

**MIAMI VALLEY RISK
MANAGEMENT ASSOCIATION**
MONTGOMERY COUNTY, OHIO

Supplemental Report

**For the Year Ended
December 31, 2019**



88 East Broad Street
Columbus, Ohio 43215
IPARReport@ohioauditor.gov
(800) 282-0370

Board of Trustees
Miami Valley Risk Management Association
3085 Woodman Drive
Kettering, Ohio 45420

We have reviewed the *Independent Auditor's Report* of the Miami Valley Risk Management Association, Montgomery County, prepared by Julian & Grube, Inc., for the audit period January 1, 2019 through December 31, 2019. Based upon this review, we have accepted these reports in lieu of the audit required by Section 117.11, Revised Code. The Auditor of State did not audit the accompanying financial statements and, accordingly, we are unable to express, and do not express an opinion on them.

Our review was made in reference to the applicable sections of legislative criteria, as reflected by the Ohio Constitution, and the Revised Code, policies, procedures and guidelines of the Auditor of State, regulations and grant requirements. The Miami Valley Risk Management Association is responsible for compliance with these laws and regulations.

A handwritten signature in black ink that reads "Keith Faber".

Keith Faber
Auditor of State
Columbus, Ohio

August 3, 2020

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**MIAMI VALLEY RISK MANAGEMENT ASSOCIATION
MONTGOMERY COUNTY, OHIO**

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**Independent Auditor's Report on Internal Control over Financial Reporting and on
Compliance and Other Matters Required by *Government Auditing Standards***

Miami Valley Risk Management Association
Montgomery County
3085 Woodman Drive, Suite 200
Kettering, Ohio 45420

To the Board of Trustees:

We have audited, in accordance with auditing standards generally accepted in the United States and the Comptroller General of the United States' *Government Auditing Standards*, the financial statements of the Miami Valley Risk Management Association (MVRMA), Montgomery County, Ohio, (a not-for-profit corporation), as of and for the year ended December 31, 2019, and the related notes to the financial statements, which collectively comprise the MVRMA's basic financial statements and have issued our report thereon dated June 19, 2020, wherein we noted as discussed in Note 12 to the financial statements, the financial impact of COVID-19 and the ensuing emergency measures will impact subsequent periods of the MVRMA.

Internal Control Over Financial Reporting

As part of our financial statement audit, we considered the MVRMA's internal control over financial reporting (internal control) to determine the audit procedures appropriate in the circumstances to the extent necessary to support our opinion on the financial statements, but not to the extent necessary to opine on the effectiveness of the MVRMA's internal control. Accordingly, we have not opined on it.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, when performing their assigned functions, to prevent, or detect and timely correct misstatements. A *material weakness* is a deficiency, or combination of internal control deficiencies resulting in a reasonable possibility that internal control will not prevent or detect and timely correct a material misstatement of the MVRMA's financial statements. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all internal control deficiencies that might be material weaknesses or significant deficiencies. Given these limitations, we did not identify any deficiencies in internal control that we consider material weaknesses. However, unidentified material weaknesses may exist.

Compliance and Other Matters

As part of reasonably assuring whether the MVRMA's financial statements are free of material misstatement, we tested its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could directly and materially affect the determination of financial statement amounts. However, opining on compliance with those provisions was not an objective of our audit and accordingly, we do not express an opinion. The results of our tests disclosed no instances of noncompliance or other matters we must report under *Government Auditing Standards*.

Purpose of this Report

This report only describes the scope of our internal control and compliance testing and our testing results, and does not opine on the effectiveness of the MVRMA's internal control or on compliance. This report is an integral part of an audit performed under *Government Auditing Standards* in considering the MVRMA's internal control and compliance. Accordingly, this report is not suitable for any other purpose.

A handwritten signature in cursive script that reads "Julian & Grube, Inc.".

Julian & Grube, Inc.
June 19, 2020

MVRMA

Miami Valley Risk Management Association

**COMPREHENSIVE ANNUAL
FINANCIAL REPORT
YEAR ENDED DECEMBER 31, 2019**

Serving the Cities of Southwest Ohio since 1988

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Miami Valley Risk Management Association

COMPREHENSIVE ANNUAL FINANCIAL REPORT
YEAR ENDED DECEMBER 31, 2019

Published June 19, 2020

Prepared by:

Thomas L. Judy, Executive Director

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June 19, 2020
President Bill Kucera & the Board of Trustees
Miami Valley Risk Management Association

Re: **MVRMA CAFR for the Period Ended December 31, 2019**

Dear MVRMA President and Members of the MVRMA Board of Trustees:

The Comprehensive Annual Financial Report of the Miami Valley Risk Management Association (MVRMA) for the year ended December 31, 2019 is hereby submitted for your review.

The purpose of this report is to provide complete and reliable information as a basis for making management decisions, as a means for determining compliance with legal requirements, as a means for determining funding adequacy including funding for losses and loss adjustment expense reserves and as a means for demonstrating responsible stewardship over the assets contributed by MVRMA's member cities.

MVRMA staff prepared all statements, schedules and other presentations in this report except the actuarial report included in the Actuarial section. Management assumes full responsibility for the completeness and reliability of the information contained in this report, based upon a comprehensive framework of internal control that it has established for this purpose. Because the cost of internal control should not exceed anticipated benefits, the objective is to provide reasonable, rather than absolute, assurance that the financial statements are free of any material misstatements.

Julian & Grube, Inc., Certified Public Accountants, have issued an unmodified (“clean”) opinion on MVRMA’s financial statements for the year ended December 31, 2019. The independent auditors’ report is included in the front of the Financial Section, which immediately follows the Introductory Section of this report.

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www.mvrma.com

Management's Discussion and Analysis (MD&A) immediately follows the independent auditors' report and provides a narrative introduction, overview and analysis of the basic financial statements. The MD&A complements this letter of transmittal and should be read in conjunction with it.

Following the Financial Section are the Statistical and Actuarial sections. The Statistical Section includes financial trends information, revenue capacity information, demographic and economic information and operating information for the last ten years. The Actuarial Section includes the independent actuary's opinion on the unpaid loss and loss adjustment expense reserves, including incurred but not reported (IBNR) claims and related exhibits.

Profile of the Reporting Entity

MVRMA is a consortium of municipalities located in southwest Ohio which formed an Association under Section 2744.081 of the Ohio Revised Code (ORC) to act collectively in addressing its members' risk management and risk financing needs. It was incorporated on December 1, 1988, with six (6) charter members: the City of Beavercreek, City of Kettering, City of Miamisburg, City of Vandalia, City of West Carrollton and City of Wilmington. As of December 31, 2019, MVRMA had twenty (21) members, with the City of Troy joining in 1989, City of Montgomery in 1990, City of Springdale in 1991, City of Blue Ash and City of Wyoming in 1992, City of the Village of Indian Hill and City of Sidney in 1993, City of Madeira in 1994, City of Tipp City in 1996, City of Mason in 1997, City of Piqua in 2002, with the City of Englewood, City of Bellbrook and City of Centerville joining in 2004 and the City of Fairfield joining in December 2019. The Association provides a combination of self-insurance, excess insurance and reinsurance for its members' property/casualty exposures; administers a claims/litigation management program; provides extensive safety/loss control consulting and training; and acts as a clearing house for risk-related information and financial reporting services for its members.

MVRMA management, under the direction of the Board of Trustees' Finance Committee, annually prepares a budget to provide for operating expenses and loss funding for the upcoming year. Funds available for the payment of claims are segregated by loss year, and claims are paid from the funds collected for the corresponding year of occurrence. Each year's loss funding contribution is determined by an actuarial study conducted by an independent actuary. Should any year's operating expenses or losses exceed that particular year's contributions, the Board of Trustees may transfer funds from the Association's Shock Loss Fund or call for supplementary payments from members, including withdrawn or expelled members, for the years of their membership.

Economic Condition and Outlook

The economic data presented below does not reflect the impact of the COVID-19 pandemic. At the time this report was prepared, area unemployment has increased significantly as a result of the measures prescribed by the State of Ohio to slow the spread of the COVID-19 virus. The full impact of the pandemic upon the region and the Association's members is impossible to project at this time.

MVRMA is only indirectly affected by the state of the local economy; however, the Association's members are more directly impacted. Members are situated along or near the "I-75

Corridor” in the southwest quadrant of the state of Ohio and are within, or influenced by, the economies in the Cincinnati and Dayton regions. This region has a first-class transit infrastructure providing access to major markets from the Midwest to the east coast. Trucks have access to not only I-75, but also I-70, I-71 and I-675. Two major airports, Cincinnati/Northern Kentucky International Airport and Dayton International Airport, can provide transport by air to 55% of the country's population in only 90 minutes. Additionally, this region is served by the CSX rail line which has access to all major cities and ports in the Midwest and along the east coast. Cargo shipping is also possible along the Ohio River, which borders the state to the south. Port Cincinnati sees 11.7 million tons of general and bulk cargo pass through annually.

Dayton Area

Similar to years' past, the Area Chamber of Commerce's Research Advisory Council (RAC) predicts continued employment growth in the region, though the Dayton region tends to lag behind national trends. Although slightly short of the national growth rate, by 2019, jobs were expected to grow to just over 800,00 which is a 1.5% jump in a two-year period. The Committee's 2019 Dayton Region Economic Outlook included the following:

- Dayton is seeing a growth area in Dayton's supply chain economy in transportation and warehousing. Although it's only expected to grow by a slight 1% in 2019, the industry has boomed in the Dayton region.
- The RAC commented on how well retail in this region is doing in light of increasing challenges from online giants like Amazon. The council reasoned that brick and mortar merchants are getting better at understanding consumers' need for convenience and becoming more nimble to adjust to changing demands.
- The economic impact of Wright-Patterson Air Force Base cannot be overstated. As Ohio's largest single-site employer, the base provides thousands of steady, high-paying jobs both behind the fence and through defense contractors located in the surrounding Fairborn and Beavercreek area.

The unemployment rate for the Dayton MSA was 3.6% for 2019 which is a decrease of 1% from 2018.

Cincinnati Area

As of the end of 2019, Greater Cincinnati's economy was growing at a faster clip than the nation, bolstering Cincinnati's labor market according to Cincinnati.com and Clevelandfed.org.

- Home values in the Cincinnati metro area rose 6.9 percent year-over-year in May 2019. While growth rate is lower than the peak of 9.3 percent in February, it is still robust by historical standards.
- The Greater Cincinnati's economy topped \$138 billion last year, outpacing U.S. Growth, new federal data shows.
- Companies across Greater Cincinnati are making high-value investments and advances in automation, machine learning and AI to serve a number of industries and functions. This will result in projects with larger capital investments.

The unemployment rate for the Cincinnati was 3.2% for 2019 which is a decrease of 0.8% from 2018.

Insurance/Reinsurance Market Outlook Insurance/Reinsurance Market Outlook

MVRMA is impacted by the insurance and reinsurance markets due to the Association's purchase of excess insurance and reinsurance. This market continues to be in a "hard" market cycle which means pricing is increasing. Weather extremes, wildfires, catastrophic losses and lack investment earnings remain areas of concern for property re/insurers, while the liability market is experiencing record verdicts and settlements. Looking ahead, upward pressure on property rates is expected and buyers of property insurance should budget conservatively. General casualty lines of coverage may see modest increases, while others such as law enforcement liability, commercial automobile liability and employment practices liability (EPL) may see higher price increases. Dramatic price increases and reductions in coverage can be expected for Sexual Abuse and Molestation. The recent COVID-19 crisis has added additional uncertainty to the marketplace and the impact is yet to be seen, however, some are predicting that claims arising from the crisis could result in the largest loss event in the history of the industry.

Long-term Financial Planning

Having found what it considers a successful formula for long-term financial planning, MVRMA continues to expand on previously developed programs while being mindful of any new opportunities:

- MVRMA's Shock Loss Fund, which was established as an internal funding mechanism to replace costly stop loss insurance, has surpassed its moving target of being equivalent to the current year's annual loss funding amount. The loss funding amount contributed in 2019 was \$2,285,000 while the Shock Loss Fund balance as of 12/31/19 was \$3,016,748.
- By participating in the insurance captive Government Entities Mutual (GEM), MVRMA has been able to further distance itself from the commercial market. GEM provides reinsurance for liability claims in excess of the pool's \$500,000 self-insured retention. GEM's limit of coverage was \$4.5 million in 2019.
- MVRMA's investment policy is primarily allocated to high-grade corporate bonds and federal agency bonds. MVRMA continued to contract with SJS Investment Consulting, Inc. for investment advisory services in 2019. The investment portfolios outperformed established benchmarks.
- The pool has a policy of returning unused loss funds to its members when a loss year is closed. After closing two loss years in 2018, the pool closed no loss years in 2019; however, MVRMA has refunded over \$19 million to its members since the Association's formation in 1988.

Relevant Financial Policies

The Amended Agreement and Bylaws of MVRMA establish the basic fiscal requirements of the

Association including: requiring Board approval of the preliminary budget by September 30 each year and the final budget by December 31; identifying the underwriting information used to establish each member's pool contribution factor; defining when supplementary payments shall be required and when and how surplus funds may be distributed to the membership.

MVRMA adopted its Cash and Investment Policy in 1991 to indicate a conscious, formal effort to develop, implement and monitor the investment of all MVRMA funds. It was last amended in March 2018 and is reviewed annually.

Major MVRMA Initiatives During 2019

Among the Association's achievements during the fiscal period ending December 31, 2019 were the following:

- Added a new member. This is the first new member added since 2004. The pool adheres to a very selective growth strategy.
- Over 750 participants attended 48 MVRMA-sponsored training courses throughout the year.
- Completed reviews of all members per the standards of the pool's new Risk Management Best Practices program.
- Moved the pool's administrative office to a more strategic location at a lower cost.

Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to MVRMA for its comprehensive annual financial report for the fiscal year ended December 31, 2018. This was the 26th consecutive year MVRMA has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both accounting principles generally accepted in the United States of America and applicable legal requirements.

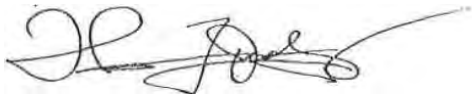
A Certificate of Achievement is valid for a period of one year only. We believe that our comprehensive annual financial report for the year ended December 31, 2019 continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

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Acknowledgements

Management would like to express appreciation to the Board of Trustees for their dedication to excellence in financial reporting, the principles of risk management, loss control and public entity pooling.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'T. L. Judy', with a long horizontal flourish extending to the right.

Thomas L. Judy, CPA
Executive Director

**MIAMI VALLEY RISK MANAGEMENT ASSOCIATION
MEMBERS OF THE BOARD OF TRUSTEES
As of December 31, 2019**

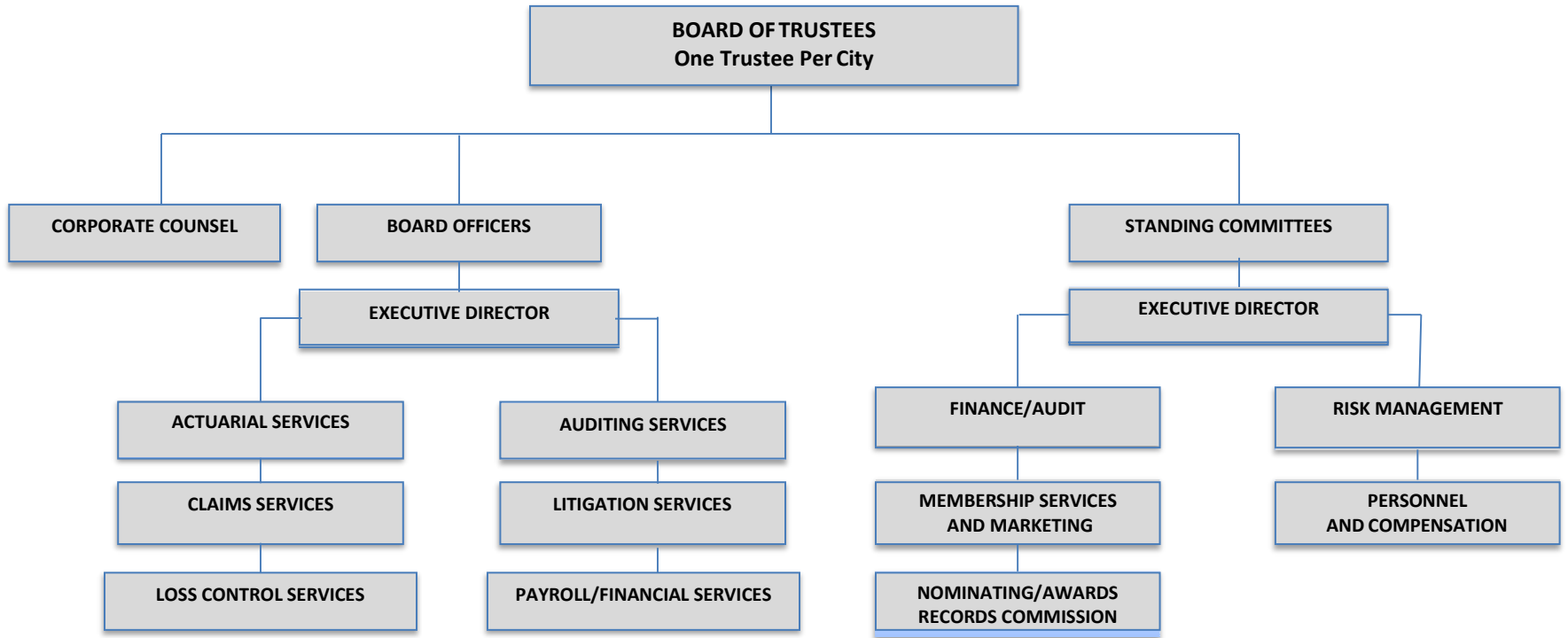
<u>Member City</u>	<u>Trustee</u>	<u>Alternate</u>
Beavercreek	Bill Kucera	Jill Bissinger
Bellbrook	Melissa Dodd	Melissa Jones
Blue Ash	Sherry Poppe	Natasha Dempsey
Centerville	Tyler Roark	Mariah Vogelgesang
Englewood	Eric A. Smith	Barbara McCormick
Fairfield	Scott Timmer	Daniel Wendt
Indian Hill	Dina Minneci	Jessica Chaney
Kettering	Nancy Gregory	Estelle Gibson
Madeira	Lori Thompson	Thomas Moeller
Mason	Jennifer Heft	Mary Mueller
Miamisburg	Keith Johnson	Emily Christian
Montgomery	John Crowell	Katie Smiddy
Piqua	Catherine Bogan	Cynthia Holtzapple
Sidney	Ginger Adams	Mark Cundiff
Springdale	Amanda Zimmerlin	John Jones
Tipp City	John Green	Timothy Eggleston
Troy	Patrick Titterington	Sue Knight
Vandalia	Shannetta Dewberry	Bridgette Leiter
West Carrollton	Thomas Reilly	Teresa Brooks
Wilmington	Greg Muenchen	Ron Craven
Wyoming	Steve Ballinger	Lynn Tetley

**MIAMI VALLEY RISK MANAGEMENT ASSOCIATION
OFFICERS OF THE BOARD OF TRUSTEES
As of December 31, 2019**

<u>Board Office</u>	<u>Office Holder</u>	<u>Member City</u>
President	Dina Minneci	Village of Indian Hill
Vice-President	Bill Kucera	City of Beavercreek
Treasurer	Ginger Adams	City of Sidney
Secretary	Amanda Zimmerlin	City of Springdale

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION

ORGANIZATIONAL CHART



2019 MEMBER CITIES					
BEAVERCREEK	ENGLEWOOD	MADEIRA	PIQUA	TROY	WYOMING
BELLBROOK	FAIRFIELD	MASON	SIDNEY	VANDALIA	
BLUE ASH	INDIAN HILL	MIAMISBURG	SPRINGDALE	W. CARROLLTON	
CENTERVILLE	KETTERING	MONTGOMERY	TIPP CITY TROY	WILMINGTON	

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Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

**Miami Valley
Risk Management Association
Ohio**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

December 31, 2018

Christopher P. Morrill

Executive Director/CEO

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Independent Auditor's Report

Miami Valley Risk Management Association
Montgomery County
3085 Woodman Drive, Suite 200
Kettering, Ohio 45420

To the Board of Trustees:

Report on the Financial Statements

We have audited the accompanying financial statements of the Miami Valley Risk Management Association (MVRMA), Montgomery County, Ohio, (a not-for-profit corporation), as of and for the year ended December 31, 2019, and the related notes to the financial statements, which collectively comprise the MVRMA's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for preparing and fairly presenting these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes designing, implementing, and maintaining internal control relevant to preparing and fairly presenting financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to opine on these financial statements based on our audit. We audited in accordance with auditing standards generally accepted in the United States of America and the financial audit standards in the Comptroller General of the United States' *Government Auditing Standards*. Those standards require us to plan and perform the audit to reasonably assure the financial statements are free from material misstatement.

An audit requires obtaining evidence about financial statement amounts and disclosures. The procedures selected depend on our judgment, including assessing the risks of material financial statement misstatement, whether due to fraud or error. In assessing those risks, we consider internal control relevant to the MVRMA's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not to the extent needed to opine on the effectiveness of the MVRMA's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of management's accounting policies and the reasonableness of their significant accounting estimates, as well as our evaluation of the overall financial statement presentation.

We believe the audit evidence we obtained is sufficient and appropriate to support our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the MVRMA, Montgomery County, Ohio, as of December 31, 2019, and the changes in its financial position and its cash flows for the year then ended in accordance with the accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 12 to the financial statements, the financial impact of COVID-19 and the ensuing emergency measures will impact subsequent periods of the MVRMA. We did not modify our opinion regarding this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require this presentation to include *management's discussion and analysis*, claims information, and schedules of net pension and other postemployment benefit assets and liabilities and pension and other postemployment benefit contributions listed in the table of contents, to supplement the basic financial statements. Although this information is not part of the basic financial statements, the Governmental Accounting Standards Board considers it essential for placing the basic financial statements in an appropriate operational, economic, or historical context. We applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, consisting of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, to the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not opine or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to opine or provide any other assurance.

Supplementary and Other Information

Our audit was conducted to opine on the MVRMA's basic financial statements taken as a whole.

The introductory section, the statistical section and the actuarial report section information present additional analysis and are not a required part of the basic financial statements.

We did not subject the introductory section, the statistical section and the actuarial report section information to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we express no opinion or any other assurance on them.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated June 19, 2020, on our consideration of the MVRMA's internal control over financial reporting and our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters. That report describes the scope of our internal control testing over financial reporting and compliance, and the results of that testing, and does not opine on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the MVRMA's internal control over financial reporting and compliance.



Julian & Grube, Inc.
June 19, 2020

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

Management's Discussion And Analysis
For The Year Ended December 31, 2019

The management of the Miami Valley Risk Management Association (MVRMA or Association) provides the following introduction, overview and analysis of MVRMA's financial statements for the year ended December 31, 2019. This discussion and analysis is designed to assist the reader in focusing on significant financial issues and activities and to identify any significant changes in financial position. We encourage the reader to consider the information presented here in conjunction with the basic financial statements taken as a whole.

MVRMA is a consortium of municipalities located in southwest Ohio, which formed an Association under Section 2744.081 of the Ohio Revised Code (ORC) to act collectively in addressing its members' risk management and risk financing needs. It became operational in December 1988 with six charter members and now has twenty members.

Basic Financial Statements and Presentation

The financial statements presented by the Association are the Statement of Net Position, Statement of Revenues, Expenses, and Changes in Net Position and the Statement of Cash Flows. As required by Governmental Accounting Standards Board Statement Number 10, the Association is accounted for as one enterprise fund.

The tables presented in this Management's Discussion and Analysis provide a summary of the Association's financial position and results of operations for 2019 and 2018, respectively.

The Statement of Net Position

This statement reports all of the Association's assets and liabilities as of December 31, 2019 categorized as current and non-current assets and liabilities. Assets consist mainly of cash and investments. Liabilities consist mainly of claims reserves and members' refunds payable. Reporting for GASB 68 has created two new categories: deferred outflows of resources and deferred inflows of resources. The balance of total assets and deferred outflows less total liabilities and deferred inflows is reported as "net position."

The table below presents a condensed summary information of the Association's net position as of December 31, 2019 compared to December 31, 2018.

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MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.Management's Discussion And Analysis
For The Year Ended December 31, 2019**Condensed Statement of Net Position**

	<u>2019</u>	<u>2018</u>
CURRENT ASSETS		
Cash and cash equivalents	\$2,450,458	\$862,000
Accounts receivable	125,621	145,775
Prepaid Expenses	362,162	290,458
Investments	4,119,049	5,564,483
NONCURRENT ASSETS		
Investments	11,671,427	11,521,913
Net pension asset	227	354
Capital assets less depreciation	5,051	3,890
Total assets	<u>18,733,995</u>	<u>18,388,873</u>
DEFERRED OUTFLOWS OF RESOURCES		
Deferred outflows of resources related to pension	184,586	86,919
Deferred outflows of resources related to OPEB	28,330	20,817
Total deferred outflows of resources	<u>212,916</u>	<u>107,736</u>
CURRENT LIABILITIES		
Claims reserve	505,926	2,173,822
Members' refunds	4,284,943	5,691,620
Members' credits	0	10,000
Accounts payable and accrued liabilities	13,008	35,050
Total current liabilities	<u>4,803,877</u>	<u>7,910,492</u>
NONCURRENT LIABILITIES		
Claims reserve	2,922,516	1,511,543
Net pension liability	570,218	324,586
Net OPEB liability	303,907	251,935
Total noncurrent liabilities	<u>3,796,641</u>	<u>2,088,064</u>
Total Liabilities	<u>8,600,518</u>	<u>9,998,556</u>
DEFERRED INFLOWS OF RESOURCES		
Deferred inflows of resources related to pension	11,807	86,737
Deferred inflows of resources related to OPEB	3,915	24,688
Total deferred inflows of resources	<u>15,722</u>	<u>111,425</u>
TOTAL NET POSITION		
Invested in capital assets	5,051	3,890
Unrestricted	10,325,620	8,382,738
Total net position	<u>\$10,330,671</u>	<u>\$8,386,628</u>

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

Management's Discussion And Analysis
For The Year Ended December 31, 2019

The net pension liability (NPL) is reported pursuant to GASB Statement 68, "Accounting and Financial Reporting for Pensions—an Amendment of GASB Statement 27." In 2018, the Association adopted GASB Statement 75, "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions," which significantly revises accounting for costs and liabilities related to other postemployment benefits (OPEB). For reasons discussed below, many end users of this financial statement will gain a clearer understanding of the Association's actual financial condition by adding deferred inflows related to pension and OPEB, the net pension liability and the net OPEB liability to the reported net position and subtracting deferred outflows related to pension and OPEB.

