five accident years is combined to determine the indicated weather severity provision. The number of years used is based upon a credibility procedure from the paper "On the Credibility of the Pure Premium" (Proceedings of the Casualty Actuarial Society, Vol. LV, 1968), by Mayerson, Jones and Bowers, and actuarial judgment. The analysis was completed using a  $k$  value of 0.100 and a  $P$  value of 90.0%; these parameters reflect the desire that the observed severity should be within 100k% of the expected severity with probability  $P$ . Unlike its non-weather counterpart, this analysis does not rely on a frequency assumption; rather, an empirical review of the severity size of loss curve provided a gauge of credibility based on the number of claims closed with a payment.

The weights applied to the loss experience for the accident years are determined by the distribution of earned exposures over those years. The weights are based on the exposure distribution rather than the claim distribution in order to lessen the impact of volatility that can occur in the claim distribution. The initial calculated weight for a given year is limited to the weight for the subsequent year and the final weights are calculated proportionate to the limited weights to total 100%.

This approach for incorporating credibility in determination of the accident year weights is consistent with the Current Practices and Alternatives detailed in Section 3 of Actuarial Standard

of Practice No. 25, *Credibility Procedures Applicable to Accident and Health, Group Term Life, and Property/Casualty Coverages*.

### Severity Development

Allstate determines ultimate accident year weather severity using the Link Ratio method, which assumes that future development is proportional to losses that have already emerged as of a given evaluation date.

Loss development factors were based on Countrywide Allstate Insurance Group data. Loss development patterns for Allstate Insurance Company and Allstate Indemnity Company are expected to be similar, since claims settlement practices are the same for each company.

To calculate estimated ultimate severities using the Link Ratio method, historical age-to-age link ratios are calculated, which represent loss development between different evaluation periods. An average of the historical link ratios is then used to estimate the ultimate level of paid losses to be used in ratemaking. This method assumes that historical loss development patterns can be used to estimate future loss development on current immature claims.

Refer to **Exhibit 4.2** for the weather severity loss development using the Link Ratio method. The estimated ultimate severity is shown in **Exhibit 2**.

### Severity Trend

The past changes in actual severity on a twelve-month-moving basis (evaluated at each quarter) were analyzed.

**Exhibit 7** displays the paid severity trends. The credibility level of Allstate loss trend data was analyzed based on the number of claims paid in the latest experience year, which is consistent with the criteria for selecting a credibility procedure outlined in Section 3 of Actuarial Standard of Practice No. 25, *Credibility Procedures Applicable to Accident and Health, Group Term Life, and Property/Casualty Coverages*.

After considering past results, credibility level of Allstate data, and actuarial judgment, annual severity trends were selected. The selected trends and projections are displayed in **Exhibit 6**. These annual selections are used to project the data from the average occurrence date of the experience period to the average occurrence date of the future policy period.

This approach for selecting severity trends and projections is consistent with the Current Practices and Alternatives detailed in *Appendix 1 – Background and Current Practices of Actuarial Standard of Practice No. 13, Trending Procedures in Property/Casualty Insurance Ratemaking*.

### Frequency Estimation

**Exhibit 8** displays the number of years of data used to calculate the average frequency for Pennsylvania for the combined Water, Wind, Hail, and Lightning perils (i.e., weather). Each accident year's claim frequencies are developed to ultimate. The straight average is used as the

state estimate of future claims frequency. Note that no trend is applied to this frequency estimate.

To calculate estimated ultimate frequencies using the Link Ratio method, historical age-to-age link ratios are calculated, which represent claim development between different evaluation periods. An average of the historical link ratios is then used to estimate the ultimate level of frequencies to be used in ratemaking. This method assumes that historical claim development patterns can be used to estimate future claim development on current immature claims.

Refer to **Exhibit 4.1** for the weather frequency claim development using the Link Ratio method. The estimated ultimate frequency is shown in **Exhibit 2**.

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**MODELED LOSSES**

Allstate separately identifies and accounts for its exposure to loss due to the occurrence of hurricane or other modeled events within a state. All hurricane related losses during the experience period were removed and then replaced with a provision to reflect expected modeled losses in Pennsylvania.

**Attachment III** describes the modeled provision in detail. **Attachment V, Exhibit 10** displays the total modeled provision used in Pennsylvania.

Please note that in developing the Provision for Hurricane Loss and LAE, the Amount of Insurance Years (AIY's) are used as an exposure base. One AIY is equal to \$1,000 of Coverage in force for one year. The AIY's must be adjusted to represent the AIY's that we expect to be in force during the policy period. **Exhibit 18** shows the average AIY trend for Pennsylvania. The selected projection is displayed in **Exhibit 17**. This annual selection is used to project the AIY's to the average earned date of the proposed policy period.

This approach for selecting AIY projections is consistent with the Current Practices and Alternatives detailed in *Appendix 1 – Background and Current Practices of Actuarial Standard of Practice No. 13, Trending Procedures in Property/Casualty Insurance Ratemaking*.

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**EXPENSES AND PROFIT PROVISION**

The expense provisions described below were derived in accordance with Section 3.2, Determining Expense Provisions, of Actuarial Standard of Practice No. 29, *Expense Provisions in Property/Casualty Insurance Ratemaking*.

**Exhibit 11** shows the expense provisions used in developing the current fixed and variable expense ratios, as well as the underwriting profit and debt provisions.

**Fixed Expenses**

Provisions

*General and Other Acquisition Expenses*

The provisions for general expense and other acquisition expense are based on Countrywide data. To develop the provision for general and other acquisition expenses, a three-year average of Countrywide, combined-lines, calendar year incurred expense divided by Countrywide calendar year direct earned premium was calculated. Because premiums charged for the net cost of reinsurance (NCOR) do not include provisions for general and other acquisition expenses, the earned premium used in the development of the general and other acquisition expenses is Countrywide direct earned premium less Countrywide NCOR premium. The provision for other acquisition expense has been reduced by the amount of installment fees collected. In addition, the provision has been adjusted for premiums written off.

*Licenses & Fees*

A provision for licenses and fees that do not vary by premium size is determined by taking the arithmetic average ratio of these licenses and fees from the latest three calendar years in Pennsylvania. The provision for licenses and fees is considered, along with the general and other acquisition expense provisions, to be a fixed expense and is shown in **Exhibit 11**.

The expense provisions for general and other acquisition expenses are developed on **Exhibits 12** and **13**.

Rate Need Calculations

In developing the dollar provision for general and other acquisition expenses used in the calculation of the rate level need, the three-year average expense ratio is applied to the average earned group premium of Pennsylvania. The group average earned premium is developed using the same three-year period used in the calculation of the Countrywide expense ratio. The provision is then adjusted for the trend expected to occur from the midpoint of the three years used in the calculation of the average earned premium to the average earned date of the proposed policy period to derive the provision included in the rate level indications.

### Trend (Inflation)

The fixed expense trend utilized in the calculation of the indicated fixed expense provision consists of two components – a trend for General & Other Acquisition expenses and a trend for Licenses & Fees.

The method used to calculate the fixed expense trend for General & Other Acquisition expenses is similar to the method used by the Insurance Services Office (I.S.O.) and other competitors to determine a fixed expense trend. The method utilizes the CPI (Consumer Price Index) and the ECI (Employment Cost Index – Insurance Carriers, Agents, Brokers, & Service) and is discussed by Geoffrey Todd Werner, FCAS, MAAA in his paper *Incorporation of Fixed Expenses*, which was published in the *CAS Forum* (Winter 2004). Based on a review of the historical indices, an annual percentage change is selected for each index. These selected annual percent changes are then weighted together using the distribution of the Allstate expenditures in the latest calendar year for the two broad expense categories that these indices represent. This method is expected to produce stable and reasonable estimates of the true trend in fixed expenses and is consistent with the Current Practices and Alternatives detailed in *Appendix I – Background and Current Practices* of Actuarial Standard of Practice No. 13, *Trending Procedures in Property/Casualty Insurance Ratemaking*.

In addition to the General & Other Acquisition expenses, Licenses & Fees are also considered as fixed expenses. Licenses & fees are generally constant in the absence of state action; therefore, the fixed expense trend should only be applied to the General & Other Acquisition portions of the fixed expenses. To accomplish this, Allstate calculates a weighted average of two trends: the fixed expense trend for general and other acquisition (as calculated using the method described in the paragraph above) and a 0.0% trend for licenses and fees. This weighted-average trend can then be applied to the entire fixed expense provision. The factor to adjust for subsequent change in Fixed Expense is shown in **Exhibit 14**.

### **Variable Expenses**

#### Commission and Brokerage Expense

The proposed commission and brokerage expense provision is determined by taking the arithmetic average ratio of commission and brokerage from the latest three calendar years in Pennsylvania. The provision is shown in **Exhibit 11**.

#### Taxes

The provision for taxes is determined by taking the currently prescribed Pennsylvania premium tax ratio and adding to that the arithmetic average ratio of other assessments that vary by the size of the premium from the latest three or five calendar years. The provision is shown in **Exhibit 11**.

#### Underwriting Profit Provision

Allstate performs two separate cost of capital analyses in the estimation of its cost of equity. The first uses the Fama-French Three-factor Model (FF3F), which reflects developments in the field of financial economics as published in the *Casualty Actuarial Society Forum*, Winter, 2004 and

*in Journal of Risk and Insurance, Vol. 72, No. 3, September 2005* (“Estimating the Cost of Equity Capital For Property-Liability Insurers” by J. David Cummins and Richard D. Phillips). The second is a Discounted Cash Flow (DCF) analysis, which estimates the expected future cash flows to investors in order to gauge the proper cost of equity. Once both the DCF and FF3F estimates had been calculated, Allstate selected a cost of equity of 10%, which reflected the outcomes of both analyses.

An analysis of premium, loss and expense cash flows is used to calculate the investment income on policyholder supplied funds (PHSF). This methodology is one of the two examples given in Actuarial Standard of Practice, No. 30, *Treatment of Profit and Contingency Provisions and the Cost of Capital in Property/Casualty Insurance Ratemaking*, as appropriate methods for recognizing investment income from insurance operations (page 4).

The calculations detailing this investment income analysis are found in **Exhibit 15**. The expected investment yield rate (applied as a force of interest) used to discount losses and expenses includes anticipated net investment income and anticipated capital gains, both realized and unrealized. Operating cash flows are discounted to the average time of earnings of premium and profit for the policy year, rather than to the start of the policy year.

The final pre-tax underwriting profit provision at present value is shown in **Exhibit 11** as well.

The underwriting profit provision will not apply to the retained risk provision or the high-layer retained hurricane related losses.

