

**CENTRAL OHIO RISK  
MANAGEMENT ASSOCIATION  
(CORMA)**

ACTUARIAL REPORT ON UNPAID LOSS AND  
LOSS ADJUSTMENT EXPENSES  
AS OF SEPTEMBER 30, 2017

*October 25, 2017*



**FINANCIAL RISK ANALYSTS, LLC**  
Actuaries • Insurance Consultants



October 25, 2017

Sent Via Email

Ms. Angel Mumma  
Director of Finance  
City of Dublin  
5200 Emerald Parkway  
Dublin, Ohio 43017  
On behalf of CORMA

Dear Angel:

Enclosed please find our report regarding indicated liabilities as of September 30, 2017 for CORMA. The report presents our summary and conclusions as well as the detailed supporting exhibits. We are available to discuss our analysis or answer any questions you may have upon review.

We thank you for the opportunity to continue to provide service to CORMA.

Sincerely,

Robert W. Van Epps, FCAS, MAAA  
Managing Principal

David S. Benusa  
Actuarial Analyst

c: Tom Wichert  
Rich Studenic

**CENTRAL OHIO RISK MANAGEMENT ASSOCIATION**

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# CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

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## **INTRODUCTION**

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Financial Risk Analysts, LLC has been retained by the Central Ohio Risk Management Association (CORMA) to provide indicated loss and allocated loss adjustment expense (ALAE) liabilities as of September 30, 2017. CORMA is a pool of eight Ohio municipalities that began providing property and liability coverage to its members on October 1, 1997.

Coverages provided are Automobile Liability, General Liability, Police & Public Officials Liability, Employee Benefits Liability, Medical Professional Liability, Property, Crime, and Automobile Physical Damage. Coverage is provided on an occurrence basis, except for Public Officials, Medical Professional, and Employee Benefits Liability, which are on a claims made basis. For the latest year, CORMA purchased specific excess reinsurance which limits its retention to \$150,000 per occurrence for liability losses and \$25,000 for property losses. CORMA carries deductibles of \$50,000 and \$250,000 per occurrence for auto physical damage and flood losses, respectively. An overall aggregate retention limits CORMA's total annual liability losses to a maximum amount. The specific excess retentions, deductibles, and aggregate retentions vary by year and are displayed on Exhibit 9.

The municipalities comprising CORMA are the cities of Dublin, Westerville, Upper Arlington, Pickerington, Grove City, Powell, Groveport, Canal Winchester, and Grandview Heights. CORMA did not provide liability coverage to Upper Arlington prior to October 1, 1999 since the city maintained a \$100,000 self insured retention for liability losses. The cities of Grove City and Powell joined the pool on October 1, 2009 and February 1, 2010, respectively. The city of Groveport joined on October 1, 2010. The city of Canal Winchester joined on October 1, 2014. The city of Grandview Heights joined on June 6, 2017.

Administrative services including claims administrative services are provided by Wichert Insurance Services, Inc.

## **CENTRAL OHIO RISK MANAGEMENT ASSOCIATION**

The estimates in this report were developed in accordance with the principals of the Casualty Actuarial Society and the applicable standards of the American Academy of Actuaries.

I, Robert W. Van Epps, am a Principal for Financial Risk Analysts, LLC. I am an independent consultant to CORMA. I am a Member of the American Academy of Actuaries and a Fellow of the Casualty Actuarial Society. I meet the qualification standards of the American Academy of Actuaries to issue this report.

# CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

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## **CONDITIONS & LIMITATIONS**

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### ***GENERAL***

Throughout this report and its exhibits the term "loss" is used to refer to both losses and allocated loss adjustment expense. Allocated loss adjustment expense or ALAE provides for all expenses associated with the handling and settling of claims that can be directly attributable to a particular claim. Such expenses typically include legal fees, investigatory expenses, expert witness fees, etc. Unallocated loss adjustment expenses or ULAE are expenses associated with the handling and settling of claims that cannot be specifically assigned to a particular claim. Such expenses are generally in the nature of overhead expenses and would include fees paid to CORMA's third party administrator, Wichert Insurance Services, Inc.

### ***DATA***

We used historical data and other information provided to us by CORMA and Wichert Insurance Services, administrator for CORMA. This information consists of premium, loss, exposure, and reinsurance information. In addition, we have relied on various oral representations made to us by the responsible employees of CORMA and Wichert Insurance Services. Certain adjustments to the loss data were made to eliminate Upper Arlington liability losses prior to October 1, 1999. We also made adjustments to include certain 'NC' claims that were not included on the ASC loss runs provided to us.

CORMA has changed claims administrators several times since 2005, most recently transitioning to Wichert Insurance Services in 2008. Prior administrators were unable to provide data valued as of September 30, 2006 that appear reasonable. We have therefore not included this valuation date in our loss triangles. The result is a "missing" diagonal and a lack of development factors based on CORMA's experience that would have used data with this valuation date.

## CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

Additionally, because of the change in claims administrators noted above, we are unable to reconcile two data items:

- 1) Net ratable expenditures, which are used as an exposure base for general liability, increased significantly as of the September 2010 evaluation. However, based on discussions with Wichert Insurance Services, we believe that this increase was driven by a change in the way exposures are reported. To account for this, we used the reported ratable exposure for 10/1/08-09 and estimated exposures for previous years based on an assumed trend.
- 2) Cumulative net losses by year do not match data that was provided historically. To maintain the integrity of historical triangles, we have relied upon the incremental paid during the previous year as well as current case outstanding losses.

To the extent that either of these data items has an effect on the estimation of historical exposures or historical payment patterns, our estimation of outstanding losses and estimated pure premiums could be affected, perhaps materially.

Although the data supplied have been reviewed for purposes of reasonability we have not independently audited or verified this information and we assume it to be accurate and complete. The results of our analysis will be contingent upon the reliability of the information supplied to us and such reliability is the responsibility of CORMA and Wichert Insurance Services. Should CORMA or Wichert Insurance Services become aware of any significant discrepancies in the data reported to us we should be notified of such discrepancies and this report will be amended, if necessary.

In performing our analysis we have also relied on loss development data and information obtained from insurance industry sources to supplement the actual historical data provided to us.

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## *UNCERTAINTY*

Actuarial projections, by their nature, are estimates of future contingent events which cannot be known with certainty. The ultimate liability of CORMA for its retained losses will be subject to events that have yet to occur such as the size of future liability awards, medical cost inflation, judicial interpretations as to liability, as well as the propensity for claimants to bring suit. No assumptions have been made in this report as to any extraordinary changes in the legal, social, or judicial environment that might affect future losses.

In particular it should be recognized that CORMA has undergone changes to their claims administrator and claims reserving practices. They also have relatively little pooled experience available at this time. These factors will tend to increase the potential variability of any actuarial estimate.

While we believe the results presented in this report are reasonable and reflect the use of accepted actuarial principles and standards of practice it is possible that actual future loss results of CORMA will differ, perhaps materially, from those projected herein. Nothing in this report should be construed as a warranty or guarantee as to the adequacy of the funding estimates contained herein.

## *UNINSURED EXPOSURES*

The estimates contained in this report are intended to cover only those exposures contained within the terms and conditions of the commercial excess insurance policies purchased by CORMA. Therefore, we have not included a specific provision for any losses that might arise as a result of exposures that fall within any exclusions of CORMA's commercially purchased policies. Such exposures often include, but are not limited to environmental impairment liability and asbestos liability.



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## *EXCESS INSURANCE*

The funding estimates contained in this report are net of all excess insurance purchased by CORMA. We have made no attempt to analyze the security of CORMA's excess insurers nor have we made provision for any additional funding that would be required by CORMA should any of its excess insurers be unable to perform on their obligations.

# CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

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## **DISTRIBUTION & USE**

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This report is intended solely for the use of CORMA in evaluating its loss and allocated loss adjustment expense liabilities as of September 30, 2017. A copy of this report may also be provided to CORMA's administrators and external auditor with the proviso that the report is copied in its entirety and each party receiving a copy of this report agrees to not distribute the report to any other third party.

Distribution of this report to parties other than those referenced above is not authorized without the express written consent of Financial Risk Analysts, LLC

# CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

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## **SUMMARY OF FINDINGS**

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### **Indicated Liability as of September 30, 2017**

Based on the analysis contained herein and as displayed on Exhibit 1.1 the following presents our indicated CORMA liabilities (unpaid losses and loss expenses as discussed below) as of September 30, 2017:

<b>CORMA</b>	
<b>Indicated Liabilities as of September 30, 2017</b>	
Loss & ALAE	\$1,226,699
Claim Service Fees	\$35,000
<b>TOTAL</b>	<b>\$1,261,699</b>

The liability indication is intended to provide for all losses incurred by CORMA during the period October 1, 1997 through September 30, 2017 under the terms and conditions of its policy provisions, but which are unpaid as of September 30, 2017.

The liability includes a provision for the following:

- For occurrence coverages, losses and loss adjustment expenses on claims occurring during the period October 1, 1997-September 30, 2017.
- For claims made coverages, losses and loss adjustment expenses on claims reported during the period October 1, 1997- September 30, 2017 provided that the loss occurred subsequent to the retroactive date for the coverage provided.

The liabilities presented above do not include a provision for future investment income to be earned on the invested assets supporting the liabilities nor do they contain a provision for any expenses associated with CORMA's operations other than loss adjustment expense.

## **CENTRAL OHIO RISK MANAGEMENT ASSOCIATION**

The provision for claim service fees is intended to provide for estimated future third party administrative claim costs involved in the handling and settling of all claims incurred as of September 30, 2017. GASB-10 requires public entity pools to accrue a liability for these costs.

The estimate of these costs has been judgmentally determined based on discussions with Wichert Insurance Services, CORMA's current third party administrator, and our understanding of their fee structure. We recommend that CORMA consult with its external auditors as to the reasonability of booking a provision for this.

# CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

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## ANALYSIS

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### **Loss and Allocated Loss Adjustment Expense Liabilities**

Exhibit 1.1 presents a summary of the results of our analysis by coverage. We used historical loss experience of the members of CORMA combined with internal municipal pool data to project ultimate losses for each coverage in the pool. We used four commonly applied actuarial methodologies, the Incurred Loss Development, Paid Loss Development, Incurred Bornhuetter-Ferguson and Paid Bornhuetter-Ferguson methods to estimate CORMA's ultimate losses for General Liability and Automobile Liability. For Automobile Physical Damage and Property we used only the loss development methods.

- **Incurred Loss Development Method**

The incurred loss development method is a method in which incurred losses are projected to an ultimate level based on historical development patterns. An analysis of the changes in accident year incurred losses between various valuation points provides a basis for estimating future changes. Assuming that reporting patterns and reserving practices have remained reasonably stable, this method can be used to provide reasonable estimates of ultimate losses. Since there is little historical loss development experience available for CORMA, we relied on a combination of CORMA's available historical experience and insurance industry loss development data in our selection of loss development factors. Results of the Incurred Loss Development method are displayed on Exhibit 6.

- **Paid Loss Development Method**

This method is similar to the incurred loss development method except that paid losses are used instead of incurred losses. Paid losses are projected to an ultimate level based on historical paid loss development patterns. This method assumes that loss settlement and

## CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

payment patterns have remained reasonably stable over time. Unlike the incurred method, the paid loss development method is not dependent on reasonably consistent reserving practices. As with the incurred loss development method, paid loss development factors have been derived from a combination of CORMA's available historical experience and insurance industry loss development data. Results of the Paid Loss Development method are also displayed on Exhibit 6.