Governmental Accounting Standards Board standards are national and apply to all government financial reports prepared in accordance with generally accepted accounting principles. Prior accounting for pensions (GASB 27) and postemployment benefits (GASB 45) focused on a funding approach. This approach limited pension and OPEB costs to contributions annually required by law, which may or may not be sufficient to fully fund each plan's *net pension liability* or *net OPEB liability*. GASB 68 and GASB 75 take an earnings approach to pension and OPEB accounting; however, the nature of Ohio's statewide pension/OPEB plans and state law governing those systems requires additional explanation in order to properly understand the information presented in these statements.

GASB 68 and GASB 75 require the net pension liability and the net OPEB liability to equal the Association's proportionate share of each plan's collective:

1. Present value of estimated future pension/OPEB benefits attributable to active and inactive employees' past service.
2. Minus plan assets available to pay these benefits.

GASB notes that pension and OPEB obligations, whether funded or unfunded, are part of the "employment exchange" – that is, the employee is trading his or her labor in exchange for wages, benefits, and the promise of a future pension and other postemployment benefits. GASB noted that the unfunded portion of this promise is a present obligation of the government, part of a bargained-for benefit to the employee, and should accordingly be reported by the government as a liability since they received the benefit of the exchange. However, the Association is not responsible for certain key factors affecting the balance of these liabilities. In Ohio, the employee shares the obligation of funding pension benefits with the employer. Both employer and employee contribution rates are capped by State statute. A change in these caps requires action of both Houses of the General Assembly and approval of the Governor. Benefit provisions are also determined by State statute. The Ohio Revised Code permits, but does not require, the retirement systems to provide healthcare to eligible benefit recipients. The retirement systems may allocate a portion of the employer contributions to provide for these OPEB benefits.

The employee enters the employment exchange with the knowledge that the employer's promise is limited not by contract but by law. The employer enters the exchange also knowing that there is a specific, legal limit to its contribution to the retirement system. In Ohio, there is no legal means to enforce the unfunded liability of the pension/OPEB plan *as against the public employer*. State law operates to mitigate/lessen the moral obligation of the public employer to the employee,

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

Management's Discussion And Analysis
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because all parties enter the employment exchange with notice as to the law. The retirement system is responsible for the administration of the pension and OPEB plans.

Most long-term liabilities have set repayment schedules or, in the case of compensated absences (i.e. sick and vacation leave), are satisfied through paid time-off or termination payments. There is no repayment schedule for the net pension liability or the net OPEB liability. As explained above, changes in benefits, contribution rates, and return on investments affect the balance of these liabilities but are outside the control of the local government. In the event that contributions, investment returns, and other changes are insufficient to keep up with required payments, State statute does not assign/identify the responsible party for the unfunded portion. Due to the unique nature of how the net pension liability and the net OPEB liability are satisfied, these liabilities are separately identified within the long-term liability section of the statement of net position.

In accordance with GASB 68 and GASB 75, the Association's statements prepared on an accrual basis of accounting include an annual pension expense and an annual OPEB expense for their proportionate share of each plan's *change* in net pension liability and net OPEB liability, respectively, not accounted for as deferred inflows/outflows.

Claims reserve is a liability for net unpaid losses, including incurred but not reported losses, and loss adjustment expenses. This amount is established annually with the assistance of an outside actuary. Claims liability is separated into current and noncurrent portions based upon a combination of an analysis of outstanding claims and historical experience. In 2019, claims reserves decreased by about \$257,000, or 7%, due to decreases in the estimates of ultimate losses for prior years. This follows a decrease of about \$57,000 in 2018 and an increase of about \$629,000 in 2017.

**% Claims Reserves by Line of Business
As of December 31**

<u>Line of Business</u>	<u>2019</u>	<u>2018</u>
Auto Liability	2%	3%
General Liability	86%	81%
Property	12%	16%

The liability for members' refunds reflects the funds being held in MVRMA's General Reserve Fund (GRF). The General Reserve Fund accounts for surplus funds returned, but not yet paid, to members from closed loss years. Once surplus funds are returned to the members, these funds are deposited in the GRF to the account of each individual member. Members may withdraw their GRF funds within 30 days after the closure of a loss year, or in January of each year, or for the payment of any MVRMA invoice at any time throughout the year. The members' refunds liability decreased in 2019 due to the closure of no loss years and the withdrawal by the members of about \$1.6 million of their funds from the GRF.

Net position is divided into two categories, net investment in capital assets and unrestricted. The net investment in capital assets represents the net book value of capital assets, while the remaining net position amount is unrestricted for future use by the Association. Net position invested in

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

Management's Discussion And Analysis

For The Year Ended December 31, 2019

capital assets increased from \$3,890 to \$5,051 during 2019 due to purchases of capital assets during the year. Total net position increased in 2019 by \$1,944,043, or 23%, due to relatively low claims expense and the closure of no loss years.

The Statement of Revenues, Expenses and Changes in Net Position

This statement reflects the operating and non-operating revenue and expenses for the fiscal year and how the Association's net position changed during the year. As noted previously, MVRMA's net position increased by 23% from 2018 to 2019.

Condensed Statement of Revenues, Expenses, and Changes in Net Position

	<u>2019</u>	<u>2018</u>
Operating Revenue	4,523,927	4,378,464
Operating Expenses:		
Incurred claims and claims adjustment expenses	1,011,172	1,298,832
Reinsurance premiums	1,125,633	988,162
Members' dividends	98,303	3,035,305
General and administrative expenses	987,998	881,436
Total Operating Expenses	3,223,106	6,203,735
Operating Income (Loss)	1,300,821	(1,825,271)
Nonoperating Revenue (Expense):		
Interest income and realized and unrealized gains (losses) on investments	643,046	173,522
Other nonoperating revenue (expense)	176	0
Changes in Net Position	1,944,043	(1,651,749)
Net position, beginning of year	8,386,628	10,038,377
Net position, end of year	<u>10,330,671</u>	<u>8,386,628</u>

Operating revenue consists primarily of members' contributions. The major categories of operating expenses are claims and claims adjustment expenses, reinsurance premiums, general and administrative expenses, and dividends to members. Non-operating revenue and expense is primarily related to investment activity.

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

Management's Discussion And Analysis
For The Year Ended December 31, 2019

Member contributions made up 93% and 94% of the Association's operating revenues in 2019 and 2018, respectively.

Members' contributions are tracked so each year may be evaluated independently. When preparing its annual budget, MVRMA determines the total amount needed to fund its operations and collects the amount needed from members in proportion to their claims history and risk exposures. Each member's allocation is determined by dividing the sum of the following seven factors by 9:

1. The member's population as of the most recent census as a percentage of the total of all members' populations;
2. The number of the member's sworn full-time police personnel as a percentage of the total of all members' full-time sworn police;
3. The number of the member's other full-time employees as a percentage of the total of all members' other full-time employees;
4. The number of the member's titled vehicles as a percentage of the total of all members' titled vehicles;
5. The member's insurable property values as a percentage of the total of all members' insurable property values;
6. The member's net operating expenses as a percentage of the total of all members' net operating expenses; and
7. The member's average annual adjusted losses for the last four years as the percentage of the total of all members' average annual adjusted losses for the last four years (weighted three times).

Changes in net position can vary widely from year to year. This variation is chiefly due to fluctuations in incurred claims expense and members' dividends. Although the incurred claims expense is subject to variability, it is moderated somewhat by the insuring of losses above the pool's self-insured retentions of \$500,000 per occurrence for liability claims and \$250,000 for property claims. Members' dividends expense is incurred when the Board of Trustees closes a loss year and refunds the residual assets in the loss year to the members. These amounts can be significant and do not necessarily occur each year.

The Statement of Cash Flows

The Statement of Cash Flows allows readers of the financial statements to assess the Association's ability to generate sufficient cash flow to meet its obligations in a timely manner. Cash and equivalents increased by \$1,588,458 in 2019 due to cash provided by investment activities.

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

Management's Discussion And Analysis

For The Year Ended December 31, 2019

	<u>2019</u>	<u>2018</u>
Cash flows from operating activities	(\$441,360)	(\$827,287)
Cash flows used in capital and related financing activities	(3,460)	(3,642)
Cash flows from (used in) investing activities	<u>2,033,278</u>	<u>891,093</u>
Net change in cash and cash equivalents	1,588,458	60,164
Cash and Cash Equivalents - Beginning of year	<u>862,000</u>	<u>801,836</u>
Cash and Cash Equivalents - End of year	<u><u>\$2,450,458</u></u>	<u><u>\$862,000</u></u>

2020 Projects and Future Plans

For 2020, the Association's liability limits of coverage will remain \$12 million per occurrence. The first layer of liability reinsurance coverage, purchased from Government Entities Mutual, a protected cell reinsurance captive domiciled in the District of Columbia, provides limits of \$4.5 million excess of the Association's self-insured retention of \$500,000. The next layer of reinsurance with General Reinsurance Corporation is \$7 million excess of \$5 million.

Property insurance for the period 7/1/19-7/1/20 was again placed with the Alliant Property Insurance Program (APIP). MVRMA's premium rate increased by about 17% following an increase of 8.5% in 2018. These increases were due to the impact upon the property insurance market of large weather-related claims. At this time, MVRMA is preparing for its 7/1/20 renewal and is anticipating a rate increase of 20% or more due to a continued hardening of the property insurance market.

Contacting MVRMA

This financial report is designed to provide members, creditors and investors with a general overview of MVRMA's finances and to show MVRMA's accountability for the monies it receives. If you have any questions about this report or need additional information, contact the Executive Director in writing at 3085 Woodman Drive, Suite 200, Kettering, OH 45429 or calling (937) 438-8878.

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MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.
STATEMENT OF NET POSITION
DECEMBER 31, 2019

ASSETS

CURRENT ASSETS:

Cash and cash equivalents	\$2,450,458
Accounts receivable:	
Claims deductibles	44,504
Interest and Other	81,117
Prepaid items	362,162
Investments	4,119,049
Total current assets	<u>7,057,290</u>

NONCURRENT ASSETS:

Investments	11,671,427
Net pension asset	227
Capital Assets:	
Equipment	26,293
Office furniture	12,499
Total capital assets	<u>38,792</u>
Accumulated depreciation	<u>(33,741)</u>
Capital assets - net	<u>5,051</u>
Total noncurrent assets	<u>11,676,705</u>
Total Assets	<u>18,733,995</u>

DEFERRED OUTFLOWS OF RESOURCES

Deferred outflows of resources related to pension	184,586
Deferred outflows of resources related to OPEB	28,330
Total Deferred Outflows	<u>212,916</u>

LIABILITIES

CURRENT LIABILITIES:

Claims reserve	505,926
Members' refunds	4,284,943
Accounts payable and accrued liabilities	13,008
Total current liabilities	<u>4,803,877</u>

NONCURRENT LIABILITIES:

Claims reserve	2,922,516
Net pension liability	570,218
Net OPEB liability	303,907
Total noncurrent liabilities	<u>3,796,641</u>
Total Liabilities	<u>8,600,518</u>

DEFERRED INFLOWS OF RESOURCES

Deferred inflows of resources related to pension	11,807
Deferred inflows of resources related to OPEB	3,915
Total Deferred Inflows	<u>15,722</u>

NET POSITION

Investment in capital assets	5,051
Unrestricted	10,325,620
Total net position	<u>\$10,330,671</u>

See notes to the basic financial statements

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.
STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
FOR THE YEAR ENDED DECEMBER 31, 2019

OPERATING REVENUES:	
Members' contributions	\$4,215,860
Claim deductibles	197,056
Other	111,011
	<hr/>
Total operating revenues	4,523,927
	<hr/>
OPERATING EXPENSES:	
Claim expenses:	
Incurred claims and claim adjustment expenses	1,011,172
Reinsurance/insurance premiums	1,125,633
Members' Dividends	98,303
	<hr/>
Total claim expenses	2,235,108
	<hr/>
General and administrative expenses:	
Professional fees	162,719
Salaries and benefits	611,627
Depreciation	2,475
Rent	36,056
Other	175,121
	<hr/>
Total general and administrative fees	987,998
	<hr/>
Total operating expenses	3,223,106
	<hr/>
OPERATING INCOME (LOSS)	1,300,821
	<hr/>
NON-OPERATING REVENUE (EXPENSE):	
Gain/(Loss) on disposal of capital assets	176
Interest income	265,620
Net gain/(loss) on investments	377,426
	<hr/>
Total Non-operating Revenue (Expense)	643,222
	<hr/>
CHANGE IN NET POSITION	1,944,043
	<hr/>
NET POSITION	
Beginning of year	8,386,628
	<hr/>
End of year	\$10,330,671
	<hr/> <hr/>

See notes to the basic financial statements

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.
STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED DECEMBER 31, 2019

CASH FLOWS FROM OPERATING ACTIVITIES:

Cash received for member contributions	\$4,205,860
Cash received for deductible reimbursements	209,804
Cash received from other sources	62,201
Cash payments for claims	(1,268,095)
Cash payments for general reserve fund payouts	(1,618,076)
Cash payments for reinsurance premiums	(1,199,996)
Cash payments for professional fees	(169,207)
Cash payments for employment expenses	(528,019)
Cash payments for rent	(35,779)
Cash payments for other expenses	<u>(100,053)</u>
Net cash provided by (used in) operating activities	<u>(441,360)</u>

CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:

Purchase of capital assets	(3,636)
Sale of capital assets proceeds	<u>176</u>
Net cash provided by (used in) capital and related financing activities	(3,460)

CASH FLOWS FROM INVESTING ACTIVITIES:

Investment purchases	(7,365,119)
Investment sales/maturities	9,038,465
Interest and dividends on investments	<u>359,932</u>
Net cash provided by (used in) investing activities	<u>2,033,278</u>

NET CHANGE IN CASH AND CASH EQUIVALENTS 1,588,458

CASH AND CASH EQUIVALENTS:

Beginning of Year	<u>862,000</u>
End of Year	<u><u>\$2,450,458</u></u>

See notes to the basic financial statements

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.
STATEMENT OF CASH FLOWS (Continued)
FOR THE YEAR ENDED DECEMBER 31, 2019

RECONCILIATION OF OPERATING INCOME (LOSS) TO NET CASH PROVIDED BY (USED IN) OPERATING ACTIVITIES

Operating Income (Loss)	\$1,300,821
Adjustments to reconcile change in net position to net cash provided by (used in) operating activities:	
Depreciation	2,475
(Increase) / decrease in assets:	
Claims deductibles receivable	12,748
Other receivables	1,673
Prepaid items	(71,704)
Net pension asset	127
(Increase) / decrease in deferred outflows:	
Deferred outflows of resources related to pension	(97,667)
Deferred outflows of resources related to OPEB	(7,513)
Increase / (decrease) in liabilities:	
Claims reserve	(256,923)
Accounts payable, accrued liabilities, members' credits and members' refunds	(1,527,298)
Net pension liability	245,632
Net OPEB liability	51,972
Increase / (decrease) in deferred inflows:	
Deferred inflows of resources related to pension	(74,930)
Deferred inflows of resources related to OPEB	(20,773)
Net cash provided by (used in) operating activities	<u><u>(\$441,360)</u></u>

NON-CASH INVESTING ACTIVITIES:

- Miami Valley Risk Management Association, Inc. had a decrease in the fair value of investments in the amount \$1,295,920 during 2019.

See notes to the basic financial statements

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

NOTES TO THE BASIC FINANCIAL STATEMENTS
FOR THE YEAR ENDED DECEMBER 31, 2019

NOTE 1 – ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES

Miami Valley Risk Management Association, Inc. (the “Association”) is an Ohio not-for-profit Corporation organized for the public purpose of enabling its member political subdivisions to obtain insurance coverage. It provides methods for paying claims, and provides a formalized, jointly administered self-insurance pool. In addition to the self-insurance pool, the Association provides risk management services, loss prevention programs, and other educational programs and materials. The members of the Association include the following cities and villages within the State of Ohio: Beavercreek, Bellbrook, Blue Ash, Centerville, Englewood, Fairfield, Kettering, Madeira, Mason, Miamisburg, Montgomery, Piqua, Sidney, Springdale, Tipp City, Troy, Vandalia, Indian Hill, West Carrollton, Wilmington and Wyoming.

Basis of Accounting – The Association follows the accrual basis of accounting as required for enterprise funds and is not legally required to adopt a budget. All transactions are accounted for in a single enterprise fund in accordance with Governmental Accounting Standards Board (GASB) Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements*.

Member and Supplemental Contributions – The Association has classified its revenues as either operating or non-operating. Non-operating revenue primarily is the result of earning investment income and related gains and losses on investments. Member and supplemental contributions are recognized on the accrual basis and are recorded as revenue in the period earned. Member contributions are calculated and collected annually to produce a sum of money within the self-insurance pool adequate to fund administrative expenses and claims of the Association and to create adequate reserves for claims and unallocated loss adjustment expenses.

Under the terms of membership, should annual member contributions not be sufficient to fund ultimate losses, establish adequate reserves and cover administrative expenses, the Board of Trustees may require supplemental contributions. Supplemental contributions may be assessed during the entire life of the Association and any later period when claims or expenses, which are attributable to any membership year during which the event or claim occurred, need to be paid. Upon approval of the Board of Trustees, transfers from the Shock Loss Fund (“SLF”) (see note 6) may occur, in lieu of supplemental contributions. There were no supplemental contributions in 2019.

Cash and cash equivalents consist of deposits with financial institutions, and a State of Ohio depository institution, having an original maturity of 90 days or less.

Claims deductibles represent the first \$2,500 of any claim paid by the Association which is reimbursed by Association members.

Investments are stated at fair value. Realized gains and losses are determined on the identified cost basis.

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

NOTES TO THE BASIC FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

The Association's investment policy authorizes the Association to invest in the following:

- 1.) United States treasury bills, notes, bonds, or any other obligation or security issued by the United States treasury or any other obligation guaranteed as to principal and interest by the United States;
- 2.) Bonds, notes, debentures, or any other obligations or securities issued by any federal agency or instrumentality, including government sponsored enterprises. All federal agency securities shall be direct issuances of federal government agencies or instrumentalities;
- 3.) Deposits in eligible financial institutions;
- 4.) Bonds, notes, or other obligations of the State of Ohio and its political subdivisions;
- 5.) Investment grade corporate bonds (industrial, utility, or financial). Corporate bonds purchased shall be rated not lower than A2 by Moody's or A by S&P at the date of purchase;
- 6.) The State Treasury Asset Reserve of Ohio (STAR Ohio) or such successor investment pools operated or managed by the Treasurer of the State of Ohio; and
- 7.) No-load money market mutual funds consisting exclusively of obligations described in 1 or 2 above.

Capital assets – Capital assets are carried at cost. Donated capital assets are recorded at their acquisition values as of the date received. Depreciation is provided on the straight-line basis at rates which are expected to amortize the costs of the assets over their estimated useful lives. The capitalization threshold is \$500. All major classes of depreciable assets have a useful life of five years, except audio-visual material which is three years.

Claim Reserves and Unallocated Loss Adjustment Expenses – Provisions for claims reserves and claims adjustment expenses are based on information reported by members and are calculated by the Association's claims administrator and actuary. These amounts represent an estimate of reported, unpaid claims, plus a provision for claims incurred but not reported. The Association's management believes the estimate of the liability for claims reserves is reasonable and supported by valid actuarial calculations; however, actual incurred losses and loss adjustment expenses may not conform to the assumptions inherent in the determination of the liability. Accordingly, the ultimate settlement of losses and related loss adjustment expenses may vary from the estimated amounts included in the accompanying financial statements. Should the provision for claims reserves not be sufficient, supplemental contributions as discussed above may be assessed subsequent to Board approval.

Member Credits – The bylaws of the Association provide that surplus operating funds may be used to credit future annual contributions at the discretion of the Board of Trustees. For the year ended December 31, 2019, member contributions are presented net of a credit of \$10,000.

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

NOTES TO THE BASIC FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

Member Dividends – Dividends to members consist of refunds from closed loss years and refunds from the Shock Loss Fund. There were no closed loss year refunds in 2019. Refunds are made to members from the Shock Loss Fund (see Note 6) to the extent the member’s Shock Loss Fund balance exceeds its required balance by greater than forty percent. Such refunds were \$98,303 in 2019.

Net Position – Net position represents the excess of revenues over expenses since inception. It is displayed in three components as follows:

Investment in capital assets consists of capital assets, net of accumulated depreciation.

Restricted consists of net position that is legally restricted by outside parties or by law through constitutional provisions or enabling legislation.

Unrestricted consists of net position that does not meet the definition of “restricted” or “investment in capital assets.”

As of December 31, 2019, the Association had no “restricted” net position. Under certain conditions, the Association may distribute, as member dividends, all or part of the net position to those members who constituted the self-insurance pool during the years when such surplus member funds were earned, provided that such members must also be members of the Association in the year in which said distribution is made.

In the event of termination of the Association, all members of the Association, past and present, are obligated for any necessary supplemental contributions attributable to the years during which they were members. After all claims and related expenses have been properly paid or reserves established for the payment of any such claims, any surplus member funds shall be distributed to members in proportion to their interest in such surplus member funds.

Pensions/Other Postemployments Benefits (OPEB) – For purposes of measuring the net pension/OPEB liability, deferred outflows of resources and deferred inflows of resources related to pensions/OPEB, and pension/OPEB expense, information about the fiduciary net position of the pension/OPEB plans and additions to and deductions from their fiduciary net position have been determined on the same basis as they are reported by the pension/OPEB plan. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. The pension/OPEB plans report investments at fair value.

Income taxes – The Internal Revenue Service has ruled that premiums and investment income with respect to premium receipts are excluded from taxable income of the Association under Section 115 of the Internal Revenue Code of 1986. Therefore, the Association is not subject to tax.

Operating Revenues and Expenses – Operating revenues are those revenues that are generated directly from primary activities. For the Association, these revenues are primarily member contributions and claims deductibles received from members. Operating expenses are the

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

NOTES TO THE BASIC FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

necessary costs incurred to provide the services that are the primary activity. All revenue and expenses not meeting these definitions are reported as non-operating.

Use of Estimates – The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Fair Value Measurements – The Association categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs.

Prepaid Items – Prepaid Items represent expenses which have been paid, but not yet incurred under GAAP. These items are reported as an asset on the statement of net position.

Deferred Inflows of Resources and Deferred Outflows of Resources – In addition to assets, the statement of net position will report a separate section for deferred outflows of resources. Deferred outflows of resources represents a consumption of net position that applies to a future period and will not be recognized as an outflow of resources (expense) until then. For the Association, see notes 8 and 9 for deferred outflows of resources related to the Associations net pension liability and net OPEB liability, respectively.

In addition to liabilities, the statement of net position will report a separate section for deferred inflows of resources. Deferred inflows of resources represent an acquisition of net position that applies to a future period and will not be recognized as an inflow of resources (revenue) until that time. For the Association, see notes 8 and 9 for deferred inflows of resources related to the Associations net pension liability and net OPEB liability, respectively.

NOTE 2 – DEPOSITS AND INVESTMENTS

Deposits as of December 31, 2019

Custodial Credit Risk – Custodial credit risk with respect to bank deposits is the potential for loss of the Association’s deposits in the event of the failure of a depository financial institution. Protection of the Association’s cash and deposits is provided by the Federal Deposit Insurance Corporation.

At December 31, 2019, the carrying amount of the Association’s deposits was \$2,450,458. The bank balance was \$2,453,587, and of this amount, \$250,000 was insured by federal depository insurance. Based on the criteria described in GASB Statement No. 40, “Deposit and Investment Risk Disclosures”, \$2,203,587 of the Association’s bank balance was exposed to custodial risk.

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

NOTES TO THE BASIC FINANCIAL STATEMENTS
FOR THE YEAR ENDED DECEMBER 31, 2019

Investments as of December 31, 2019

At December 31, 2019, the Association had the following investments:

<u>Investment</u>	Measurement Value	Investment Maturities			
		Less than 6 months	6 mo. to 1 year	1 to 3 years	Greater than 3 years
US Treasury Bills	\$742,964		\$399,391	\$343,573	
FHLB	\$2,547,960	\$729,689	\$514,022	\$1,304,249	
FFCB	\$850,626	349,692		500,934	
FHLMC	\$1,546,945	199,733	449,202	898,010	
FNMA	\$872,450			872,450	
Corporate Bonds	\$8,479,531	625,054	852,266	5,380,969	1,621,242
Government Entities					
Mutual, Inc. (see Note 6)	\$750,000				750,000
Total	\$15,790,476	\$1,904,168	\$2,214,881	\$9,300,185	\$2,371,242

The Association's investments in U.S. government money market mutual funds are valued using quoted market prices in active markets (Level 1 inputs). The Association's investments in US Treasury bills and federal agency securities (FHLB, FFCB, FHLMC, FNMA) and corporate bonds are valued using quoted prices in markets that are not considered to be active, dealer quotations or alternative pricing sources for familiar assets or liabilities for which all significant inputs are observable, either directly or indirectly (Level 2 inputs).

Interest Rate Risk – Interest rate risk is the risk that the value of investments will decrease as a result of an increase in interest rates. To limit interest rate risk, the Association's investment policy limits security purchases to those that mature within seven years of the settlement date.

Credit Risk – Credit risk for holders of debt securities is the risk that the debtor will not be able to make its scheduled payments. The Association's investments in the Federal Home Loan Mortgage Corporation, Federal Home Loan Bank, Federal National Mortgage Association and Federal Farm Credit Bank are rated Aaa by Moody's and/or AA+ by Standard & Poor's. The Association's investment in GEM is not rated. The Association's investment policy requires corporate bonds, when purchased, to be rated not lower than A2 by Moody's or A by Standard & Poor's. As of 12/31/19, all corporate bonds held by the Association met or exceeded these benchmarks.

Custodial Credit Risk – For an investment, custodial credit risk is the risk that an investor might be unable to recover the value of an investment in the possession of an outside third party should the counterparty to the investment transaction fail. The Association's investment in Government Entities Mutual is subject to custodial credit risk. The Association's investments in debt securities of FHLB, FNMA, FHLMC, FFCB and the various corporate issuers are either registered in the

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

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Association's name or held in pledge accounts of the custodial financial institutions and the underlying records of the custodial financial institutions support the Association's claim to the investments; therefore, these investments are considered to be held in the Association's name and are not subject to custodial credit risk. The Association's investment policy does not specifically address credit risk beyond restricting the Association to invest only in securities authorized.