#### Debt Provision

The cost of debt is listed as a separate provision in the Variable Expense and Profit Ratio. The debt provision amount is shown in **Exhibit 11**.

#### Contingency Provision

The contingency provision of 2% is shown in **Exhibit 11**. Please note that the contingency provision does not apply to the retained risk provision.

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**RETAINED RISK PROVISION**

Allstate includes a retained risk provision in determining the rate level need in Pennsylvania. This provision is meant to provide appropriate returns on the high-layer retained hurricane exposure. **Attachment IV** describes the development of the retained risk provision per Amount of Insurance Year (AIY). **Exhibit 10** displays the retained risk provision per AIY used in Pennsylvania. Please note that in developing the Provision for Modeled Loss and LAE and Retained Risk, the Amount of Insurance Years (AIY's) are used as an exposure base. One AIY is equal to \$1,000 of Coverage in force for one year. The AIY's must be adjusted to represent the AIY's that we expect to be in force during the policy period. **Exhibit 18** shows the average AIY trend. The selected projection is displayed in **Exhibit 17**. This annual selection is used to project the AIY's to the average earned date of the proposed policy period. This approach for selecting AIY projections is consistent with the Current Practices and Alternatives detailed in *Appendix 1 – Background and Current Practices* of Actuarial Standard of Practice No. 13, *Trending Procedures in Property/Casualty Insurance Ratemaking*. Due to the retained risk provision representing an appropriate return for this high-layer retained hurricane exposure, the underwriting profit provision for the corresponding loss and LAE is not applied.

The methodology used to develop this retained risk provision is based upon the approach detailed in the presentation “Quantifying Risk Load for Property Catastrophe Exposure” by David Appel from the 2010 Casualty Actuarial Society Ratemaking and Product Management Seminar (<http://www.casact.org/education/rpm/2010/handouts/RR3-Appel.pdf>).

**ALLSTATE INSURANCE COMPANY  
CONDOMINIUM  
PENNSYLVANIA**

**ADJUSTMENTS TO PREMIUMS**

Current Rate Level

All premiums in the experience period were adjusted to current rate level. Allstate applies the “Miller-Davis-Karlinski” method to adjust premiums since it more accurately calculates factors to current rate level in instances when exposures are changing throughout the year, whether through growth, shrinkage or seasonality. When exposures are, in fact, written uniformly throughout the year, this method produces approximately the same answers as the parallelogram method.

The Miller-Davis-Karlinski method is also used to bring premiums to current rate level prior to calculating the changes in average premium used in the premium trends.

Premium Trend

In addition to bringing premiums to current rate level, changes in the average written premium at the current premium level were reviewed. Unlike losses, premium is relatively stable. Only the latest year of premium is used in the calculation of the indication, which eliminates the need for premium trend. Premium projections are still selected to account for shifts in the distribution of various underlying factors. Given that the effects on losses caused by these shifts are reflected in the loss projections, it is important that Allstate also account for the anticipated future changes in premiums.

The projected average earned premium as well as the calculation of the premium projection factor is displayed in **Exhibits 16** and **17**, respectively. This annual projection is used to project the data from the average occurrence date of the most recent experience period to the average occurrence date of the future policy period. Premium trend data is provided in **Exhibit 18**.

This approach for selecting a premium projection is consistent with the Current Practices and Alternatives detailed in *Appendix 1 – Background and Current Practices* of Actuarial Standard of Practice No. 13, *Trending Procedures in Property/Casualty Insurance Ratemaking*.

# **ATTACHMENT III**

## **Modeled Loss Provision**

**ALLSTATE INSURANCE GROUP  
CONDOMINIUM  
PENNSYLVANIA**

**DEVELOPMENT OF THE HURRICANE PROVISION  
BASED ON THE 2013/2012 AIR CLASIC/2 VERSION 15.0 HURRICANE MODEL  
IN THE STATEWIDE RATE LEVEL INDICATION  
EXPLANATORY MEMORANDUM**

I. INTRODUCTION

**The Casualty Actuarial Society Statement of Principles Regarding Property and Casualty Ratemaking defines a rate as “...an estimate of the expected value of future costs” and further states that “a rate provides for all costs associated with the transfer of risk”. Rates are therefore an estimate of the costs for the policies to which the rates will apply. In our property ratemaking we assume that the proposed rates will apply to the policies written for one year from the effective date of the rates. Each provision of the rate is based on an estimate of the costs associated with those policies.**

Losses expected from a hurricane are significantly different than losses expected from other types of loss events. Hurricanes are unique because of the large potential impact such storms can have on the company's solvency and because of the relatively low frequency of such events.

The significant variation in the frequency of different magnitudes of hurricanes diminishes the accuracy of historical hurricane loss experience for projecting expected loss levels for the policies to which proposed rates will apply. Average expected recurrence periods for the larger, more severe storms are so long that many external variables will change in the time periods between occurrences. For example, the area of southern Florida hit by Hurricane Andrew in 1992 was last hit by a major hurricane, Hurricane Betsy, in 1965. The type, number, value, vulnerability and geographical distribution of exposed properties in the area impacted by Hurricane Andrew are very different than those of the exposed properties in 1965. Actual loss statistics from a hurricane that occurred many years ago are not easily adjusted for the type, number, value, and vulnerability of present day structures.

Since historical hurricane losses cannot be used to accurately estimate current hurricane loss potential, Allstate has contracted with an outside vendor, AIR Worldwide (AIR), which uses an alternative methodology based on Monte Carlo simulation to arrive at Allstate's expected annual hurricane losses. This approach involves the development of computer programs that describe in detail the frequency of hurricanes, their meteorological characteristics, and their effects on exposed properties. A high-speed computer then simulates a large set of hypothetical hurricanes and estimates the resulting property losses based on Allstate's exposure.

In order to estimate the potential loss from hurricanes, 100,000 scenario years of potential hurricanes are simulated. This large number of simulations attempts to ensure that the resulting probability distribution of losses converges to a stable representative distribution of potential annual hurricane loss.

The pattern of simulated hurricanes is representative of what has occurred historically because meteorological data on the actual events since 1900 were used to estimate the parameters of the AIR hurricane simulation model. The meteorological sources used to develop the model are the most complete and accurate databases available from various agencies of the National Weather Service and the National Oceanic and Atmospheric Administration (NOAA), including the National Hurricane Center.

This explanatory memorandum incorporates text taken directly from documents supplied to Allstate by AIR Worldwide (AIR) and should not be copied or distributed without the express, written permission of AIR.

## II. HURRICANE PARAMETERS AND WIND SPEED ESTIMATION

### HURRICANE PARAMETERS

The primary characteristics of hurricanes used to simulate each storm and resulting wind speeds are:

1. Hurricane Frequency
2. Landfall Location
3. Central Pressure
4. Radius of Maximum Winds
5. Forward Speed
6. Track Angle at Landfall
7. Storm Track
8. Gradient Wind Reduction Factor
9. Peak Weighting Factor

The probability distributions for several of these variables (2-6) are estimated for coastal segments of equal length from Texas to Maine. Random samples are generated from the probability distributions of these input variables to assign values to the variables for each simulated hurricane.

#### 1. Hurricane Frequency

More than one hundred years of history, spanning the period 1900-2010, were used to estimate the parameters of the annual frequency distribution.

#### 2. Landfall Location

There are 62 segments of fifty nautical miles in the AIR hurricane simulation model, totaling 3,100 nautical miles of coastline. Of these, segment 29 in Southern Florida is split into two parts, one of which represents Key West in Florida. Historical landfalls are tabulated by the 62 segments and the frequencies are then smoothed to produce an estimate of the landfall probability for each segment. A cumulative probability

distribution of landfall locations is developed for the entire coastline. Once a landfall segment has been selected from this distribution, the exact landfall location is selected from a uniform distribution within the segment.

### 3. Central Pressure

Central pressure is the lowest sea-level pressure at the center of the hurricane. This variable is the primary determinant of hurricane wind speed. All else being equal, wind speeds increase as the central pressure decreases, or more precisely, as the difference between the central pressure and the peripheral pressure increases. Distributions are first fitted to historical central pressure data for each hundred nautical mile coastal segment. Separate distributions are then estimated for larger regions defined based on broad meteorological differences. The final distribution used for each segment is a mixture, with appropriate weights applied, of the regional distributions and the segment distribution.

### 4. Radius of Maximum Winds

Radius of Maximum Winds ( $R_{\max}$ ) is the distance from the storm's center (eye) to the point where the strongest winds are found. The  $R_{\max}$  of stochastic events is estimated using a procedure that relates the  $R_{\max}$  to the central pressure of the storm and to latitude. The  $R_{\max}$  is allowed to vary after landfall over the life of the storm.

### 5. Forward Speed

Forward Speed is the speed at which a hurricane moves from point to point. The parameters of the distribution of forward speed at landfall are estimated for each coastal segment. The lower bound of the distribution of forward speed is three nautical miles. The upper bound is dependent on latitude. Forward speed is allowed to vary after landfall based on historical distributions.

### 6. Track Angle at Landfall

Track Angle at Landfall is the angle between track direction and due north at landfall location. Separate distributions for track angle at landfall are estimated for segments of coastline that have variable orientation.

### 7. Storm Track

A times-series model is employed to reflect dependent variables in the historical data to produce simulated storm tracks. The track direction of each simulated hurricane has the capability to curve and re-curve on a fully probabilistic basis using conditional probability matrices. Thus, the AIR hurricane simulation model has the ability to propagate a storm track that accurately imitates actual storm motion.

## 8. Gradient Wind Reduction Factor (GWRF)

The model uses a stochastic GWRF, which varies from storm to storm according to a probability distribution. The probability distribution is developed based on dropsonde data for the period 2002-2005 along with published literature.

## 9. Peak Weighting Factor (PWF)

The PWF is a stochastic parameter used to reflect the vertical slant of the hurricane eye. The PWF and GWRF are generated jointly using a bounded Bivariate Normal distribution.

## HURRICANE WIND SPEED ESTIMATION

Once the key parameters have been generated, the meteorological relationships among them are used to develop a complete time profile of wind speeds for each location affected by the storm. This involves the following calculations for each simulated hurricane:

1. Gradient-Level Wind Speed
2. Adjustment to surface (10-meter) level
3. Storm Asymmetry
4. Storm Decay (Filling)
5. Radial Decay (Storm Center-Relative Wind Speed)
6. Adjustment of Wind Speed for Surface Friction and Averaging Time

### 1. Gradient-Level Wind Speed

A maximum upper-level (or gradient-level) wind speed is determined based on central and peripheral pressures, as well as radius of maximum winds and latitude coordinates. The upper level wind is then determined above the location of interest by adjusting the maximum value based on the distance of location from the eye of the storm. This is done using an expected radial gradient wind profile derived from the scientific literature. This wind, called the gradient-level wind speed, is estimated over a 10-minute averaging time.