- **Bornhuetter-Ferguson Incurred Method**

This approach is essentially a credibility weighted average of two other reserving methods; the incurred loss development method and the expected loss method. The expected loss method simply sets the indicated reserve equal to the difference between expected losses and paid losses. It produces very stable results but fails to incorporate actual results as they emerge.

The Bornhuetter-Ferguson Incurred method blends the incurred loss development method and the expected loss method by splitting expected losses into two distinct pieces; expected reported losses and expected unreported losses. As an accident year matures, the expected incurred losses are replaced with actual reported losses plus expected unreported losses. Thus, as the year matures, the initial expected incurred loss estimate becomes less important while the actual reported loss experience increases in importance. In order to use this method, one must estimate both the initial expected losses and the expected loss reporting pattern.

Initial expected losses have been estimated based on CORMA's historical loss costs adjusted to current cost levels. This is displayed on Exhibit 5. Expected loss reporting patterns are the reciprocal of the incurred loss development factors from the incurred loss development method. Results of the Incurred Bornhuetter-Ferguson method are displayed on Exhibit 4.

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- **Bornhuetter-Ferguson Paid Method**

The Bornhuetter-Ferguson paid loss method is similar to the Bornhuetter-Ferguson incurred loss method except that expected losses are split between expected paid and unpaid losses. Expected loss payment patterns are derived from the paid loss development factors. Initial expected losses are the same as those used in the Bornhuetter-Ferguson Incurred method.

Ultimate loss projections for Liability coverages are summarized on Exhibits 3.2 and 3.3. Ultimate losses are selected from the results of all four methods. For Property and Automobile Physical Damage we used the results from the loss development methods as displayed on Exhibits 6.3 and 6.4.

The ultimate loss selections by coverage are summarized on Exhibit 3.1 and limited to the aggregate stop loss amount. On Exhibit 1.1, losses paid to date are subtracted from selected ultimate losses to produce the indicated outstanding losses net of all excess insurance. For five of CORMA's first six years paid losses have exceeded the aggregate so there are no outstanding losses on a net of reinsurance basis. For older years where the aggregates are not exceeded but for which all claims are closed, ultimate losses are selected to equal paid losses so there are no outstanding losses.

Exhibit 2 shows changes in selected ultimate losses from our September 30, 2016 analysis. The selected ultimates for all lines of business have increased slightly in some pool years and decreased slightly in others. Overall, this indicates that ultimate losses have not changed materially from the prior year.

**CENTRAL OHIO RISK MANAGEMENT ASSOCIATION**

INDICATED OUTSTANDING LOSSES  
NET OF REINSURANCE  
AS OF SEPTEMBER 30, 2017

<u>Accident Period</u> (1)	<u>Aggregate Stop Loss</u> (2)	<u>Selected Ultimate Losses Net Of Reinsurance</u> (3)	<u>Net Paid Losses</u> (4)	<u>Indicated Outstanding Losses Net Of Reinsurance</u> (5) = (3) - (4)	<u>Case Outstanding Losses</u> (6)	<u>IBNR</u> (7) = (5) - (6)
10/1/97-98	125,000	125,000	125,000	0	0	0
10/1/98-99	125,000	125,000	125,000	0	0	0
10/1/99-00	128,750	128,750	128,750	0	0	0
10/1/00-01	183,000	183,000	183,000	0	0	0
10/1/01-02	183,000	170,404	170,404	0	0	0
10/1/02-03	325,000	470,283	470,283	0	0	0
10/1/03-04	450,000	314,030	314,030	0	0	0
10/1/04-05	450,000	407,750	407,750	0	0	0
10/1/05-06	550,000	176,749	176,749	0	0	0
10/1/06-07	550,000	114,033	114,033	0	0	0
10/1/07-08	550,000	253,225	253,225	0	0	0
10/1/08-09	550,000	281,250	281,250	0	0	0
10/1/09-10	550,000	604,400	604,401	0	0	0
10/1/10-11	550,000	335,926	335,926	0	0	0
10/1/11-12	600,000	537,477	537,477	0	0	0
10/1/12-13	600,000	176,717	157,399	19,318	0	19,318
10/1/13-14	600,000	320,971	238,208	82,763	46,390	36,373
10/1/14-15	615,600	501,636	327,814	173,822	55,500	118,322
10/1/15-16	750,000	689,295	361,567	327,728	239,821	87,907
10/1/16-17	750,000	800,354	177,285	623,069	327,265	295,804
<b>TOTAL</b>		<b>6,716,250</b>	<b>5,489,550</b>	<b>1,226,699</b>	<b>668,976</b>	<b>557,723</b>

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(2) Exhibit 9

(3) Exhibit 3.1

(4) Exhibits 6.1-6.4 limited to aggregate

(6) Exhibits 6.1-6.4



## CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

### COMPARISON OF SELECTED ULTIMATE LOSSES TO PRIOR ANALYSIS

AS OF SEPTEMBER 30, 2017

Accident Period (1)	General Liability			Automobile Liability		
	Current (2)	Prior (3)	Change (4)=(2)-(3)	Current (5)	Prior (6)	Change (7)=(5)-(6)
10/1/97-98	101,449	101,449	0	13,842	13,842	0
10/1/98-99	185,737	185,737	0	1,142	1,142	0
10/1/99-00	163,100	163,100	0	35,452	35,452	0
10/1/00-01	248,397	248,397	0	8,840	8,840	0
10/1/01-02	112,345	112,345	0	9,901	9,901	0
10/1/02-03	407,418	407,418	0	8,132	8,132	0
10/1/03-04	189,237	189,237	0	18,901	18,901	0
10/1/04-05	155,317	155,317	0	86,830	86,830	0
10/1/05-06	13,588	13,588	0	7,987	7,987	0
10/1/06-07	71,485	71,485	0	17,431	17,431	0
10/1/07-08	66,477	66,477	0	28,507	28,507	0
10/1/08-09	36,295	36,295	0	23,921	23,921	0
10/1/09-10	230,850	230,850	0	223,997	223,997	0
10/1/10-11	136,663	136,663	0	20,300	20,300	0
10/1/11-12	328,286	336,185	-7,899	47,906	47,906	0
10/1/12-13	34,967	45,222	-10,255	5,597	5,597	0
10/1/13-14	165,931	190,488	-24,557	68,011	69,294	-1,283
10/1/14-15	338,959	349,853	-10,894	66,101	26,603	39,498
10/1/15-16	501,547	447,349	54,198	28,602	46,615	-18,013
TOTAL	3,488,048	3,487,455	593	721,400	701,198	20,202

Accident Period (1)	Property			Automobile Physical Damage		
	Current (8)	Prior (9)	Change (10)=(8)-(9)	Current (11)	Prior (12)	Change (13)=(11)-(12)
10/1/97-98	29,153	29,153	0	18,354	18,354	0
10/1/98-99	26,586	26,586	0	30,981	30,981	0
10/1/99-00	17,785	17,785	0	17,559	17,559	0
10/1/00-01	41,721	41,721	0	30,319	30,319	0
10/1/01-02	38,879	38,879	0	9,279	9,279	0
10/1/02-03	104,172	104,172	0	41,111	41,111	0
10/1/03-04	58,425	58,425	0	47,467	47,467	0
10/1/04-05	84,727	84,727	0	80,876	80,876	0
10/1/05-06	22,651	22,651	0	132,523	132,523	0
10/1/06-07	16,599	16,599	0	8,518	8,518	0
10/1/07-08	74,462	74,462	0	83,779	83,779	0
10/1/08-09	36,628	36,628	0	184,406	184,406	0
10/1/09-10	83,991	83,991	0	65,562	65,562	0
10/1/10-11	159,228	159,228	0	19,735	19,735	0
10/1/11-12	113,775	113,775	0	47,509	47,509	0
10/1/12-13	30,992	30,992	0	105,160	105,160	0
10/1/13-14	56,263	56,263	0	30,766	30,766	0
10/1/14-15	46,499	49,173	-2,674	50,077	49,076	1,001
10/1/15-16	67,158	103,516	-36,358	91,988	89,711	2,277
TOTAL	1,109,694	1,148,725	-39,031	1,095,970	1,092,692	3,278

(2) Exhibit 3.2

(5) Exhibit 3.3

(8) Exhibit 6.3

(11) Exhibit 6.4

(3),(6),(9),(12) From previous analysis

## CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

INDICATED OUTSTANDING LOSSES  
NET OF REINSURANCE  
AS OF SEPTEMBER 30, 2017

Accident Period (1)	Selected Ultimate Losses					Aggregate Stop Loss (7)	Selected Ultimate Losses Subject To Aggregate (8)	Selected Ultimate Losses Net Of Reinsurance (9)
	General Liability (2)	Automobile Liability (3)	Property (4)	Automobile Physical Damage (5)	TOTAL (6)			
10/1/97-98	101,449	13,842	29,153	18,354	162,798	125,000	162,798	125,000
10/1/98-99	185,737	1,142	26,586	30,981	244,446	125,000	244,446	125,000
10/1/99-00	163,100	35,452	17,785	17,559	233,896	128,750	233,896	128,750
10/1/00-01	248,397	8,840	41,721	30,319	329,277	183,000	329,277	183,000
10/1/01-02	112,345	9,901	38,879	9,279	170,404	183,000	170,404	170,404
10/1/02-03	407,418	8,132	104,172	41,111	560,833	325,000	415,550	470,283
10/1/03-04	189,237	18,901	58,425	47,467	314,030	450,000	208,138	314,030
10/1/04-05	155,317	86,830	84,727	80,876	407,750	450,000	242,147	407,750
10/1/05-06	13,588	7,987	22,651	132,523	176,749	550,000	21,575	176,749
10/1/06-07	71,485	17,431	16,599	8,518	114,033	550,000	88,916	114,033
10/1/07-08	66,477	28,507	74,462	83,779	253,225	550,000	94,984	253,225
10/1/08-09	36,295	23,921	36,628	184,406	281,250	550,000	60,216	281,250
10/1/09-10	230,850	223,997	83,991	65,562	604,400	550,000	454,847	604,400
10/1/10-11	136,663	20,300	159,228	19,735	335,926	550,000	156,963	335,926
10/1/11-12	328,286	47,906	113,775	47,509	537,477	600,000	376,192	537,477
10/1/12-13	34,967	5,597	30,992	105,160	176,717	600,000	40,564	176,717
10/1/13-14	165,931	68,011	56,263	30,766	320,971	600,000	233,942	320,971
10/1/14-15	338,959	66,101	46,499	50,077	501,636	615,600	405,060	501,636
10/1/15-16	501,547	28,602	67,158	91,988	689,295	750,000	530,149	689,295
10/1/16-17	381,811	62,271	239,348	116,924	800,354	750,000	444,082	800,354
TOTAL	3,869,859	783,671	1,349,042	1,212,894	7,215,466		4,914,146	6,716,250

(2) Exhibit 3.2

(3) Exhibit 3.3

(4) Exhibit 6.3

(5) Exhibit 6.4

(6) (2)+(3)+(4)+(5)