Concentration of Credit Risk – The Association's investment policy states “no more than 25% of the total investment portfolio shall be invested with any one eligible financial institution as a time deposit at the time a deposit is made, exclusive of United States Treasury securities, all Federal Agency securities, and STAR Ohio.” Five percent or more of the Association's investments were in the following at December 31, 2019:

<u>Investment</u>	<u>% as of 12/31/19</u>
Federal Home Loan Bank	16.1%
Federal Farm Credit Bank	5.4%
Federal Home Loan Mortgage Corporation	9.8%
Federal National Mortgage Association	5.5%

NOTE 3 – CAPITAL ASSETS

Capital assets activity for the year ended December 31, 2019, was as follows:

	Restated Balance *		Transfers/ Disposals	Balance 12/31/19
	<u>01/01/19</u>	<u>Additions</u>	<u></u>	<u></u>
Capital Assets Being Depreciated:				
Audio-Visual	\$72,274	\$0	(\$72,274)	\$0
Equipment	32,685	3,636	(10,028)	\$26,293
Leasehold Improvements	12,281	0	(12,281)	\$0
Office Furniture	15,789	0	(3,290)	\$12,499
Total Property and Equipment	<u>133,029</u>	<u>3,636</u>	<u>(97,873)</u>	<u>38,792</u>
Less: Accumulated Depreciation				
Audio-Visual	(72,207)	(67)	72,274	\$0
Equipment	(29,410)	(2,299)	10,028	(\$21,681)
Leasehold Improvements	(12,281)	0	12,281	\$0
Office Furniture	(15,241)	(109)	3,290	(\$12,060)
Total Accumulated Depreciation	<u>(129,139)</u>	<u>(2,475)</u>	<u>97,873</u>	<u>(33,741)</u>
Total Capital Assets Being Depreciated, net	<u>\$3,890</u>	<u>\$1,161</u>	<u>\$0</u>	<u>\$5,051</u>

* The Association has chosen to reclassify certain capital assets and their respective accumulated depreciation within other asset classes to better represent the classes of those assets.

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NOTE 4 – NONCURRENT LIABILITIES

Noncurrent liability activity for the year ended December 31, 2019 was as follows:

	Beginning Balance	Additions	Reductions	Ending Balance
Net Pension Liability	\$324,586	\$245,632	\$0	\$570,218
Net OPEB Liability	\$251,935	\$51,972	\$0	\$303,907

NOTE 5 – SELF-INSURED RETENTION

The Association retains responsibility for the payment of claims within specified self-insured retention limits prior to the application of coverage provided by excess insurance and reinsurance contracts. The Association's per-occurrence retention limit for liability claims was \$500,000 in 2019. Property claims had an all-risk per-occurrence retention limit of \$250,000 for 2019. Boiler and machinery had a per occurrence retention limit from \$10,000 to \$350,000 depending upon boiler size. For every occurrence, the member was charged a deductible equal to the amount of the claim or \$2,500, whichever was less.

NOTE 6 – INSURANCE AND REINSURANCE CONTRACTS

The Association maintains insurance and reinsurance contracts with insurance carriers who provide various limits of coverage over the Association's self-insured retention limits. Under the Association's bylaws, the Board of Trustees annually determines the types of insurance/reinsurance to purchase as well as appropriate limits. For the loss year ended December 31, 2019, the Association purchased the following types of insurance/reinsurance in excess of the Association's self-insured retention:

<u>Excess Insurance / Reinsurance</u>	<u>Limits of Coverage</u>
General liability (including law enforcement) per occurrence	\$9,500,000
Automobile liability per occurrence	\$9,500,000
Public official liability:	
Per occurrence	\$9,500,000
Per member annual aggregate	\$9,500,000
Employment practices liability:	
Per occurrence	\$9,500,000
Per member annual aggregate	\$9,500,000
Property (excluding flood and earthquake) per occurrence	\$1,000,000,000
Flood and earthquake property coverage – per occurrence and annual aggregate	\$25,000,000

In 2019, MVRMA reinsured its liability program with Government Entities Mutual (a protected cell reinsurance captive domiciled in the District of Columbia) for \$4.5 million excess of MVRMA's \$500,000 self-insured retention and with General Reinsurance Corporation for \$7 million excess of \$5 million.

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

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In 1996, the Association established a Shock Loss Fund (SLF) to replace the aggregate stop-loss policy. The Association's members contribute to the SLF based on a moving target equal to the annual loss fund. The Association's members annually fund approximately 15 percent of the moving target until the balance of the SLF is equivalent to the current year's annual loss fund. Once a member has at least the current year's regular loss fund contribution on account in the Association's SLF, it is not required to contribute additionally to the SLF. Any member whose balance falls below its targeted amount is required to contribute the amount needed to reach its targeted amount, or 15% of the current annual loss year contribution, whichever is less.

In the event that a series of losses or a single loss should exceed the amount of coverage provided by the self-insurance fund and insurance/reinsurance and any amount of supplemental payments for which members are obligated, then the payment of any uncovered loss is the obligation of the individual member or members against which the claims were made. In the unlikely event that all or any of the insurance companies are unable to meet their obligations under the excess insurance and reinsurance contracts, the Association and its members would be responsible for such defaulted amounts in accordance with the applicable policy terms and conditions.

NOTE 7 – CLAIMS RESERVE

As discussed in Note 1, the Association establishes a claims reserve liability which includes both reported and unreported insured events and estimates of future payment of losses and related claims adjustment expenses. The changes in the aggregate liabilities for the Association are as follows:

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MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.NOTES TO THE BASIC FINANCIAL STATEMENTS
FOR THE YEAR ENDED DECEMBER 31, 2019

	December 31 2019	December 31 2018
Unpaid claims and claim adjustment expenses - Beginning of Year	<u>\$3,685,365</u>	<u>\$3,742,308</u>
Incurred claims and claim adjustment expenses:		
Provision for insured events of the current year	1,699,748	1,795,709
Change in provision for insured events of prior years	(861,060)	(709,612)
Change in unallocated expense provision	<u>(10,392)</u>	<u>9,215</u>
Total incurred claims and claim adjustment expenses	<u>828,296</u>	<u>1,095,312</u>
Payments:		
Claims and claim adjustment expenses attributable to insured events of the current year	264,076	220,738
Claims and claim adjustment expenses attributable to insured events of prior years	821,143	931,517
Aggregate Adjustment Total Payments	<u>1,085,219</u>	<u>1,152,255</u>
Unpaid claims and claim adjustment expenses - End of Year	<u><u>\$3,428,442</u></u>	<u><u>\$3,685,365</u></u>

NOTE 8 - DEFINED BENEFIT PENSION PLANS***Net Pension Liability/Asset***

The net pension liability/asset reported on the statement of net position represents a liability or asset to employees for pensions. Pensions are a component of exchange transactions—between an employer and its employees—of salaries and benefits for employee services. Pensions are provided to an employee—on a deferred-payment basis—as part of the total compensation package offered by an employer for employee services each financial period. The obligation to sacrifice resources for pensions is a present obligation because it was created as a result of employment exchanges that already have occurred.

The net pension liability/asset represents the Association's proportionate share of each pension plan's collective actuarial present value of projected benefit payments attributable to past periods of service, net of each pension plan's fiduciary net position. The net pension liability/asset calculation is dependent on critical long-term variables, including estimated average life expectancies, earnings on investments, cost of living adjustments and others. While these estimates use the best information available, unknowable future events require adjusting this estimate annually.

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

NOTES TO THE BASIC FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

The Ohio Revised Code limits the Association's obligation for this liability to annually required payments. The Association cannot control benefit terms or the manner in which pensions are financed; however, the Association does receive the benefit of employees' services in exchange for compensation including pension.

GASB 68 assumes any net pension liability/asset is solely the obligation of the employer, because (1) they benefit from employee services; and (2) State statute requires all funding to come from these employers. All contributions to date have come solely from these employers (which also includes costs paid in the form of withholdings from employees). State statute requires the pension plans to amortize unfunded liabilities within 30 years. If the amortization period exceeds 30 years, each pension plan's board must propose corrective action to the State legislature. Any resulting legislative change to benefits or funding could significantly affect the net pension liability. Resulting adjustments to the net pension liability would be effective when the changes are legally enforceable.

The proportionate share of each plan's unfunded benefits is presented as a long-term net pension liability/asset on the accrual basis of accounting. Any liability for the contractually-required pension contribution outstanding at the end of the year is included in accounts payable and accrued liabilities on the accrual basis of accounting.

Plan Description – Ohio Public Employees Retirement System (OPERS)

Plan Description - Association employees participate in the Ohio Public Employees Retirement System (OPERS). OPERS administers three separate pension plans. The Traditional Pension Plan is a cost-sharing, multiple-employer defined benefit pension plan. The Member-Directed Plan is a defined contribution plan and the Combined Plan is a cost-sharing, multiple-employer defined benefit pension plan with defined contribution features. While members (e.g. Association employees) may elect the Member-Directed Plan and the Combined Plan, substantially all employee members are in OPERS' Traditional Pension Plan.

OPERS provides retirement, disability, survivor and death benefits, and annual cost of living adjustments to members of the Traditional Pension Plan. Authority to establish and amend benefits is provided by Chapter 145 of the Ohio Revised Code. OPERS issues a stand-alone financial report that includes financial statements, required supplementary information and detailed information about OPERS' fiduciary net position that may be obtained by visiting <https://www.opers.org/financial/reports.shtml>, by writing to the Ohio Public Employees Retirement System, 277 East Town Street, Columbus, Ohio 43215-4642, or by calling 800-222-7377.

Senate Bill (SB) 343 was enacted into law with an effective date of January 7, 2013. In the legislation, members were categorized into three groups with varying provisions of the law applicable to each group. The following table provides age and service requirements for retirement and the retirement formula applied to final average salary (FAS) for the three member groups under the Traditional Pension Plan as per the reduced benefits adopted by SB 343 (see OPERS CAFR referenced above for additional information):

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NOTES TO THE BASIC FINANCIAL STATEMENTS
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Group A	Group B	Group C
Eligible to retire prior to January 7, 2013 or five years after January 7, 2013	20 years of service credit prior to January 7, 2013 or eligible to retire ten years after January 7, 2013	Members not in other Groups and members hired on or after January 7, 2013
State and Local	State and Local	State and Local
Age and Service Requirements: Age 60 with 60 months of service credit or Age 55 with 25 years of service credit	Age and Service Requirements: Age 60 with 60 months of service credit or Age 55 with 25 years of service credit	Age and Service Requirements: Age 57 with 25 years of service credit or Age 62 with 5 years of service credit
Formula: 2.2% of FAS multiplied by years of service for the first 30 years and 2.5% for service years in excess of 30	Formula: 2.2% of FAS multiplied by years of service for the first 30 years and 2.5% for service years in excess of 30	Formula: 2.2% of FAS multiplied by years of service for the first 35 years and 2.5% for service years in excess of 35

Final Average Salary (FAS) represents the average of the three highest years of earnings over a member's career for Groups A and B. Group C is based on the average of the five highest years of earnings over a member's career.

Members who retire before meeting the age and years of service credit requirement for unreduced benefits receive a percentage reduction in the benefit amount.

When a benefit recipient has received benefits for 12 months, an annual cost of living adjustment (COLA) is provided. This COLA is calculated on the base retirement benefit at the date of retirement and is not compounded. For those retiring prior to January 7, 2013, the COLA will continue to be a 3.00% simple annual COLA. For those retiring subsequent to January 7, 2013, beginning in calendar year 2019, the COLA will be based on the average percentage increase in the Consumer Price Index, capped at 3.00%.

Benefits in the Combined Plan consist of both an age-and-service formula benefit (defined benefit) and a defined contribution element. The defined benefit element is calculated on the basis of age, FAS, and years of service. Eligibility regarding age and years of service in the Combined Plan is the same as the Traditional Pension Plan. The benefit formula for the defined benefit component of the plan for State and Local members in transition Groups A and B applies a factor of 1.00% to the member's FAS for the first 30 years of service.

A factor of 1.25% is applied to years of service in excess of 30. The benefit formula for transition Group C applies a factor of 1.00% to the member's FAS and the first 35 years of service and a factor of 1.25% is applied to years in excess of 35. Persons retiring before age 65 with less than 30 years of service credit receive a percentage reduction in benefit. The defined contribution portion of the benefit is based on accumulated member contributions plus or minus any investment gains or losses on those contributions. Members retiring under the Combined Plan receive a 3.00% COLA adjustment on the defined benefit portion of their benefit.

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NOTES TO THE BASIC FINANCIAL STATEMENTS
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Defined contribution plan benefits are established in the plan documents, which may be amended by the OPERS's Board of Trustees. Member-Directed Plan and Combined Plan members who have met the retirement eligibility requirements may apply for retirement benefits. The amount available for defined contribution benefits in the Combined Plan consists of the member's contributions plus or minus the investment gains or losses resulting from the member's investment selections. The amount available for defined contribution benefits in the Member-Directed Plan consists of the members' contributions, vested employer contributions and investment gains or losses resulting from the members' investment selections. Employer contributions and associated investment earnings vest over a five-year period, at a rate of 20% each year. For additional information, see the Plan Statement in the OPERS CAFR.

Funding Policy - The Ohio Revised Code (ORC) provides statutory authority for member and employer contributions as follows:

	<u>State and Local</u>
2019 Statutory Maximum Contribution Rates	
Employer	14.0 %
Employee *	10.0 %
2019 Actual Contribution Rates	
Employer:	
Pension**	14.0 %
Post-employment Health Care Benefits**	<u>0.0 %</u>
Total Employer	<u>14.0 %</u>
Employee	<u>10.0 %</u>

* Member contributions within the combined plan are not used to fund the defined benefit retirement allowance

**These pension and employer health care rates are for the traditional and combined plans. The employer contribution for the member-directed plan is allocated 4.00% for health care with the remainder to pension.

Employer contribution rates are actuarially determined and are expressed as a percentage of covered payroll.

The Association's contractually required contribution for the Traditional Pension Plan and Member-Directed Plan was \$54,884 for 2019. Of this amount, \$6,860 is reported as accounts payable and accrued liabilities.

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

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Net Pension Liabilities/Assets, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

The net pension liability and net pension asset for the OPERS Traditional Pension Plan and Member-Directed Plan, respectively, were measured as of December 31, 2018, and the total pension liability or asset used to calculate the net pension liability or asset was determined by an actuarial valuation as of that date. The Association's proportion of the net pension liability or asset was based on the Association's share of contributions to the pension plan relative to the contributions of all participating entities.

Following is information related to the proportionate share and pension expense:

	<u>OPERS - Traditional</u>	<u>OPERS - Member- Directed</u>	<u>Total</u>
Proportion of the net pension liability/asset prior measurement date	0.00206900%	0.01013200%	
Proportion of the net pension liability/asset current measurement date	<u>0.00208200%</u>	<u>0.00995800%</u>	
Change in proportionate sha	<u>0.00001300%</u>	<u>-0.00017400%</u>	
Proportionate share of the net pension liability	\$ 570,218	\$ -	\$ 570,218
Proportionate share of the net pension asset	-	(227)	(227)
Pension expense	128,105	(59)	128,046

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NOTES TO THE BASIC FINANCIAL STATEMENTS
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At December 31, 2019, the Association reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	OPERS - Traditional	Member- Directed	Total
Deferred outflows of resources			
Differences between expected and actual experience	\$ 27	\$ 943	\$ 970
Net difference between projected and actual earnings on pension plan investment	77,396	78	77,474
Changes of assumptions	49,638	71	49,709
Changes in employer's proportionate percentage/difference between employer contributions	1,548	-	1,548
Contributions subsequent to the measurement date	48,543	6,341	54,884
Total deferred outflows of resources	<u>\$ 177,152</u>	<u>\$ 7,433</u>	<u>\$ 184,585</u>
	OPERS - Traditional	OPERS - Member- Directed	Total
Deferred inflows of resources			
Differences between expected and actual experience	\$ 7,487	\$ -	\$ 7,487
Changes in employer's proportionate percentage/difference between employer contributions	4,320	-	4,320
Total deferred inflows of resources	<u>\$ 11,807</u>	<u>\$ -</u>	<u>\$ 11,807</u>

\$54,884 reported as deferred outflows of resources related to pension resulting from Association contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability/asset in the year ending December 31, 2020.

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

NOTES TO THE BASIC FINANCIAL STATEMENTS
FOR THE YEAR ENDED DECEMBER 31, 2019

Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pension will be recognized in pension expense as follows:

	OPERS - Traditional	OPERS - Member- Directed	Total
Year Ending December 31:			
2020	\$ 48,005	\$ 159	\$ 48,164
2021	25,624	146	25,770
2022	7,180	144	7,324
2023	35,993	176	36,169
2024	-	128	128
Thereafter	-	339	339
Total	<u>\$ 116,802</u>	<u>\$ 1,092</u>	<u>\$ 117,894</u>

Actuarial Assumptions - OPERS

Actuarial valuations of an ongoing plan involve estimates of the values of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and cost trends. Actuarially determined amounts are subject to continual review or modification as actual results are compared with past expectations and new estimates are made about the future.

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employers and plan members) and include the types of benefits provided at the time of each valuation. The total pension liability was determined by an actuarial valuation as of December 31, 2018, using the following actuarial assumptions applied to all prior periods included in the measurement in accordance with the requirements of GASB 67.

Wage inflation	3.25%
Future salary increases, including inflation COLA or ad hoc COLA	3.25% to 10.75% including wage inflation Pre 1/7/2013 retirees: 3.00%, simple Post 1/7/2013 retirees: 3.00%, simple through 2018, then 2.15% simple
Investment rate of return	
Current measurement date	7.20%
Prior measurement date	7.50%
Actuarial cost method	Individual entry age

Pre-retirement mortality rates are based on the RP-2014 Employees mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and

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NOTES TO THE BASIC FINANCIAL STATEMENTS
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2010, respectively. Post-retirement mortality rates are based on the RP-2014 Healthy Annuitant mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates for disabled retirees are based on the RP-2014 Disabled mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Mortality rates for a particular calendar year for both healthy and disabled retiree mortality tables are determined by applying the MP-2015 mortality improvement scale to the above described tables.

The most recent experience study was completed for the five-year period ended December 31, 2015.

The long-term expected rate of return on defined benefit investment assets was determined using a building-block method in which best-estimate ranges of expected future real rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected real rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adjusted for inflation.

During 2018, OPERS managed investments in three investment portfolios: the Defined Benefit portfolio, the Health Care portfolio, and the Defined Contribution portfolio. The Defined Benefit portfolio contains the investment assets for the Traditional Pension Plan, the defined benefit component of the Combined Plan and the annuitized accounts of the Member-Directed Plan. Within the Defined Benefit portfolio, contributions into the plans are all recorded at the same time, and benefit payments all occur on the first of the month. Accordingly, the money-weighted rate of return is considered to be the same for all plans within the portfolio. The annual money-weighted rate of return expressing investment performance, net of investment expenses and adjusted for the changing amounts actually invested, for the Defined Benefit portfolio was a loss of 2.94% for 2018.

The allocation of investment assets with the Defined Benefit portfolio is approved by the OPERS Board of Trustees as outlined in the annual investment plan. Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the defined benefit pension plans. The table below displays the Board-approved asset allocation policy for 2018 and the long-term expected real rates of return:

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Asset Class	Target Allocation	Weighted Average Long-Term Expected Real Rate of Return (Arithmetic)
Fixed income	23.00 %	2.79 %
Domestic equities	19.00	6.21
Real estate	10.00	4.90
Private equity	10.00	10.81
International equities	20.00	7.83
Other investments	18.00	5.50
Total	100.00 %	5.95 %

Discount Rate - The discount rate used to measure the total pension liability/asset was 7.20%, post-experience study results, for the Traditional Pension Plan, the Combined Plan and Member-Directed Plan. The discount rate used to measure total pension liability prior to December 31, 2018 was 7.50%. The projection of cash flows used to determine the discount rate assumed that contributions from plan members and those of the contributing employers are made at the contractually required rates, as actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefits payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments for the Traditional Pension Plan, Combined Plan and Member-Directed Plan was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the Association's Proportionate Share of the Net Pension Liability/Asset to Changes in the Discount Rate - The following table presents the Association's proportionate share of the net pension liability/asset calculated using the current period discount rate assumption of 7.20%, as well as what the Association's proportionate share of the net pension liability/asset would be if it were calculated using a discount rate that is one-percentage-point lower (6.20%) or one-percentage-point higher (8.20%) than the current rate:

	1% Decrease	Current Discount Rate	1% Increase
Association's proportionate share of the net pension liability (asset):			
Traditional Pension Plan	\$ 842,377	\$ 570,218	\$ 344,051
Member-Directed Plan	(100)	(227)	(398)

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MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

NOTES TO THE BASIC FINANCIAL STATEMENTS
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NOTE 9 - DEFINED BENEFIT OPEB PLANS

Net OPEB Liability

The net OPEB liability reported on the statement of net position represents a liability to employees for OPEB. OPEB is a component of exchange transactions—between an employer and its employees—of salaries and benefits for employee services. OPEB are provided to an employee—on a deferred-payment basis—as part of the total compensation package offered by an employer for employee services each financial period. The obligation to sacrifice resources for OPEB is a present obligation because it was created as a result of employment exchanges that already have occurred.

The net OPEB liability represents the Association’s proportionate share of each OPEB plan’s collective actuarial present value of projected benefit payments attributable to past periods of service, net of each OPEB plan’s fiduciary net position. The net OPEB liability calculation is dependent on critical long-term variables, including estimated average life expectancies, earnings on investments, cost of living adjustments and others. While these estimates use the best information available, unknowable future events require adjusting these estimates annually.

Ohio Revised Code limits the Association’s obligation for this liability to annually required payments. The Association cannot control benefit terms or the manner in which OPEB are financed; however, the Association does receive the benefit of employees’ services in exchange for compensation including OPEB.

GASB 75 assumes the liability is solely the obligation of the employer, because they benefit from employee services. OPEB contributions come from these employers and health care plan enrollees which pay a portion of the health care costs in the form of a monthly premium. The Ohio revised Code permits, but does not require, the retirement systems to provide healthcare to eligible benefit recipients. Any change to benefits or funding could significantly affect the net OPEB liability. Resulting adjustments to the net OPEB liability would be effective when the changes are legally enforceable. The retirement systems may allocate a portion of the employer contributions to provide for these OPEB benefits.

The proportionate share of each plan’s unfunded benefits is presented as a long-term net OPEB liability on the accrual basis of accounting. Any liability for the contractually-required OPEB contribution outstanding at the end of the year is included in accounts payable and accrued liabilities on the accrual basis of accounting.

Plan Description – Ohio Public Employees Retirement System (OPERS)

Plan Description - The Ohio Public Employees Retirement System (OPERS) administers three separate pension plans: the traditional pension plan, a cost-sharing, multiple-employer defined benefit pension plan; the member-directed plan, a defined contribution

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

NOTES TO THE BASIC FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

plan; and the combined plan, a cost-sharing, multiple-employer defined benefit pension plan that has elements of both a defined benefit and defined contribution plan.

OPERS maintains a cost-sharing, multiple-employer defined benefit post-employment health care trust, which funds multiple health care plans including medical coverage, prescription drug coverage and deposits to a Health Reimbursement Arrangement to qualifying benefit recipients of both the traditional pension and the combined plans. This trust is also used to fund health care for member-directed plan participants, in the form of a Retiree Medical Account (RMA). At retirement or refund, member directed plan participants may be eligible for reimbursement of qualified medical expenses from their vested RMA balance.

In order to qualify for postemployment health care coverage, age and service retirees under the traditional pension and combined plans must have twenty or more years of qualifying Ohio service credit. Health care coverage for disability benefit recipients and qualified survivor benefit recipients is available. The health care coverage provided by OPERS meets the definition of an Other Post Employment Benefit (OPEB) as described in GASB Statement 75. See OPERS' CAFR referenced below for additional information.

The Ohio Revised Code permits, but does not require OPERS to provide health care to its eligible benefit recipients. Authority to establish and amend health care coverage is provided to the Board in Chapter 145 of the Ohio Revised Code.

Disclosures for the health care plan are presented separately in the OPERS financial report. Interested parties may obtain a copy by visiting <https://www.opers.org/financial/reports.shtml>, by writing to OPERS, 277 East Town Street, Columbus, Ohio 43215-4642, or by calling (614) 222-5601 or 800-222-7377.

Funding Policy - The Ohio Revised Code provides the statutory authority requiring public employers to fund postemployment health care through their contributions to OPERS. When funding is approved by OPERS' Board of Trustees, a portion of each employer's contribution to OPERS is set aside to fund OPERS health care plans. Health care is not being funded.

Employer contribution rates are expressed as a percentage of the earnable salary of active members. In 2019, state and local employers contributed at a rate of 14.00% of earnable salary and public safety and law enforcement employers contributed at 18.10%. These are the maximum employer contribution rates permitted by the Ohio Revised Code. Active member contributions do not fund health care.

Each year, the OPERS Board determines the portion of the employer contribution rate that will be set aside to fund health care plans. As recommended by OPERS' actuary, the portion of employer contributions allocated to health care was 0.00% for the Traditional and Combined plans. The OPERS Board is also authorized to establish rules for the retiree or their surviving beneficiaries to pay a portion of the health care provided. Payment amounts vary depending on the number of covered dependents and the coverage selected.

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

NOTES TO THE BASIC FINANCIAL STATEMENTS
FOR THE YEAR ENDED DECEMBER 31, 2019

The employer contribution as a percentage of covered payroll deposited into the RMA for participants in the Member-Directed Plan for 2019 was 4.00%.

Employer contribution rates are actuarially determined and are expressed as a percentage of covered payroll.

The Association's contractually required contribution was \$2,537 for 2019. Of this amount, \$317 is reported as accounts payable and accrued liabilities.