### 2. Adjustment to surface (10-meter) level

The gradient-level wind is then reduced to a 10-meter height level through application of a scaling factor and a spatial relationship adjustment. The gradient-wind adjustment factor (GWRF) that is used is a variable factor that represents the observed relationship between gradient-level winds and those measured at a 10-m height. The spatial

adjustment accounts for differences in the GWRP relationship between the core and the periphery of the storm. The resulting wind represents the surface-level (10-meter) wind speed over an open water surface.

### 3. Storm Asymmetry

An asymmetry factor is calculated based on the forward speed of the hurricane and the relationship between the track direction and the surface wind direction. Since storms in the Northern Hemisphere rotate counterclockwise, this factor is added to the wind speeds calculated to the right of the hurricane track and is subtracted from those calculated to the left of the hurricane track. The wind field's asymmetry is therefore a function of how quickly the storm is propagating.

### 4. Storm Decay (Filling)

Once over land, the hurricane moves away from its source of energy, i.e., warm ocean water. Central pressure rises and as a result, the eye "fills" and winds degrade. Filling equations used in the AIR model estimate the reduction in over-land wind speed as a function of time since landfall, rather than distance. A fast moving storm can produce damaging winds further inland than a slow moving storm with the same landfall intensity (wind speed). Some storms can also reintensify after landfall, in accordance with historical data, but central pressure cannot be lower than the central pressure at landfall. The filling equations vary by coastal region and smoothing is performed to ensure that there are no unrealistic jumps between regions.

### 5. Radial Decay (Storm Center-Relative Wind Speed)

The wind speed in any five-digit zip code is dependent on the distance of the zip code centroid from the eye of the storm. The estimated wind speed at any point within the hurricane is dependent on the radius of maximum winds ( $R_{max}$ ), the distance between the eye of the storm and the centroid of the zip code area, the translational factor between upper-level winds and surface-level wind speeds, and the vertical slant in the eye of a hurricane. As a zip code centroid lies farther from the eyewall, the winds decay until they reach an ambient level at the periphery of the storm.

### 6. Adjustment of Wind Speeds for Surface Friction and Averaging Time

Differences in surface terrain also affect wind speeds. The roughness of the underlying surface induces friction which tends to slow down the winds, and induces turbulence effects which tend to generate short-lived gusts. The friction and gust effects are estimated based on the roughness of the surface over which the wind passes and from which direction the winds are coming.

A friction factor is calculated to capture surface roughness at each affected site and the associated decrease in wind speed that results from surface obstacles. Estimates of surface roughness are derived from digital US Geological Survey (USGS) land use/land cover data.

Each terrain type has a different “roughness value” that will lead to different frictional effects on wind speeds at different locations. In general, the rougher the terrain is the larger the effect of friction on wind speeds will be.

As soon as a storm crosses the coastline, there is an immediate reduction in wind speed. The reduction factors reach equilibrium values when the terrain is homogeneous over sufficiently large areas such that the surface winds come in balance with the surface. Thus, most local variability occurs when the underlying surface is diverse.

A gust factor is calculated to capture the effects of surface turbulence and is also associated with the roughness of the terrain. Smooth surfaces impart only a small turbulent effect. The adjustment for rougher surfaces is more substantial since rough surfaces tend to generate short-lived gusts which will translate to a stronger maximum 1-minute sustained wind speed. The gust factor is computed using the same USGS land use data set as is used for the friction calculation. The final adjusted wind represents a 1-minute at a 10-meter height that accounts for the impacts of the local environment and the forward motion of the storm.

### III. DAMAGE ESTIMATION AND DEMAND SURGE

AIR engineers have developed damage functions that describe the interaction between buildings, (including both structural and nonstructural components) and their contents, and the local wind speeds to which they are exposed. These functions relate the mean damage level as well as the variability of damage to wind speed at each location. Because different structural types will experience different degrees of damage, the damage functions vary according to construction class, occupancy, and height. The model estimates a complete distribution around the mean level of damage for each local wind speed and each structural type. Losses are calculated by applying the appropriate damage function to the replacement value of the insured property.

The AIR damage functions capture the effects of wind duration as well as the effect of peak wind speed. The longer a property experiences severe wind speeds, the greater the damage. The hurricane damageability relationships incorporate well-documented engineering studies published by wind engineers and other experts outside of AIR. They also incorporate the results of post-hurricane field surveys performed by AIR engineers. These relationships are continually refined and validated based on actual client companies' loss data.

Any major hurricane event causes an increase in demand for materials and services to repair and rebuild damaged property. This can put pressure on costs, resulting in higher than expected costs. Therefore, AIR applies aggregate demand surge functions to loss estimates to take into account the combined effects of events clustered in both time and geography.

### IV. LOSS CALCULATION

## ALLSTATE EXPOSURE DETAIL

Allstate has supplied AIR with a detailed exposure database containing insured values by policy level and ZIP Code for each line of business, construction, and deductible combination. Damage functions relating wind speed and wind duration to the percentage of property damaged for varying types of coverage and construction are used to produce loss estimates by zip code for each simulated hurricane.

## MODELED LOSS ESTIMATES

Losses estimated from 100,000 years of simulated potential hurricanes are summed and divided by 100,000 to produce the expected annual losses from all hurricanes for each ZIP Code. ZIP Code loss estimates are then aggregated to produce expected annual loss by county and state.

Hurricane factors are then calculated as the total loss estimate for a given ZIP Code, county, or state divided by the total insured value in thousands of dollars (amount of insurance years). This factor is applied to the expected average amount of insurance years in the determination of the overall rate level indication.

## IMPACT ON MODELED LOSSES DUE TO WARM SEA SURFACE TEMPERATURES

Meteorological research has identified correlations between naturally varying ocean temperatures and hurricane activity originating in the Atlantic that affects both the Gulf and the Atlantic coastlines. The active 2004 and 2005 hurricane seasons heightened Allstate's awareness of such relationships. Scientists have concluded that the climate is presently undergoing a cycle of warmer than average sea surface temperatures which is expected to result in increased hurricane activity in the United States. It is well known that the ocean is able to retain heat for very long periods of time, a physical characteristic known as persistence. Due to the ocean's long-term persistence and the associated ocean current cycle known as the Atlantic Thermohaline Circulation, most scientists believe that the Atlantic Ocean is likely to remain warmer than average for the next several years.

In hurricane rate filings prior to 2013, the modeled losses were adjusted with a WSST Adjustment Factor in order to account for the impact of warm sea surface temperatures on temperatures in the Atlantic Ocean on hurricane landfall activity. This WSST Adjustment Factor was created because only 50,000 years of simulations were previously available. With the current model, 100,000 years of simulations of WSST modeled losses are available and can be directly utilized without the application of a WSST Adjustment Factor.

## ADJUSTMENTS TO MODELED LOSS ESTIMATES

As advances in science and changes in claim payment behaviors evolve, Allstate re-evaluates how it currently reflects modeled hurricane related losses in ratemaking. At times it is necessary to adjust the modeled losses to more accurately estimate the Property and Casualty industry's risk from hurricanes. Note that all adjustments made to the modeled losses are under continual development and may change in the future as Allstate learns more about the changing risk environment. Modeled loss estimates include adjustments for:

- Loss Adjustment Expenses

### Loss Adjustment Expenses

Loss Adjustment Expense (LAE), both allocated and unallocated, represents the cost of adjusting, investigating and settling losses due to the hurricane peril. Allocated expenses are incurred while investigating and settling claims and are considered allocated because they can be linked directly to a claim file. Unallocated expenses are associated with processing claims, but cannot be linked directly to a claim file. Modeled hurricane related losses provided by AIR do not include LAE. Therefore, it is necessary to develop a LAE provision to be applied to these losses for use in pricing and hurricane exposure management. In order to account for the LAE associated with hurricane related losses, we have applied a factor of 1.195 to the modeled losses for all property lines. The selection of this provision was based on a study of the LAE associated with hurricane related losses for Allstate.

#### Methodology:

Loss, allocated loss adjustment expense, and unallocated loss adjustment expense data for hurricane events from 2005 through 2013 were analyzed. These years were selected as the prevailing claims settlement practices better reflect the current practices. Additional adjustments to historical unallocated expenses were made where needed to best represent the expected claims staffing model and costs. Tropical storms are not included in the LAE analysis, as they are not simulated in the modeled loss data. A ratio of loss adjustment expenses to losses was developed.

Allstate Insurance Group Allstate Personal and Commercial Lines Combined Loss Adjustment Expense Analysis - Hurricane Peril	
ALAE	2.1%
ULAE	<u>17.4%</u>
Total	19.5%
Selected:	19.5%

V. ACTUARIAL STANDARDS OF PRACTICE

The rules and procedures as set forth in ASOP38-Using Models Outside the Actuary's Area of Expertise (Property and Casualty) were applied in reviewing the modeled losses.

# **ATTACHMENT IV**

## **Retained Risk Provision**

**ALLSTATE INSURANCE GROUP  
CONDOMINIUM  
PENNSYLVANIA**

**DEVELOPMENT OF RETAINED RISK PROVISION BASED ON MODELED  
EXPOSURE**

Allstate includes a provision in the rates to cover the risk of exposing its capital to large catastrophic events. This retained risk provision (RRP) is intended to provide appropriate compensation to Allstate relative to its retained, high-layer modeled risk. The provision described below is consistent with the rules and procedures set forth in the Actuarial Standard of Practice No. 38, *Using Models Outside the Actuary's Area of Expertise (Property and Casualty)* and Actuarial Standard of Practice No. 39, *Treatment of Catastrophe Losses in Property/Casualty Insurance Ratemaking*.

The procedure for developing the RRP calls for identifying the portion of catastrophic losses that will be retained by Allstate and then estimating the cost to Allstate of holding the capital required to pay such losses. To measure the amount of retained losses, Allstate's actual reinsurance contracts are applied to the modeled losses based on the AIR Touchstone Version 1.5 Hurricane and Earthquake Model for Pennsylvania. This provides an estimate of the portion of the losses that will be covered by Allstate's reinsurance contracts and the amounts that will be retained by Allstate. Once the retained losses in excess of a 1-in-5 event (i.e., 20% occurrence probability) have been determined, we then calculate the appropriate compensation for exposure to such losses by using data from capital markets – specifically the market for catastrophe bonds. The details of the procedures used to determine the magnitude of retained losses at various occurrence probabilities, and the investor-required compensation for bearing the risk of those losses, are explained in more detail below.