(7) Exhibit 9

(8) 10/1/02-03 and subsequent: Aggregate only applies to liability losses

(9) Losses from column (6) limited to aggregate

## CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

### SUMMARY OF METHODOLOGY RESULTS AND SELECTION OF ULTIMATE LOSSES AS OF SEPTEMBER 30, 2017

#### GENERAL LIABILITY

Accident Period (1)	Incurred Losses (2)	Paid Losses (3)	Projected Ultimate Losses by Method				Selected Ultimate Losses (8)
			Incurred LDF (4)	Paid LDF (5)	Incurred Born-Ferg (6)	Paid Born-Ferg (7)	
10/1/97-98	101,449	101,449	101,449	101,449	101,449	101,449	101,449
10/1/98-99	185,737	185,737	185,737	185,737	185,737	185,737	185,737
10/1/99-00	163,100	163,100	163,100	163,100	163,100	163,100	163,100
10/1/00-01	248,397	248,397	248,397	248,397	248,397	248,397	248,397
10/1/01-02	112,345	112,345	112,345	112,345	112,345	112,345	112,345
10/1/02-03	407,418	407,418	407,418	407,418	407,418	407,418	407,418
10/1/03-04	189,237	189,237	189,237	189,237	189,237	189,237	189,237
10/1/04-05	155,317	155,317	155,317	155,317	155,317	155,317	155,317
10/1/05-06	13,588	13,588	13,588	13,588	13,588	13,588	13,588
10/1/06-07	71,485	71,485	71,485	71,485	71,485	71,485	71,485
10/1/07-08	66,477	66,477	66,809	66,809	67,522	67,522	66,477
10/1/08-09	36,295	36,295	36,767	37,021	39,258	40,854	36,295
10/1/09-10	230,850	230,850	236,622	240,084	236,698	240,109	230,850
10/1/10-11	136,663	136,663	141,446	144,999	145,733	151,868	136,663
10/1/11-12	328,286	328,286	346,670	360,458	341,324	350,180	328,286
10/1/12-13	15,649	15,649	17,026	18,560	34,967	53,093	34,967
10/1/13-14	129,559	83,169	147,957	118,349	164,648	167,213	165,931
10/1/14-15	221,933	221,933	291,398	442,091	297,618	380,299	338,959
10/1/15-16	436,241	196,420	687,516	586,902	567,511	435,583	501,547
10/1/16-17	131,762	9,972	519,142	148,981	408,074	355,548	381,811
TOTAL	3,381,788	2,973,787	4,139,426	3,812,327	3,951,427	3,890,342	3,869,859

(2),(3),(4),(5) Exhibit 6.1

(6) Exhibit 4.1

(7) Exhibit 4.2

**CENTRAL OHIO RISK MANAGEMENT ASSOCIATION**SUMMARY OF METHODOLOGY RESULTS AND SELECTION OF ULTIMATE LOSSES  
AS OF SEPTEMBER 30, 2017

## AUTOMOBILE LIABILITY

Accident Period (1)	Incurred Losses (2)	Paid Losses (3)	Projected Ultimate Losses by Method				Selected Ultimate Losses (8)
			Incurred LDF (4)	Paid LDF (5)	Incurred Born-Ferg (6)	Paid Born-Ferg (7)	
10/1/97-98	13,842	13,842	13,842	13,842	13,842	13,842	13,842
10/1/98-99	1,142	1,142	1,142	1,142	1,142	1,142	1,142
10/1/99-00	35,452	35,452	35,452	35,452	35,452	35,452	35,452
10/1/00-01	8,840	8,840	8,840	8,840	8,840	8,840	8,840
10/1/01-02	9,901	9,901	9,901	9,901	9,901	9,901	9,901
10/1/02-03	8,132	8,132	8,132	8,132	8,132	8,132	8,132
10/1/03-04	18,901	18,901	18,901	18,901	18,901	18,901	18,901
10/1/04-05	86,830	86,830	86,830	86,830	86,830	86,830	86,830
10/1/05-06	7,987	7,987	7,987	7,987	7,987	7,987	7,987
10/1/06-07	17,431	17,431	17,431	17,431	17,431	17,431	17,431
10/1/07-08	28,507	28,507	28,507	28,507	28,507	28,507	28,507
10/1/08-09	23,921	23,921	23,921	23,921	23,921	23,921	23,921
10/1/09-10	223,997	223,997	223,997	223,997	223,997	223,997	223,997
10/1/10-11	20,300	20,300	20,300	20,300	20,300	20,300	20,300
10/1/11-12	47,906	47,906	47,906	47,906	47,906	47,906	47,906
10/1/12-13	5,597	5,597	5,597	5,597	5,597	5,597	5,597
10/1/13-14	68,011	68,011	68,011	68,011	68,011	68,011	68,011
10/1/14-15	64,805	9,305	66,101	9,770	66,096	12,403	66,101
10/1/15-16	9,653	9,653	11,815	14,701	22,838	34,366	28,602
10/1/16-17	30,801	12,301	49,005	41,222	58,960	65,582	62,271
TOTAL	731,956	657,956	753,618	692,390	774,590	739,047	783,671

(2),(3),(4),(5) Exhibit 6.2

(6) Exhibit 4.3

(7) Exhibit 4.4

**CENTRAL OHIO RISK MANAGEMENT ASSOCIATION**

GENERAL LIABILITY  
 PROJECTED ULTIMATE LOSSES  
 AS OF SEPTEMBER 30, 2017

**BORNHUETTER-FERGUSON INCURRED LOSS METHOD**

Accident Period (1)	Operating Budget (000) (2)	Initial Expected Pure Premium (3)	Initial Expected Losses (4)=(2)x(3)	Expected % Of Losses Reported (5)	Losses Reported		Expected % Of Losses Unreported (8)=1.0-(5)	Expected Unreported Losses (9)=(4)x(8)	Projected Ultimate Losses (10)=(6)+(9)
					Actual (6)	Expected (7)=(4)x(5)			
10/1/97-98	60,754	6.10	370,597	100.0%	101,449	370,597	0.0%	0	101,449
10/1/98-99	62,311	8.92	555,817	100.0%	185,737	555,817	0.0%	0	185,737
10/1/99-00	63,909	10.41	665,293	100.0%	163,100	665,293	0.0%	0	163,100
10/1/00-01	65,548	5.81	380,832	100.0%	248,397	380,832	0.0%	0	248,397
10/1/01-02	67,228	5.95	400,009	100.0%	112,345	400,009	0.0%	0	112,345
10/1/02-03	68,952	6.29	433,710	100.0%	407,418	433,710	0.0%	0	407,418
10/1/03-04	70,720	7.74	547,375	100.0%	189,237	547,375	0.0%	0	189,237
10/1/04-05	72,534	8.00	580,269	100.0%	155,317	580,269	0.0%	0	155,317
10/1/05-06	74,393	6.47	481,326	100.0%	13,588	481,326	0.0%	0	13,588
10/1/06-07	76,301	2.89	220,510	100.0%	71,485	220,510	0.0%	0	71,485
10/1/07-08	78,257	2.67	208,947	99.5%	66,477	207,902	0.5%	1,045	67,522
10/1/08-09	80,264	2.84	227,950	98.7%	36,295	224,987	1.3%	2,963	39,258
10/1/09-10	82,877	2.94	243,658	97.6%	230,850	237,810	2.4%	5,848	236,698
10/1/10-11	88,037	3.03	266,752	96.6%	136,663	257,682	3.4%	9,070	145,733
10/1/11-12	83,390	2.95	246,001	94.7%	328,286	232,963	5.3%	13,038	341,324
10/1/12-13	83,390	2.86	238,495	91.9%	15,649	219,177	8.1%	19,318	34,967
10/1/13-14	94,357	3.00	282,977	87.6%	129,559	247,888	12.4%	35,089	164,648
10/1/14-15	95,871	3.32	318,004	76.2%	221,933	242,319	23.8%	75,685	297,618
10/1/15-16	100,515	3.58	359,643	63.5%	436,241	228,373	36.5%	131,270	567,511
10/1/16-17	101,477	3.65	370,392	25.4%	131,762	94,080	74.6%	276,312	408,074
TOTAL	1,571,086		7,398,557		3,381,789	6,828,919		569,638	3,951,427

(2) Exhibit 8

(3) Exhibit 5.1. Prior to 10/1/14 from previous analysis

(5) Reciprocal of development factors from Exhibit 6.1

(6) Exhibit 6.1

**CENTRAL OHIO RISK MANAGEMENT ASSOCIATION**

GENERAL LIABILITY  
 PROJECTED ULTIMATE LOSSES  
 AS OF SEPTEMBER 30, 2017

**BORNHUETTER-FERGUSON PAID LOSS METHOD**

Accident Period (1)	Operating Budget (000) (2)	Initial Expected Pure Premium (3)	Initial Expected Losses (4)=(2)x(3)	Expected % Of Losses Paid (5)	Losses Paid		Expected % Of Losses Unpaid (8)=1.0-(5)	Expected Unpaid Losses (9)=(4)x(8)	Projected Ultimate Losses (10)=(6)+(9)
					Actual (6)	Expected (7)=(4)x(5)			
10/1/97-98	60,754	6.10	370,597	100.0%	101,449	370,597	0.0%	0	101,449
10/1/98-99	62,311	8.92	555,817	100.0%	185,737	555,817	0.0%	0	185,737
10/1/99-00	63,909	10.41	665,293	100.0%	163,100	665,293	0.0%	0	163,100
10/1/00-01	65,548	5.81	380,832	100.0%	248,397	380,832	0.0%	0	248,397
10/1/01-02	67,228	5.95	400,009	100.0%	112,345	400,009	0.0%	0	112,345
10/1/02-03	68,952	6.29	433,710	100.0%	407,418	433,710	0.0%	0	407,418
10/1/03-04	70,720	7.74	547,375	100.0%	189,237	547,375	0.0%	0	189,237
10/1/04-05	72,534	8.00	580,269	100.0%	155,317	580,269	0.0%	0	155,317
10/1/05-06	74,393	6.47	481,326	100.0%	13,588	481,326	0.0%	0	13,588
10/1/06-07	76,301	2.89	220,510	100.0%	71,485	220,510	0.0%	0	71,485
10/1/07-08	78,257	2.67	208,947	99.5%	66,477	207,902	0.5%	1,045	67,522
10/1/08-09	80,264	2.84	227,950	98.0%	36,295	223,391	2.0%	4,559	40,854
10/1/09-10	82,877	2.94	243,658	96.2%	230,850	234,399	3.8%	9,259	240,109
10/1/10-11	88,037	3.03	266,752	94.3%	136,663	251,547	5.7%	15,205	151,868
10/1/11-12	83,390	2.95	246,001	91.1%	328,286	224,107	8.9%	21,894	350,180
10/1/12-13	83,390	2.86	238,495	84.3%	15,649	201,051	15.7%	37,444	53,093
10/1/13-14	94,357	3.00	282,977	70.3%	83,169	198,933	29.7%	84,044	167,213
10/1/14-15	95,871	3.32	318,004	50.2%	221,933	159,638	49.8%	158,366	380,299
10/1/15-16	100,515	3.58	359,643	33.5%	196,420	120,480	66.5%	239,163	435,583
10/1/16-17	101,477	3.65	370,392	6.7%	9,972	24,816	93.3%	345,576	355,548
TOTAL	1,571,086		7,398,557		2,973,787	6,482,002		916,555	3,890,342