Net OPEB Liabilities, OPEB Expense, and Deferred Outflows or Resources and Deferred Inflows of Resources Related to OPEB

The net OPEB liability and total OPEB liability for OPERS were determined by an actuarial valuation as of December 31, 2017, rolled forward to the measurement date of December 31, 2018, by incorporating the expected value of health care cost accruals, the actual health care payment, and interest accruals during the year. The Association's proportion of the net OPEB liability was based on the Association's share of contributions to the retirement plan relative to the contributions of all participating entities. Following is information related to the proportionate share and OPEB expense:

	<u>OPERS</u>
Proportion of the net OPEB liability prior measurement date	0.00232000%
Proportion of the net OPEB liability current measurement date	<u>0.00233100%</u>
Change in proportionate share	<u>0.00001100%</u>
Proportionate share of the net OPEB liability	\$ 303,907
OPEB expense	\$ 26,223

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MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

NOTES TO THE BASIC FINANCIAL STATEMENTS
FOR THE YEAR ENDED DECEMBER 31, 2019

At December 31, 2019, the Association reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	<u>OPERS</u>
Deferred outflows of resources	
Differences between expected and actual experience	\$ 103
Net difference between projected and actual earnings on OPEB plan investments	13,932
Changes of assumptions	9,798
Changes in employer's proportionate percentage/ difference between employer contributions	1,960
Contributions subsequent to the measurement date	2,537
Total deferred outflows of resources	<u>\$ 28,330</u>
	<u>OPERS</u>
Deferred inflows of resources	
Differences between expected and actual experience	\$ 825
Changes in employer's proportionate percentage/ difference between employer contributions	3,090
Total deferred inflows of resources	<u>\$ 3,915</u>

\$2,537 reported as deferred outflows of resources related to OPEB resulting from Association contributions subsequent to the measurement date will be recognized as a reduction of the net OPEB liability in the year ending December 31, 2020.

Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows:

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

NOTES TO THE BASIC FINANCIAL STATEMENTS
FOR THE YEAR ENDED DECEMBER 31, 2019

	<u>OPERS</u>
Year Ending December 31:	
2020	\$ 9,028
2021	3,510
2022	2,324
2023	<u>7,016</u>
Total	<u>\$ 21,878</u>

Actuarial Assumptions - OPERS

Actuarial valuations of an ongoing plan involve estimates of the values of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and cost trends. Actuarially determined amounts are subject to continual review or modification as actual results are compared with past expectations and new estimates are made about the future.

Projections of health care costs for financial reporting purposes are based on the substantive plan and include the types of coverage provided at the time of each valuation and the historical pattern of sharing of costs between OPERS and plan members. The total OPEB liability was determined by an actuarial valuation as of December 31, 2017, rolled forward to the measurement date of December 31, 2018. The actuarial valuation used the following actuarial assumptions applied to all prior periods included in the measurement in accordance with the requirements of GASB 74:

Wage Inflation	3.25%
Projected Salary Increases, including inflation	3.25 to 10.75% including wage inflation
Single Discount Rate:	
Current measurement date	3.96%
Prior Measurement date	3.85%
Investment Rate of Return	
Current measurement date	6.00%
Prior Measurement date	6.50%
Municipal Bond Rate	
Current measurement date	3.71%
Prior Measurement date	3.31%
Health Care Cost Trend Rate	
Current measurement date	10.00% initial, 3.25% ultimate in 2029
Prior Measurement date	7.50%, initial 3.25%, ultimate in 2028
Actuarial Cost Method	Individual Entry Age

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

NOTES TO THE BASIC FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

Pre-retirement mortality rates are based on the RP-2014 Employees mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates are based on the RP-2014 Healthy Annuitant mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates for disabled retirees are based on the RP-2014 Disabled mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Mortality rates for a particular calendar year are determined by applying the MP-2015 mortality improvement scale to all of the above described tables.

The most recent experience study was completed for the five-year period ended December 31, 2015.

The long-term expected rate of return on health care investment assets was determined using a building-block method in which best-estimate ranges of expected future real rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected real rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adjusted for inflation.

During 2018, OPERS managed investments in three investment portfolios: the Defined Benefit portfolio, the Health Care portfolio and the Defined Contribution portfolio. The Health Care portfolio includes the assets for health care expenses for the Traditional Pension Plan, Combined Plan and Member-Directed Plan eligible members. Within the Health Care portfolio, contributions into the plans are assumed to be received continuously throughout the year based on the actual payroll payable at the time contributions are made, and health care-related payments are assumed to occur mid-year. Accordingly, the money-weighted rate of return is considered to be the same for all plans within the portfolio. The annual money-weighted rate of return expressing investment performance, net of investment expenses and adjusted for the changing amounts actually invested, for the Health Care portfolio was a loss of 5.60% for 2018.

The allocation of investment assets with the Health Care portfolio is approved by the Board of Trustees as outlined in the annual investment plan. Assets are managed on a total return basis with a long-term objective of continuing to offer a sustainable health care program for current and future retirees. OPERS' primary goal is to achieve and maintain a fully funded status for the benefits provided through the defined pension plans. Health care is a discretionary benefit. The table below displays the Board-approved asset allocation policy for 2018 and the long-term expected real rates of return:

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

NOTES TO THE BASIC FINANCIAL STATEMENTS
FOR THE YEAR ENDED DECEMBER 31, 2019

Asset Class	Target Allocation	Weighted Average Long-Term Expected Real Rate of Return (Arithmetic)
Fixed Income	34.00 %	2.42 %
Domestic Equities	21.00	6.21
Real Estate Investment Trust	6.00	5.98
International Equities	22.00	7.83
Other investments	17.00	5.57
Total	100.00 %	5.16 %

Discount Rate - A single discount rate of 3.96% was used to measure the OPEB liability on the measurement date of December 31, 2018. A single discount rate of 3.85% was used to measure the OPEB liability on the measurement date of December 31, 2017. Projected benefit payments are required to be discounted to their actuarial present value using a single discount rate that reflects (1) a long-term expected rate of return on OPEB plan investments (to the extent that the health care fiduciary net position is projected to be sufficient to pay benefits), and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate are not met). This single discount rate was based on an expected rate of return on the health care investment portfolio of 6.00% and a municipal bond rate of 3.71%. The projection of cash flows used to determine this single discount rate assumed that employer contributions will be made at rates equal to the actuarially determined contribution rate. Based on these assumptions, the health care fiduciary net position and future contributions were sufficient to finance health care costs through 2031. As a result, the long-term expected rate of return on health care investments was applied to projected costs through the year 2031, and the municipal bond rate was applied to all health care costs after that date.

Sensitivity of the Association's Proportionate Share of the Net OPEB Liability to Changes in the Discount Rate - The following table presents the Association's proportionate share of the net OPEB liability calculated using the single discount rate of 3.96%, as well as what the Association's proportionate share of the net OPEB liability would be if it were calculated using a discount rate that is one-percentage-point lower (2.96%) or one-percentage-point higher (4.96%) than the current rate:

	1% Decrease	Current Discount Rate	1% Increase
Association's proportionate share of the net OPEB liability	\$ 388,811	\$ 303,907	\$ 236,387

Sensitivity of the Association's Proportionate Share of the Net OPEB Liability to Changes in the Health Care Cost Trend Rate - Changes in the health care cost trend rate

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

NOTES TO THE BASIC FINANCIAL STATEMENTS
FOR THE YEAR ENDED DECEMBER 31, 2019

may also have a significant impact on the net OPEB liability. The following table presents the net OPEB liability calculated using the assumed trend rates, and the expected net OPEB liability if it were calculated using a health care cost trend rate that is 1.00% lower or 1.00% higher than the current rate.

Retiree health care valuations use a health care cost-trend assumption that changes over several years built into the assumption. The near-term rates reflect increases in the current cost of health care; the trend starting in 2019 is 10.00%. If this trend continues for future years, the projection indicates that years from now virtually all expenditures will be for health care. A more reasonable alternative is that in the not-too-distant future, the health plan cost trend will decrease to a level at, or near, wage inflation. On this basis, the actuaries project premium rate increases will continue to exceed wage inflation for approximately the next decade, but by less each year, until leveling off at an ultimate rate, assumed to be 3.25% in the most recent valuation.

	<u>1% Decrease</u>	<u>Current Health Care Trend Rate Assumption</u>	<u>1% Increase</u>
Association's proportionate share of the net OPEB liability	\$ 292,121	\$ 303,907	\$ 317,482

NOTE 10 – COMMITMENTS

Leases - The Association leases office space under a five-year lease effective July 1, 2019. Rental expense for the current and predecessor lease totaled \$35,779 in 2019. Future minimum annual lease payments are \$33,406 in 2020, \$34,074 in 2021, \$34,755 in 2022, and \$35,450 in 2023.

NOTE 11 – LITIGATION AND CLAIMS

The Association is party to various legal proceedings, which normally occur in the course of claims processing operations. Management believes that the outcome of such claims has been adequately accrued in the claims reserve liability, and excess will be covered by insurance carriers that provide excess insurance and reinsurance contracts. Nevertheless, due to uncertainties in the settlement process, it is at least reasonably possible that management's view of the outcome could change materially in the near term.

NOTE 12 - SUBSEQUENT EVENT

The United States and the State of Ohio declared a state of emergency in March 2020 due to the COVID-19 pandemic. The financial impact of COVID-19 and the ensuing emergency measures will impact subsequent periods of the Association; however, that impact cannot be determined at this time.

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REQUIRED SUPPLEMENTARY INFORMATION

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.
REQUIRED SUPPLEMENTARY INFORMATION
COMPARATIVE SCHEDULE OF CLAIM DEVELOPMENT, EARNED ASSESSMENTS AND UNALLOCATED EXPENSES
FOR THE YEARS ENDED DECEMBER 31, 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011 AND 2010

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Earned assessments and interest income:										
Earned	\$5,167,149	\$4,551,986	\$4,487,270	\$4,243,039	\$4,223,535	\$4,908,192	\$4,316,800	\$4,433,255	\$4,388,732	\$4,259,382
Ceded	1,125,633	988,162	947,406	864,407	885,468	878,317	870,249	807,647	761,789	753,793
Net	\$4,041,516	\$3,563,824	\$3,539,864	\$3,378,632	\$3,338,067	\$4,029,875	\$3,446,551	\$3,625,608	\$3,626,943	\$3,505,589
Unallocated loss expenses	\$987,998	\$881,436	\$835,464	\$826,140	\$758,871	\$757,719	\$751,099	\$733,355	\$691,571	\$677,469
Original estimates ultimate incurred claims and expenses for the policy year, including members' deductibles (1)	\$1,893,000	\$2,051,000	\$2,055,000	\$1,413,000	\$1,459,000	\$2,771,000	\$1,798,849	\$2,032,756	\$2,587,500	\$1,997,755
Cummulative incurred claims, net of reinsurance, including members' deductibles, as of:										
End of policy year	\$787,282	\$972,843	\$963,801	\$577,160	\$626,239	\$1,480,995	\$729,736	\$664,220	\$1,681,382	\$519,228
One year later		973,592	1,113,265	998,670	947,321	1,626,822	952,440	810,718	1,430,501	689,893
Two years later			1,237,785	1,090,294	1,018,542	2,130,715	1,180,592	889,541	1,195,774	1,141,553
Three years later				1,143,625	1,049,615	2,119,389	1,421,688	964,041	1,195,250	1,391,993
Four years later					1,059,615	2,209,389	1,435,920	1,003,672	1,247,570	1,481,047
Five years later						2,727,066	1,428,162	1,139,987	1,291,472	1,523,508
Six years later							1,419,374	1,139,987	1,291,472	1,523,508
Seven years later								1,139,987	1,291,472	1,523,508
Eight years later									1,291,472	1,523,508
Nine years later										1,523,508
Re-estimated ultimate incurred claims and expenses, including members' deductibles:										
End of policy year	\$1,893,000	\$2,051,000	\$2,055,000	\$1,413,000	\$1,459,000	\$2,771,000	\$1,798,849	\$2,032,756	\$2,587,500	\$1,997,755
One year later		\$1,649,419	1,827,000	1,769,000	1,502,478	2,334,000	1,621,700	1,587,710	2,136,224	1,742,370
Two years later			1,621,901	1,475,758	1,277,747	2,637,033	1,431,006	1,167,878	1,326,059	1,394,990
Three years later				1,384,103	1,223,584	2,417,033	1,547,491	1,137,378	1,339,671	1,544,150
Four years later					1,133,584	2,327,033	1,506,279	1,067,378	1,312,671	1,554,895
Five years later						2,227,033	1,419,374	1,139,987	1,318,671	1,523,508
Six years later							1,419,374	1,139,987	1,291,472	1,523,508
Seven years later								1,139,987	1,291,472	1,523,508
Eight years later									1,291,472	1,523,508
Nine years later										1,523,508
Increase (decrease) in estimate incurred claims and expenses from original estimate		(\$401,581)	(\$433,099)	(\$28,897)	(\$325,416)	(\$543,967)	(\$379,475)	(\$892,769)	(\$1,296,028)	(\$474,247)

(1) Ceded losses are not expected to be significant.

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION, INC.

Reconciliation of Claim Liabilities by Type of Contract

For the Year Ended December 31, 2019

	General Liability	Automobile Liability	Property	Total
Unpaid claims and claim adjustment expenses - Beginning of Year - including Aggregate Adjustment	<u>\$2,992,611</u>	<u>\$102,806</u>	<u>\$589,948</u>	<u>\$3,685,365</u>
Incurred claims and claim adjustment expenses:				
Provision for insured events of the current year	985,552	68,482	645,713	\$1,699,747
Change in provision for insured events of prior years	<u>-463,537</u>	<u>-44,088</u>	<u>-363,826</u>	<u>-871,451</u>
Total incurred claims and claim adjustment expenses	<u>522,015</u>	<u>24,394</u>	<u>281,887</u>	<u>828,296</u>
Payments:				
Claims and claim adjustment expenses attributable to insured events of the current year	9,043	4,733	250,300	\$264,076
Claims and claim adjustment expenses attributable to insured events of prior years	<u>565,935</u>	<u>40,214</u>	<u>214,994</u>	<u>821,143</u>
Total Payments	<u>574,978</u>	<u>44,947</u>	<u>465,294</u>	<u>1,085,219</u>
Unpaid claims and claim adjustment expenses - End of Year	<u><u>\$2,939,648</u></u>	<u><u>\$82,253</u></u>	<u><u>\$406,541</u></u>	<u><u>\$3,428,442</u></u>

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION

SCHEDULES OF THE REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF THE ASSOCIATION'S PROPORTIONATE SHARE OF
THE NET PENSION LIABILITY/NET PENSION ASSET
OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM (OPERS)

LAST SIX YEARS (1)

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
<i>Traditional Plan:</i>						
Association's proportion of the net pension liability	0.002082%	0.002069%	0.002152%	0.002093%	0.002411%	0.002411%
Association's proportionate share of the net pension liability	\$ 570,218	\$ 324,586	\$ 488,683	\$ 362,534	\$ 289,865	\$ 283,973
Association's covered payroll	\$ 281,800	\$ 273,031	\$ 266,575	\$ 285,853	\$ 301,763	\$ 337,396
Association's proportionate share of the net pension liability as a percentage of its covered payroll	202.35%	118.88%	183.32%	126.83%	96.06%	84.17%
Plan fiduciary net position as a percentage of the total pension liability	74.70%	84.66%	77.25%	81.08%	86.45%	86.36%
<i>Member Directed Plan:</i>						
Association's proportion of the net pension asset	0.009958%	0.010132%	0.011055%	0.010468%		
Association's proportionate share of the net pension asset	\$ 227	\$ 354	\$ 46	\$ 40		
Association's covered payroll	\$ 56,920	\$ 55,540	\$ 57,389	\$ 73,642		
Association's proportionate share of the net pension asset as a percentage of its covered payroll	0.40%	0.64%	0.08%	0.05%		
Plan fiduciary net position as a percentage of the total pension asset	113.42%	124.45%	103.40%	103.91%		

(1) Information prior to 2014 was unavailable for the Traditional Plan.

Information prior to 2016 was unavailable for the Member Directed Plan.

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Amounts presented for each year were determined as of the Association's measurement date which is the prior year-end.

SEE ACCOMPANYING NOTES TO THE REQUIRED SUPPLEMENTARY INFORMATION

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION

SCHEDULES OF THE REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF ASSOCIATION PENSION CONTRIBUTIONS
OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM (OPERS)

LAST TEN YEARS (1)

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>
<i>Traditional Plan:</i>										
Contractually required contribution	\$ 48,543	\$ 39,452	\$ 35,494	\$ 31,989	\$ 34,302	\$ 36,212	\$ 43,861	\$ 31,306	\$ 28,316	\$ 29,018
Contributions in relation to the contractually required contribution	<u>(48,543)</u>	<u>(39,452)</u>	<u>(35,494)</u>	<u>(31,989)</u>	<u>(34,302)</u>	<u>(36,212)</u>	<u>(43,861)</u>	<u>(31,306)</u>	<u>(28,316)</u>	<u>(29,018)</u>
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Association's covered payroll	\$ 346,736	\$ 281,800	\$ 273,031	\$ 266,575	\$ 285,853	\$ 301,763	\$ 337,396	\$ 313,064	\$ 283,158	\$ 325,313
Contributions as a percentage of covered payroll	14.00%	14.00%	13.00%	12.00%	12.00%	12.00%	13.00%	10.00%	10.00%	8.92%
<i>Member Directed Plan:</i>										
Contractually required contribution	\$ 6,341	\$ 5,692	\$ 5,554	\$ 5,452	\$ 6,996					
Contributions in relation to the contractually required contribution	<u>(6,341)</u>	<u>(5,692)</u>	<u>(5,554)</u>	<u>(5,452)</u>	<u>(6,996)</u>					
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>					
Association's covered payroll	\$ 63,410	\$ 56,920	\$ 55,540	\$ 57,389	\$ 73,642					
Contributions as a percentage of covered payroll	10.00%	10.00%	10.00%	9.50%	9.50%					

(1) Information prior to 2015 was unavailable for the Member Directed Plan.

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

SEE ACCOMPANYING NOTES TO THE REQUIRED SUPPLEMENTARY INFORMATION

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION

SCHEDULES OF THE REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF THE ASSOCIATION'S PROPORTIONATE SHARE OF
THE NET OPEB LIABILITY
OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM (OPERS)

LAST THREE YEARS (1)

	2019	2018	2017
Association's proportion of the net OPEB liability	0.002331%	0.002320%	0.002420%
Association's proportionate share of the net OPEB liability	\$ 303,907	\$ 251,935	\$ 244,379
Association's covered payroll	\$ 338,720	\$ 328,571	\$ 323,964
Association's proportionate share of the net OPEB liability as a percentage of its covered payroll	89.72%	76.68%	75.43%
Plan fiduciary net position as a percentage of the total OPEB liability	46.33%	54.14%	54.05%

(1) Information prior to 2017 was unavailable.

Schedule is intended to show information for 10 years.

Additional years will be displayed as they become available.

Amounts presented for each year were determined as of the Association's measurement date which is the prior year-end

SEE ACCOMPANYING NOTES TO THE REQUIRED SUPPLEMENTARY INFORMATION

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION

SCHEDULES OF THE REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF ASSOCIATION OPEB CONTRIBUTIONS
OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM (OPERS)

LAST TEN YEARS

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>
Contractually required contribution	\$ 2,537	\$ 2,277	\$ 4,951	\$ 7,913	\$ 6,157	\$ 6,116	\$ 3,174	\$ 12,567	\$ 11,659	\$ 13,598
Contributions in relation to the contractually required contribution	<u>(2,537)</u>	<u>(2,277)</u>	<u>(4,951)</u>	<u>(7,913)</u>	<u>(6,157)</u>	<u>(6,116)</u>	<u>(3,174)</u>	<u>(12,567)</u>	<u>(11,659)</u>	<u>(13,598)</u>
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Association's covered payroll	\$ 410,146	\$ 338,720	\$ 328,571	\$ 323,964	\$ 359,495	\$ 301,763	\$ 337,396	\$ 313,064	\$ 283,158	\$ 325,313
Contributions as a percentage of covered payroll	0.62%	0.67%	1.51%	2.44%	1.71%	2.03%	0.94%	4.01%	4.12%	4.18%

SEE ACCOMPANYING NOTES TO THE REQUIRED SUPPLEMENTARY INFORMATION

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION

**NOTES TO THE REQUIRED SUPPLEMENTARY INFORMATION
FOR THE YEAR ENDED DECEMBER 31, 2019**

PENSION

OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM (OPERS)

Changes in benefit terms : There were no changes in benefit terms from the amounts reported for 2014-2019.

Changes in assumptions : There were no changes in methods and assumptions used in the calculation of actuarial determined contributions for 2014-2016. For 2017, the following were the most significant changes of assumptions that affected the total pension liability since the prior measurement date: (a) reduction in the actuarially assumed rate of return from 8.00% down to 7.50%, (b) for defined benefit investments, decreasing the wage inflation from 3.75% to 3.25% and (c) changing the future salary increases from a range of 4.25%-10.05% to 3.25%-10.75%. There were no changes in assumptions for 2018. For 2019 the following were the most significant changes of assumptions that affected the total pension liability since the prior measurement date: (a) the assumed rate of return and discount rate were reduced from 7.50% down to 7.20%.

OTHER POSTEMPLOYMENT BENEFITS (OPEB)

OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM (OPERS)

Changes in benefit terms : There were no changes in benefit terms from the amounts reported for 2017-2019.

Changes in assumptions : There were no changes in methods and assumptions used in the calculation of actuarial determined contributions for 2017. For 2018, the following were the most significant changes of assumptions that affected the total OPEB liability since the prior measurement date: (a) reduction in the actuarially assumed rate of return from 4.23% down to 3.85%. For 2019, the following were the most significant changes of assumptions that affect the total OPEB liability since the prior measurement date: (a) the discount rate was increased from 3.85% up to 3.96%, (b) The investment rate of return was decreased from 6.50% percent down to 6.00%, (c) the municipal bond rate was increased from 3.31% up to 3.71% and (d) the health care cost trend rate was increased from 7.50%, initial/3.25%, ultimate in 2028 up to 10.00%, initial/3.25%, ultimate in 2029.

STATISTICAL SECTION

Miami Valley Risk Management Association
Statistical Section
December 31, 2019

This section of Miami Valley Risk Management's comprehensive annual financial report provides users with additional historical perspective, context, and detail to assist in using the information in the financial statements, notes to financial statements and required supplementary information to understand and assess the Association's overall financial health.

<u>Contents</u>	<u>Page</u>
Financial Trends Information (Schedules 1, 2 & 3)	51 - 53
These schedules contain trend information to help the reader understand and assess how the Association's financial position has changed over time.	
Revenue Capacity Information (Schedule 4)	54
This schedule contains information to help the reader understand the sources of the Association's revenues.	
Demographic and Economic Information (Schedules 5-27)	55 - 81
These schedules contain information related to the demographics of the region as well as the Association's members' exposures, which determine each member's annual contribution. These schedules are intended to assist the reader in understanding the changing environment of the Association and to provide comparisons among its members.	
Operating Information (Schedule 28)	82
This schedule contains information about the Association's operations and resources to help the reader understand how the information in the financial report relates to the services the Association provides and the activities it performs.	

Note: The Association has no debt, and therefore, provides no schedules related to debt.

Sources: Unless otherwise noted, the information in these schedules is derived from the audited annual financial statements for the relevant year.

Miami Valley Risk Management Association
 Net Position by Component
 Last Ten Years

Schedule 1

Year Ended December 31

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Invested in capital assets	\$ 10,299	\$ 9,621	\$ 19,641	\$ 17,192	\$ 11,747	\$ 8,756	\$ 6,395	\$ 2,839	\$ 3,890	\$ 5,051
Unrestricted	11,504,656	12,359,793	12,783,463	11,216,080	11,275,275	10,575,137	11,187,936	10,274,966	8,382,738	10,325,620
Total Net Position	<u>\$ 11,514,955</u>	<u>\$ 12,369,414</u>	<u>\$ 12,803,104</u>	<u>\$ 11,233,272</u>	<u>\$ 11,287,022</u>	<u>\$ 10,583,893</u>	<u>\$ 11,194,331</u>	<u>\$ 10,277,805</u>	<u>\$ 8,386,628</u>	<u>\$ 10,330,671</u>

Note: Accounting standards require that net position be reported in three components in the financial statements: invested in capital assets net of related debt, restricted and unrestricted. The Association does not have any assets "restricted" by outside parties or by law through constitutional provisions or enabling legislation. The "unrestricted" assets are assets that do not meet the definition of "restricted" or "invested in capital assets net of related debt."