Catastrophe bonds are one of a class of financial instruments known collectively as “insurance linked securities (ILS).” ILS have payoffs conditional on future contingent events, such as the occurrence of hurricanes. While there are a variety of ILS traded in today's capital markets, the most common and prominent of these are catastrophe bonds, which are bonds that may default on both principal and interest if a specific catastrophic event occurs.

Typically a catastrophe bond is issued by an insurance company with a provision that if a specified catastrophic event (e.g., hurricane in Florida, earthquake in California, winter storm in Europe, etc.) of a particular magnitude occurs, the issuer may default on the payment of principal and/or interest on the bond. In that respect, the bond functions similarly to reinsurance – once the “attachment point” is breached, the insurer receives a benefit that at maximum is equal to the face amount of the bond. When catastrophe bonds are sold, investors naturally demand a yield premium as compensation for the risk of default.

Mechanically, when catastrophe bonds are sold, the issuer deposits the proceeds of the sale into a segregated account which pays interest at the risk free rate. However, because of the default risk, the yields on such bonds must be higher than the risk free rate. Thus, the interest in excess of the risk free rate is an excellent basis for measuring the risk premium that the marketplace has established for bearing catastrophe exposure. Furthermore, since insurers face the same risk of catastrophic loss as investors, the risk premiums paid in capital markets provide an appropriate measure of the compensation required for the insurer as well.

There are several reasons why this is a particularly useful way to quantify a RRP in ratemaking. First, the data are drawn directly from capital markets, meaning they reflect the consensus of all investors as to the compensation required for bearing catastrophe risk. Second, they reflect exactly the types of risks to which insurers are exposed when they write property coverage in catastrophe prone states; as such they represent an appropriate estimate of the return demanded for the catastrophe exposure. Third, the entire analysis is free of assumptions regarding insurer-specific factors such as cost of capital, leverage, and investment income. Finally, the data required to adapt this information to insurance ratemaking is readily available and reported regularly at annual (or more frequent) intervals.

The data used in the calculation of the rate retained risk provision was selected in accordance with the considerations listed in Section 3.2 of Actuarial Standard of Practice No. 23, *Data Quality*. As regards the data, the sources Allstate relies upon are the annual publications of Lane Financial LLC, the most prominent analyst of the ILS market in the US. Annually, Lane Financial provides a summary of all newly issued catastrophe bonds, which includes information on the following critical variables:

- Face amount of bond
- Insured peril
- Yield spread to risk free rate (the excess return or risk premium on the bond)
- Probability of first loss (the probability that the insured event will cause any loss of principal or interest)
- Probability of exhaustion (the probability that the loss will be large enough to exhaust the entire principal of the bond)
- Expected value of loss (the annual average loss given the probability of attachment and exhaustion, expressed as a percent of the face amount of the bond)

Allstate uses this data to develop the appropriate RRP by state, line, and company in the following manner. First, profit multiples are calculated, which are obtained by subtracting the expected value of loss from the excess return on the bond, and then dividing that quantity by the expected loss. This profit multiple is essentially a measure of the profit an investor expects per dollar of expected loss on the bond. However, as might be expected, the amount of profit that investors require per dollar of loss depends on the riskiness of the losses themselves. For bonds that are extremely risky (i.e., that have very low probabilities of attachment) the profit multiples are considerably higher than for less risky instruments. Therefore, when the data are compiled, the profit multiples are computed for each bond, and a regression curve is fit to the profit multiple data. The average profit multiples for each layer are then determined using the fitted curve, for the following layers: those with attachment probabilities of 20% - 10%, 10% - 5%, 5% - 2%, 2% - 1%, 1% - 0.4%, and less than 0.4%. As expected, these profit multiples increase as the attachment probabilities decrease.

The next step is to apply these profit multiples to the amount of modeled losses retained by Allstate. To do this, the amount of retained modeled losses are compiled by layer, where the layers are defined by occurrence probabilities in the same ranges as the profit multiples described above. Given the expected retained losses within each layer and the required profit per dollar of loss as measured by the profit multiples, the RRP (in dollars) is calculated by multiplying the expected retained losses within each layer by the corresponding profit multiple and summing across the layers. This result can be used to estimate the appropriate compensation to Allstate for its retained modeled exposure. These calculations are performed using annual aggregate modeled losses since Allstate's surplus is exposed to multiple events in the same year.

The AIR model produces 100,000 years of modeled losses, some of which contain multiple events. Since catastrophe bond risk is related to the likelihood of the occurrence of an event that is large enough to pierce a predetermined layer in a given year, the largest modeled event in each year is considered for the purposes of determining the probability of loss. Thus, the years are ranked from high to low based on the largest loss in each year. The loss sizes are determined for each of the occurrence probabilities that are used to define the loss layers (0.4%, 1%, 2%, 5%, 10%, and 20%). For example, the 1-in-100-year loss (1% probability) is the amount of the largest loss in the 1000th largest year (1% of 100,000), the 1-in-250-year loss (0.4% probability) is the amount of the largest loss in the 400th largest year, etc. Once the loss sizes are determined for the boundaries of each layer, all expected losses from the AIR model are distributed into these layers of loss.

Next, the amount of losses in each layer that are covered by Allstate's reinsurance contracts is determined by applying Allstate's reinsurance contracts to the modeled losses. The following items need to be considered when applying Allstate's reinsurance contracts:

- For events that impact more than one state, the reinsured losses are allocated to each affected state proportional to those events' expected losses in each state.
- Allstate's nationwide (excluding New Jersey and Florida) reinsurance program is a per-occurrence excess-of-loss contract that covers catastrophe losses in a year, subject to the terms and limits of that contract.
- The reinsurance coverage provided by the nationwide program is applied to each state proportional to each state's expected losses in the reinsured layer.
- Some states have multiple reinsurance contracts that provide coverage for various types of catastrophe losses – these may include state-specific reinsurance contracts in addition to the nationwide contract.
- Additional considerations are required when there are multiple events in a year to ensure that the reinsured losses are allocated properly to each state.

Allstate's retained losses for each event are derived by subtracting the losses covered by reinsurance from the total expected losses. In some years, the retained losses exceed the total amount of Allstate's statutory surplus. Those years with retained losses in excess of Allstate's surplus are identified and Pennsylvania's portion of the excess losses is determined proportional to the retained losses in that year. The losses in excess of Allstate's statutory surplus are subtracted from the retained losses to determine the exposed losses covered by Allstate's surplus.

The indicated RRP is then developed by applying the profit multiple indicated by capital markets to the exposed Pennsylvania losses covered by surplus in each layer. The dollars of RRP are summed across the layers, and a diversification factor is applied to account for the fact that Allstate is a multi-line, multi-state company, to determine the total RRP.

Finally, the dollars of calculated RRP are divided by Amount of Insurance Years (AIYs) to develop a per-AIY charge that is included in the rate level indication.

# **ATTACHMENT V**

## **Rate Level Indication Exhibits**

**ALLSTATE INSURANCE COMPANY  
CONDOMINIUM  
PENNSYLVANIA**

**SUMMARY OF RATE LEVEL CHANGES**

	<b>Premium Dist. at Current Rates</b>	<b>Indicated Change</b>	<b>Selected Change*</b>
Variable Package Premium	80.6%	N/A	6.1%
Additional Coverages	16.8%	N/A	N/C
<b>Total Condominium</b>	<b>97.4%</b>	<b>9.5%</b>	<b>5.0%</b>
Reinsurance Charges	2.6%	N/A	N/C
<b>Total Condominium including Reinsurance Charges</b>	<b>100.0%</b>	<b>9.3%</b>	<b>4.9%</b>
*Implicitly assumes no indicated change for additional coverages.			

**ALLSTATE INSURANCE COMPANY  
CONDOMINIUM  
PENNSYLVANIA**

**DETERMINATION OF STATEWIDE RATE LEVEL INDICATION**

1) Indicated Provision for Loss and Loss Adjustment Expense	\$254.64
[ (a) + (b) + (c) + (d) ]	
a) Non-Weather Loss and LAE	\$84.73
b) Weather Loss and LAE	\$166.08
c) Low-Layer Retained and Ceded Hurricane Loss and LAE	\$2.42
d) High-Layer Retained Hurricane Loss and LAE	\$1.41
2) Current Fixed Expense Ratio	11.0%
3) Three Year Average Earned Premium	\$296.07
4) Current Dollar Provision for Fixed Expense	\$32.57
[ (2) x (3) ]	
5) Factor to Adjust for Subsequent Change in Fixed Expense	1.072
6) Indicated Provision for Fixed Expense [ (4) x (5) ]	\$34.92
7) Variable Expense, Contingencies Ratio, and Profit Ratio	24.6%
[ (a) + (b) + (c) ]	
a) Variable Expense Ratio (including Commissions, Taxes, and Debt Provision)	14.8%
b) Contingencies Ratio	2.0%
c) Profit Ratio	7.8%
8) Indicated Retained Risk Provision	\$4.47
9) Indicated Average Premium	\$389.10
[ (a) + (b) + (c) ]	
a) Non-Weather Loss and LAE	\$382.16
Weather Loss and LAE	
Low-Layer Retained and Ceded Hurricane Loss and LAE	
Fixed Expense	
[ (1a) + (1b) + (1c) + (6) ] / [ 1 -(7 Total) ]	
b) High-Layer Retained Hurricane Loss and LAE	\$1.69
(1d) / [ 1 - (7a) - (7b) ]	
c) Retained Risk Provision	\$5.25
(8) / [ 1 - (7a) ]	
10) Projected Average Earned Premium at Current Rates	\$355.29
11) Indicated Rate Level Change	9.5%
[ (9 Total) / (10) - 1.0 ]	

**ALLSTATE INSURANCE COMPANY  
CONDOMINIUM  
PENNSYLVANIA**

**DEVELOPMENT OF PROVISION FOR LOSS AND LAE**

Non-Weather Peril excluding Earthquake

Data: Pennsylvania Allstate Insurance Group

Fiscal Accident Year* Ending	<u>3/31/2010</u>	<u>3/31/2011</u>	<u>3/31/2012</u>	<u>3/31/2013</u>	<u>3/31/2014</u>
1) Earned Exposures	14,626	14,841	15,060	15,054	14,962
2) Accident Year* Non-Weather Ultimate Loss	\$926,749	\$1,129,574	\$490,903	\$914,913	\$1,310,126
3) Non-Weather Ultimate Loss and LAE	\$1,063,908	\$1,296,751	\$563,557	\$1,050,320	\$1,504,025
4) Factor to Adjust Losses for Pure Premium Trend	1.278	1.229	1.181	1.136	1.092
5) Projected Non-Weather Ultimate Loss and LAE [ (3) x (4) ]	\$1,359,674	\$1,593,707	\$665,561	\$1,193,164	\$1,642,395
6) Projected Average Non-Weather Loss and LAE [ (5) / (1) ]	\$92.96	\$107.39	\$44.19	\$79.26	\$109.77
7) Non-Weather Experience Year Weights	19%	20%	20%	20%	21%
8) Indicated Provision for Non-Weather Loss and LAE $\Sigma [ (6) \times (7) ]$					\$86.88
9) State Non-Weather Credibility					50%
10) Non-Weather Complement of Credibility					\$82.57
11) Credibility-Weighted Indicated Provision for Non-Weather Loss and LAE [ (8) x (9) + [ 1 - (9) ] x (10) ]					\$84.73