(2) Exhibit 8

(3) Exhibit 5.1. Prior to 10/1/14 from previous analysis

(5) Reciprocal of development factors from Exhibit 6.1

(6) Exhibit 6.1

**CENTRAL OHIO RISK MANAGEMENT ASSOCIATION**

AUTOMOBILE LIABILITY  
 PROJECTED ULTIMATE LOSSES  
 AS OF SEPTEMBER 30, 2017

**BORNHUETTER-FERGUSON INCURRED LOSS METHOD**

Accident Period (1)	Number Of Vehicles (2)	Initial Expected Pure Premium (3)	Initial Expected Losses (4)=(2)x(3)	Expected % Of Losses Reported (5)	Losses Reported		Expected % Of Losses Unreported (8)=1.0-(5)	Expected Unreported Losses (9)=(4)x(8)	Projected Ultimate Losses (10)=(6)+(9)
					Actual (6)	Expected (7)=(4)x(5)			
10/1/97-98	267	120	32,040	100.0%	13,842	32,040	0.0%	0	13,842
10/1/98-99	270	72	19,440	100.0%	1,142	19,440	0.0%	0	1,142
10/1/99-00	493	73	35,989	100.0%	35,452	35,989	0.0%	0	35,452
10/1/00-01	554	58	32,132	100.0%	8,840	32,132	0.0%	0	8,840
10/1/01-02	607	58	35,206	100.0%	9,901	35,206	0.0%	0	9,901
10/1/02-03	663	58	38,454	100.0%	8,132	38,454	0.0%	0	8,132
10/1/03-04	746	58	43,268	100.0%	18,901	43,268	0.0%	0	18,901
10/1/04-05	746	60	44,760	100.0%	86,830	44,760	0.0%	0	86,830
10/1/05-06	721	58	41,818	100.0%	7,987	41,818	0.0%	0	7,987
10/1/06-07	736	65	47,840	100.0%	17,431	47,840	0.0%	0	17,431
10/1/07-08	784	56	43,876	100.0%	28,507	43,876	0.0%	0	28,507
10/1/08-09	831	65	54,015	100.0%	23,921	54,015	0.0%	0	23,921
10/1/09-10	846	67	56,682	100.0%	223,997	56,682	0.0%	0	223,997
10/1/10-11	916	68	62,288	100.0%	20,300	62,288	0.0%	0	20,300
10/1/11-12	917	62	56,854	100.0%	47,906	56,854	0.0%	0	47,906
10/1/12-13	946	67	63,382	100.0%	5,597	63,382	0.0%	0	5,597
10/1/13-14	943	64	60,352	100.0%	68,011	60,352	0.0%	0	68,011
10/1/14-15	978	66	64,548	98.0%	64,805	63,257	2.0%	1,291	66,096
10/1/15-16	987	73	72,051	81.7%	9,653	58,866	18.3%	13,185	22,838
10/1/16-17	1,012	75	75,899	62.9%	30,801	47,740	37.1%	28,159	58,960
TOTAL	14,962		980,894		731,955	938,259		42,635	774,590

(2) Exhibit 8

(3) Exhibit 5.2. Prior to 10/1/14 from previous analysis

(5) Reciprocal of development factors from Exhibit 6.2

(6) Exhibit 6.2

**CENTRAL OHIO RISK MANAGEMENT ASSOCIATION**

AUTOMOBILE LIABILITY  
 PROJECTED ULTIMATE LOSSES  
 AS OF SEPTEMBER 30, 2017

**BORNHUETTER-FERGUSON PAID LOSS METHOD**

Accident Period (1)	Number Of Vehicles (2)	Initial Expected Pure Premium (3)	Initial Expected Losses (4)=(2)x(3)	Expected % Of Losses Paid (5)	Losses Paid		Expected % Of Losses Unpaid (8)=1.0-(5)	Expected Unpaid Losses (9)=(4)x(8)	Projected Ultimate Losses (10)=(6)+(9)
					Actual (6)	Expected (7)=(4)x(5)			
10/1/97-98	267	120	32,040	100.0%	13,842	32,040	0.0%	0	13,842
10/1/98-99	270	72	19,440	100.0%	1,142	19,440	0.0%	0	1,142
10/1/99-00	493	73	35,989	100.0%	35,452	35,989	0.0%	0	35,452
10/1/00-01	554	58	32,132	100.0%	8,840	32,132	0.0%	0	8,840
10/1/01-02	607	58	35,206	100.0%	9,901	35,206	0.0%	0	9,901
10/1/02-03	663	58	38,454	100.0%	8,132	38,454	0.0%	0	8,132
10/1/03-04	746	58	43,268	100.0%	18,901	43,268	0.0%	0	18,901
10/1/04-05	746	60	44,760	100.0%	86,830	44,760	0.0%	0	86,830
10/1/05-06	721	58	41,818	100.0%	7,987	41,818	0.0%	0	7,987
10/1/06-07	736	65	47,840	100.0%	17,431	47,840	0.0%	0	17,431
10/1/07-08	784	56	43,876	100.0%	28,507	43,876	0.0%	0	28,507
10/1/08-09	831	65	54,015	100.0%	23,921	54,015	0.0%	0	23,921
10/1/09-10	846	67	56,682	100.0%	223,997	56,682	0.0%	0	223,997
10/1/10-11	916	68	62,288	100.0%	20,300	62,288	0.0%	0	20,300
10/1/11-12	917	62	56,854	100.0%	47,906	56,854	0.0%	0	47,906
10/1/12-13	946	67	63,382	100.0%	5,597	63,382	0.0%	0	5,597
10/1/13-14	943	64	60,352	100.0%	68,011	60,352	0.0%	0	68,011
10/1/14-15	978	66	64,548	95.2%	9,305	61,450	4.8%	3,098	12,403
10/1/15-16	987	73	72,051	65.7%	9,653	47,338	34.3%	24,713	34,366
10/1/16-17	1,012	75	75,899	29.8%	12,301	22,618	70.2%	53,281	65,582
TOTAL	14,962		980,894		657,955	899,802		81,092	739,047

(2) Exhibit 8

(3) Exhibit 5.2. Prior to 10/1/14 from previous analysis

(5) Reciprocal of development factors from Exhibit 6.2

(6) Exhibit 6.2



## CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

### GENERAL LIABILITY PROJECTED PURE PREMIUM

Accident Year (1)	Retention (2)	Initial Selected Ultimate Losses (3)	Exposure (4)	Pure Premium (5)=(3)/(4)	Trend To April 1, 2017 (6)	Trended Pure Premium (7)=(5)x(6)
10/1/99-00	50,000	313,793	63,909	4.91	1.399	6.87
10/1/00-01	50,000	371,662	65,548	5.67	1.371	7.77
10/1/01-02	50,000	212,345	67,228	3.16	1.344	4.25
10/1/02-03	50,000	507,418	68,952	7.36	1.318	9.70
10/1/03-04	100,000	239,237	70,720	3.38	1.292	4.37
10/1/04-05	100,000	155,317	72,534	2.14	1.267	2.71
10/1/05-06	100,000	13,588	74,393	0.18	1.242	0.23
10/1/06-07	100,000	71,485	76,301	0.94	1.218	1.14
10/1/07-08	100,000	66,477	78,257	0.85	1.194	1.01
10/1/08-09	100,000	36,295	80,264	0.45	1.170	0.53
10/1/09-10	100,000	330,850	82,877	3.99	1.147	4.58
10/1/10-11	100,000	136,663	88,037	1.55	1.125	1.75
10/1/11-12	100,000	342,602	83,390	4.11	1.103	4.53
10/1/12-13	100,000	17,793	83,390	0.21	1.081	0.23
10/1/13-14	100,000	141,718	94,357	1.50	1.060	1.59
10/1/14-15	100,000	496,861	95,871	5.18	1.040	5.39
10/1/15-16	150,000	637,209	100,515	6.34	1.020	6.47
(7) MEAN						3.71
(8) LATEST 3						4.48
(9) LATEST 5						3.64
(10) LATEST 5 EX. HI/LOW						3.84
(11) WTD AVG ALL YEARS						3.63
(12) SELECTED						3.65

FORECAST PURE PREMIUM				
	Retention (13)	Retention Factor (14)	Detrend Factor (15)=1.0 / (6)	Forecast Pure Premium (16)
10/1/14-15	100,000	0.945	0.962	3.32
10/1/15-16	150,000	1.000	0.980	3.58
10/1/16-17	150,000	1.000	1.000	3.65

- (2),(13) Exhibit 9  
(3) Exhibit 6.1 adjusted to 150K SIR  
(4) Exhibit 8  
(6) +2.0% annual trend based on industry  
(14) Based on industry increased limits factors  
(16) (12) x (14) x (15)

## CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

### AUTOMOBILE LIABILITY PROJECTED PURE PREMIUM

Accident Year (1)	Retention (2)	Initial Selected Ultimate Losses (3)	Exposure (4)	Pure Premium (5)=(3)/(4)	Trend To April 1, 2017 (6)	Trended Pure Premium (7)=(5)x(6)
10/1/99-00	50,000	35,452	493	72	1.6325	118
10/1/00-01	50,000	8,840	554	16	1.5861	25
10/1/01-02	50,000	9,901	607	16	1.5410	25
10/1/02-03	50,000	8,132	663	12	1.4972	18
10/1/03-04	100,000	18,901	746	25	1.4547	36
10/1/04-05	100,000	86,830	746	116	1.4134	164
10/1/05-06	100,000	7,987	721	11	1.3732	15
10/1/06-07	100,000	17,431	736	24	1.3342	32
10/1/07-08	100,000	28,507	784	36	1.2962	47
10/1/08-09	100,000	23,921	831	29	1.2594	37
10/1/09-10	100,000	280,697	846	332	1.2236	406
10/1/10-11	100,000	20,300	916	22	1.1888	26
10/1/11-12	100,000	47,906	917	52	1.1551	60
10/1/12-13	100,000	5,597	946	6	1.1222	7
10/1/13-14	100,000	68,011	943	72	1.0903	79
10/1/14-15	100,000	66,101	978	68	1.0594	72
10/1/15-16	150,000	13,258	987	13	1.0293	13
(7) MEAN						69
(8) MEAN POST '03 SIR CHANGE						76
(9) LATEST 3						55
(10) LATEST 5						46
(11) LATEST 5 EX. HI/LOW						48
(12) WTD AVG ALL YEARS POST SIR CHANGE						76
(13) SELECTED						75

#### FORECAST PURE PREMIUM

	Retention (14)	Retention Factor (15)	Detrend Factor (16)=1.0 / (6)	Forecast Pure Premium (17)
10/1/14-15	100,000	0.926	0.9440	66
10/1/15-16	150,000	1.000	0.9716	73
10/1/16-17	150,000	1.000	1.0000	75

(2),(13) Exhibit 9

(3) Exhibit 6.2 adjusted to \$150K SIR

(4) Exhibit 8

(6) +2.93% annual trend based on industry

(15) Based on industry increased limits factors

(17) (13) x (15) x (16)