Source: Audited Financial Statements for the years 2010-2019

Miami Valley Risk Management Association
Changes in Net Position
Last Ten Years

Schedule 2

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
EXPENSES:										
Claim expenses										
Incurring claims and claim adjustment expenses	\$ 1,195,748	\$ 2,080,913	\$ 1,182,409	\$ 1,010,964	\$ 1,892,603	\$ 651,209	\$ 1,890,342	\$ 1,984,627	\$ 1,298,832	\$ 1,011,172
Reinsurance/insurance premiums	753,793	761,789	807,647	870,249	878,317	885,468	864,407	947,406	988,162	1,125,633
Members' dividends	1,901,982	-	1,276,154	3,254,320	1,325,803	2,389,527	51,712	1,636,299	3,035,305	98,303
Total claim expense	3,851,523	2,842,702	3,266,210	5,135,533	4,096,723	3,926,204	2,806,461	4,568,332	5,322,299	2,235,108
Total general and administrative expenses	677,469	691,571	733,355	751,099	757,719	758,871	826,140	835,464	881,436	987,998
Total operating expenses	4,528,992	3,534,273	3,999,565	5,886,632	4,854,442	4,685,075	3,632,601	5,403,796	6,203,735	3,223,106
REVENUES:										
Operating revenues										
Members' contributions	3,947,859	4,027,567	3,965,398	4,139,860	4,173,334	4,208,593	4,211,279	4,039,646	4,124,647	4,215,860
Claims deductibles	176,920	229,751	169,168	195,194	251,166	214,597	188,899	229,033	205,147	197,056
Other	18,700	26,620	36,482	24,862	37,437	39,109	93,488	35,770	48,670	111,011
Total operating revenues	4,143,479	4,283,938	4,171,048	4,359,916	4,461,937	4,462,299	4,493,666	4,304,449	4,378,464	4,523,927
Non-operating revenues										
Gain/Loss on disposal of capital assets		(151)	(580)	(265)	-	166	(304)	-	-	176
Interest income	41,066	104,281	75,136	55,996	119,888	151,016	201,828	245,259	245,073	265,620
Unrealized gain/loss on investment	74,837	664	187,651	(98,847)	326,367	(389,946)	(452,151)	(62,438)	(71,551)	377,426
Total non-operating revenues	115,903	104,794	262,207	(43,116)	446,255	(238,764)	(250,627)	182,821	173,522	643,222
Total revenues	4,259,382	4,388,732	4,433,255	4,316,800	4,908,192	4,223,535	4,243,039	4,487,270	4,551,986	5,167,149
CHANGES IN NET POSITION:										
Increase (decrease) in net position	(269,610)	854,459	433,690	(1,569,832)	53,750	(461,540)	610,438	(916,526)	(1,651,749)	1,944,043

Source: Audited Financial Statements for the years 2010-2019

Loss Development Report-Comparison of Dollar Losses and Claims Counts by Loss Year - As of December 31, 2019

Last 10 Years

Loss Experience After:	12 Months	24 Months	36 Months	48 Months	60 Months	72 Months	84 Months	96 Months	108 Months	120 Months		
Loss Year/Members' Loss Fund Contribution	Total amount incurred followed by number of claims/open claims (1)										Balance in Loss Fund 12/31/19	Paid to Date 12/31/19
Loss Year 22 12/31/09-12/31/10 20 Member Cities	\$519,228 (331/40)	\$689,893 (363/7)	\$1,141,553 (366/6)	\$1,391,993 (367/4)	\$1,481,047 (368/4)	\$1,587,679 (368/0)	\$1,587,679 (368/0)	\$1,587,679 (368/0)	\$1,587,679 (368/0)	\$1,587,679 (368/0)	\$0 - LY 22 Closed	\$1,587,679
Loss Year 23 12/31/10-12/31/11 20 Member Cities	\$2,908,228 (416/51)	\$2,657,347 (439/4)	\$2,422,620 (443/6)	\$2,422,096 (443/3)	\$2,474,416 (444/3)	\$2,518,318 (444/2)	\$2,504,348 (444/0)	\$2,504,348 (444/0)	\$2,504,348 (444/0)		\$0 - LY 23 Closed	\$2,504,348
Loss Year 24 12/31/11-12/31/12 20 Member Cities	\$664,220 (337/57)	\$810,718 (366/3)	\$889,541 (368/3)	\$964,041 (368/2)	\$1,003,672 (368/2)	\$1,139,987 (368/0)	\$1,139,987 (368/0)	\$1,139,987 (368/0)			\$0 - LY 24 Closed	\$1,139,987
Loss Year 25 12/31/12-12/31/13 20 Member Cities	\$729,736 (360/43)	\$952,440 (371/9)	\$1,180,592 (374/6)	\$1,421,688 (374/5)	\$1,435,920 (375/2)	\$1,428,162 (375/0)	\$1,428,162 (375/0)				\$0 - LY 25 Closed	\$1,428,162
Loss Year 26 12/31/13-12/31/14 20 Member Cities	\$1,480,995 (395/46)	\$1,626,822 (421/8)	\$3,431,215 (422/3)	\$3,419,889 (422/2)	\$3,509,889 (422/2)	\$4,027,566 (422/1)					\$1,079,616	\$2,010,700
Loss Year 27 12/31/14-12/31/15 20 Member Cities	\$626,239 (344/53)	\$947,321 (364/7)	\$1,018,542 (369/3)	\$1,049,615 (369/1)	\$1,059,615 (369/1)						\$1,879,984	\$1,047,759
Loss Year 28 12/31/15-12/31/16 20 Member Cities	\$577,160 (349/56)	\$998,670 (386/11)	\$1,090,294 (389/8)	\$1,143,625 (390/5)							\$1,866,298	\$1,063,468
Loss Year 29 12/31/16-12/31/17 20 Member Cities	\$963,801 (352/74)	\$1,113,265 (374/10)	\$1,237,785 (376/4)								\$1,450,793	\$1,178,570
Loss Year 30 12/31/17-12/31/18 20 Member Cities	\$972,843 (438/78)	\$973,592 (413/9)									\$1,749,086	\$865,167
Loss Year 31 12/31/18-12/31/19 20 Member Cities	\$787,282 (279/46)										\$2,013,590	\$400,248

(1) Incurred losses include both paid claims (including loss adjustment expenses) and all claims reserves against open claims.

Miami Valley Risk Management Association
 Annual Contributions by Member and Year
 Last Ten Years

Schedule 4

Year Ended December 31

Member	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Beavercreek	\$221,919	\$235,484	\$247,239	\$243,516	\$272,287	\$252,044	\$404,225	\$396,331	\$376,481	\$386,335
Bellbrook	\$42,485	\$43,061	\$54,946	\$74,118	\$77,140	\$69,985	\$58,945	\$43,586	\$41,654	\$41,772
Blue Ash	\$262,775	\$227,704	\$240,172	\$256,961	\$274,384	\$242,578	\$270,782	\$305,552	\$272,335	\$273,513
Centerville	\$239,595	\$247,794	\$192,074	\$198,140	\$182,291	\$183,871	\$194,763	\$165,657	\$163,297	\$172,091
Englewood	\$231,831	\$205,979	\$145,508	\$157,223	\$142,257	\$143,500	\$122,470	\$110,777	\$121,263	\$121,449
Indian Hill	\$84,708	\$98,718	\$116,972	\$114,673	\$135,918	\$124,962	\$102,159	\$96,127	\$92,846	\$97,660
Kettering	\$513,606	\$480,720	\$488,029	\$527,445	\$569,468	\$504,942	\$510,029	\$483,326	\$482,101	\$531,091
Madeira	\$47,158	\$47,529	\$50,156	\$51,720	\$37,293	\$37,718	\$35,798	\$43,778	\$53,754	\$65,887
Mason	\$284,894	\$314,081	\$316,748	\$358,149	\$346,946	\$304,519	\$252,994	\$258,915	\$297,685	\$314,490
Miamisburg	\$188,032	\$174,104	\$204,148	\$232,959	\$214,458	\$227,484	\$248,201	\$218,238	\$234,983	\$267,148
Montgomery	\$105,152	\$116,047	\$123,881	\$131,749	\$114,304	\$120,712	\$104,255	\$104,963	\$110,282	\$106,442
NAWA ¹	\$23,071	\$24,422	\$26,426	\$7,939	\$12,481	\$11,835	\$11,018	\$7,807	\$7,630	\$7,999
Piqua	\$315,950	\$276,213	\$321,935	\$308,575	\$370,336	\$342,528	\$312,389	\$286,932	\$326,311	\$309,951
Sidney	\$262,532	\$276,769	\$274,799	\$297,323	\$275,604	\$291,276	\$267,186	\$248,446	\$268,006	\$261,609
Springdale	\$144,575	\$141,082	\$133,556	\$150,283	\$142,950	\$157,690	\$155,822	\$147,329	\$144,919	\$140,075
Tipp City	\$114,577	\$94,419	\$113,611	\$132,256	\$148,587	\$194,349	\$263,477	\$188,514	\$203,316	\$234,869
Troy	\$233,605	\$248,487	\$253,633	\$271,031	\$272,050	\$276,511	\$304,759	\$288,345	\$282,197	\$313,352
Vandalia	\$182,625	\$185,520	\$210,005	\$213,809	\$208,679	\$186,839	\$165,571	\$181,551	\$163,633	\$184,439
West Carrollton	\$117,440	\$99,912	\$87,456	\$104,785	\$104,806	\$149,097	\$152,266	\$114,605	\$121,320	\$106,134
Wilmington	\$303,332	\$265,297	\$229,142	\$230,042	\$237,165	\$257,999	\$199,029	\$204,166	\$180,841	\$187,724
Wyoming	\$107,990	\$144,226	\$144,962	\$137,163	\$123,930	\$93,154	\$99,813	\$119,701	\$134,793	\$81,830
Total	\$4,027,852	\$3,947,568	\$3,975,398	\$4,199,859	\$4,263,334	\$4,173,593	\$4,235,951	\$4,014,646	\$4,079,647	\$4,205,860

Note 1: Beginning in 2007, NAWA, a joint venture water authority shared by Tipp City and Vandalia, was included as a separate entity for the purpose of calculating member contributions.

Source: Association's internal records

Demographic Statistics

Last 10 Years

MVRMA is a consortium of municipalities located in southwest Ohio. Core cities for the region are Dayton and Cincinnati. Information for the Dayton MSA and the Cincinnati MSA provides an indication of the demographic and economic condition of the region.

DAYTON MSA	<u>2019</u>	<u>2018</u>
Population:	*	806,548
Total Personal Income (thousands \$):	*	\$38,461,497
Per Capita Personal Income:	*	\$47,687
GDP (million \$):	*	\$43,254,892
Wage and Salary Jobs:	*	401,009
Unemployment Rate:	3.60%	4.60%

Ten Largest Employers (employee count and %):

	Count	%		Count	%
Wright Patterson Air Force	30,000		Wright Patterson Air Force	28,000	6.98%
Premier Health	12,425		Premier Health	12,138	3.03%
Kettering Health Network	9,319		Kettering Health Network	8,909	2.22%
Montgomery County	4,284		Kroger Co.	4,855	1.21%
Kroger Co.	4,030		Montgomery County	4,366	1.09%
Miami University	3,817		Miami University	3,777	0.94%
Dayton's Children's Hospital	3,341		Sinclair Community College	3,085	0.77%
Honda of America	3,200		University of Dayton	3,028	0.76%
Sinclair Community College	3,163		Honda of America	3,000	0.75%
CareSource	3,021		LexisNexis	3,000	0.75%

CINCINNATI MSA	<u>2019</u>	<u>2018</u>
Population:	*	2,212,945
Total Personal Income (thousands \$):	*	\$119,887,654
Per Capita Personal Income:	*	\$54,176
GDP (million \$):	*	\$141,052,695
Wage and Salary Jobs:	*	1,133,931
Unemployment Rate:	3.20%	4.00%

Ten Largest Employers (employee count and %):

	Count	%		Count	%
Kroger	20,000		Kroger	21,263	1.88%
University of Cincinnati	15,000		Cincinnati Children's Hospital	15,429	1.36%
Cincinnati Children's Hospital	12,000		Cincinnati/Northern KY Airport	12,682	1.12%
The Procter & Gamble Company	12,000		TriHealth	12,000	1.06%
TriHealth, Inc.	10,000		UC Health	11,241	0.99%
UC Health	8,000		University of Cincinnati	10,551	0.93%
GE Transportation	7,500		GE Transportation	10,500	0.93%
St. Elizabeth Healthcare	7,000		Mercy Health	10,422	0.92%
Fifth Third Bank	7,000		Procter and Gamble	10,000	0.88%

* This information is not yet available

Miami Valley Risk Management Association
Demographic Statistics
Last 10 Years

Schedule 5

DAYTON MSA	2017	2016
Population:	803,416	800,683
Total Personal Income (thousands \$):	\$36,722,900	\$34,966,720
Per Capita Personal Income:	\$45,708	\$43,671
GDP (thousands \$):	\$41,110	\$394,216
Wage and Salary Jobs:	398,960	400,572
Unemployment Rate:	4.20%	4.5%

Ten Largest Employers (employee count and %):

	Count	%		Count	%
Wright Patterson Air Force Base	27,585	7.08%	Wright Patterson Air Force Base	27,585	7.20%
Premier Health Partners	13,858	3.56%	Premier Health Partners	13,500	3.52%
Kettering Health Network	8,415	2.16%	Kettering Health Network	8,288	2.16%
Kroger Co.	5,151	1.32%	Montgomery County	4,389	1.14%
Montgomery County	4,383	1.13%	Kroger Co.	4,267	1.11%
Miamia University	3,778	0.97%	Wright State University	3,715	0.97%
Honda of America Manufacturing	3,300	0.85%	Miami University	3,685	0.96%
Sinclair Community College	3,094	0.79%	Sinclair Community College	3,206	0.84%
LexisNexis	3,000	0.77%	LexisNexis	3,000	0.78%
University of Dayton	2,964	0.76%	Honda of America	2,850	0.74%

CINCINNATI MSA	2017	2016
Population:	2,179,082	2,165,139
Total Personal Income (thousands \$):	\$112,301,900	\$105,372,017
Per Capita Personal Income:	\$51,536	\$48,668
GDP (thousands \$):	\$138,034	\$132,010
Wage and Salary Jobs:	1,111,262	1,096,885
Unemployment Rate:	3.8	3.8%

Ten Largest Employers (employee count and %):

	Count	%		Count	%
Kroger	20,000	5.13%	Kroger Co.	20,000	5.22%
University of Cincinnati	15,000	3.85%	University of Cincinnati	15,000	3.91%
Cincinnati Children's Hospital	12,000	3.08%	Cincinnati Children's Hospital	12,000	3.13%
Proctor & Gamble	12,000	3.08%	Proctor & Gamble	12,000	3.13%
TriHealth Inc.	10,000	2.57%	TriHealth Inc.	10,000	2.61%
UC Health	8,000	2.05%	UC Health	8,000	2.09%
GE Transportation	7,500	1.93%	GE Transportation	7,500	1.96%
St. Elizabeth Healthcare	7,000	1.80%	St. Elizabeth Healthcare	7,000	1.83%
Fifth Third Bank	7,000	1.80%	Fifth Third Bank	7,000	1.83%

Miami Valley Risk Management Association
 Demographic Statistics
 Last 10 Years

Schedule 5

DAYTON MSA

	2015	2014
Population:	800,909	800,836
Total Personal Income (thousands \$):	\$34,204,726	33,143,730
Per Capita Personal Income:	\$42,707	41,386
GDP (thousands \$):	\$39,206	38,178,000
Wage and Salary Jobs:	389,565	383,380
Unemployment Rate:	4.5%	5.8%

Ten Largest Employers (employee count and %):

	Count	%		Count	%
Wright Patterson Air Force Base	26,270	6.74%	Wright Patterson Air Force Base	27,500	7.17%
Premier Health Partners	13,500	3.47%	Premier Health Partners	13,500	3.52%
Kettering Health Network	8,259	2.12%	Kettering Health Network	7,115	1.86%
Montgomery County	4,343	1.11%	Kroger Company	5,582	1.46%
Kroger Co.	4,335	1.11%	Montgomery County	4,328	1.13%
Miami University	3,655	0.94%	Miami University	3,564	0.93%
LexisNexis	3,000	0.77%	Wright State University	3,303	0.86%
Honda of America	2,800	0.72%	LexisNexis	3,200	0.83%
Wright State University	2,469	0.63%	Sinclair Community College	2,601	0.68%
University of Dayton	2,453	0.63%	Honda of America	2,600	0.68%

CINCINNATI MSA

	2015	2014
Population:	2,157,719	2,149,449
Total Personal Income (thousands \$):	\$101,960,460	\$98,613,244
Per Capita Personal Income:	\$47,254	\$45,878
GDP (thousands \$):	\$127,057	121,407,000
Wage and Salary Jobs:	1,077,899	\$1,507,998
Unemployment Rate:	4.3%	5.4%

Ten Largest Employers (employee count and %):

	Count	%		Count	%
Kroger Co.	21,646	2.01%	Kroger Company	17,000	1.13%
University of Cincinnati	16,016	1.49%	University of Cincinnati	15,162	1.01%
Cincinnati Children's Hospital	14,944	1.39%	Procter & Gamble Co.	14,000	0.93%
TriHealth Inc	11,800	1.09%	Cincinnati Children's Hospital	12,057	0.80%
Procter & Gambe	11,000	1.02%	TriHealth Inc.	8,898	0.59%
UC Health	10,000	0.93%	Mercy Health Partners	8,550	0.57%
GE Aviation	7,800	0.72%	Archdiocese of Cincinnati	8,000	0.53%
Mercy Health - Cincinnati	7,500	0.70%	GE Aviation	7,300	0.48%
St. Elizabeth Healthcare	7,479	0.69%	Wal-Mart Stores	6,932	0.46%
Fifth Third Bancorp	6,882	0.64%	St. Elizabeth Healthcare	6,839	0.45%

Demographic Statistics

Last 10 Years

DAYTON MSA

	<u>2013</u>	<u>2012</u>
Population:	802,489	803,185
Total Personal Income (thousands \$):	\$32,382,822	\$31,933,183
Per Capita Personal Income:	\$40,353	\$39,758
GDP (thousands \$):	\$37,534,000	\$37,211,000
Wage and Salary Jobs:	378,185	378,169
Unemployment Rate:	7.8%	7.8%

Ten Largest Employers (employee count and %):

	Count	%		Count	%
Wright Patterson Air Force Base	29,000	7.67%	Wright Patterson Air Force Base	27,400	7.25%
Premier Health Partners	14,765	3.90%	Premier Health Partners	14,548	3.85%
Kettering Health Network	7,000	1.85%	Kettering Health Network	5,496	1.45%
Kroger Company	4,950	1.31%	Kroger Co.	4,950	1.31%
Montgomery County	3,884	1.03%	Montgomery County	4,363	1.15%
LexisNexis	3,600	0.95%	LexisNexis	3,400	0.90%
Miami University	3,313	0.88%	Sinclair Community College	2,726	0.72%
Sinclair College	2,613	0.69%	Dayton City Schools	2,574	0.68%
Honda of America	2,500	0.66%	AK Steel Holding Corp.	2,400	0.63%
Wright State University	2,403	0.64%	Honda of America Manufacturing	2,400	0.63%

CINCINNATI MSA

	<u>2013</u>	<u>2012</u>
Population:	2,150,524	2,128,603
Total Personal Income (thousands \$):	\$93,882,332	92,431,519
Per Capita Personal Income:	\$43,923	\$43,454
GDP (thousands \$):	\$119,090,000	\$115,124,000
Wage and Salary Jobs:	\$1,040,070	1,027,637
Unemployment Rate:	7.2%	7.4%

Ten Largest Employers (employee count and %):

	Count	%		Count	%
Kroger Company	17,000	1.63%	Kroger Company	20,646	2.01%
University of Cincinnati	15,162	1.46%	University of Cincinnati	15,329	1.49%
Procter & Gamble Co.	14,000	1.35%	Cincinnati Children's Hospital	12,564	1.22%
Cincinnati Children's Hospital	12,057	1.16%	Procter & Gamble Co.	12,000	1.17%
TriHealth Inc.	8,898	0.86%	TriHealth Inc.	10,400	1.01%
Mercy Health Partners	8,550	0.82%	Mercy Health Partners	8,940	0.87%
Archdiocese of Cincinnati	8,000	0.77%	UC Health	8,670	0.84%
GE Aviation	7,300	0.70%	GE Aviation	7,500	0.73%
Wal-Mart Stores	6,932	0.67%	St. Elizabeth Healthcare	7,251	0.71%
St. Elizabeth Healthcare	6,839	0.66%	Fifth Third Bancorp	7,180	0.70%

Miami Valley Risk Management Association
 Demographic Statistics
 Last 10 Years

Schedule 5

DAYTON MSA	2011	2010
Population:	802,970	801,899
Total Personal Income (thousands \$):	\$31,082,885	\$29,319,944
Per Capita Personal Income:	\$38,710	\$36,563
GDP (thousands \$):	\$35,776,000	\$34,271,000
Wage and Salary Jobs:	374,633	369,829
Unemployment Rate:	9.4%	11.0%

Ten Largest Employers (employee count and %):

	Count	%		Count	%
Wright Patterson Air Force Base	27,400	7.31%	Wright Patterson Air Force Base	25,000	6.76%
Premier Health Partners	14,135	3.77%	Premier Health Partners	14,070	3.80%
Kettering Health Network	5,029	1.34%	Kettering Health Network	5,452	1.47%
Montgomery County	4,559	1.22%	Kroger Co.	4,800	1.30%
Kroger Co.	4,100	1.09%	Montgomery County	4,595	1.24%
LexisNexis	3,100	0.83%	LexisNexis	3,000	0.81%
Sinclair Community College	2,726	0.73%	Sinclair Community College	2,720	0.74%
Dayton Public Schools	2,574	0.69%	Honda of America Manufacturing	2,710	0.73%
Wright State University	2,417	0.65%	Dayton Public Schools	2,574	0.70%
AK Steel Holding Corp.	2,400	0.64%	AK Steel Corp.	2,400	0.65%
Honda of America Manufacturing	2,400	0.64%			

CINCINNATI MSA	2011	2010
Population:	2,138,038	2,132,415
Total Personal Income (thousands \$):	88,297,133	82,796,790
Per Capita Personal Income:	\$40,918	\$39,105
GDP (thousands \$):	\$108,509,000	\$104,538,000
Wage and Salary Jobs:	1,013,214	1,005,942
Unemployment Rate:	8.9%	9.9%

Ten Largest Employers (employee count and %):

	Count	%		Count	%
Kroger Co.	19,000	1.88%	Kroger Co.	17,000	1.69%
University of Cincinnati	15,374	1.52%	University of Cincinnati	15,162	1.51%
Procter & Gamble Co.	12,500	1.23%	Procter & Gamble	14,000	1.39%
Cincinnati Children's Hospital	12,332	1.22%	Cincinnati Children's Hospital	12,057	1.20%
TriHealth Inc.	10,197	1.01%	TriHealth Inc.	9,898	0.98%
Mercy Health	8,817	0.87%	Mercy Health Partners	8,550	0.85%
Archdiocese of Cincinnati	7,500	0.74%	Archdiocese of Cincinnati	8,000	0.80%
GE Aviation	7,400	0.73%	GE Aviation	7,300	0.73%
St. Elizabeth Healthcare	7,300	0.72%	Walmart Stores	6,932	0.69%
Fifth Third Bankcorp	7,063	0.70%	St. Elizabeth Healthcare	6,839	0.68%

Sources: US Census Bureau, Bureau of Economic Analysis, Ohio Dept. of Jobs and Family Services, The Dayton Business Journal, REDI Cincinnati, and The City of Blue Ash Economic Development

**MVRMA POOL CONTRIBUTION FACTORS -- 2019 / Loss Year 31
2019 MVRMA Budget**

Member City	2010 Population	# Sworn FT Police	# Other Full-Time	# Titled Vehicles	Insurable Property Values	NOE	Avg. Annual Adjusted Losses	Pool Contribution Factors
Beavercreek	45,193	49	95	126	\$39,267,907	\$17,233,509	\$133,278	9.17335%
Bellbrook	6,943	12	21	30	\$14,939,089	\$5,262,563	\$1,260	0.98718%
Blue Ash	12,114	34	107	119	\$118,393,102	\$36,981,816	\$65,514	6.45453%
Centerville	23,999	41	81	94	\$38,265,500	\$20,506,479	\$23,835	4.07676%
Englewood	13,465	20	55	62	\$41,057,826	\$14,106,568	\$21,799	2.87117%
Indian Hill	5,785	20	56	66	\$29,273,224	\$15,671,784	\$13,894	2.31017%
Kettering	56,163	80	322	243	\$209,567,322	\$77,636,512	\$76,630	12.53937%
Madeira	8,726	13	15	17	\$5,412,265	\$4,645,128	\$18,404	1.50910%
Mason	30,712	45	151	164	\$143,727,091	\$47,197,419	\$46,567	7.41724%
Miamisburg	20,181	35	112	107	\$71,138,218	\$23,148,846	\$74,103	6.32229%
Montgomery	10,251	22	43	51	\$27,647,615	\$14,169,080	\$20,360	2.52031%
NAWA	-	0	4	2	\$15,229,675	\$1,269,145	\$0	0.18353%
Piqua	20,522	34	161	160	\$144,885,171	\$56,850,108	\$50,248	7.31067%
Sidney	21,229	38	149	147	\$88,091,655	\$27,312,360	\$50,753	6.18524%
Springdale	11,223	32	79	69	\$42,083,153	\$20,995,756	\$20,837	3.31417%
Tipp City	9,689	19	48	79	\$40,172,980	\$26,395,734	\$88,510	5.56815%
Troy	25,058	43	144	146	\$104,911,885	\$32,223,154	\$72,270	7.40660%
Vandalia	15,246	28	98	112	\$63,028,519	\$24,142,716	\$31,795	4.35881%
West Carrollton	13,143	21	42	63	\$33,595,978	\$12,941,859	\$16,133	2.51105%
Wilmington	12,520	21	118	131	\$81,058,086	\$23,420,103	\$46,241	5.04637%
Wyoming	8,428	22	26	37	\$35,866,497	\$9,860,142	\$11,630	1.93394%
MVRMA Totals	370,590	629	1927	2025	\$1,387,612,758	\$511,970,781	\$884,061	100.00000%

Notes:

- The data is as of 8/31/18 unless otherwise noted.
- "Avg. Annual Adjusted Losses" are calculated by averaging each member's losses for the years 2014, 2015, 2016 & 2017.
Losses are adjusted in accordance with MVRMA's Loss Capping Policy and include both paid claims and open claim reserves.
Loss data is as of August 15, 2018
- Annually, all buildings valued in excess of \$50K, that were constructed or acquired since the previous year's on-site appraisal, are appraised.
Annually, Alliant updates the values of existing buildings using an index.
- "NOE" are calculated based upon each members' audited financial statements for the fiscal year most recently concluded. The amount has been adjusted to exclude depreciation, interest expense, and contracts for which the risk has been effectively transferred to a third party.
- A member's PCF value is determined by applying the following formula to the member's percentage share of each of the factors in the above table:

$$(3 \times \%AAAL) + (\%Population + \%FT Police + \% Other FT + \%Titled Vehicles + \% IRPRV + \%NOE)$$

Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)						Net Operating Expenditures	
	Average Annual Losses	Population	Full-Time Employees	Full-Time Sworn Police	Titled Vehicles	PP/RP Values		
2009	\$708,014	348,100	2,032	645	1,933	\$914,069,611	\$396,081,790	100.00%
2010	\$847,609	348,100	2,020	642	1,926	\$959,970,282	\$396,536,755	100.00%
2011	\$768,322	348,100	1,954	632	1,920	\$1,018,755,061	\$412,734,256	100.00%
2012	\$696,716	370,590	1,888	612	1,939	\$1,047,889,231	\$407,102,311	100.00%
2013	\$763,825	370,590	1,825	611	1,976	\$1,077,777,731	\$420,844,315	100.00%
2014	\$672,451	370,590	1,822	605	1,924	\$1,107,428,574	\$411,669,530	100.00%
2015	\$724,499	370,590	1,825	622	1,904	\$1,113,247,357	\$420,164,274	100.00%
2016	\$821,474	370,590	1,927	629	2,025	\$1,387,612,758	\$511,970,781	100.00%
2017	\$835,455	370,590	1,849	634	1,987	\$1,235,194,030	\$444,428,163	100.00%
2018	\$899,008	370,590	1,938	645	2,010	\$1,318,462,345	\$477,164,152	100.00%
2019	\$884,061	370,590	1,927	629	2,025	\$1,387,612,758	\$511,970,781	100.00%