Weather Peril

Data: Pennsylvania Allstate Insurance Group

Fiscal Accident Year* Ending	<u>3/31/2010</u>	<u>3/31/2011</u>	<u>3/31/2012</u>	<u>3/31/2013</u>	<u>3/31/2014</u>
12) Accident Year* Weather Ultimate Severity	\$3,244.78	\$3,235.24	\$4,178.37	\$4,023.99	\$4,429.36
13) Weather Ultimate Severity incl. LAE	\$3,725.01	\$3,714.06	\$4,796.77	\$4,619.54	\$5,084.91
14) Weather Severity Trend Factor	1.357	1.292	1.230	1.172	1.116
15) Projected Weather Ultimate Severity incl. LAE [ (13) x (14) ]	\$5,054.84	\$4,798.57	\$5,900.03	\$5,414.10	\$5,674.76
16) Weather Experience Year Weights	19%	20%	20%	20%	21%
17) Indicated Provision for Severity Including All LAE $\Sigma [ (15) \times (16) ]$					\$5,374.66
18) Indicated Provision for Frequency					3.09%
19) Indicated Provision for Weather Loss and LAE [ (17) x (18) ]					\$166.08

\* Evaluated at 15 months

**ALLSTATE INSURANCE COMPANY  
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**CALCULATION OF LOSS DEVELOPMENT FACTORS**

Liability Peril

Data: Countrywide Allstate Insurance Group

**Incurred Losses †**

Fiscal Accident Year Ending 03/31	15 Months	27 Months	39 Months	51 Months	63 Months	75 Months	87 Months‡
2003							6,664,633
2004						7,833,586	8,244,472
2005					7,202,296	7,745,806	12,379,356
2006				10,005,112	10,051,805	10,147,213	10,323,541
2007			9,770,439	10,933,130	10,892,444	11,021,374	11,283,807
2008		9,727,185	10,755,741	11,137,524	11,841,098	11,808,811	11,911,820
2009	7,594,688	9,281,457	10,137,507	10,481,758	10,644,100	10,800,649	
2010	9,706,565	11,418,053	12,587,834	14,049,461	14,501,580		
2011	10,309,279	11,937,054	13,020,115	13,808,151			
2012	12,534,516	14,948,134	17,749,638				
2013	12,279,554	15,485,743					
2014	11,496,579						

**Link Ratios**

Development	15 to 27	27 to 39	39 to 51	51 to 63	63 to 75	75 to 87*
4th Prior	1.222	1.106	1.119	1.005	1.075	1.052
3rd Prior	1.176	1.092	1.035	0.996	1.009	1.598
2nd Prior	1.158	1.102	1.034	1.063	1.012	1.017
1st Prior	1.193	1.091	1.116	1.015	0.997	1.024
Latest	1.261	1.187	1.061	1.032	1.015	1.009
5 Year Average:	1.202	1.116	1.073	1.022	1.022	1.026

<b>Loss Development Period (months):</b>	<u>15 - 87</u>	<u>27 - 87</u>	<u>39 - 87</u>	<u>51 - 87</u>	<u>63 - 87</u>
<b>Loss Development Factor:</b>	1.542	1.283	1.150	1.072	1.049

†Includes ALAE

‡Includes supplemental reserves in addition to case reserves

\*The link ratio for the 75 to 87 month development period was selected excluding the 3rd Prior value

**CALCULATION OF ULTIMATE LOSS**

Liability Peril

Data: Pennsylvania Allstate Insurance Group

Year	(1) Inc. Loss	(2) Factor to Ultimate	(3) Ultimate Loss & ALAE
2010	\$404,479	1.049	\$424,298
2011	\$529,777	1.072	\$567,921
2012	\$164,298	1.150	\$188,943
2013	\$243,497	1.283	\$312,407
2014	\$260,104	1.542	\$401,080

**ALLSTATE INSURANCE COMPANY  
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**CALCULATION OF LOSS DEVELOPMENT FACTORS**

Non-Weather Excluding Liability  
Data: Countrywide Allstate Insurance Group

Fiscal Accident Year Ending 03/31	Incurred Losses †						
	15 Months	27 Months	39 Months	51 Months	63 Months	75 Months	87 Months‡
2003							13,814,835
2004						14,613,910	14,588,301
2005					14,683,750	14,647,027	14,589,655
2006				18,168,182	18,224,918	18,223,357	18,226,258
2007			23,599,191	23,517,946	23,266,449	23,276,742	23,245,371
2008		22,444,931	22,287,308	22,257,692	22,165,848	22,159,146	22,161,689
2009	22,322,234	23,281,650	23,186,624	23,218,975	23,194,335	23,148,198	
2010	22,585,741	23,936,640	24,365,257	24,414,767	24,465,864		
2011	20,538,513	21,538,950	21,390,878	21,359,850			
2012	22,783,521	23,823,287	23,671,736				
2013	27,385,834	28,484,779					
2014	22,340,914						
	Link Ratios						
Development	15 to 27	27 to 39	39 to 51	51 to 63	63 to 75	75 to 87*	
4th Prior	1.043	0.993	0.997	1.003	0.997	0.998	
3rd Prior	1.060	0.996	0.999	0.989	1.000	0.996	
2nd Prior	1.049	1.018	1.001	0.996	1.000	1.000	
1st Prior	1.046	0.993	1.002	0.999	1.000	0.999	
Latest	1.040	0.994	0.999	1.002	0.998	1.000	
5 Year Average:	1.048	0.999	1.000	0.998	0.999	0.999	
<b>Loss Development Period (months):</b>	<u>15 - 87</u>	<u>27 - 87</u>	<u>39 - 87</u>	<u>51 - 87</u>	<u>63 - 87</u>		
<b>Loss Development Factor:</b>	1.043	0.995	0.996	0.996	0.998		

†Includes ALAE

‡Includes supplemental reserves in addition to case reserves

**CALCULATION OF ULTIMATE LOSS**

Non-Weather Excluding Liability  
Data: Pennsylvania Allstate Insurance Group

Year	(1)	(2)	(3)
	Inc. Loss	Factor to Ultimate	Ultimate Loss & ALAE
2010	\$503,458	0.998	\$502,451
2011	\$563,909	0.996	\$561,653
2012	\$303,173	0.996	\$301,960
2013	\$605,534	0.995	\$602,506
2014	\$871,569	1.043	\$909,046

**ALLSTATE INSURANCE COMPANY  
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**CALCULATION OF FREQUENCY DEVELOPMENT FACTORS**

Weather Peril

Data: Countrywide Allstate Insurance Group

**Paid Frequency**

Fiscal Accident Year Ending 03/31	<u>15 Months</u>	<u>27 Months</u>	<u>39 Months</u>	<u>51 Months</u>	<u>63 Months</u>	<u>75 Months</u>	<u>87 Months</u>
2003							1.65%
2004						1.53%	1.53%
2005					1.39%	1.39%	1.39%
2006				1.28%	1.28%	1.28%	1.28%
2007			1.33%	1.33%	1.33%	1.33%	1.33%
2008		1.31%	1.31%	1.31%	1.31%	1.31%	1.31%
2009	1.48%	1.52%	1.52%	1.52%	1.52%	1.52%	
2010	1.53%	1.57%	1.58%	1.58%	1.58%		
2011	1.70%	1.75%	1.75%	1.75%			
2012	1.60%	1.63%	1.63%				
2013	1.49%	1.52%					
2014	1.76%						
	<b>Link Ratios</b>						
<u>Development</u>	<u>15 to 27</u>	<u>27 to 39</u>	<u>39 to 51</u>	<u>51 to 63</u>	<u>63 to 75</u>	<u>75 to 87</u>	
4th Prior	1.027	1.000	1.000	1.000	1.000	1.000	
3rd Prior	1.026	1.000	1.000	1.000	1.000	1.000	
2nd Prior	1.029	1.006	1.000	1.000	1.000	1.000	
1st Prior	1.019	1.000	1.000	1.000	1.000	1.000	
Latest	1.020	1.000	1.000	1.000	1.000	1.000	
5 Year Average:	1.024	1.001	1.000	1.000	1.000	1.000	
<b>Loss Development Period (months):</b>	<u>15 - 87</u>	<u>27 - 87</u>	<u>39 - 87</u>	<u>51 - 87</u>	<u>63 - 87</u>		
<b>Frequency Development Factor:</b>	1.025	1.001	1.000	1.000	1.000		

**CALCULATION OF ULTIMATE FREQUENCY**

Weather Peril

Data: Pennsylvania Allstate Insurance Group

Year	(1) Paid Frequency	(2) Factor to Ultimate	(3) Ultimate Frequency
2010	2.81%	1.000	2.81%
2011	2.80%	1.000	2.80%
2012	2.48%	1.000	2.48%
2013	2.27%	1.001	2.27%
2014	2.89%	1.025	2.96%

**ALLSTATE INSURANCE COMPANY  
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**CALCULATION OF SEVERITY DEVELOPMENT FACTORS**