**CENTRAL OHIO RISK MANAGEMENT ASSOCIATION**

GENERAL LIABILITY  
 PROJECTED ULTIMATE LOSSES  
 AS OF SEPTEMBER 30, 2017

## INCURRED AND PAID LOSS DEVELOPMENT METHODS

Accident Year (1)	Incurred Losses (2)	Incurred Development Factor (3)	Projected Ultimate Losses (4)=(2)x(3)	Paid Losses (5)	Paid Development Factor (6)	Projected Ultimate Losses (7)=(5)x(6)	Initial Selected Ultimate Losses (8)
10/1/97-98	101,449	1.000	101,449	101,449	1.000	101,449	101,449
10/1/98-99	185,737	1.000	185,737	185,737	1.000	185,737	185,737
10/1/99-00	163,100	1.000	163,100	163,100	1.000	163,100	163,100
10/1/00-01	248,397	1.000	248,397	248,397	1.000	248,397	248,397
10/1/01-02	112,345	1.000	112,345	112,345	1.000	112,345	112,345
10/1/02-03	407,418	1.000	407,418	407,418	1.000	407,418	407,418
10/1/03-04	189,237	1.000	189,237	189,237	1.000	189,237	189,237
10/1/04-05	155,317	1.000	155,317	155,317	1.000	155,317	155,317
10/1/05-06	13,588	1.000	13,588	13,588	1.000	13,588	13,588
10/1/06-07	71,485	1.000	71,485	71,485	1.000	71,485	71,485
10/1/07-08	66,477	1.005	66,809	66,477	1.005	66,809	66,477
10/1/08-09	36,295	1.013	36,767	36,295	1.020	37,021	36,295
10/1/09-10	230,850	1.025	236,622	230,850	1.040	240,084	230,850
10/1/10-11	136,663	1.035	141,446	136,663	1.061	144,999	136,663
10/1/11-12	328,286	1.056	346,670	328,286	1.098	360,458	328,286
10/1/12-13	15,649	1.088	17,026	15,649	1.186	18,560	17,793
10/1/13-14	129,559	1.142	147,957	83,169	1.423	118,349	133,153
10/1/14-15	221,933	1.313	291,398	221,933	1.992	442,091	366,745
10/1/15-16	436,241	1.576	687,516	196,420	2.988	586,902	637,209
10/1/16-17	131,762	3.940	519,142	9,972	14.940	148,981	334,062
<b>TOTAL</b>	<b>3,381,789</b>		<b>4,139,426</b>	<b>2,973,787</b>		<b>3,812,327</b>	<b>3,935,605</b>

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(2),(3) Exhibit 7.1

(5),(6) Exhibit 7.2

**CENTRAL OHIO RISK MANAGEMENT ASSOCIATION**

AUTOMOBILE LIABILITY  
 PROJECTED ULTIMATE LOSSES  
 AS OF SEPTEMBER 30, 2017

## INCURRED AND PAID LOSS DEVELOPMENT METHODS

Accident Year (1)	Incurred Losses (2)	Incurred Development Factor (3)	Projected Ultimate Losses (4)=(2)x(3)	Paid Losses (5)	Paid Development Factor (6)	Projected Ultimate Losses (7)=(5)x(6)	Initial Selected Ultimate Losses (8)
10/1/97-98	13,842	1.000	13,842	13,842	1.000	13,842	13,842
10/1/98-99	1,142	1.000	1,142	1,142	1.000	1,142	1,142
10/1/99-00	35,452	1.000	35,452	35,452	1.000	35,452	35,452
10/1/00-01	8,840	1.000	8,840	8,840	1.000	8,840	8,840
10/1/01-02	9,901	1.000	9,901	9,901	1.000	9,901	9,901
10/1/02-03	8,132	1.000	8,132	8,132	1.000	8,132	8,132
10/1/03-04	18,901	1.000	18,901	18,901	1.000	18,901	18,901
10/1/04-05	86,830	1.000	86,830	86,830	1.000	86,830	86,830
10/1/05-06	7,987	1.000	7,987	7,987	1.000	7,987	7,987
10/1/06-07	17,431	1.000	17,431	17,431	1.000	17,431	17,431
10/1/07-08	28,507	1.000	28,507	28,507	1.000	28,507	28,507
10/1/08-09	23,921	1.000	23,921	23,921	1.000	23,921	23,921
10/1/09-10	223,997	1.000	223,997	223,997	1.000	223,997	223,997
10/1/10-11	20,300	1.000	20,300	20,300	1.000	20,300	20,300
10/1/11-12	47,906	1.000	47,906	47,906	1.000	47,906	47,906
10/1/12-13	5,597	1.000	5,597	5,597	1.000	5,597	5,597
10/1/13-14	68,011	1.000	68,011	68,011	1.000	68,011	68,011
10/1/14-15	64,805	1.020	66,101	9,305	1.050	9,770	66,101
10/1/15-16	9,653	1.224	11,815	9,653	1.523	14,701	13,258
10/1/16-17	30,801	1.591	49,005	12,301	3.351	41,222	45,114
TOTAL	731,955		753,618	657,955		692,390	751,169

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(2),(3) Exhibit 7.3

(5),(6) Exhibit 7.4

**CENTRAL OHIO RISK MANAGEMENT ASSOCIATION**

PROPERTY  
PROJECTED ULTIMATE LOSSES  
AS OF SEPTEMBER 30, 2017

## INCURRED AND PAID LOSS DEVELOPMENT METHODS

Accident <u>Year</u> (1)	Incurred <u>Losses</u> (2)	Incurred Development <u>Factor</u> (3)	Projected Ultimate <u>Losses</u> (4)=(2)x(3)	Paid <u>Losses</u> (5)	Paid Development <u>Factor</u> (6)	Projected Ultimate <u>Losses</u> (7)=(5)x(6)	Selected Ultimate <u>Losses</u> (8)
10/1/97-98	29,153	1.000	29,153	29,153	1.000	29,153	29,153
10/1/98-99	26,586	1.000	26,586	26,586	1.000	26,586	26,586
10/1/99-00	17,785	1.000	17,785	17,785	1.000	17,785	17,785
10/1/00-01	41,721	1.000	41,721	41,721	1.000	41,721	41,721
10/1/01-02	38,879	1.000	38,879	38,879	1.000	38,879	38,879
10/1/02-03	104,172	1.000	104,172	104,172	1.000	104,172	104,172
10/1/03-04	58,425	1.000	58,425	58,425	1.000	58,425	58,425
10/1/04-05	84,727	1.000	84,727	84,727	1.000	84,727	84,727
10/1/05-06	22,651	1.000	22,651	22,651	1.000	22,651	22,651
10/1/06-07	16,599	1.000	16,599	16,599	1.000	16,599	16,599
10/1/07-08	74,462	1.000	74,462	74,462	1.000	74,462	74,462
10/1/08-09	36,628	1.000	36,628	36,628	1.000	36,628	36,628
10/1/09-10	83,991	1.000	83,991	83,991	1.000	83,991	83,991
10/1/10-11	159,228	1.000	159,228	159,228	1.000	159,228	159,228
10/1/11-12	113,775	1.000	113,775	113,775	1.000	113,775	113,775
10/1/12-13	30,992	1.000	30,992	30,992	1.000	30,992	30,992
10/1/13-14	56,263	1.000	56,263	56,263	1.000	56,263	56,263
10/1/14-15	46,499	1.000	46,499	46,499	1.000	46,499	46,499
10/1/15-16	63,506	1.035	65,729	63,506	1.080	68,587	67,158
10/1/16-17	220,191	1.087	239,348	60,191	1.944	117,012	239,348
<b>TOTAL</b>	<b>1,326,234</b>		<b>1,347,613</b>	<b>1,166,234</b>		<b>1,228,135</b>	<b>1,349,042</b>

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(2),(3) Exhibit 7.5

(5),(6) Exhibit 7.6

**CENTRAL OHIO RISK MANAGEMENT ASSOCIATION**

AUTOMOBILE PHYSICAL DAMAGE  
 PROJECTED ULTIMATE LOSSES  
 AS OF SEPTEMBER 30, 2017

## INCURRED AND PAID LOSS DEVELOPMENT METHODS

Accident Year (1)	Incurred Losses (2)	Incurred Development Factor (3)	Projected Ultimate Losses (4)=(2)x(3)	Paid Losses (5)	Paid Development Factor (6)	Projected Ultimate Losses (7)=(5)x(6)	Selected Ultimate Losses (8)
10/1/97-98	18,354	1.000	18,354	18,354	1.000	18,354	18,354
10/1/98-99	30,981	1.000	30,981	30,981	1.000	30,981	30,981
10/1/99-00	17,559	1.000	17,559	17,559	1.000	17,559	17,559
10/1/00-01	30,319	1.000	30,319	30,319	1.000	30,319	30,319
10/1/01-02	9,279	1.000	9,279	9,279	1.000	9,279	9,279
10/1/02-03	41,111	1.000	41,111	41,111	1.000	41,111	41,111
10/1/03-04	47,467	1.000	47,467	47,467	1.000	47,467	47,467
10/1/04-05	80,876	1.000	80,876	80,876	1.000	80,876	80,876
10/1/05-06	132,523	1.000	132,523	132,523	1.000	132,523	132,523
10/1/06-07	8,518	1.000	8,518	8,518	1.000	8,518	8,518
10/1/07-08	83,779	1.000	83,779	83,779	1.000	83,779	83,779
10/1/08-09	184,406	1.000	184,406	184,406	1.000	184,406	184,406
10/1/09-10	65,562	1.000	65,562	65,562	1.000	65,562	65,562
10/1/10-11	19,735	1.000	19,735	19,735	1.000	19,735	19,735
10/1/11-12	47,509	1.000	47,509	47,509	1.000	47,509	47,509
10/1/12-13	105,160	1.000	105,160	105,160	1.000	105,160	105,160
10/1/13-14	30,766	1.000	30,766	30,766	1.000	30,766	30,766
10/1/14-15	50,077	1.000	50,077	50,077	1.000	50,077	50,077
10/1/15-16	91,988	0.980	90,148	91,988	1.000	91,988	91,988
10/1/16-17	121,795	0.960	116,924	94,820	1.080	102,406	116,924
<b>TOTAL</b>	<b>1,217,765</b>		<b>1,211,053</b>	<b>1,190,790</b>		<b>1,198,375</b>	<b>1,212,894</b>

(2),(3) Exhibit 7.7

(5),(6) Exhibit 7.8

## CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

### GENERAL LIABILITY INCURRED LOSSES AND ALAE NET OF RETENTION AND DEDUCTIBLES

Accident Period	Months Of Development							
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>	<u>96</u>
10/1/97-98	24,594	54,388			101,309	92,604	101,451	101,450
10/1/98-99	23,750	101,001	146,008	136,621	165,446	185,738	185,738	
10/1/99-00	35,713	101,170	99,500	99,500	99,500	163,100		163,100
10/1/00-01	18,596	113,561	199,666	163,055	214,065		248,397	248,397
10/1/01-02	35,416	123,394	147,210	143,609		112,345	112,345	112,345
10/1/02-03	57,097	190,443	207,434		389,307	396,307	407,418	407,418
10/1/03-04	55,986	280,083		284,237	289,237	189,237	189,237	189,237
10/1/04-05	36,113		95,858	149,864	168,796	168,796	155,317	155,317
10/1/05-06		12,432	13,588	13,588	13,588	13,588	13,588	13,588
10/1/06-07	42,664	152,576	161,408	98,908	71,485	71,485	71,485	71,485
10/1/07-08	139,401	126,406	100,236	100,236	115,236	115,236	66,254	66,477
10/1/08-09	8,204	7,704	7,704	42,704	36,295	36,295	36,295	36,295
10/1/09-10	20,463	205,445	249,445	230,851	230,850	230,850	230,850	230,850
10/1/10-11	103,569	202,840	175,227	136,663	136,663	136,663	136,663	
10/1/11-12	162,390	295,448	279,383	368,090	318,286	328,286		
10/1/12-13	57,601	19,522	14,522	15,649	15,649			
10/1/13-14	70,984	92,559	129,559	129,559				
10/1/14-15	135,454	263,954	221,933					
10/1/15-16	270,196	436,241						
10/1/16-17	131,762							