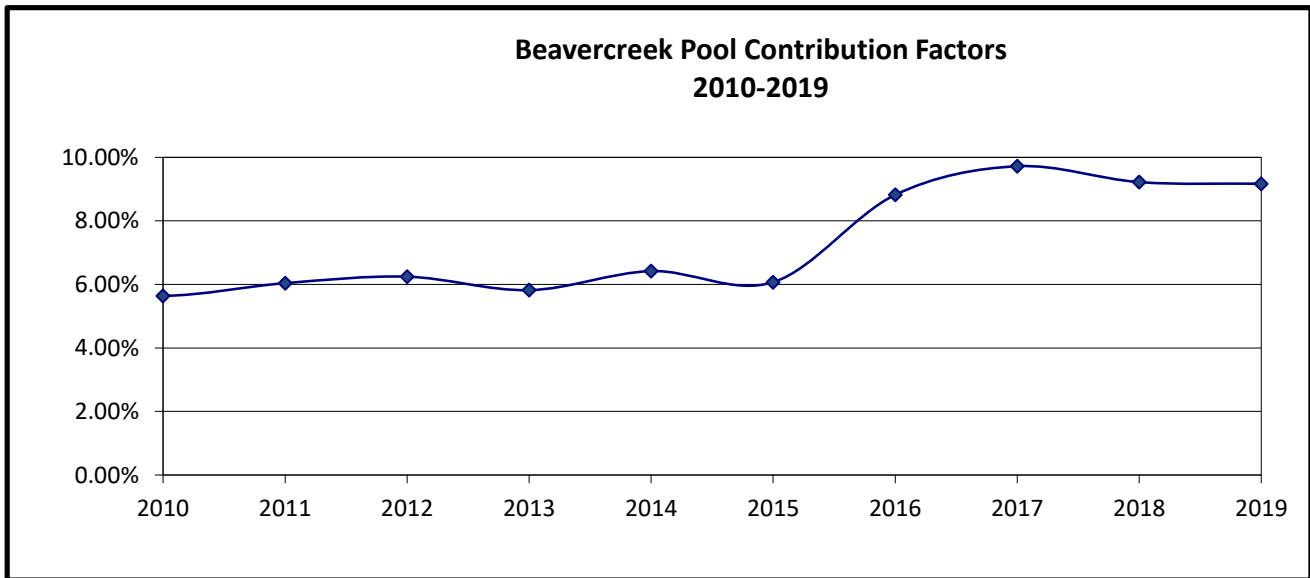
Note: In 2007, NAWA, a joint venture water authority shared by the cities of Tipp City and Vandalia, was included as a separate entity when co factors were calculated for each member of the pool. Calculating a separate contribution factor for NAWA was simply a means of separating it from the cities of Tipp City and Vandalia. The 2007-2010 totals above include the following information submitted for NAWA:

NAWA - 2010	\$8,750	0	3	0	1	\$12,601,281	\$862,624	0.54%
NAWA - 2011	\$8,750	0	4	0	1	\$12,384,113	\$1,060,718	0.57%
NAWA - 2012	\$8,750	0	4	0	1	\$13,103,413	\$897,199	0.61%
NAWA - 2013	\$0	0	4	0	1	\$13,512,950	\$922,993	0.19%
NAWA - 2014	\$2,166	0	4	0	1	\$13,010,810	\$976,491	0.29%
NAWA - 2015	\$2,166	0	4	0	1	\$13,010,810	\$952,964	0.28%
NAWA - 2016	\$2,166	0	4	0	1	\$14,740,428	\$287,066	0.26%
NAWA - 2017	\$0	0	4	0	2	\$14,832,952	\$1,096,999	0.20%
NAWA - 2018	\$0	0	4	0	2	\$14,845,395	\$1,243,673	0.19%
NAWA - 2019	\$0	0	4	0	2	\$15,229,675	\$1,269,145	0.18%

Source: Association's internal records

Membership Year	Risk Exposure							Pool Contribution Factors
	Average Annual Losses	Population	(Non-Police)		Titled Vehicles	PP/RP Values	Net Operating Expenditures	
			Full-Time Sworn Police	Full-Time Employees				
2009	\$44,102	37,984	48	84	104	\$26,337,822	\$16,759,148	5.96%
2010	\$45,982	37,984	46	82	96	\$26,848,883	\$18,056,350	5.64%
2011	\$50,220	37,984	46	88	96	\$26,944,472	\$18,189,385	6.04%
2012	\$45,434	45,193	46	88	95	\$28,306,520	\$18,979,561	6.24%
2013	\$40,172	45,193	47	86	97	\$28,996,673	\$18,579,197	5.82%
2014	\$45,937	45,193	46	86	99	\$29,362,096	\$20,582,065	6.42%
2015	\$42,018	45,193	47	85	108	\$29,769,414	\$18,828,507	6.07%
2016	\$114,445	45,193	49	84	107	\$39,267,907	\$17,233,509	8.82%
2017	\$139,604	45,193	48	86	115	\$34,916,451	\$19,362,614	9.72%
2018	\$135,665	45,193	48	95	120	\$37,187,098	\$21,017,345	9.22%
2019	\$133,278	45,193	95	49	126	\$39,267,907	\$17,233,509	9.17%

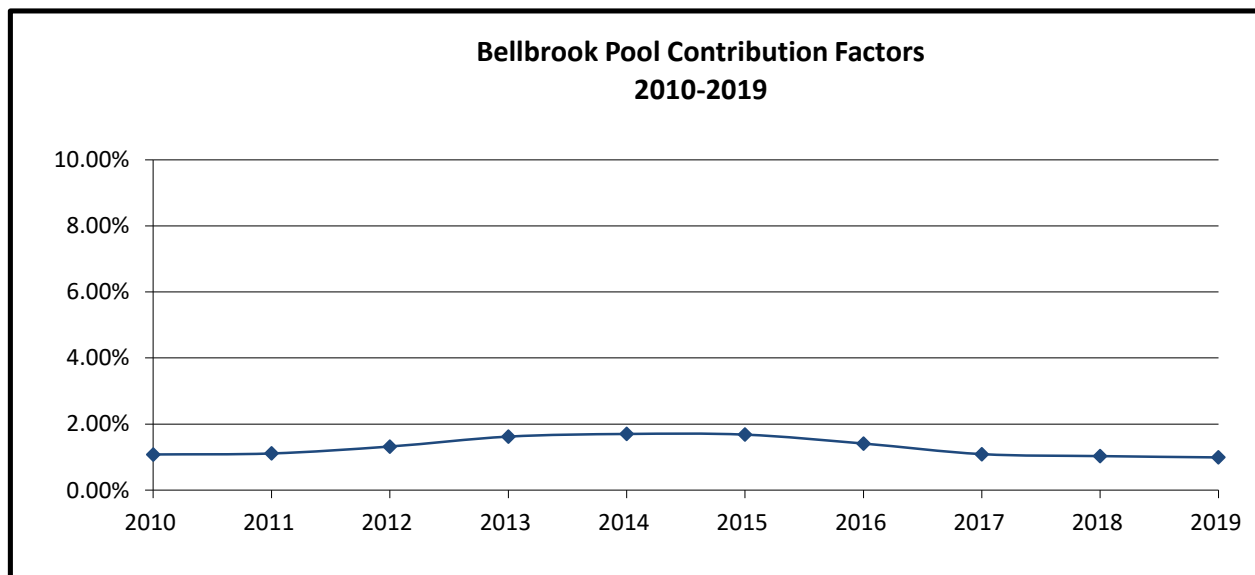
Source: Association's internal records



Last Ten Years

Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Sworn Police	Full-Time Employees	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$1,517	7,009	12	26	33	\$11,598,240	\$4,316,695	1.08%
2011	\$1,380	7,009	12	26	34	\$13,620,523	\$4,383,111	1.11%
2012	\$5,533	6,943	12	26	34	\$13,671,866	\$5,016,924	1.32%
2013	\$13,621	6,943	12	25	32	\$14,013,239	\$4,731,637	1.62%
2014	\$14,085	6,943	12	21	31	\$14,346,736	\$4,562,205	1.70%
2015	\$14,727	6,943	12	22	30	\$14,271,119	\$5,003,578	1.68%
2016	\$10,768	6,943	12	21	29	\$14,381,106	\$4,850,570	1.41%
2017	\$3,219	6,943	12	21	30	\$14,617,343	\$4,850,506	1.09%
2018	\$1,260	6,943	12	21	30	\$14,939,089	\$5,262,563	1.03%
2019	\$1,260	6,943	21	12	30	\$14,939,089	\$5,262,563	0.99%

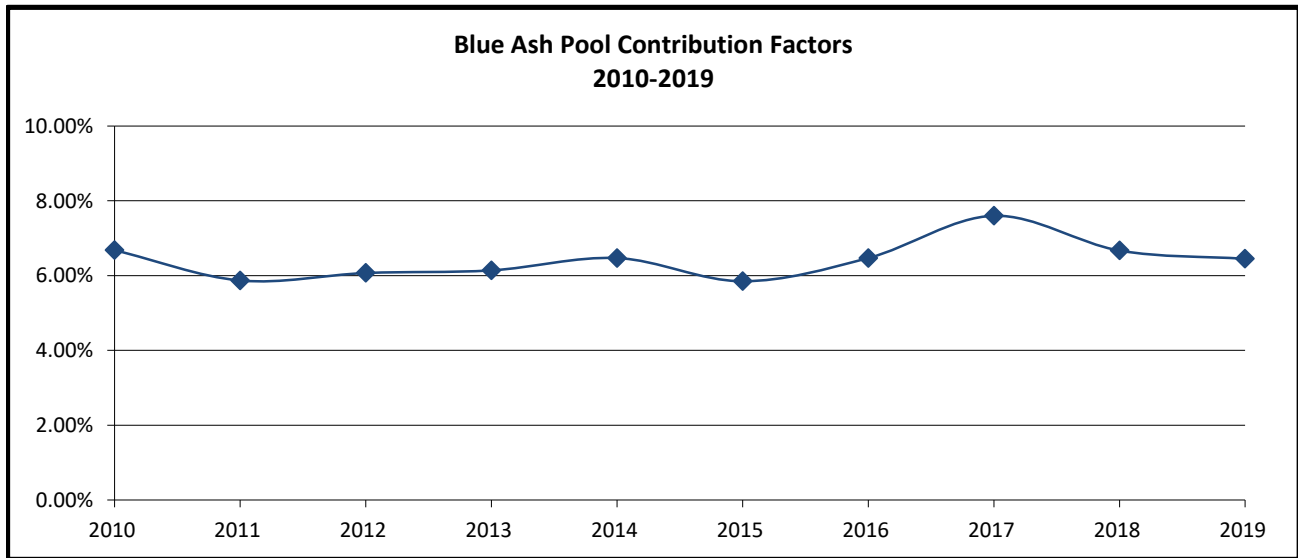
Source: Association's internal records



Last Ten Years

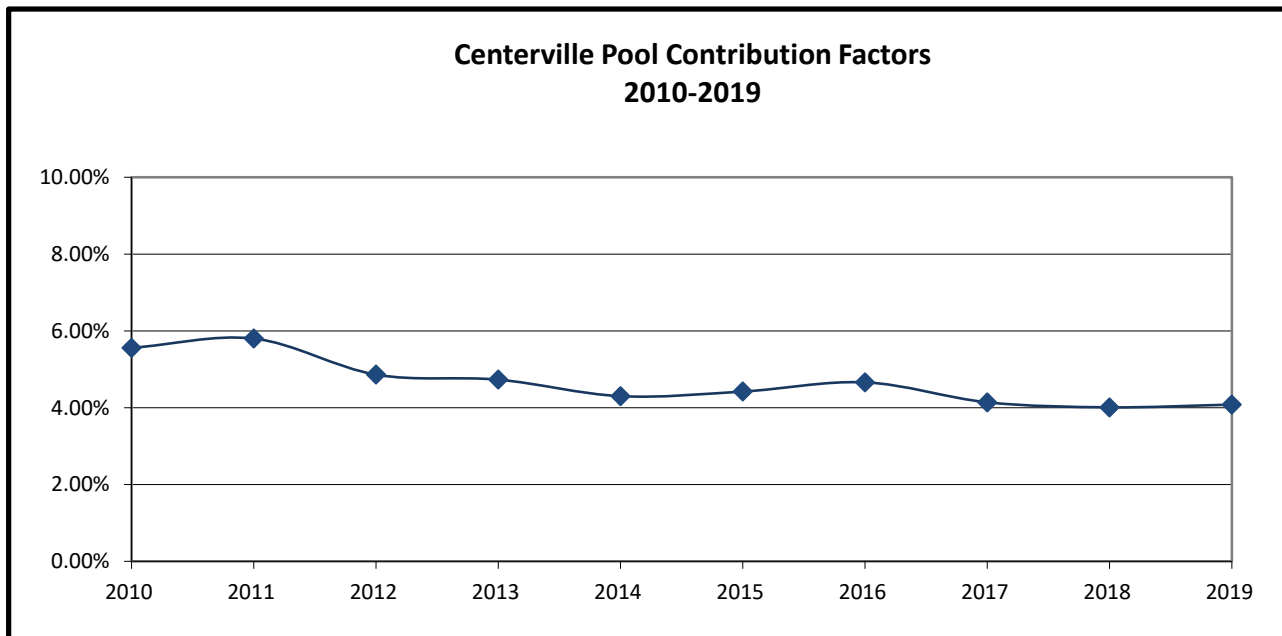
Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Sworn Police	Full-Time Employees	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$71,848	12,513	37	106	115	\$76,921,838	\$24,173,860	6.68%
2011	\$45,746	12,513	37	104	108	\$87,598,219	\$24,786,830	5.87%
2012	\$45,820	12,114	35	96	108	\$89,042,698	\$27,369,113	6.07%
2013	\$47,171	12,114	35	97	109	\$90,720,934	\$35,631,783	6.14%
2014	\$50,436	12,114	32	93	111	\$94,664,444	\$31,999,635	6.47%
2015	\$41,104	12,114	32	100	109	\$96,040,638	\$30,980,532	5.85%
2016	\$63,400	12,114	32	100	109	\$96,760,953	\$31,950,901	6.47%
2017	\$90,330	12,114	34	107	109	\$109,611,799	\$31,908,666	7.60%
2018	\$75,207	12,114	34	108	113	\$105,131,960	\$34,591,458	6.67%
2019	\$65,514	12,114	107	34	119	\$118,393,102	\$36,981,816	6.45%

Source: Association's internal records



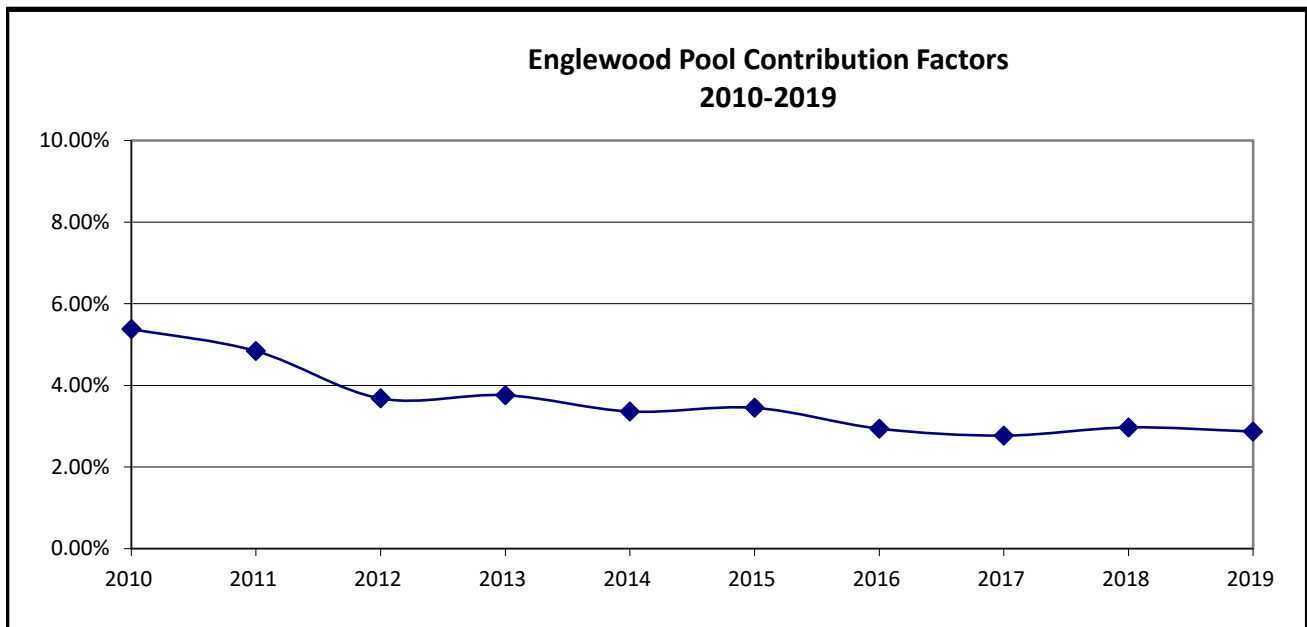
Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Sworn Police	Full-Time Employees	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$59,427	23,024	43	80	88	\$36,455,615	\$13,498,803	5.56%
2011	\$58,028	23,024	42	78	88	\$34,958,605	\$17,809,067	5.80%
2012	\$32,719	23,999	41	78	92	\$34,472,337	\$17,525,689	4.86%
2013	\$32,731	23,999	40	79	96	\$35,377,779	\$17,939,284	4.73%
2014	\$20,305	23,999	40	80	91	\$35,803,979	\$17,299,367	4.30%
2015	\$26,014	23,999	40	81	83	\$35,644,958	\$17,250,599	4.42%
2016	\$35,777	23,999	40	78	87	\$36,227,816	\$17,754,223	4.66%
2017	\$23,591	23,999	40	78	92	\$36,577,419	\$18,739,020	4.14%
2018	\$23,835	23,999	41	81	94	\$38,265,500	\$20,506,479	4.01%
2019	\$23,835	23,999	81	41	94	\$38,265,500	\$20,506,479	4.08%

Source: Association's internal records



Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Sworn Police	Full-Time Employees	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$85,660	12,235	20	44	66	\$29,955,893	\$10,779,062	5.38%
2011	\$65,485	12,235	20	45	66	\$29,697,266	\$11,102,203	4.84%
2012	\$35,031	13,465	20	46	63	\$30,371,950	\$10,553,408	3.68%
2013	\$40,326	13,465	20	45	63	\$31,084,042	\$10,576,634	3.76%
2014	\$26,466	13,465	20	49	63	\$31,999,694	\$10,713,519	3.36%
2015	\$30,371	13465	20	50	63	\$32,153,474	\$11,290,786	3.45%
2016	\$22,670	13465	20	49	62	\$32,410,510	\$11,570,295	2.94%
2017	\$19,154	13,465	20	52	62	\$32,146,447	\$11,995,274	2.77%
2018	\$21,799	13465	20	55	62	\$41,057,826	\$14,106,568	2.97%
2019	\$21,799	13465	55	20	62	\$41,057,826	\$14,106,568	2.87%

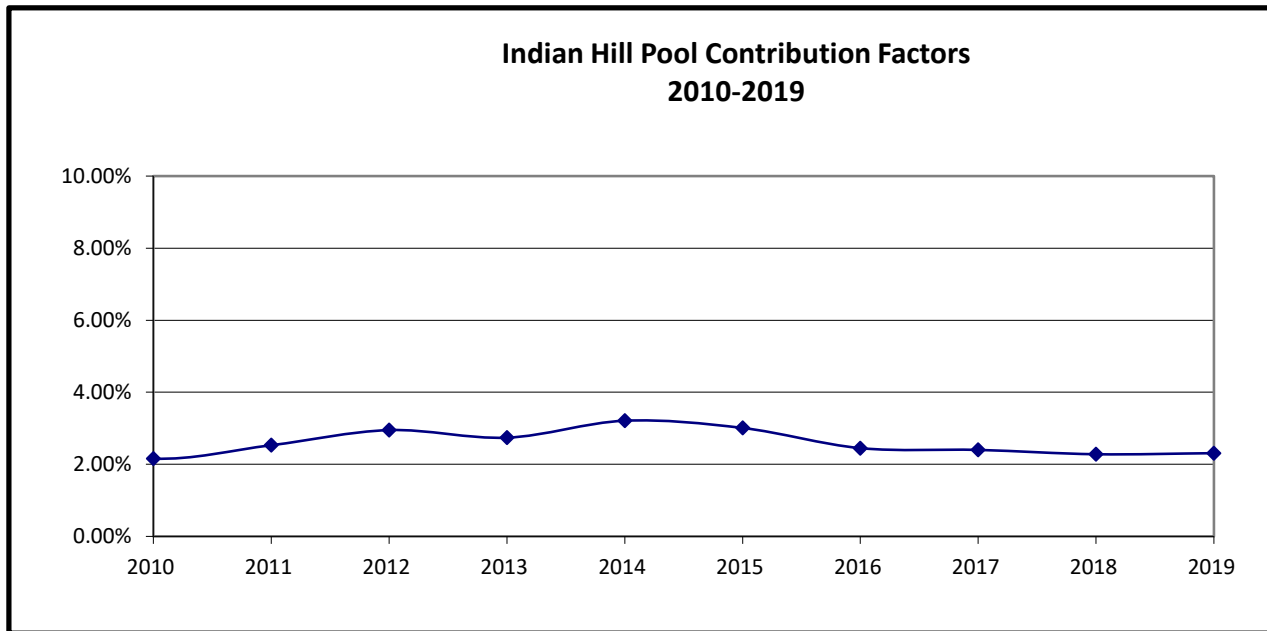
Source: Association's internal records



Last Ten Years

Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Sworn Police	Full-Time Employees	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$11,308	5,907	19	59	65	\$23,536,511	\$7,930,463	2.16%
2011	\$17,119	5,907	20	59	58	\$24,018,096	\$11,520,812	2.53%
2012	\$24,043	5,785	19	56	58	\$24,510,843	\$13,235,566	2.95%
2013	\$22,890	5,785	19	53	59	\$25,089,755	\$11,757,158	2.74%
2014	\$28,111	5,785	19	53	64	\$25,936,887	\$12,499,416	3.21%
2015	\$26,341	5,785	19	53	63	\$26,085,169	\$12,659,360	3.01%
2016	\$16,205	5,785	20	54	62	\$26,377,682	\$12,891,852	2.45%
2017	\$15,839	5,785	20	54	61	\$26,721,716	\$13,480,644	2.40%
2018	\$13,894	5,785	20	57	61	\$26,967,014	\$15,599,813	2.28%
2019	\$13,894	5,785	56	20	66	\$29,273,224	\$15,671,784	2.31%

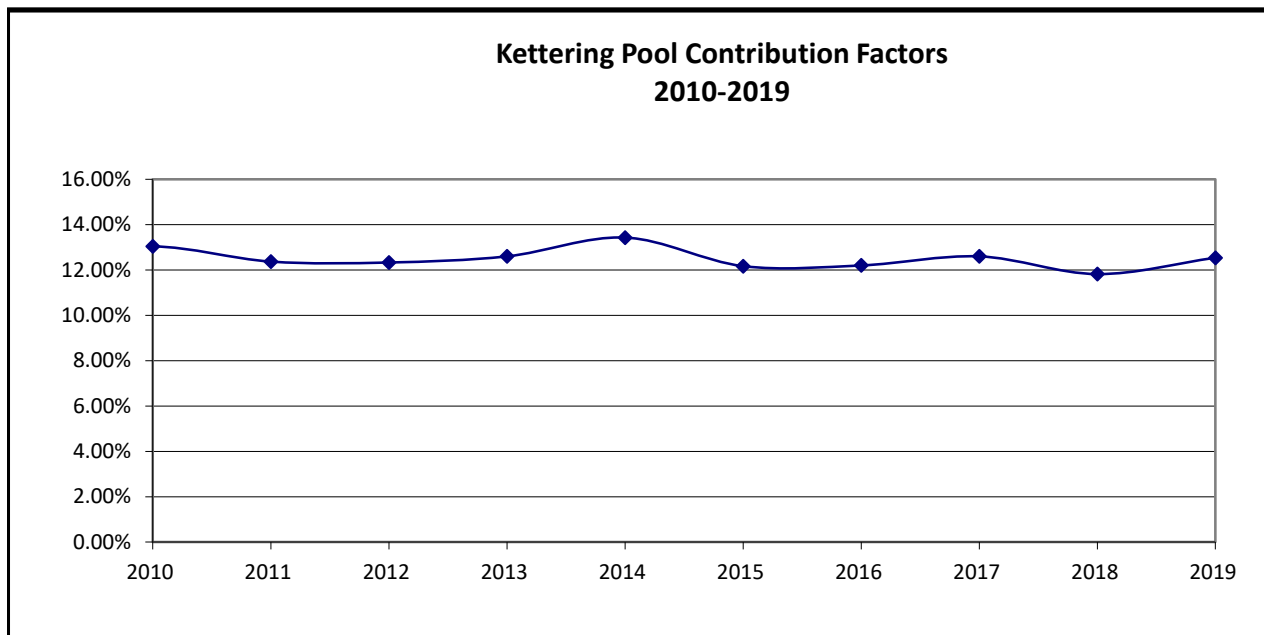
Source: Association's internal records



Last Ten Years

Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Sworn Police	Full-Time Employees	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$81,829	57,502	83	312	260	\$146,813,009	\$58,321,082	13.04%
2011	\$62,797	57,502	81	298	254	\$157,357,696	\$55,958,354	12.37%
2012	\$56,891	56,163	81	285	261	\$165,013,544	\$56,061,531	12.33%
2013	\$69,189	56,163	81	280	260	\$168,588,121	\$57,431,798	12.60%
2014	\$74,944	56,163	80	282	260	\$174,741,061	\$58,950,292	13.43%
2015	\$55,970	56,163	80	284	245	\$175,472,336	\$59,574,560	12.17%
2016	\$65,033	56,163	81	290	245	\$179,251,621	\$61,549,195	12.20%
2017	\$63,302	56,163	78	303	249	\$187,790,324	\$63,210,217	12.06%
2018	\$76,630	56,163	80	322	243	\$209,567,322	\$77,636,512	11.82%
2019	\$76,630	56,163	322	80	243	\$209,567,322	\$77,636,512	12.54%