Weather Peril

Data: Countrywide Allstate Insurance Group

<b>Paid Severity</b>							
Fiscal Accident <u>Year Ending 03/31</u>	<u>15 Months</u>	<u>27 Months</u>	<u>39 Months</u>	<u>51 Months</u>	<u>63 Months</u>	<u>75 Months</u>	<u>87 Months</u>
2003							2,969.00
2004						3,085.79	3,084.13
2005					3,229.32	3,229.84	3,229.86
2006				3,391.00	3,389.75	3,389.07	3,389.34
2007			4,074.06	4,070.06	4,093.62	4,092.36	4,088.39
2008		4,566.34	4,560.96	4,588.16	4,586.72	4,587.79	4,580.33
2009	4,667.29	4,784.61	4,803.16	4,813.27	4,813.03	4,825.24	
2010	4,790.29	4,872.70	4,861.60	4,833.93	4,834.25		
2011	5,041.96	5,206.70	5,200.48	5,190.73			
2012	4,976.72	5,098.11	5,085.77				
2013	5,441.00	5,463.20					
2014	5,886.19						
<b>Link Ratios</b>							
<u>Development</u>	<u>15 to 27</u>	<u>27 to 39</u>	<u>39 to 51</u>	<u>51 to 63</u>	<u>63 to 75</u>	<u>75 to 87</u>	
4th Prior	1.025	0.999	0.999	1.000	1.000	0.999	
3rd Prior	1.017	1.004	1.006	1.006	1.000	1.000	
2nd Prior	1.033	0.998	1.002	1.000	1.000	1.000	
1st Prior	1.024	0.999	0.994	1.000	1.000	0.999	
Latest	1.004	0.998	0.998	1.000	1.003	0.998	
5 Year Average:	1.021	1.000	1.000	1.001	1.001	0.999	
<b>Development Period (months):</b>	<u>15 - 87</u>	<u>27 - 87</u>	<u>39 - 87</u>	<u>51 - 87</u>	<u>63 - 87</u>		
<b>Severity Development Factor:</b>	1.022	1.001	1.001	1.001	1.000		

**CALCULATION OF ULTIMATE SEVERITY**

Weather Peril

Data: Pennsylvania Allstate Insurance Group

<u>Year</u>	<u>(1) Paid Severity</u>	<u>(2) Factor to Ultimate</u>	<u>(3) Ultimate Severity</u>
2010	\$3,244.78	1.000	\$3,244.78
2011	\$3,232.01	1.001	\$3,235.24
2012	\$4,174.20	1.001	\$4,178.37
2013	\$4,019.97	1.001	\$4,023.99
2014	\$4,334.01	1.022	\$4,429.36

**ALLSTATE INSURANCE COMPANY  
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**EXPENSE EXPERIENCE - UNALLOCATED (ADJUSTING AND OTHER EXPENSE) FACTORS**

Data: Countrywide Allstate Insurance Group\*

	<u>2011 - 2013</u>
1) Direct Losses and Allocated Loss Adjustment Expense Incurred excluding Earthquake and Hurricane Losses	\$ 41,778,864
2) Direct Unallocated Loss Adjustment Expense Incurred excluding Earthquake and Hurricane	\$ 6,165,245
3) Ratio (2)/(1)	0.148
4) Proposed Provision	0.148

\* Allstate Insurance Company, Allstate Indemnity Company, Allstate Property and Casualty Insurance Company, Allstate County Mutual Insurance Company, Allstate Fire & Casualty, Northbrook Indemnity, and Allstate Texas Lloyds. Data includes Personal Property Lines and Private Passenger Automobile Insurance

(000 Omitted)

**ALLSTATE INSURANCE COMPANY  
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**CALCULATION OF LOSS TREND FACTORS**

<u>Peril</u>	Selected Annual Impacts*	
	<u>Historical</u>	<u>Projected</u>
Non-Weather Peril excluding Earthquake	4.0%	4.0%
Data: Pennsylvania Allstate Insurance Group		
Weather Peril	5.0%	5.0%
Data: Pennsylvania Allstate Insurance Group		

	<u>4th Prior Year</u>	<u>3rd Prior Year</u>	<u>2nd Prior Year</u>	<u>1st Prior Year</u>	<u>Current Year</u>
1) Loss Trend Projection Date	12/31/2015	12/31/2015	12/31/2015	12/31/2015	12/31/2015
2) Mid-Point of Current Year's Experience Period	9/30/2013	9/30/2013	9/30/2013	9/30/2013	9/30/2013
3) Experience Period Ended	3/31/2010	3/31/2011	3/31/2012	3/31/2013	3/31/2014
4) Midpoint of Experience Period	9/30/2009	9/30/2010	9/30/2011	9/30/2012	9/30/2013
5) Historical: Number of Years from (4) to (2)	4.000	3.000	2.000	1.000	0.000
6) Projected: Number of Years from (2) to (1)	2.251	2.251	2.251	2.251	2.251

Calculation of Trend Factors

(a) Historical Factors are the Annual Historical Impacts plus unity compounded for the number of years in (5)

(b) Projected Factors are the Annual Projected Impacts plus unity compounded for the number of years in (6)

(c) Factor to Adjust Losses for Pure Premium Trend = (a) x (b)

\*Loss trend data on Exhibit 7

**ALLSTATE INSURANCE COMPANY  
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**LOSS TREND DATA**

Non-Weather Peril excluding Earthquake  
Data: Pennsylvania Allstate Insurance Group

Year Ending	Actual Paid Pure		Exponential Curve of Best Fit			
	Premium	Annual Change	24 pt.	20 pt.	12 pt.	6 pt.
09/08	47.98	-29.60%	\$43.86			
12/08	54.37	-3.41%	\$44.30			
03/09	56.91	-0.37%	\$44.74			
06/09	55.71	-6.24%	\$45.19			
09/09	53.01	10.47%	\$45.64	\$38.81		
12/09	46.37	-14.70%	\$46.09	\$39.71		
03/10	37.77	-33.64%	\$46.55	\$40.64		
06/10	35.99	-35.39%	\$47.01	\$41.59		
09/10	45.32	-14.51%	\$47.48	\$42.56		
12/10	40.06	-13.62%	\$47.96	\$43.55		
03/11	42.71	13.09%	\$48.43	\$44.57		
06/11	49.19	36.67%	\$48.92	\$45.61		
09/11	49.34	8.88%	\$49.40	\$46.67	\$39.39	
12/11	50.89	27.06%	\$49.90	\$47.76	\$41.40	
03/12	52.95	23.97%	\$50.39	\$48.87	\$43.52	
06/12	42.26	-14.08%	\$50.90	\$50.01	\$45.75	
09/12	29.06	-41.10%	\$51.40	\$51.18	\$48.10	
12/12	29.17	-42.68%	\$51.92	\$52.37	\$50.56	
03/13	56.70	7.09%	\$52.43	\$53.59	\$53.15	\$56.93
06/13	62.79	48.56%	\$52.96	\$54.84	\$55.87	\$60.22
09/13	62.40	114.71%	\$53.48	\$56.12	\$58.73	\$63.70
12/13	67.30	130.69%	\$54.02	\$57.43	\$61.74	\$67.38
03/14	65.57	15.63%	\$54.56	\$58.77	\$64.90	\$71.27
06/14	80.63	28.42%	\$55.10	\$60.14	\$68.23	\$75.39
Regression			24 pt.	20 pt.	12 pt.	6 pt.
Avg Annual Percent Change Based on Best Fit:			4.05 %	9.66 %	22.11 %	25.19 %

**Weather Peril**  
Data: Pennsylvania Allstate Insurance Group

Year Ending	Actual Paid		Exponential Curve of Best Fit			
	Severity	Annual Change	24 pt.	20 pt.	12 pt.	6 pt.
09/08	\$2,945.12	-6.43%	\$2,988.54			
12/08	\$3,132.80	-3.51%	\$3,033.07			
03/09	\$3,118.06	-3.09%	\$3,078.25			
06/09	\$3,245.66	-0.88%	\$3,124.11			
09/09	\$3,459.58	17.47%	\$3,170.65	\$3,125.86		
12/09	\$3,385.58	8.07%	\$3,217.89	\$3,176.04		
03/10	\$3,338.93	7.08%	\$3,265.83	\$3,227.02		
06/10	\$3,198.10	-1.47%	\$3,314.48	\$3,278.81		
09/10	\$3,010.30	-12.99%	\$3,363.86	\$3,331.44		
12/10	\$3,073.54	-9.22%	\$3,413.98	\$3,384.92		
03/11	\$3,091.32	-7.42%	\$3,464.84	\$3,439.25		
06/11	\$3,178.14	-0.62%	\$3,516.46	\$3,494.45		
09/11	\$3,375.70	12.14%	\$3,568.84	\$3,550.54	\$3,745.35	
12/11	\$3,595.30	16.98%	\$3,622.01	\$3,607.53	\$3,781.55	
03/12	\$3,881.03	25.55%	\$3,675.97	\$3,665.44	\$3,818.11	
06/12	\$4,168.68	31.17%	\$3,730.73	\$3,724.27	\$3,855.01	
09/12	\$4,355.53	29.03%	\$3,786.31	\$3,784.05	\$3,892.28	
12/12	\$4,028.34	12.04%	\$3,842.72	\$3,844.79	\$3,929.90	
03/13	\$4,128.23	6.37%	\$3,899.97	\$3,906.51	\$3,967.89	\$3,992.19
06/13	\$3,996.60	-4.13%	\$3,958.07	\$3,969.21	\$4,006.24	\$4,000.27
09/13	\$3,873.65	-11.06%	\$4,017.04	\$4,032.92	\$4,044.97	\$4,008.36
12/13	\$3,924.26	-2.58%	\$4,076.88	\$4,097.66	\$4,084.07	\$4,016.47
03/14	\$3,965.19	-3.95%	\$4,137.62	\$4,163.43	\$4,123.54	\$4,024.60
06/14	\$4,196.02	4.99%	\$4,199.26	\$4,230.26	\$4,163.40	\$4,032.74
Regression			24 pt.	20 pt.	12 pt.	6 pt.
Avg Annual Percent Change Based on Best Fit:			6.09 %	6.58 %	3.92 %	0.81 %

**ALLSTATE INSURANCE COMPANY  
CONDOMINIUM  
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**PROVISION FOR WEATHER FREQUENCY**

Weather Peril

Data: Pennsylvania Allstate Insurance Group

(1) Fiscal Accident Year* Ending 03/31	(2) Earned Exposures	(3) Accident Year* Paid Claims	(4) Accident Year* Paid Frequency	(5) Accident Year* Ultimate Paid Frequency
1990	4,291	130	3.03%	3.03%
1991	4,871	166	3.41%	3.41%
1992	5,258	150	2.85%	2.85%
1993	5,538	241	4.35%	4.35%
1994	5,819	348	5.98%	5.98%
1995	6,263	190	3.03%	3.03%
1996	6,758	314	4.65%	4.65%
1997	7,276	241	3.31%	3.31%
1998	7,817	205	2.62%	2.62%
1999	8,180	258	3.15%	3.15%
2000	8,776	304	3.46%	3.46%
2001	9,180	331	3.61%	3.61%
2002	9,736	288	2.96%	2.96%
2003	10,143	309	3.05%	3.05%
2004	10,837	314	2.90%	2.90%
2005	11,774	339	2.88%	2.88%
2006	12,655	269	2.13%	2.13%
2007	13,587	308	2.27%	2.27%
2008	14,444	305	2.11%	2.11%
2009	14,546	334	2.30%	2.30%
2010	14,626	411	2.81%	2.81%
2011	14,841	415	2.80%	2.80%
2012	15,060	373	2.48%	2.48%
2013	15,054	341	2.27%	2.27%
2014	14,962	432	2.89%	2.96%
<b>(6) Pennsylvania Weather Frequency Provision</b> Straight Average of Column (5)				3.09%