Accident Period	Loss Development Factors							<u>96-ult.</u>
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>	<u>84-96</u>	
10/1/97-98	2.211				0.914	1.096	1.000	
10/1/98-99	4.253	1.446	0.936	1.211	1.123	1.000		
10/1/99-00	2.833	0.983	1.000	1.000	1.639			
10/1/00-01	6.107	1.758	0.817	1.313			1.000	
10/1/01-02	3.484	1.193	0.976			1.000	1.000	
10/1/02-03	3.335	1.089			1.018	1.028	1.000	
10/1/03-04	5.003			1.018	0.654	1.000	1.000	
10/1/04-05			1.563	1.126	1.000	0.920	1.000	
10/1/05-06		1.093	1.000	1.000	1.000	1.000	1.000	
10/1/06-07	3.576	1.058	0.613	0.723	1.000	1.000	1.000	
10/1/07-08	0.907	0.793	1.000	1.150	1.000	0.575	1.003	
10/1/08-09	0.939	1.000	5.543	0.850	1.000	1.000	1.000	
10/1/09-10	10.040	1.214	0.925	1.000	1.000	1.000	1.000	
10/1/10-11	1.959	0.864	0.780	1.000	1.000	1.000		
10/1/11-12	1.819	0.946	1.318	0.865	1.031			
10/1/12-13	0.339	0.744	1.000	1.000				
10/1/13-14	1.304	1.400	1.000					
10/1/14-15	1.949	0.841						
10/1/15-16	1.615							
Mean	3.040	1.095	1.319	1.020	1.029	0.968	1.000	
Latest 3	1.623	0.995	1.106	0.955	1.010	1.000	1.001	
Latest 5	1.405	0.959	1.005	0.943	1.006	0.915	1.001	
5 ex. hi/low	1.579	0.884	0.975	0.955	1.000	1.000	1.000	
Industry	1.856	1.399	1.212	1.109	1.057	1.037	1.021	1.146
Prior	2.500	1.200	1.150	1.050	1.030	1.020	1.010	1.025
Selected	2.500	1.200	1.150	1.050	1.030	1.020	1.010	1.025
Cumulative	3.940	1.576	1.313	1.142	1.088	1.056	1.035	1.025

## CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

GENERAL LIABILITY  
PAID LOSSES AND ALAE  
NET OF RETENTION AND DEDUCTIBLES

Accident Period	Months Of Development							
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>	<u>96</u>
10/1/97-98	5,694	25,028			72,827	92,604	101,451	101,450
10/1/98-99	1,335	101,001	104,008	128,770	165,446	185,738	185,738	
10/1/99-00	3,234	101,170	99,500	99,500	99,500	163,100		163,100
10/1/00-01	18,596	38,220	86,732	90,713	188,832		248,397	248,397
10/1/01-02	2,415	68,653	89,765	112,194		112,345	112,345	112,345
10/1/02-03	5,936	75,893	94,434		340,770	356,097	357,418	407,418
10/1/03-04	27,484	195,142		261,738	289,237	189,237	189,237	189,237
10/1/04-05	5,611		72,041	98,796	135,586	135,630	155,317	155,317
10/1/05-06		12,432	13,588	13,588	13,588	13,588	13,588	13,588
10/1/06-07	11,093	36,383	36,408	70,515	71,485	71,485	71,485	71,485
10/1/07-08	10,206	12,164	27,756	46,205	57,755	65,342	66,254	66,477
10/1/08-09	3,704	7,704	7,704	25,355	36,295	36,295	36,295	36,295
10/1/09-10	3,463	84,835	218,483	230,851	230,850	230,850	230,850	230,850
10/1/10-11	11,757	61,194	116,131	136,663	136,663	136,663	136,663	
10/1/11-12	50,046	162,513	191,292	222,617	273,227	328,286		
10/1/12-13	17,489	14,522	14,522	15,649	15,649			
10/1/13-14	20,431	35,528	43,146	83,169				
10/1/14-15	55,130	133,881	221,933					
10/1/15-16	67,577	196,420						
10/1/16-17	9,972							

Accident Period	Loss Development Factors							
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>	<u>84-96</u>	<u>96-ult.</u>
10/1/97-98	4.396				1.272	1.096	1.000	
10/1/98-99	75.656	1.030	1.238	1.285	1.123	1.000		
10/1/99-00	31.283	0.983	1.000	1.000	1.639			
10/1/00-01	2.055	2.269	1.046	2.082			1.000	
10/1/01-02	28.428	1.308	1.250			1.000	1.000	
10/1/02-03	12.785	1.244			1.045	1.004	1.140	
10/1/03-04	7.100			1.105	0.654	1.000	1.000	
10/1/04-05			1.371	1.372	1.000	1.145	1.000	
10/1/05-06		1.093	1.000	1.000	1.000	1.000	1.000	
10/1/06-07	3.280	1.001	1.937	1.014	1.000	1.000	1.000	
10/1/07-08	1.192	2.282	1.665	1.250	1.131	1.014	1.003	
10/1/08-09	2.080	1.000	3.291	1.431	1.000	1.000	1.000	
10/1/09-10	24.498	2.575	1.057	1.000	1.000	1.000	1.000	
10/1/10-11	5.205	1.898	1.177	1.000	1.000	1.000		
10/1/11-12	3.247	1.177	1.164	1.227	1.202			
10/1/12-13	0.830	1.000	1.000	1.000				
10/1/13-14	1.739	1.214	1.928					
10/1/14-15	2.428	1.658						
10/1/15-16	2.907							

Mean	12.301	1.449	1.437	1.213	1.082	1.022	1.013	
Latest 3	2.358	1.291	1.364	1.076	1.067	1.000	1.001	
Latest 5	2.230	1.389	1.265	1.132	1.067	1.003	1.001	
5 ex. hi/low	2.358	1.350	1.133	1.076	1.044	1.000	1.000	
Industry	2.600	1.700	1.398	1.229	1.115	1.070	1.041	1.108
Prior	5.000	1.500	1.400	1.200	1.080	1.035	1.020	1.040
Selected	5.000	1.500	1.400	1.200	1.080	1.035	1.020	1.040
Cumulative	14.940	2.988	1.992	1.423	1.186	1.098	1.061	1.040



## CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

### AUTOMOBILE LIABILITY INCURRED LOSSES AND ALAE NET OF RETENTION AND DEDUCTIBLES

Accident Period	Months Of Development							
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>	<u>96</u>
10/1/97-98	19,169	18,312	13,843	13,843	13,843	13,843	13,843	13,843
10/1/98-99	2,189	1,142	1,142	1,142	1,142	1,142	1,142	
10/1/99-00	18,131	11,099	11,099	11,099	11,099	35,452		35,452
10/1/00-01	8,340	9,340	9,340	8,840	8,840		8,840	8,840
10/1/01-02	32,996	20,894	19,394	10,546		9,901	9,901	9,901
10/1/02-03	10,191	14,141	7,747		8,132	8,132	8,132	8,132
10/1/03-04	20,584	19,144		18,901	18,901	18,901	18,901	18,901
10/1/04-05	22,222		33,536	86,830	86,830	86,830	86,830	86,830
10/1/05-06		7,987	7,987	7,987	7,987	7,987	7,987	7,987
10/1/06-07	17,583	19,701	37,201	17,431	17,431	17,431	17,431	17,431
10/1/07-08	130,655	103,507	28,507	28,507	28,507	28,507	28,507	28,507
10/1/08-09	13,920	34,921	23,921	23,921	23,921	23,921	23,921	23,921
10/1/09-10	102,974	199,871	224,330	224,330	224,330	224,330	223,997	223,997
10/1/10-11	20,381	20,300	20,300	20,300	20,300	20,300	20,300	
10/1/11-12	24,141	28,499	47,999	47,999	47,906	47,906		
10/1/12-13	5,597	5,597	5,597	5,597	5,597			
10/1/13-14	62,157	116,847	68,011	68,011				
10/1/14-15	19,295	14,055	64,805					
10/1/15-16	10,403	9,653						
10/1/16-17	30,801							

Accident Period	Loss Development Factors							
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>	<u>84-96</u>	<u>96-ult.</u>
10/1/97-98	0.955	0.756	1.000	1.000	1.000	1.000	1.000	
10/1/98-99	0.522	1.000	1.000	1.000	1.000	1.000		
10/1/99-00	0.612	1.000	1.000	1.000	3.194			
10/1/00-01	1.120	1.000	0.946	1.000			1.000	
10/1/01-02	0.633	0.928	0.544			1.000	1.000	
10/1/02-03	1.388	0.548			1.000	1.000	1.000	
10/1/03-04	0.930			1.000	1.000	1.000	1.000	
10/1/04-05			2.589	1.000	1.000	1.000	1.000	
10/1/05-06		1.000	1.000	1.000	1.000	1.000	1.000	
10/1/06-07	1.120	1.888	0.469	1.000	1.000	1.000	1.000	
10/1/07-08	0.792	0.275	1.000	1.000	1.000	1.000	1.000	
10/1/08-09	2.509	0.685	1.000	1.000	1.000	1.000	1.000	
10/1/09-10	1.941	1.122	1.000	1.000	1.000	0.999	1.000	
10/1/10-11	0.996	1.000	1.000	1.000	1.000	1.000		
10/1/11-12	1.181	1.684	1.000	1.000	1.002			
10/1/12-13	1.000	1.000	1.000	1.000				
10/1/13-14	1.880	0.582	1.000					
10/1/14-15	0.728	4.611						
10/1/15-16	0.928							
Mean	1.131	1.192	1.037	1.000	1.169	1.000	1.000	
Latest 3	1.179	2.064	1.000	1.000	1.001	1.000	1.000	
Latest 5	1.143	1.775	1.000	1.000	1.000	1.000	1.000	
5 ex. hi/low	1.036	1.228	1.000	1.000	1.000	1.000	1.000	
Industry	1.410	1.167	1.081	1.037	1.013	1.006	1.002	1.004
Prior	1.300	1.100	1.020	1.000	1.000	1.000	1.000	1.000
Selected	1.300	1.200	1.020	1.000	1.000	1.000	1.000	1.000
Cumulative	1.591	1.224	1.020	1.000	1.000	1.000	1.000	1.000

## CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

### AUTOMOBILE LIABILITY PAID LOSSES AND ALAE NET OF RETENTION AND DEDUCTIBLES

Accident Period	Months Of Development							
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>	<u>96</u>
10/1/97-98	6,311	6,312	13,843	13,843	13,843	13,843	13,843	13,843
10/1/98-99	1,142	1,142	1,142	1,142	1,142	1,142	1,142	
10/1/99-00	9,831	11,099	11,099	11,099	11,099	35,452		35,452
10/1/00-01	8,340	9,340	9,340	8,840	8,840		8,840	8,840
10/1/01-02	9,996	20,894	19,394	10,546		9,901	9,901	9,901
10/1/02-03	3,384	3,890	7,747		8,132	8,132	8,132	8,132
10/1/03-04	17,583	19,144		18,901	18,901	18,901	18,901	18,901
10/1/04-05	19,970		23,536	86,830	86,830	86,830	86,830	86,830
10/1/05-06		7,987	7,987	7,987	7,987	7,987	7,987	7,987
10/1/06-07	13,883	17,201	17,431	17,431	17,431	17,431	17,431	17,431
10/1/07-08	27,455	28,507	28,507	28,507	28,507	28,507	28,507	28,507
10/1/08-09	8,920	8,921	23,921	23,921	23,921	23,921	23,921	23,921
10/1/09-10	9,474	121,871	224,330	224,330	224,330	224,330	223,997	223,997
10/1/10-11	12,381	20,300	20,300	20,300	20,300	20,300	20,300	
10/1/11-12	5,141	17,999	47,999	47,999	47,906	47,906		
10/1/12-13	5,097	5,597	5,597	5,597	5,597			
10/1/13-14	21,958	67,748	68,011	68,011				
10/1/14-15	6,795	8,555	9,305					
10/1/15-16	8,903	9,653						
10/1/16-17	12,301							

Accident Period	Loss Development Factors							
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>	<u>84-96</u>	<u>96-ult.</u>
10/1/97-98	1.000	2.193	1.000	1.000	1.000	1.000	1.000	
10/1/98-99	1.000	1.000	1.000	1.000	1.000	1.000		
10/1/99-00	1.129	1.000	1.000	1.000	3.194			
10/1/00-01	1.120	1.000	0.946	1.000			1.000	
10/1/01-02	2.090	0.928	0.544			1.000	1.000	
10/1/02-03	1.150	1.992			1.000	1.000	1.000	
10/1/03-04	1.089			1.000	1.000	1.000	1.000	
10/1/04-05			3.689	1.000	1.000	1.000	1.000	
10/1/05-06		1.000	1.000	1.000	1.000	1.000	1.000	
10/1/06-07	1.239	1.013	1.000	1.000	1.000	1.000	1.000	
10/1/07-08	1.038	1.000	1.000	1.000	1.000	1.000	1.000	
10/1/08-09	1.000	2.681	1.000	1.000	1.000	1.000	1.000	
10/1/09-10	12.864	1.841	1.000	1.000	1.000	0.999	1.000	
10/1/10-11	1.640	1.000	1.000	1.000	1.000	1.000		
10/1/11-12	3.501	2.667	1.000	1.000	1.000			
10/1/12-13	1.098	1.000	1.000	1.000				
10/1/13-14	3.085	1.004	1.000					
10/1/14-15	1.259	1.088						
10/1/15-16	1.084							
Mean	2.140	1.400	1.145	1.000	1.169	1.000	1.000	
Latest 3	1.809	1.031	1.000	1.000	1.000	1.000	1.000	
Latest 5	2.005	1.352	1.000	1.000	1.000	1.000	1.000	
5 ex. hi/low	1.814	1.031	1.000	1.000	1.000	1.000	1.000	
Industry	2.167	1.453	1.241	1.121	1.051	1.022	1.009	1.019
Prior	2.200	1.500	1.000	1.000	1.000	1.000	1.000	1.000
Selected	2.200	1.450	1.050	1.000	1.000	1.000	1.000	1.000
Cumulative	3.351	1.523	1.050	1.000	1.000	1.000	1.000	1.000

## CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

### PROPERTY INCURRED LOSSES AND ALAE NET OF RETENTION AND DEDUCTIBLES

Accident Period	Months Of Development							
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>	<u>96</u>
10/1/97-98	22,226	22,226	22,226	22,226	22,226	22,226	22,226	22,226
10/1/98-99	26,284	25,152	25,152	25,152	25,152	25,152	25,152	25,152
10/1/99-00	22,571	15,478	15,478	15,478	14,478	17,785		17,785
10/1/00-01	37,055	41,721	41,721	41,721	41,721		41,721	41,721
10/1/01-02	46,244	39,728	40,727	38,879		38,879	38,879	38,879
10/1/02-03	84,370	104,673	104,172		104,172	104,172	104,172	104,172
10/1/03-04	57,579	49,976		58,425	58,425	58,425	58,425	58,425
10/1/04-05	59,055		134,389	84,727	84,727	84,727	84,727	84,727
10/1/05-06		22,651	22,651	22,651	22,651	22,651	22,651	22,651
10/1/06-07	13,678	16,599	16,599	16,599	16,599	16,599	16,599	16,599
10/1/07-08	101,142	74,462	74,462	76,906	74,462	74,462	74,462	74,462
10/1/08-09	52,611	37,825	36,628	36,628	36,628	36,628	36,628	36,628
10/1/09-10	65,776	76,416	76,416	76,416	76,416	76,416	83,991	83,991
10/1/10-11	155,610	142,029	166,803	166,803	166,803	159,228	159,228	
10/1/11-12	126,515	113,775	113,775	113,775	113,775	113,775		
10/1/12-13	26,986	32,119	32,119	30,992	30,992			
10/1/13-14	46,090	45,868	56,263	56,263				
10/1/14-15	88,449	46,499	46,499					
10/1/15-16	103,580	63,506						
10/1/16-17	220,191							

Accident Period	Loss Development Factors							
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>	<u>84-96</u>	<u>96-ult.</u>
10/1/97-98	1.000	1.000	1.000	1.000	1.000	1.000	1.022	
10/1/98-99	0.957	1.000	1.000	1.000	1.000	1.000		
10/1/99-00	0.686	1.000	1.000	0.935	1.228			
10/1/00-01	1.126	1.000	1.000	1.000			1.000	
10/1/01-02	0.859	1.025	0.955			1.000	1.000	
10/1/02-03	1.241	0.995			1.000	1.000	1.000	
10/1/03-04	0.868			1.000	1.000	1.000	1.000	
10/1/04-05			0.630	1.000	1.000	1.000	1.000	
10/1/05-06		1.000	1.000	1.000	1.000	1.000	1.000	
10/1/06-07	1.214	1.000	1.000	1.000	1.000	1.000	1.000	
10/1/07-08	0.736	1.000	1.033	0.968	1.000	1.000	1.000	
10/1/08-09	0.719	0.968	1.000	1.000	1.000	1.000	1.000	
10/1/09-10	1.162	1.000	1.000	1.000	1.000	1.000	1.000	
10/1/10-11	0.913	1.174	1.000	1.000	1.000	1.000		
10/1/11-12	0.899	1.000	1.000	1.000	1.000			
10/1/12-13	1.190	1.000	1.000	1.000				
10/1/13-14	0.995	1.227	1.000					
10/1/14-15	0.526	1.000						
10/1/15-16	0.613							

Mean	0.924	1.024	0.975	0.993	1.018	1.000	1.002	
Latest 3	0.711	1.076	1.000	1.000	1.000	1.000	1.000	
Latest 5	0.845	1.080	1.000	1.000	1.000	1.000	1.000	
5 ex. hi/low	0.836	1.058	1.000	1.000	1.000	1.000	1.000	
Industry	1.180	1.070	1.020	1.000	1.000	1.000	1.000	
Prior	1.050	1.035	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.050	1.035	1.000	1.000	1.000	1.000	1.000	1.000
Cumulative	1.087	1.035	1.000	1.000	1.000	1.000	1.000	1.000

## CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

PROPERTY  
PAID LOSSES AND ALAE  
NET OF RETENTION AND DEDUCTIBLES

Accident Period	Months Of Development							
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>	<u>96</u>
10/1/97-98	22,226	22,226	22,226	22,226	22,226	22,226	22,226	22,726
10/1/98-99	26,284	25,152	25,152	25,152	25,152	25,152	25,152	
10/1/99-00	11,571	15,478	15,478	15,478	14,478	17,785		17,785
10/1/00-01	37,055	41,721	41,721	41,721	41,721		41,721	41,721
10/1/01-02	38,434	39,728	40,727	38,879		38,879	38,879	38,879
10/1/02-03	63,870	104,673	104,172		104,172	104,172	104,172	104,172
10/1/03-04	38,043	49,745		58,425	58,425	58,425	58,425	58,425
10/1/04-05	29,054		134,389	84,727	84,727	84,727	84,727	84,727
10/1/05-06		22,651	22,651	22,651	22,651	22,651	22,651	22,651
10/1/06-07	12,678	16,599	16,599	16,599	16,599	16,599	16,599	16,599
10/1/07-08	46,142	74,462	74,462	76,906	74,462	74,462	74,462	74,462
10/1/08-09	9,129	37,825	36,628	36,628	36,628	36,628	36,628	36,628
10/1/09-10	30,776	83,991	83,991	83,991	83,991	83,991	83,991	83,991
10/1/10-11	102,593	124,454	159,228	159,228	159,228	159,228	159,228	
10/1/11-12	44,153	113,775	113,775	113,775	113,775	113,775		
10/1/12-13	11,486	32,119	32,119	30,992	30,992			
10/1/13-14	41,090	45,868	56,263	56,263				
10/1/14-15	39,449	46,499	46,499					
10/1/15-16	48,580	63,506						
10/1/16-17	60,191							

Accident Period	Loss Development Factors							
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>	<u>84-96</u>	<u>96-ult.</u>
10/1/97-98	1.000	1.000	1.000	1.000	1.000	1.000	1.022	
10/1/98-99	0.957	1.000	1.000	1.000	1.000	1.000		
10/1/99-00	1.338	1.000	1.000	0.935	1.228			
10/1/00-01	1.126	1.000	1.000	1.000			1.000	
10/1/01-02	1.034	1.025	0.955			1.000	1.000	
10/1/02-03	1.639	0.995			1.000	1.000	1.000	
10/1/03-04	1.308			1.000	1.000	1.000	1.000	
10/1/04-05			0.630	1.000	1.000	1.000	1.000	
10/1/05-06		1.000	1.000	1.000	1.000	1.000	1.000	
10/1/06-07	1.309	1.000	1.000	1.000	1.000	1.000	1.000	
10/1/07-08	1.614	1.000	1.033	0.968	1.000	1.000	1.000	
10/1/08-09	4.143	0.968	1.000	1.000	1.000	1.000	1.000	
10/1/09-10	2.729	1.000	1.000	1.000	1.000	1.000	1.000	
10/1/10-11	1.213	1.279	1.000	1.000	1.000	1.000		
10/1/11-12	2.577	1.000	1.000	1.000	1.000			
10/1/12-13	2.796	1.000	1.000	1.000				
10/1/13-14	1.116	1.227	1.000					
10/1/14-15	1.179	1.000						
10/1/15-16	1.307							
Mean	1.670	1.031	0.975	0.993	1.018	1.000	1.002	
Latest 3	1.201	1.076	1.000	1.000	1.000	1.000	1.000	
Latest 5	1.795	1.101	1.000	1.000	1.000	1.000	1.000	
5 ex. hi/low	1.688	1.076	1.000	1.000	1.000	1.000	1.000	
Industry	1.595	1.100	1.050	1.000	1.000	1.000	1.000	
Prior	1.800	1.080	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.800	1.080	1.000	1.000	1.000	1.000	1.000	1.000
Cumulative	1.944	1.080	1.000	1.000	1.000	1.000	1.000	1.000

## CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

### AUTOMOBILE PHYSICAL DAMAGE INCURRED LOSSES AND ALAE NET OF RETENTION AND DEDUCTIBLES

Accident Period	Months Of Development							
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>	<u>96</u>
10/1/97-98	26,863	18,855	18,855	18,855	18,855	18,855	18,855	18,354
10/1/98-99	33,996	30,981	30,981	30,981	30,981	30,981	30,981	
10/1/99-00	14,682	18,059	18,059	18,059	17,559	17,559		17,559
10/1/00-01	36,114	29,708	29,910	30,208	30,208		30,319	30,319
10/1/01-02	9,440	9,516	10,516	9,279		9,279	9,279	9,279
10/1/02-03	30,768	32,309	30,309		41,111	41,111	41,111	41,111
10/1/03-04	40,239	35,450		47,467	47,467	47,467	47,467	47,467
10/1/04-05	75,328		80,876	80,876	80,876	80,876	80,876	80,876
10/1/05-06		145,984	141,307	132,523	132,523	132,523	132,523	132,523
10/1/06-07	20,634	8,518	8,518	8,518	8,518	8,518	8,518	8,518
10/1/07-08	71,040	83,779	83,779	83,779	83,779	83,779	83,779	83,779
10/1/08-09	280,127	275,953	184,406	184,406	184,406	184,406	184,406	184,406
10/1/09-10	65,729	65,729	65,454	65,454	65,454	65,454	65,562	65,562
10/1/10-11	16,169	19,735	19,735	19,735	19,735	19,735	19,735	
10/1/11-12	62,551	47,416	47,416	47,416	47,509	47,509		
10/1/12-13	101,269	105,160	105,160	105,160	105,160			
10/1/13-14	66,880	65,766	30,766	30,766				
10/1/14-15	59,192	50,077	50,077					
10/1/15-16	93,449	91,988						
10/1/16-17	121,795							

Accident Period	Loss Development Factors							
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>	<u>84-96</u>	<u>96-ult.</u>
10/1/97-98	0.702	1.000	1.000	1.000	1.000	1.000	0.973	
10/1/98-99	0.911	1.000	1.000	1.000	1.000	1.000		
10/1/99-00	1.230	1.000	1.000	0.972	1.000			
10/1/00-01	0.823	1.007	1.010	1.000			1.000	
10/1/01-02	1.008	1.105	0.882			1.000	1.000	
10/1/02-03	1.050	0.938			1.000	1.000	1.000	
10/1/03-04	0.881			1.000	1.000	1.000	1.000	
10/1/04-05			1.000	1.000	1.000	1.000	1.000	
10/1/05-06		0.968	0.938	1.000	1.000	1.000	1.000	
10/1/06-07	0.413	1.000	1.000	1.000	1.000	1.000	1.000	
10/1/07-08	1.179	1.000	1.000	1.000	1.000	1.000	1.000	
10/1/08-09	0.985	0.668	1.000	1.000	1.000	1.000	1.000	
10/1/09-10	1.000	0.996	1.000	1.000	1.000	1.000	1.000	
10/1/10-11	1.221	1.000	1.000	1.000	1.000	1.000		
10/1/11-12	0.758	1.000	1.000	1.000	1.000			
10/1/12-13	1.038	1.000	1.000	1.000				
10/1/13-14	0.983	0.468	1.000					
10/1/14-15	0.846	1.000						
10/1/15-16	0.984							
Mean	0.942	0.947	0.989	0.998	1.000	1.000	0.998	
Latest 3	0.938	0.823	1.000	1.000	1.000	1.000	1.000	
Latest 5	0.922	0.894	1.000	1.000	1.000	1.000	1.000	
5 ex. hi/low	0.938	1.000	1.000	1.000	1.000	1.000	1.000	
Industry	0.981	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	0.980	0.980	1.000	1.000	1.000	1.000	1.000	1.000
Selected	0.980	0.980	1.000	1.000	1.000	1.000	1.000	1.000
Cumulative	0.960	0.980	1.000	1.000	1.000	1.000	1.000	1.000

## CENTRAL OHIO RISK MANAGEMENT ASSOCIATION

AUTOMOBILE PHYSICAL DAMAGE  
PAID LOSSES AND ALAE  
NET OF RETENTION AND DEDUCTIBLES

Accident Period	Months Of Development							
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>	<u>96</u>
10/1/97-98	18,855	18,855	18,855	18,855	18,855	18,855	18,855	18,354
10/1/98-99	30,981	30,981	30,981	30,981	30,981	30,981	30,981	
10/1/99-00	10,632	18,059	18,059	18,059	17,559	17,559		17,559
10/1/00-01	25,614	29,708	29,708	30,208	30,208		30,319	30,319
10/1/01-02	9,440	9,516	10,516	9,279		9,279	9,279	9,279
10/1/02-03	30,267	32,309	30,309		41,111	41,111	41,111	41,111
10/1/03-04	37,418	35,450		47,467	47,467	47,467	47,467	47,467
10/1/04-05	75,328		80,876	80,876	80,876	80,876	80,876	80,876
10/1/05-06		145,984	141,307	132,523	132,523	132,523	132,523	132,523
10/1/06-07	20,634	8,518	8,518	8,518	8,518	8,518	8,518	8,518
10/1/07-08	71,040	83,779	83,779	83,779	83,779	83,779	83,779	83,779
10/1/08-09	53,627	275,953	184,406	184,406	184,406	184,406	184,406	184,406
10/1/09-10	65,454	65,454	65,454	65,454	65,454	65,454	65,562	65,562
10/1/10-11	14,169	19,735	19,735	19,735	19,735	19,735	19,735	
10/1/11-12	49,170	47,416	47,416	47,416	47,509	47,509		
10/1/12-13	98,769	105,160	105,160	105,160	105,160			
10/1/13-14	63,380	30,766	30,766	30,766				
10/1/14-15	39,192	50,077	50,077					
10/1/15-16	62,324	91,988						
10/1/16-17	94,820							

Accident Period	Loss Development Factors							
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>	<u>84-96</u>	<u>96-108</u>
10/1/97-98	1.000	1.000	1.000	1.000	1.000	1.000	0.973	
10/1/98-99	1.000	1.000	1.000	1.000	1.000	1.000		
10/1/99-00	1.699	1.000	1.000	0.972	1.000			
10/1/00-01	1.160	1.000	1.017	1.000			1.000	
10/1/01-02	1.008	1.105	0.882			1.000	1.000	
10/1/02-03	1.067	0.938			1.000	1.000	1.000	
10/1/03-04	0.947			1.000	1.000	1.000	1.000	
10/1/04-05			1.000	1.000	1.000	1.000	1.000	
10/1/05-06		0.968	0.938	1.000	1.000	1.000	1.000	
10/1/06-07	0.413	1.000	1.000	1.000	1.000	1.000	1.000	
10/1/07-08	1.179	1.000	1.000	1.000	1.000	1.000	1.000	
10/1/08-09	5.146	0.668	1.000	1.000	1.000	1.000	1.000	
10/1/09-10	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
10/1/10-11	1.393	1.000	1.000	1.000	1.000	1.000		
10/1/11-12	0.964	1.000	1.000	1.000	1.000			
10/1/12-13	1.065	1.000	1.000	1.000				
10/1/13-14	0.485	1.000	1.000					
10/1/14-15	1.278	1.000						
10/1/15-16	1.476							
Mean	1.311	0.980	0.989	0.998	1.000	1.000	0.998	
Latest 3	1.080	1.000	1.000	1.000	1.000	1.000	1.000	
Latest 5	1.054	1.000	1.000	1.000	1.000	1.000	1.000	
5 ex. hi/low	1.102	1.000	1.000	1.000	1.000	1.000	1.000	
Industry	1.040	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.070	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.080	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Cumulative	1.080	1.000	1.000	1.000	1.000	1.000	1.000	1.000

**CENTRAL OHIO RISK MANAGEMENT ASSOCIATION**

## EXPOSURE INFORMATION

Policy Period (1)	Net Expenditures (\$000)		Number Of Vehicles		Property Values (\$00) (6)
	Total (2)	CORMA (3)	Total (4)	CORMA (5)	
10/1/97-98		60,754	496	267	1,487,640
10/1/98-99		62,311	512	270	1,529,640
10/1/99-00		63,909	517	493	1,810,269
10/1/00-01		65,548	554	554	2,059,223
10/1/01-02		67,228	607	607	1,901,487
10/1/02-03		68,952	663	663	2,186,841
10/1/03-04		70,720	746	746	2,200,345
10/1/04-05		72,534	746	746	2,304,390
10/1/05-06		74,393	721	721	2,332,460
10/1/06-07		76,301	736	736	2,435,660
10/1/07-08		78,257	784	784	2,635,449
10/1/08-09	80,264	80,264	831	831	2,453,035
10/1/09-10	83,733	82,877	853	846	2,759,588
10/1/10-11	88,037	88,037	916	916	3,184,840
10/1/11-12	83,390	83,390	917	917	3,347,292
10/1/12-13	83,390	83,390	946	946	3,756,828
10/1/13-14	94,357	94,357	943	943	3,862,229
10/1/14-15	95,871	95,871	978	978	4,302,283
10/1/15-16	100,515	100,515	987	987	4,262,427
10/1/16-17	101,477	101,477	1,012	1,012	4,493,365

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Total exposure reflects historical exposure of all current members  
 CORMA exposure reflects actual exposure based on when each member joined  
 10/1/07-08 and prior exposures have been estimated  
 Grove City and Powell were added 10/1/09 and 2/1/10, respectively  
 Groveport was added 10/1/10  
 Canal Winchester was added 10/1/14  
 Grandview Heights was added 6/6/17

**CENTRAL OHIO RISK MANAGEMENT ASSOCIATION**

## RETENTION INFORMATION

Policy Period (1)	Occurrence Deductible		Per Occurrence				Annual Aggregate (6)
	Property (2)	Liability (3)	Property (4)	Flood	Phys Dam	Liability (5)	
10/1/99-00	500	none	25,000		25,000	50,000	128,750
10/1/00-01	500	none	25,000		25,000	50,000	183,000
10/1/01-02	1,000	1,000	25,000		25,000	50,000	450,000 *
10/1/02-03	1,000	1,000	25,000		25,000	50,000	325,000 **
10/1/03-04	none	none	25,000		25,000	100,000	450,000 **
10/1/04-05	none	none	25,000		25,000	100,000	450,000 **
10/1/05-06	none	none	25,000		25,000	100,000	550,000 **
10/1/06-07	none	none	25,000		25,000	100,000	550,000 **
10/1/07-08	none	none	25,000		25,000	100,000	550,000 **
10/1/08-09	none	none	25,000		25,000	100,000	550,000 **
10/1/09-10	none	none	25,000	100,000	25,000	100,000	550,000 **
10/1/10-11	none	none	10,000 ***	100,000	50,000	100,000	550,000 **
10/1/11-12	none	none	10,000 ***	100,000	50,000	100,000	600,000 **
10/1/12-13	none	none	10,000 ***	100,000	50,000	100,000	600,000 **
10/1/13-14	none	none	10,000 ***	100,000	50,000	100,000	600,000 **
10/1/14-15	none	none	25,000	250,000	50,000	100,000	615,600 **
10/1/15-16	none	none	25,000	250,000	50,000	150,000	750,000 **
10/1/16-17	none	none	25,000	250,000	50,000	150,000	750,000 **

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Retention information provided by Wichert Insurance

\* Combination of \$150,000 Property and \$300,000 Liability

\*\* Liability only

\*\*\* Disappearing deductible of \$10,000 disappears at \$100,000