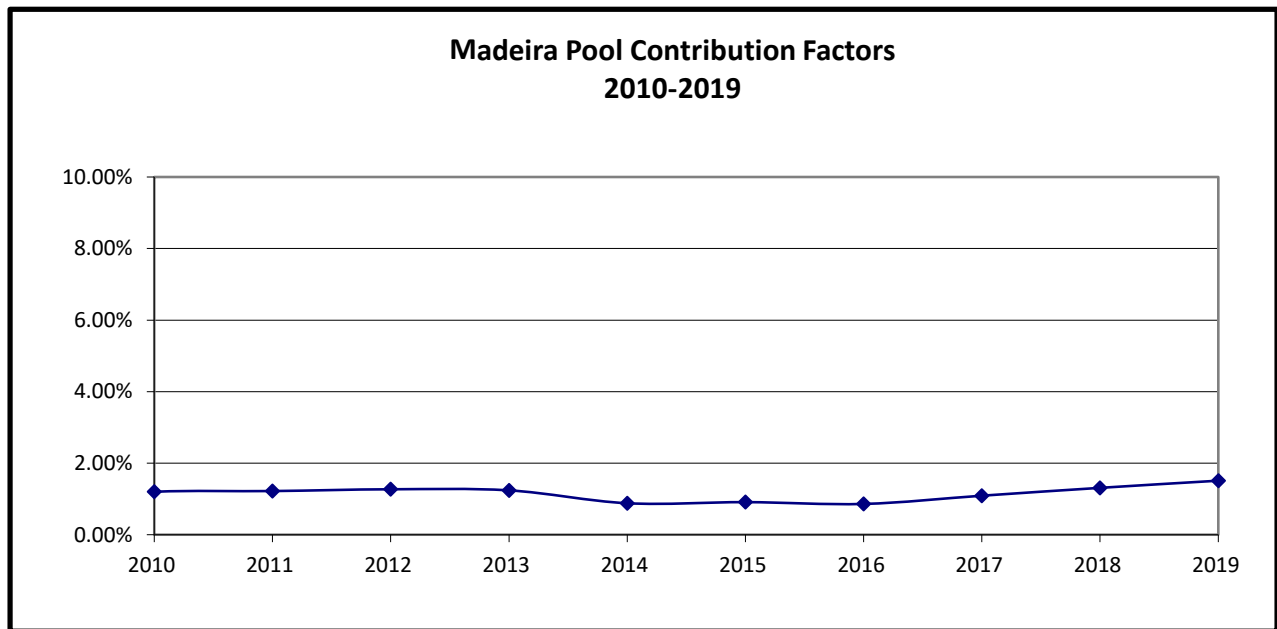
Source: Association's internal records



Last Ten Years

Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Sworn Police	Full-Time Employees	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$9,568	8,923	12	12	18	\$4,763,287	\$3,641,039	1.20%
2011	\$9,568	8,923	13	12	20	\$4,750,274	\$2,090,829	1.22%
2012	\$9,953	8,726	11	12	19	\$4,882,962	\$3,587,538	1.27%
2013	\$9,953	8,726	12	11	19	\$4,997,826	\$3,647,254	1.24%
2014	\$1,435	8,726	12	11	20	\$5,155,887	\$3,419,147	0.88%
2015	\$2,300	8,726	12	10	20	\$5,155,887	\$3,625,419	0.91%
2016	\$1,548	8,726	12	11	20	\$5,212,559	\$3,390,139	0.86%
2017	\$7,883	8,726	12	10	20	\$5,248,717	\$3,274,069	1.09%
2018	\$18,404	8,726	13	15	17	\$5,412,265	\$4,645,128	1.31%
2019	\$18,404	8,726	15	13	17	\$5,412,265	\$4,645,128	1.51%

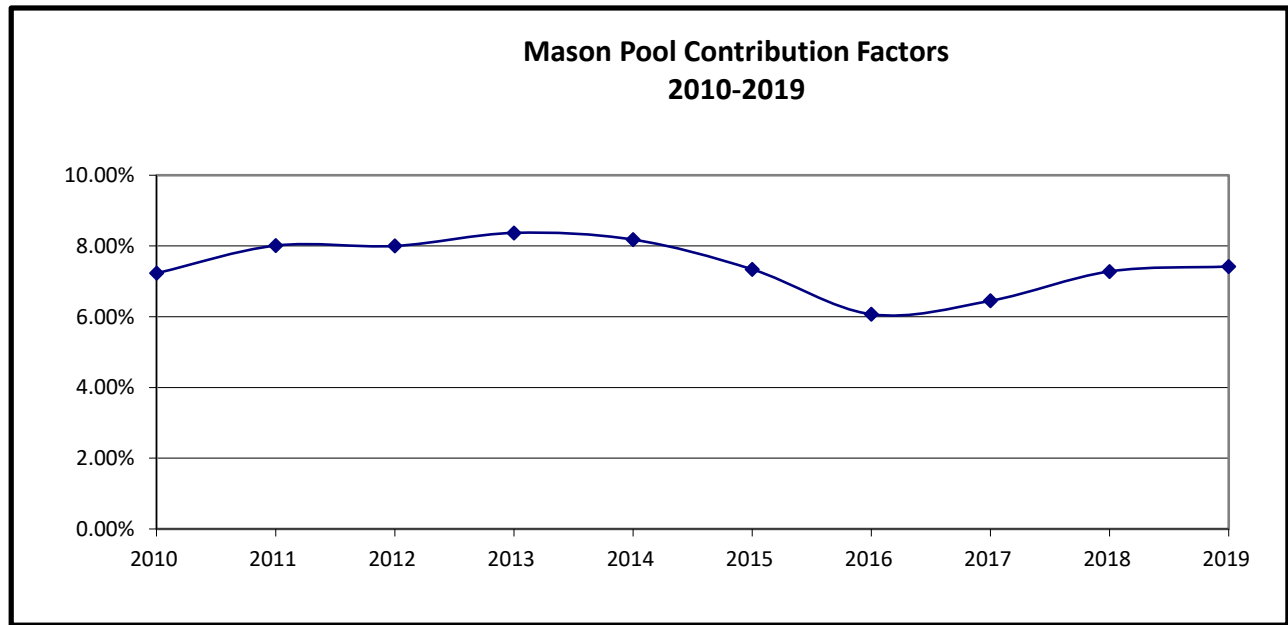
Source: Association's internal records



Last Ten Years

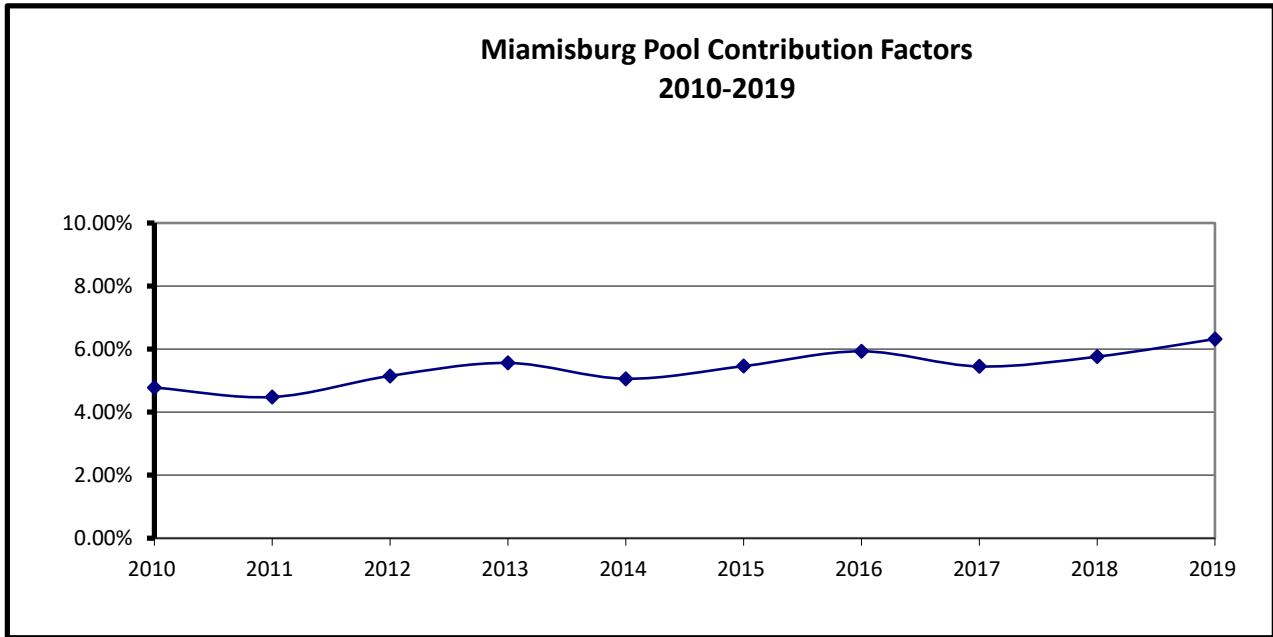
Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Sworn Police	Full-Time Employees	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$59,237	22,016	43	149	128	\$99,265,213	\$26,767,913	7.23%
2011	\$64,269	22,016	43	148	131	\$116,229,359	\$33,361,055	8.01%
2012	\$55,606	30,712	38	144	126	\$118,786,784	\$33,039,076	8.00%
2013	\$68,019	30,712	40	136	135	\$122,739,440	\$34,084,947	8.37%
2014	\$53,392	30,712	43	144	124	\$128,276,254	\$35,045,902	8.18%
2015	\$38,276	30,712	49	134	123	\$127,892,985	\$36,913,947	7.34%
2016	\$12,809	30,712	42	141	140	\$132,122,628	\$38,044,980	6.07%
2017	\$22,200	30,712	45	143	146	\$139,207,628	\$37,109,923	6.45%
2018	\$46,567	30,712	151	45	164	\$143,727,091	\$47,197,419	7.28%
2019	\$46,567	30,712	151	45	164	\$143,727,091	\$47,197,419	7.42%

Source: Association's internal records



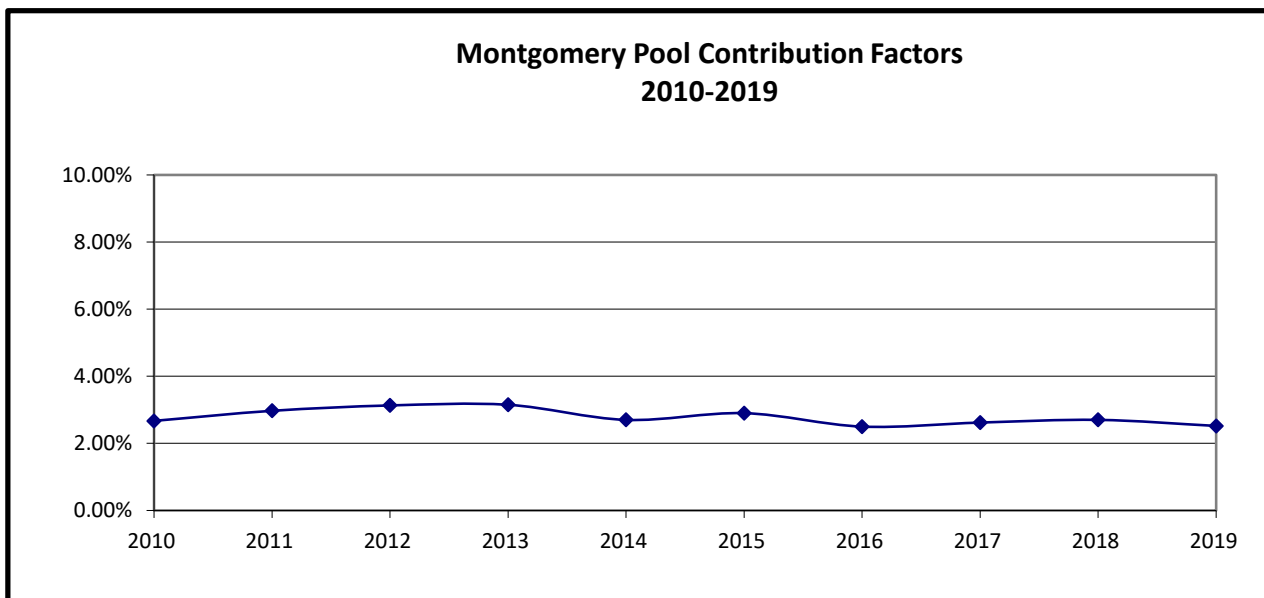
Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Sworn Police	Full-Time Employees	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$22,345	19,489	40	138	122	\$44,344,585	\$21,937,415	4.78%
2011	\$14,910	19,489	36	135	121	\$43,557,340	\$23,674,531	4.48%
2012	\$27,876	20,181	37	127	121	\$43,926,521	\$23,270,400	5.15%
2013	\$43,839	20,181	35	100	121	\$44,033,325	\$25,122,699	5.56%
2014	\$32,924	20,181	35	90	99	\$41,886,009	\$23,648,250	5.06%
2015	\$44,553	20,181	38	91	103	\$41,870,338	\$21,050,388	5.46%
2016	\$62,190	20,181	35	95	105	\$48,293,033	\$21,180,125	5.93%
2017	\$53,302	20,181	34	95	100	\$48,831,994	\$22,259,700	5.45%
2018	\$74,103	20,181	35	112	107	\$71,138,218	\$23,148,846	5.76%
2019	\$74,103	20,181	112	35	107	\$71,138,218	\$23,148,846	6.32%

Source: Association's internal records



Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Sworn Police	Full-Time Employees	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$23,895	10,163	21	44	53	\$17,180,169	\$10,465,396	2.67%
2011	\$27,561	10,163	21	43	56	\$17,560,789	\$12,026,355	2.97%
2012	\$27,847	10,251	21	44	60	\$17,936,640	\$11,522,015	3.13%
2013	\$30,102	10,251	21	43	66	\$18,641,658	\$12,087,079	3.15%
2014	\$16,280	10,251	21	43	72	\$18,958,734	\$12,157,433	2.70%
2015	\$21,607	10,251	23	42	72	\$18,628,129	\$12,298,636	2.90%
2016	\$17,922	10,251	22	43	44	\$26,774,775	\$11,925,188	2.50%
2017	\$20,850	10,251	22	43	47	\$26,776,746	\$13,162,092	2.62%
2018	\$20,360	10,251	22	43	51	\$27,647,615	\$14,169,080	2.70%
2019	\$20,360	10,251	43	22	51	\$27,647,615	\$14,169,080	2.52%

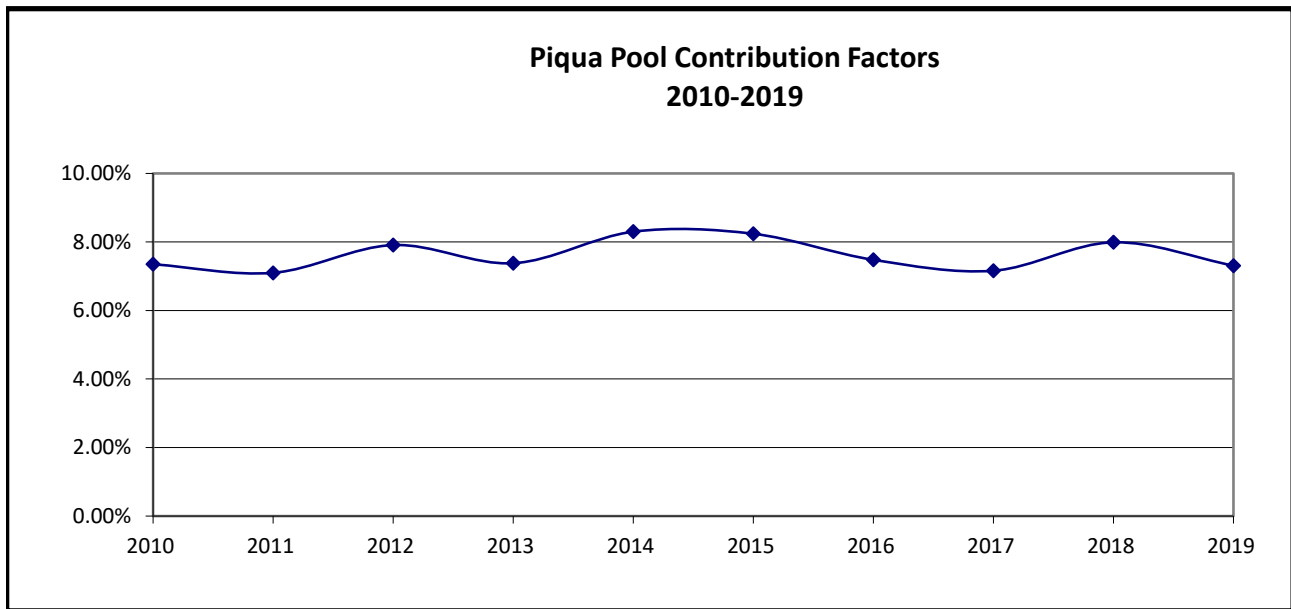
Source: Association's internal records



Last Ten Years

Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Sworn Police	Full-Time Employees	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$60,917	20,738	33	168	142	\$62,544,120	\$44,851,674	7.35%
2011	\$54,193	20,738	31	160	140	\$62,925,749	\$42,344,214	7.10%
2012	\$67,371	20,522	31	156	145	\$64,525,119	\$39,559,501	7.91%
2013	\$59,718	20,522	30	149	152	\$72,017,789	\$41,864,785	7.38%
2014	\$71,322	20,522	30	154	147	\$74,654,276	\$39,353,735	8.30%
2015	\$73,617	20,522	30	158	147	\$75,400,976	\$42,740,087	8.24%
2016	\$54,907	20,522	34	157	162	\$99,149,309	\$47,488,995	7.48%
2017	\$47,244	20,522	31	161	166	\$110,204,542	\$49,325,717	7.16%
2018	\$50,248	20,522	34	161	160	\$144,885,171	\$56,850,108	7.99%
2019	\$50,248	20,522	161	34	160	\$144,885,171	\$56,850,108	7.31%

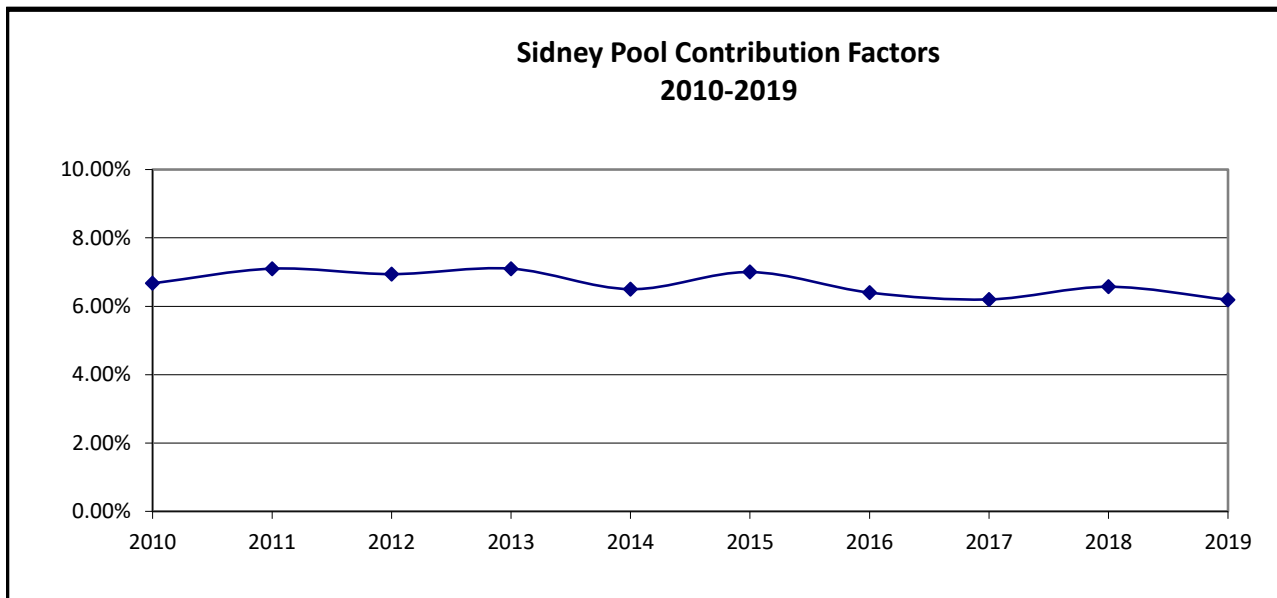
Source: Association's internal records



Last Ten Years

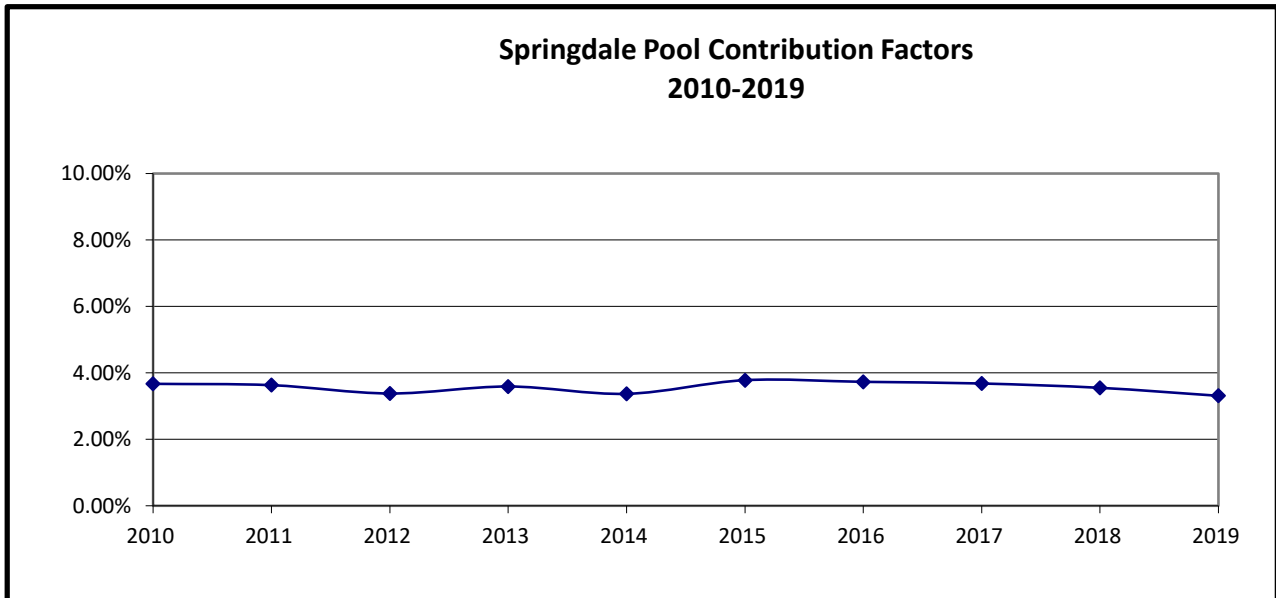
Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Sworn Police	Full-Time Employees	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$49,652	20,211	40	160	152	\$72,897,123	\$27,683,855	6.67%
2011	\$58,830	20,211	40	153	154	\$71,697,298	\$24,349,332	7.10%
2012	\$50,576	21,229	37	151	154	\$73,442,513	\$24,379,417	6.94%
2013	\$60,577	21,229	36	148	154	\$75,033,010	\$23,703,290	7.10%
2014	\$41,798	21,229	36	149	142	\$76,513,173	\$23,545,356	6.50%
2015	\$56,895	21,229	36	149	133	\$77,683,418	\$24,203,862	7.00%
2016	\$48,047	21,229	36	149	153	\$80,469,787	\$24,562,121	6.40%
2017	\$46,835	21,229	36	154	139	\$81,984,842	\$25,004,148	6.20%
2018	\$50,753	21,229	38	149	147	\$88,091,655	\$27,312,360	6.57%
2019	\$50,753	21,229	149	38	147	\$88,091,655	\$27,312,360	6.19%

Source: Association's internal records



Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Sworn Police	Full-Time Employees	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$22,180	10,563	38	83	74	\$35,784,392	\$18,081,809	3.67%
2011	\$20,750	10,563	36	82	73	\$37,207,591	\$17,144,932	3.63%
2012	\$14,988	11,223	33	74	74	\$37,960,645	\$16,893,700	3.38%
2013	\$20,889	11,223	36	74	80	\$38,805,997	\$14,575,302	3.59%
2014	\$14,364	11,223	34	76	71	\$39,495,622	\$15,911,155	3.37%
2015	\$24,833	11,223	32	76	73	\$39,769,584	\$16,941,758	3.78%
2016	\$27,036	11,223	33	76	78	\$40,343,050	\$16,215,558	3.73%
2017	\$26,734	11,223	37	76	69	\$40,359,051	\$16,758,666	3.68%
2018	\$20,837	11,223	32	79	69	\$42,083,153	\$20,995,756	3.55%
2019	\$20,837	11,223	79	32	69	\$42,083,153	\$20,995,756	3.31%

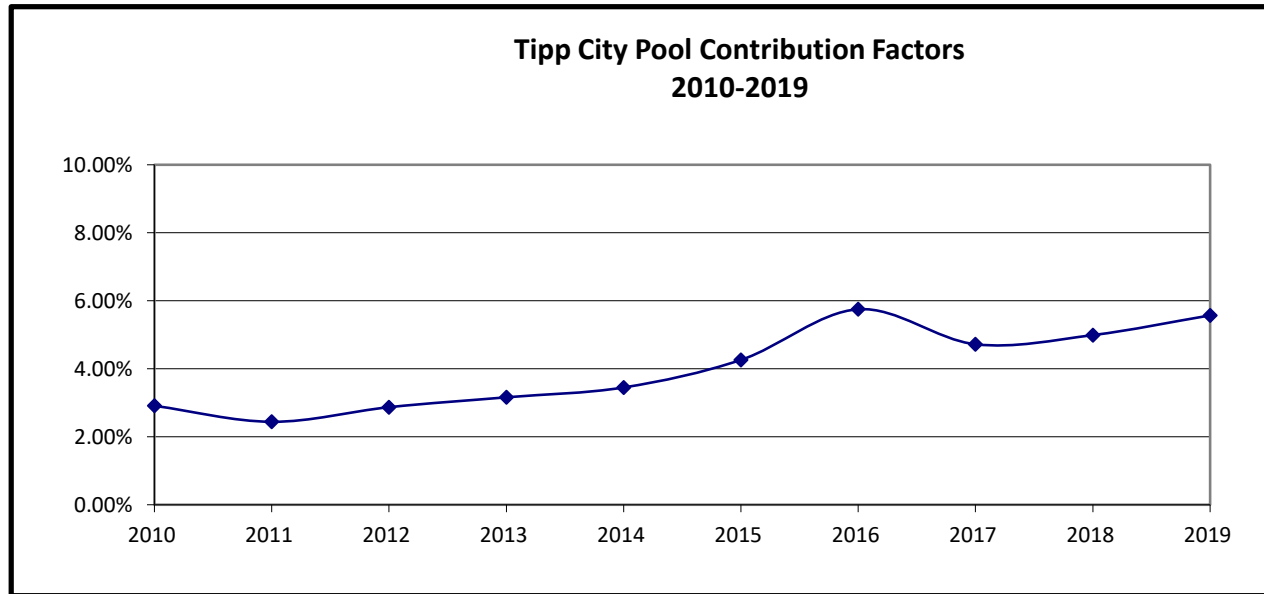
Source: Association's internal records



Last Ten Years

Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Sworn Police	Full-Time Employees	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$20,083	9,221	19	48	77	\$25,772,171	\$17,518,594	2.91%
2011	\$6,357	9,221	19	52	78	\$25,554,338	\$18,924,381	2.44%
2012	\$14,726	9,689	18	48	84	\$26,431,509	\$18,352,038	2.87%
2013	\$23,571	9,689	18	48	84	\$26,577,876	\$17,862,591	3.16%
2014	\$24,948	9,689	19	47	86	\$30,389,846	\$19,237,669	3.45%
2015	\$43,746	9,689	19	48	80	\$30,983,069	\$20,849,710	4.26%
2016	\$83,711	9,689	19	49	84	\$36,375,267	\$23,526,968	5.75%
2017	\$60,284	9,689	19	49	89	\$37,947,607	\$22,429,536	4.72%
2018	\$88,510	9,689	19	48	79	\$40,172,980	\$26,395,734	4.99%
2019	\$88,510	9,689	48	19	79	\$40,172,980	\$26,395,734	5.57%