\* Evaluated at 15 months

**ALLSTATE INSURANCE COMPANY  
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**COMPLEMENT OF CREDIBILITY FOR LOSSES**

Data: Pennsylvania Allstate Insurance Company

	<u>All Perils Excluding Earthquake</u>	
1) Current Permissible Loss and Fixed Expense Ratio	75.4%	
2) Current Average Premium @ CRL	\$336.13	
3) Current Average Fixed Expense	\$32.57	
4) Current Expected Hurricane Pure Premium	\$3.58	
	<u>Non-Weather Peril Excluding Earthquake</u>	<u>Total Weather Peril*</u>
5) Provision for Loss and LAE	\$86.88	\$166.08
6) Loss Trend Project Selection	4.0%	5.0%
7) Loss Trend Factor	1.092	1.116
8) Expected Pure Premium (5) / (7)	\$79.56	\$148.82
9) Expected Proportion of Pure Premium [ (8) / (8 Total) ]	34.8%	65.2%
10) Complement of Credibility [ [ (1) x (2) - (3) - (4) ] x (7) x (9) ]	\$82.57	\$158.11

\*The Weather complement of credibility is not utilized in this indication

**ALLSTATE INSURANCE COMPANY  
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**DEVELOPMENT OF PROVISION FOR MODELED LOSS AND RETAINED RISK**

Data: Pennsylvania Allstate Insurance Company

1) Hurricane Provision Per AIY Including All LAE	0.060
2) Retained Risk Provision Per AIY	0.070
3) Earned Exposures	6,447
4) Earned AIY	384,959
5) Average Earned AIY	59.71
[ (4)/(3) ]	
6) Factor to Adjust to Projected Average AIY Level	1.069
7) Average AIY Projected to 12/31/2015	63.83
[ (5) x (6) ]	
8) Proportion of High-Layer Retained Modeled Losses to Total Modeled Losses	0.368
9) Expected Modeled Catastrophe Pure Premium	\$3.83
[ (1) x (7) ]	
a) Low-Layer Retained and Ceded Hurricane Pure Premium	\$2.42
[ 1 - (8) ] x (9 Total)	
b) High-Layer Retained Hurricane Pure Premium	\$1.41
[ (8) x (9 Total) ]	
10) Expected Retained Risk Provision	\$4.47
[ (2) x (7) ]	

\*1 AIY = One Amount of Insurance Years = \$1000 of Coverage in Force for One Year

**ALLSTATE INSURANCE COMPANY  
CONDOMINIUM  
PENNSYLVANIA**

**SUMMARY OF EXPENSE PROVISIONS**

Data: Pennsylvania Allstate Insurance Group

	<u>Percent Fixed</u>	<u>Expense Provision</u>
Commissions	0 %	11.5%
Taxes †	0	2.1%
Licenses and Fees	100	0.1%
Profit Provision	0	7.8%

Data: Countrywide Allstate Insurance Group

	<u>Percent Fixed</u>	<u>Expense Provision</u>
Other Acquisition	100 %	5.4%
General Expense	100	5.5%
Debt Provision	0	1.2%
Contingency Provision	0	2.0%

† State Taxes - Does not include Federal Income Tax

**ALLSTATE INSURANCE COMPANY  
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**EXPERIENCE FOR GENERAL EXPENSES**

Data: Countrywide Allstate Insurance Group\*

	General Expense		
	2011	2012	2013
1. Direct Premium Earned Less Reinsurance Premium**	\$21,889,933	\$21,815,813	\$22,129,879
2. General Expense Incurred	\$1,134,661	\$1,316,189	\$1,422,519
3. Ratio (2)/(1)	0.0518	0.0603	0.0643
4. Three Year Average			0.0588
5. Proposed Provision			0.055

\* Allstate Insurance Company, Allstate Property and Casualty Insurance Company, Allstate Indemnity Company, Northbrook Indemnity Company, Allstate Fire & Casualty Insurance Company and Allstate County Mutual. Data includes Personal Property Lines (excluding Earthquake) and Private Passenger Automobile Insurance

\*\* Premiums for Net Cost of Reinsurance (NCOR) do not include provisions for General Expenses. Therefore, direct premiums must be reduced by NCOR premiums to get the premium base upon which the general expense provision is applied.

(000's) omitted

**ALLSTATE INSURANCE COMPANY  
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**EXPERIENCE FOR OTHER ACQUISITION EXPENSES**

Data: Countrywide Allstate Insurance Group\*

	Other Acquisition Expense		
	2011	2012	2013
1. Direct Premium Earned Less Reinsurance Premium**	\$21,889,933	\$21,815,813	\$22,129,879
2. Other Acquisition Expense Incurred	\$1,397,619	\$1,326,479	\$1,319,920
3. Ratio (2)/(1)	0.0638	0.0608	0.0596
4. Three Year Average			0.0614
5. Adjusted Three Year Average***			0.0538
6. Proposed Provision			0.054

\* Allstate Insurance Company, Allstate Property and Casualty Insurance Company, Allstate Indemnity Company, Northbrook Indemnity Company, Allstate Fire & Casualty and Allstate County Mutual. Data includes Personal Property Lines and Private Passenger Automobile Insurance

\*\* Premiums for Net Cost of Reinsurance (NCOR) do not include provisions for General and Other Acquisition expenses. Therefore, direct premiums must be reduced by NCOR premiums to get the premium base upon which general and other acquisition expense provisions are applied.

\*\*\* Reduced by 1.01% to reflect the amount of Installment Fees collected for Allstate Insurance Group Personal Property Lines and includes a 0.18% provision for Allstate Insurance Group Personal Property Lines premiums written off.

(000's) omitted

**ALLSTATE INSURANCE COMPANY  
CONDOMINIUM  
PENNSYLVANIA**

**FACTOR TO ADJUST FOR SUBSEQUENT CHANGE IN FIXED EXPENSE**

Data: Countrywide Allstate Insurance Group\*

	<u>2011 - 2013</u>
1) Average Earned Date of Experience Period	6/30/2012
2) Average Earned Date of Proposed Policy Period	12/31/2015
3) Number of Years from (1) to (2)	3.502
4) Selected Annual Impact	2.00%
5) Factor to Adjust for Subsequent Change in Fixed Expense [ $1.0 + (4) ] ^ (3)$	1.072

\* Allstate Insurance Company, Allstate Property and Casualty Insurance Company, Allstate Indemnity Company, Northbrook Indemnity Company, Allstate Fire & Casualty Insurance Company and Allstate County Mutual. Data includes Personal Property Lines (excluding Earthquake) and Private Passenger Automobile Insurance

**ALLSTATE INSURANCE COMPANY  
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PENNSYLVANIA**

**INVESTMENT INCOME**

Data: Pennsylvania Allstate Insurance Group

Calculation of Present Value, as of the Average Earning Date of a Policy Year, of all Income and Outgo @ 1.9% †force of interest, assuming an Operating Profit of 5.9% and twelve month Policy Terms

Years From Start of Policy Year	Cumulative Percent of Losses Paid	Yearly Percent of Losses Paid	Time from Start of Policy Year	Discounted‡ to Average Time of Profit @ 1.9%	Discounted Payments
1	37.3%	37.3%	0.7	1.006	37.5%
2	88.2%	50.9%	1.4	0.992	50.5%
3	95.0%	6.8%	2.4	0.974	6.6%
4	97.0%	2.0%	3.4	0.955	1.9%
5	98.3%	1.3%	4.3	0.939	1.2%
Subsequent	100.0%	1.7%	6.9	0.894	1.5%
<b>Total</b>					99.2%
<b>Expected Losses and Loss Expense Ratio</b>					64.4%
<b>Present Value of Loss and Loss Expense Payments</b>					63.9%
General Expense		5.5%	0.75	1.005	5.5%
Other Acquisition		5.4%	0.63	1.007	5.4%
Taxes †		2.1%	0.65	1.007	2.1%
Licenses and Fees		0.1%	0.65	1.007	0.1%
Commissions		11.5%	0.58	1.008	11.6%
Debt Provision		1.2%	1.00	1.000	1.2%
Contingency Provision		2.0%	1.00	1.000	2.0%
Profit		7.8%	1.00	1.000	7.8%
<b>Total Present Value of Outgo</b>					99.6%
<b>Premiums</b>		100.0%	0.78	1.004	100.4%
<b>Difference, Present Value of Income Less Present Value of Outgo</b>					0.8%

†Discount rate from Investment Department forecast

‡exp (force of interest x (timing of profit being earned – timing of cash flow))

**ALLSTATE INSURANCE COMPANY  
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**DEVELOPMENT OF PROJECTED AVERAGE EARNED PREMIUM**

Data: Pennsylvania Allstate Insurance Company

Fiscal Year Ending	<u>3/31/2014</u>
1) Earned Exposures	6,447
2) Earned Premium at Current Rates	\$2,167,041
3) Factor to Adjust to Projected Premium Level	1.057
4) Projected Earned Premium at Current Rates (2) x (3)	\$2,290,562
5) Projected Average Earned Premium at Current Rates (4) / (1)	\$355.29
6) Experience Year Weights	100%
7) Projected Average Earned Premium at Current Rates (5) x (6)	\$355.29

**ALLSTATE INSURANCE COMPANY  
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**CALCULATION OF PREMIUM AND AIY TREND FACTORS**

Data: Pennsylvania Allstate Insurance Company

	<u>Projected</u>
Selected Annual Premium Impacts*	2.50%
Selected Annual AIY Impacts*	3.00%

	<u>Current Year</u>
1) Average Earned Date of Proposed Policy Period	12/31/2015
2) Mid-Point of Current Year's Experience Period	9/30/2013
3) Experience Period Ended	3/31/2014
4) Midpoint of Experience Period	9/30/2013
5) Historical: Number of Years from (4) to (2)	0.000
6) Projected: Number of Years from (2) to (1)	2.251

Calculation of Premium and AIY Trend Factors

Factor to Adjust to Projected Premium Level = Annual Projected Impacts plus unity compounded for the number of years in (6)

Factor to Adjust to Projected AIY Level = Annual Projected Impacts plus unity compounded for the number of years in (6)

\*Premium and AIY trend data on Exhibit 18

**ALLSTATE INSURANCE COMPANY  
CONDOMINIUM  
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**PREMIUM TRENDS**

Data: Pennsylvania Allstate Insurance Company

Year Ending	Average Written Premium @ CRL	Annual Change	Exponential Curve of Best Fit		
			12 pt.	6 pt.	4 pt.
09/11	\$323.39	0.28%	\$322.49		
12/11	\$324.45	0.40%	\$324.20		
03/12	\$326.36	0.97%	\$325.93		
06/12	\$327.25	1.27%	\$327.67		
09/12	\$328.43	1.56%	\$329.42		
12/12	\$330.86	1.98%	\$331.17		
03/13	\$332.47	1.87%	\$332.94	\$332.28	
06/13	\$333.92	2.04%	\$334.71	\$334.32	
09/13	\$336.42	2.43%	\$336.49	\$336.38	\$336.53
12/13	\$338.70	2.37%	\$338.29	\$338.44	\$338.53
03/14	\$340.53	2.42%	\$340.09	\$340.52	\$340.54
06/14	\$342.52	2.58%	\$341.90	\$342.62	\$342.57
Regression			12 pt.	6 pt.	4 pt.
Avg Annual Percent Change Based on Best Fit:			2.15%	2.48%	2.40%

**AIY TRENDS**

Data: Pennsylvania Allstate Insurance Company

Year Ending	AIY	Annual Change	Exponential Curve of Best Fit		
			12 pt.	6 pt.	4 pt.
09/11	57.12	0.18%	56.82		
12/11	57.31	0.35%	57.17		
03/12	57.62	0.79%	57.53		
06/12	57.75	1.28%	57.89		
09/12	57.88	1.33%	58.25		
12/12	58.50	2.08%	58.62		
03/13	58.89	2.20%	58.98	58.80	
06/13	59.08	2.30%	59.35	59.25	
09/13	59.78	3.28%	59.72	59.70	59.74
12/13	60.12	2.77%	60.09	60.15	60.18
03/14	60.62	2.94%	60.47	60.61	60.62
06/14	61.08	3.39%	60.85	61.07	61.06
Regression			12 pt.	6 pt.	4 pt.
Avg Annual Percent Change Based on Best Fit:			2.52%	3.08%	2.96%

# **ATTACHMENT VI**

## **Summary of Manual Changes**

**ALLSTATE INSURANCE COMPANY  
CONDOMINIUM  
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**SUMMARY OF MANUAL CHANGES**

**RULE PAGES**

**Page 1**

- Updated Rate Adjustment Factor

# **ATTACHMENT VII**

## **Impacts & Histograms**

**ALLSTATE INSURANCE COMPANY  
CONDOMINIUM  
PENNSYLVANIA**

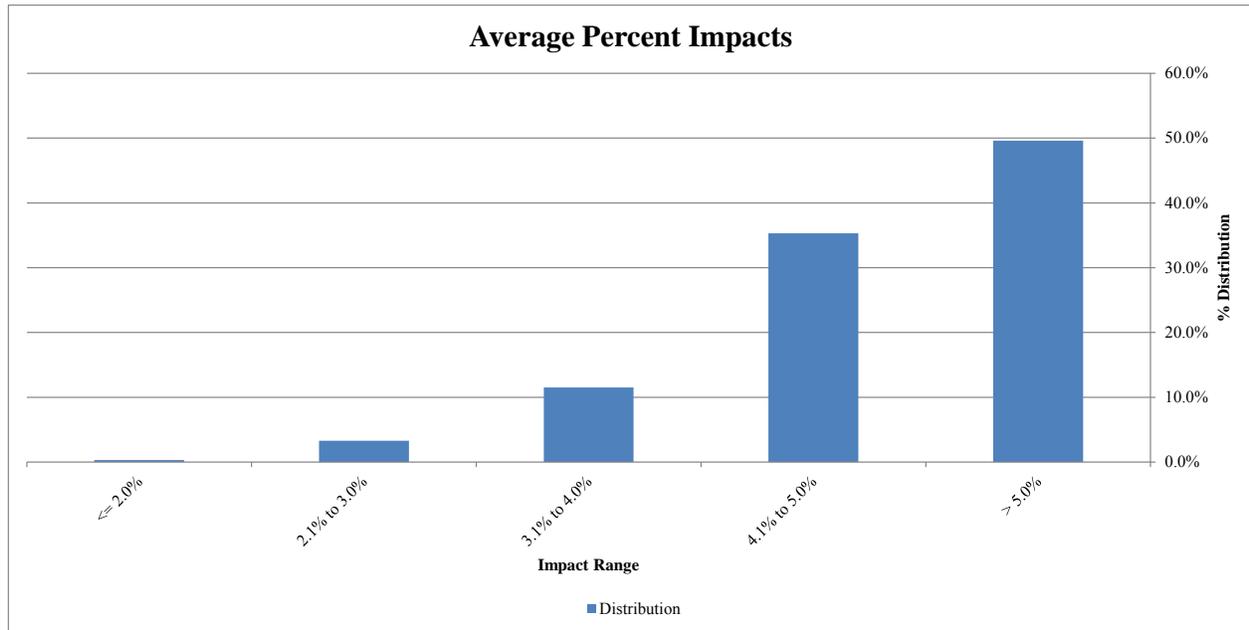
**IMPACTS AND HISTOGRAMS**

The maximum percent impact any single policyholder will receive as a result of these proposed changes is 6.1%, which is associated with a \$226.13 increase. The minimum percent impact any single policyholder will receive as a result of these proposed changes is 0.9%, which is associated with a \$2.44 increase.

The impact tables and histograms on the following pages show the overall premium level changes, including additional coverage and the Reinsurance Charge.

**ALLSTATE INSURANCE COMPANY  
CONDOMINIUM  
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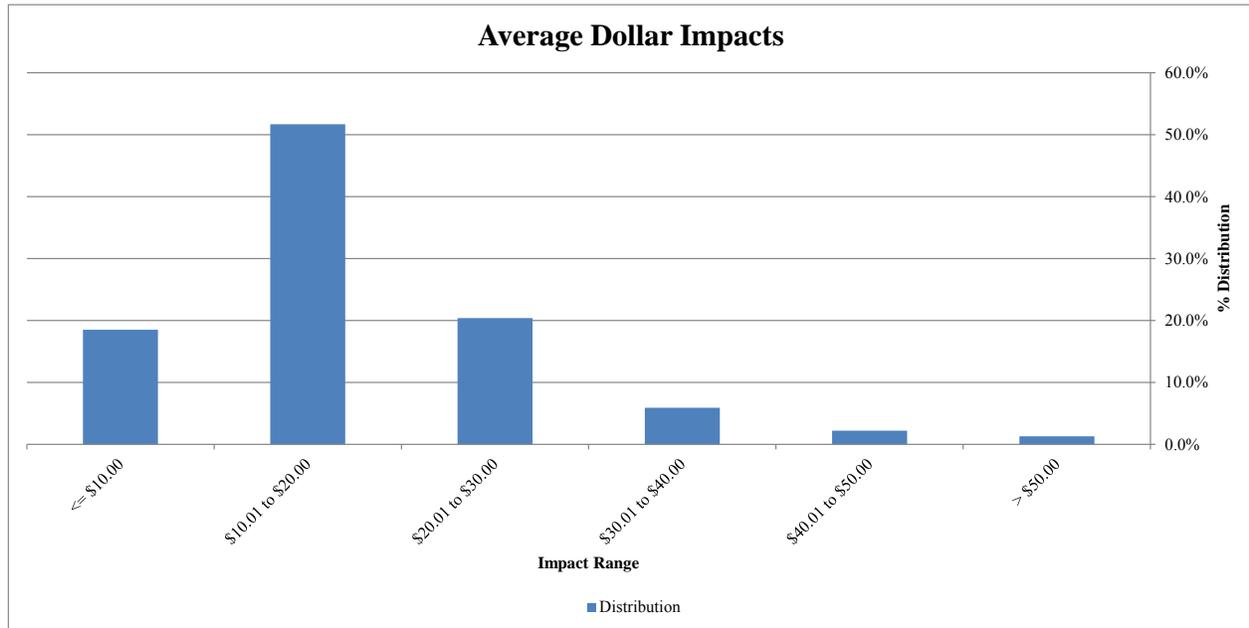
**IMPACTS AND HISTOGRAMS**



<b>% Impact Interval</b>	<b>Distribution</b>
<b>&lt;= 2.0%</b>	0.3%
<b>2.1% to 3.0%</b>	3.3%
<b>3.1% to 4.0%</b>	11.5%
<b>4.1% to 5.0%</b>	35.3%
<b>&gt; 5.0%</b>	49.6%
<b>Total</b>	<b>100.0%</b>

**ALLSTATE INSURANCE COMPANY  
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**IMPACTS AND HISTOGRAMS**



<b>\$ Impact Interval</b>	<b>Distribution</b>
<b>&lt;= \$10.00</b>	18.5%
<b>\$10.01 to \$20.00</b>	51.7%
<b>\$20.01 to \$30.00</b>	20.4%
<b>\$30.01 to \$40.00</b>	5.9%
<b>\$40.01 to \$50.00</b>	2.2%
<b>&gt; \$50.00</b>	1.3%
<b>Total</b>	<b>100.0%</b>

## CONDOMINIUM

## PENNSYLVANIA RATE PAGE CALCULATION OPTIONS

The following discounts, credits and surcharges should be applied in the order listed.

1. Multiply the appropriate premium from the rate pages by a Rate Adjustment Factor of ~~1.288~~ 1.367 (Note: Premiums for policies with Coverage C limits less than \$6,000 may be developed by subtracting \$1 per \$1,000 from the \$6,000 premium and then applying the Rate Adjustment Factor.)
2. Not Rented - Multiply by .95  
Rented 1-8 Weeks - Multiply by 1.00  
Rented 9 or More Weeks - Multiply by 1.25
3. \$50, \$500 or \$1,000 Deductible - Multiply \$100 Deductible premium by 1.111, .778 or .700
4. \$250 Theft Deductible - Multiply \$50 or \$100 Deductible premium by .95
5. Home Buyer Discount – Multiply by the appropriate factor (Rule 23)
6. Personal Property Reimbursement Provision - Multiply by 1.25 (Rule 4.B.)
7. Protective Device Discount - Multiply by the appropriate factor (Rule 16)
8. 55 and Retired Discount - Multiply by .75 (Rule 17)
9. Home and Auto Discount - Multiply by .90 (Rule 18)
10. The Good Hands People ® Discount - Multiply by .95 (Rule 19)
11. For Secondary Residence Credit subtract the amount shown on the Supplementary Rate Pages (Rule 8)
12. Rate Transition – Multiply by the Rate Transition Factor (Rule 24)