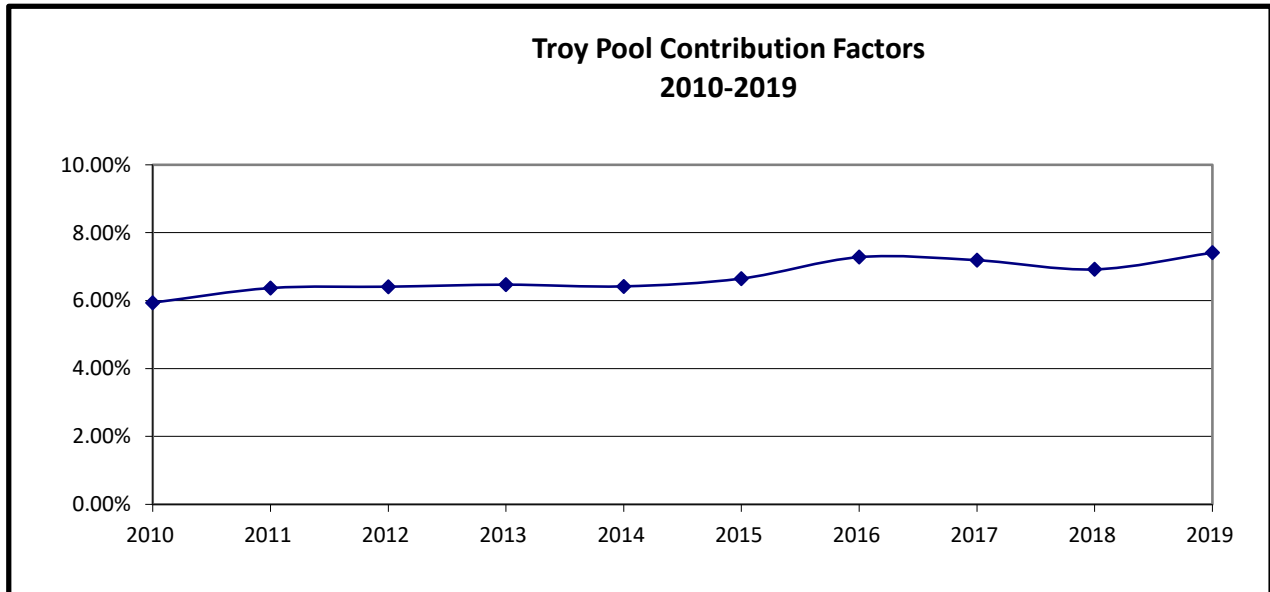
Source: Association's internal records



Last Ten Years

Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Sworn Police	Full-Time Employees	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$33,879	21,999	41	165	116	\$77,486,302	\$25,605,656	5.94%
2011	\$43,029	21,999	40	149	118	\$77,867,665	\$26,778,965	6.37%
2012	\$38,515	25,058	38	142	120	\$80,019,303	\$27,530,777	6.41%
2013	\$43,715	25,058	39	138	117	\$81,722,588	\$28,978,679	6.47%
2014	\$37,119	25,058	39	140	118	\$82,989,425	\$27,498,899	6.42%
2015	\$42,575	25,058	43	141	124	\$83,607,476	\$28,426,635	6.65%
2016	\$67,444	25,058	43	141	111	\$83,275,967	\$29,243,228	7.28%
2017	\$63,225	25,058	40	141	144	\$88,115,813	\$30,974,471	7.19%
2018	\$72,270	25,058	43	144	146	\$104,911,885	\$32,223,154	6.92%
2019	\$72,270	25,058	144	43	146	\$104,911,885	\$32,223,154	7.41%

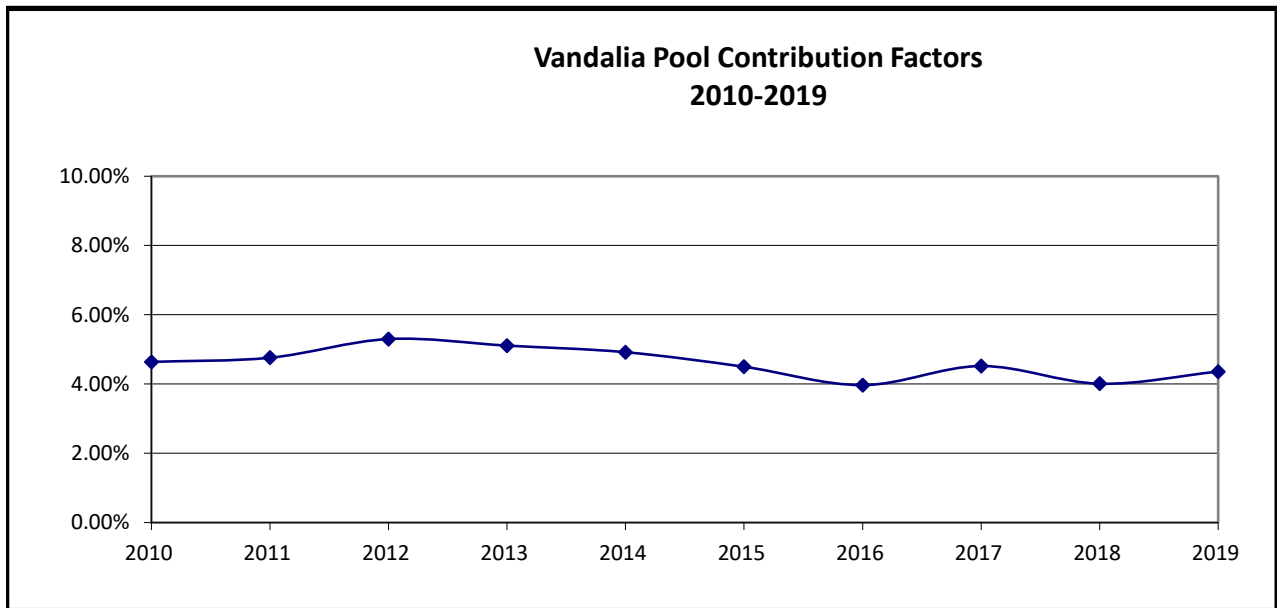
Source: Association's internal records



Last Ten Years

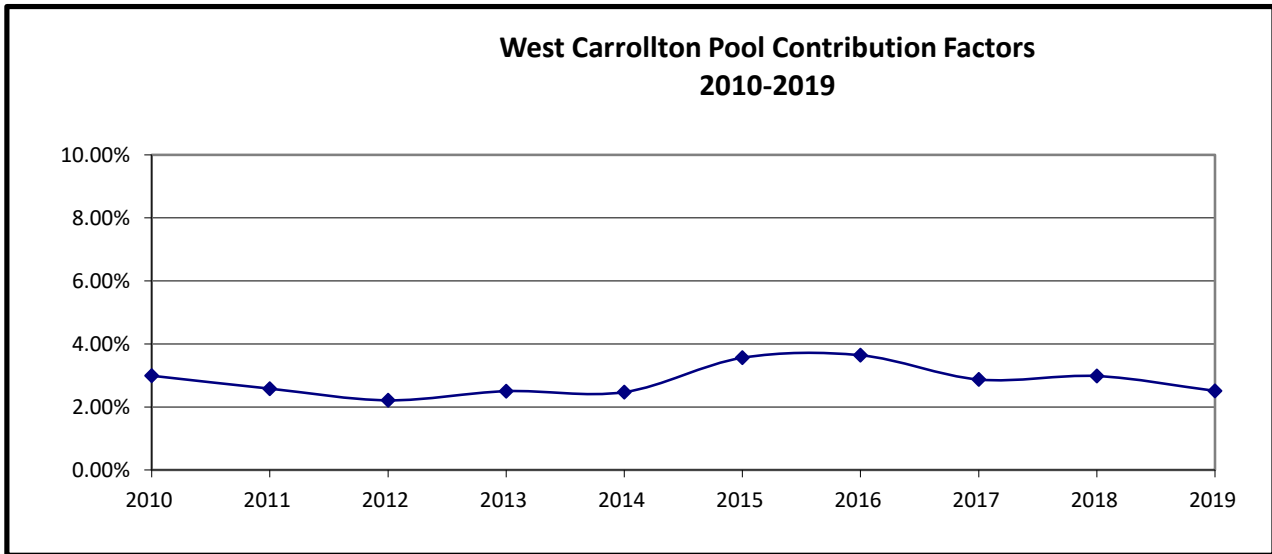
Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Employees	Full-Time Sworn Police	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$33,159	14,603	111	30	99	\$47,826,976	\$21,950,659	4.64%
2011	\$30,926	14,603	105	31	102	\$51,524,679	\$24,564,802	4.76%
2012	\$40,729	15,246	108	31	101	\$54,897,952	\$19,643,180	5.30%
2013	\$40,474	15,246	102	30	104	\$56,289,545	\$20,996,497	5.11%
2014	\$33,126	15,246	105	31	101	\$57,688,226	\$16,739,616	4.92%
2015	\$24,552	15,246	31	107	102	\$57,965,235	\$20,335,739	4.50%
2016	\$15,674	15,246	31	106	104	\$58,382,095	\$20,699,768	3.97%
2017	\$30,156	15,246	31	103	112	\$60,231,706	\$21,085,397	4.52%
2018	\$31,795	15,246	28	98	112	\$63,028,519	\$24,142,716	4.01%
2019	\$31,795	15,246	98	28	112	\$63,028,519	\$24,142,716	4.36%

Source: Association's internal records



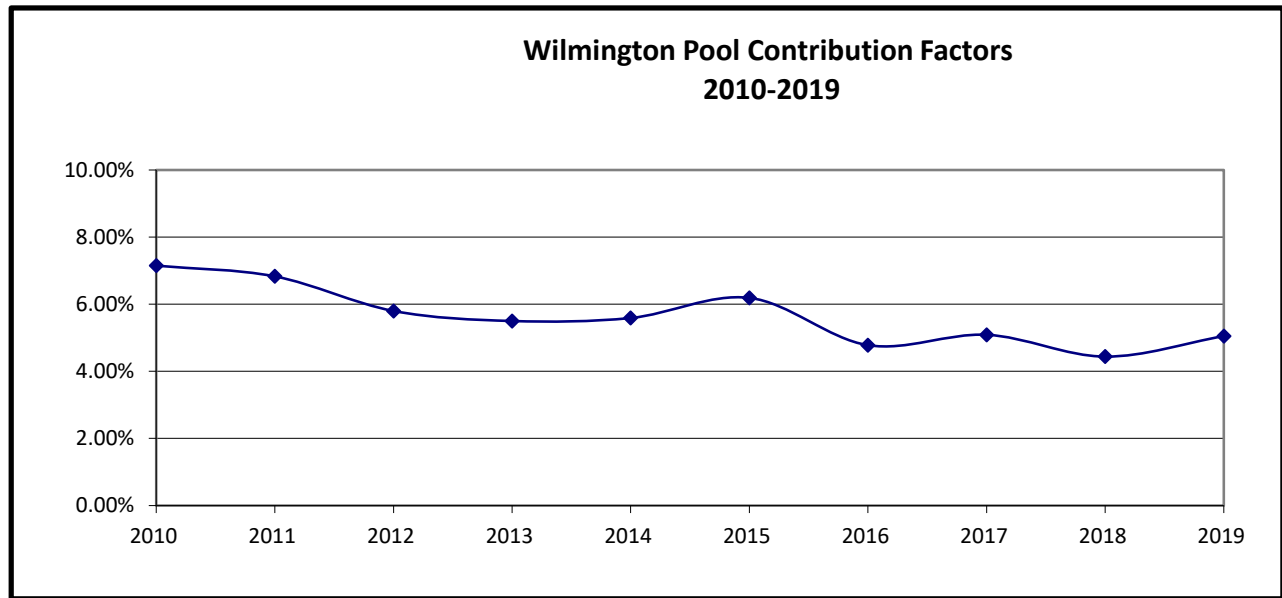
Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Sworn Police	Full-Time Employees	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$22,032	13,818	23	59	62	\$26,531,747	\$10,387,085	2.99%
2011	\$11,150	13,818	23	54	62	\$27,224,795	\$10,652,767	2.58%
2012	\$3,556	13,143	22	50	62	\$27,768,872	\$11,157,776	2.21%
2013	\$10,618	13,143	22	49	62	\$28,340,006	\$11,506,423	2.50%
2014	\$8,931	13,143	22	46	63	\$28,876,147	\$11,021,168	2.47%
2015	\$33,748	13,143	22	45	63	\$29,414,833	\$10,888,826	3.56%
2016	\$40,289	13,143	22	44	64	\$30,933,346	\$11,436,574	3.64%
2017	\$22,794	13,143	23	42	64	\$31,209,386	\$11,060,789	2.87%
2018	\$16,133	13,143	21	42	63	\$33,595,978	\$12,941,859	2.98%
2019	\$16,133	13,143	42	21	63	\$33,595,978	\$12,941,859	2.51%

Source: Association's internal records



Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Sworn Police	Full-Time Employees	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$94,831	11,921	23	137	124	\$53,447,136	\$19,616,027	7.15%
2011	\$76,912	11,921	22	124	124	\$69,015,342	\$20,294,238	6.83%
2012	\$48,948	12,520	22	121	124	\$71,065,287	\$18,452,322	5.80%
2013	\$46,544	12,520	21	122	126	\$72,608,144	\$19,315,329	5.50%
2014	\$45,623	12,520	18	117	122	\$74,109,343	\$17,250,306	5.59%
2015	\$61,564	12,520	21	114	123	\$74,328,087	\$17,262,613	6.19%
2016	\$35,691	12,520	21	114	126	\$75,583,201	\$17,710,188	4.78%
2017	\$44,388	12,520	21	111	134	\$76,275,394	\$18,793,497	5.09%
2018	\$46,241	12,520	21	118	131	\$81,058,086	\$23,420,103	4.44%
2019	\$46,241	12,520	118	21	131	\$81,058,086	\$23,420,103	5.05%

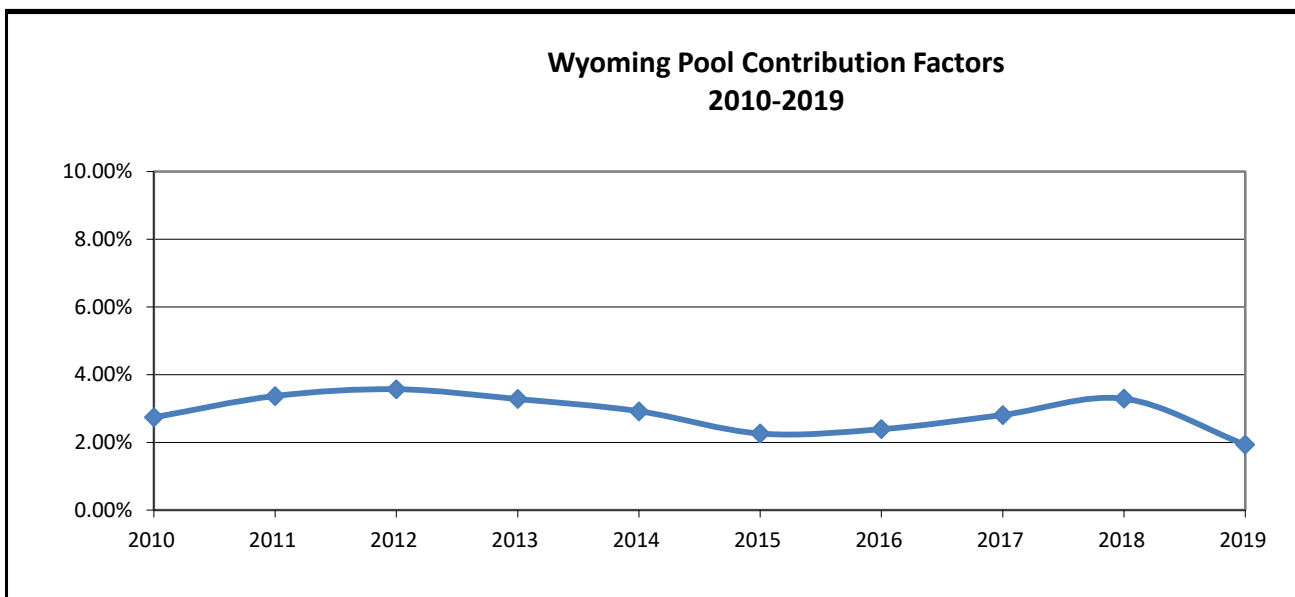
Source: Association's internal records



Last Ten Years

Membership Year	Risk Exposure							Pool Contribution Factors
	(Non-Police)							
	Average Annual Losses	Population	Full-Time Sworn Police	Full-Time Employees	Titled Vehicles	PP/RP Values	Net Operating Expenditures	
2010	\$29,510	8,261	19	34	35	\$27,395,791	\$10,090,694	2.74%
2011	\$40,342	8,261	19	35	36	\$27,060,852	\$11,717,375	3.37%
2012	\$41,804	8,428	19	32	37	\$27,751,953	\$10,075,580	3.57%
2013	\$39,706	8,428	17	36	39	\$28,587,034	\$9,528,956	3.28%
2014	\$28,739	8,428	16	32	39	\$28,119,925	\$9,256,904	2.92%
2015	\$17,522	8,428	16	31	39	\$28,099,422	\$8,085,768	2.26%
2016	\$23,742	8,428	16	31	33	\$29,508,384	\$8,915,723	2.39%
2017	\$34,521	8,428	16	31	37	\$31,586,153	\$8,546,218	2.97%
2018	\$11,630	8,428	16	31	37	\$35,866,497	\$9,860,142	3.29%
2019	\$11,630	8,428	26	22	37	\$35,866,497	\$9,860,142	1.93%

Source: Association's internal records



Miami Valley Risk Management Association
 Operating Information by Component
 Last Ten Years

Schedule 28

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of Members	20	20	20	20	20	20	20	20	20	21
Number of Staff	4	4	4	4	4	4	4	4	4	4
Number of Claims	334	406	349	345	399	346	350	356	393	274
Number of Training Sessions	31	23	31	24	22	24	32	34	57	48

Note: The MVRMA staff addresses its members' risk management and risk financing needs, acts as a clearing house for risk related information, administers a claims/litigation management program, and provides extensive safety/loss control consulting and training.

Source: Employment Records, Association's internal records



***ANALYSIS OF UNPAID LOSS AND LAE
AS OF DECEMBER 31, 2019***

MARCH 27, 2020



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Commitment Beyond Numbers

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Timothy C. Mosler, FCAS, MAAA
Principal and Consulting Actuary
tmosler@pinnacleactuaries.com

March 27, 2020

Mr. Tom Judy
Executive Director
Miami Valley Risk Management Association
4625 Presidential Way
Kettering, OH 45429-5706

Re: Analysis of Unpaid Loss and LAE as of December 31, 2019

Dear Mr. Judy:

Attached is Pinnacle Actuarial Resources, Inc.'s (Pinnacle's) draft report on the unpaid loss and loss adjustment expense (LAE) amounts of Miami Valley Risk Management Association (MVRMA) as of December 31, 2019.

This final report replaces and supersedes the draft report issued on March 23, 2020. We have not made any modifications to the indicated unpaid loss and LAE subsequent to the draft report.

Attention is called to the section of the report entitled *Distribution*, which sets out the limits on distribution of the report.

We have prepared this report to document our analysis and so that MVRMA may comply with requirements of the state of Ohio concerning the need for a written actuarial report. A copy of this report should be retained in MVRMA's offices for a seven-year period in support of the loss reserves that will be contained in the 2019 financial statement. The report should be made available for insurance regulatory examination, upon request.

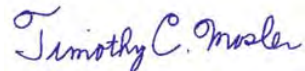
This report contains workpapers, trade secrets, and confidential information of both MVRMA and Pinnacle, and as such, it is not intended to be subject to disclosure requirements under any Freedom of Information Act or similar laws.

The authors of this report are members of the American Academy of Actuaries and meet its qualification standards to render the actuarial opinion contained herein.

Commitment Beyond Numbers

We have enjoyed working with you in the preparation of this report. Please let us know if you have any questions.

Very truly yours,



Timothy C. Mosler, FCAS, MAAA
Principal and Consulting Actuary
Direct Dial: 678.894.7254



Nicholas E. Alicea, ACAS, MAAA
Consulting Actuary
Direct Dial: 678.894.7261

Miami Valley Risk Management Association
Analysis of Unpaid Loss and LAE as of December 31, 2019

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Miami Valley Risk Management Association

Analysis of Unpaid Loss and LAE as of December 31, 2019

PURPOSE AND SCOPE

Pinnacle Actuarial Resources, Inc. (Pinnacle) was retained by Miami Valley Risk Management Association (MVRMA) to prepare an actuarial analysis of MVRMA's loss and loss adjustment expense (LAE) experience for the purpose of developing estimates of unpaid loss and LAE as of December 31, 2019.

This report was prepared for the internal use of MVRMA management to present our findings with respect to this analysis. It is our understanding that MVRMA management will consider our findings for the purposes of establishing liability estimates for external financial reporting and internal management reporting.

Our report is not intended or necessarily suitable for any other purpose.

In this report, we develop an actuarial central estimate of MVRMA's unpaid loss and LAE as of December 31, 2019. This actuarial central estimate is intended to represent an expected value over a range of reasonably foreseeable outcomes. The actuarial central estimate was arrived at through evaluation of the results of various actuarial methods and models applied to MVRMA's experience. As such, the derivation of this estimate does not reflect extreme events believed to have a remote possibility of occurring. We consider the actuarial central estimate suitable for use in financial reporting contexts.

The exhibits attached in support of our conclusions are an integral part of this report. This section has been prepared so that our actuarial assumptions and judgments are documented. Judgments about the analysis and findings presented in this report should be made only after considering the report in its entirety. Our projections are predicated on a number of assumptions as to future conditions and events. These assumptions are documented in subsequent sections of this report, and should be understood in order to place the actuarial estimates in their appropriate context. In addition, these projections are subject to a number of reliances and limitations, as described in subsequent sections of this report.

We are available to answer any questions that may arise regarding this report. We assume that the user of this report will seek such explanation on any matter in question.

The scope does not include quantification of the uncertainty in our estimates. However, our report includes commentary on this uncertainty to assist in understanding the financial implications of our results.

For the purposes of our report, the "accounting date" of December 31, 2019 is the date used to separate paid and unpaid claim amounts in MVRMA's financial statement. Transactions through the "valuation date" of December 31, 2019 are included in the data used in our analysis. No account has been taken in the projections of developments subsequent to the "review date" of March 3, 2020.

Paid losses provided to us are net of salvage and subrogation. Therefore loss reserve estimates derived from this data would implicitly anticipate salvage and subrogation. The other recoverables considered in our reserve estimates are individual member liabilities and excess insurance.

All loss and LAE amounts are stated on an undiscounted basis as regards future investment income.

Miami Valley Risk Management Association
Analysis of Unpaid Loss and LAE as of December 31, 2019

Throughout this report, the use of the term *loss* without modification includes loss and allocated loss adjustment expenses (ALAE), but does not include unallocated loss adjustment expenses (ULAE).

This actuarial report is being provided to MVRMA to be retained for a period of seven years in its administrative offices and to be available for examination by its members and for regulatory examination, if appropriate.

Loss adjustment expenses include but are not limited to the costs of administering, determining coverage for, settling, or defending claims even if it is ultimately determined that the claim is invalid.

Miami Valley Risk Management Association
Analysis of Unpaid Loss and LAE as of December 31, 2019

DISTRIBUTION

Our report is delivered under the following terms and conditions:

- This report is provided to MVRMA solely for the intended purpose, and may not be referenced or distributed to any other party without our prior written consent
- This report has been prepared for use by persons technically competent in the areas covered and with the necessary background information
- Draft versions of this report must not be relied upon by any person for any purpose
- This report is available for regulatory examination
- A copy of this report may be shared with MVRMA's independent auditors solely in the context of their performing regular audit activities

We accept no responsibility for any consequences arising from any third party relying on this report. If we agree to provide this report to a third party, you are responsible for ensuring that the report is provided in its entirety, that the third party is made aware of the fact that they are not entitled to rely upon it, and that they may not distribute the report to any other party.

This report contains workpapers, trade secrets, and confidential information of both MVRMA and Pinnacle. Because of the nature of the material contained in the report, it is not intended to be subject to disclosure requirements under any Freedom of Information Act or similar laws.

Miami Valley Risk Management Association

Analysis of Unpaid Loss and LAE as of December 31, 2019

BACKGROUND

MVRMA has provided insurance coverage for its members since December 1, 1988. As of December 31, 2019 the pool was comprised of the following 20 entities: Beaver creek, Bellbrook, Blue Ash, Centerville, Englewood, Kettering, Madeira, Mason, Miamisburg, Montgomery, Piqua, Sidney, Springdale, Tipp City, Troy, Vandalia, the Village of Indian Hill, West Carrollton, Wilmington and Wyoming. MVRMA provides coverage for several lines of insurance including commercial property, comprehensive general liability, automobile liability, automobile physical damage, law enforcement liability, public official's liability, crime, ambulance attendants, and boiler and machinery.

This report groups all losses into three categories: automobile liability (AL), general liability (GL), and property which includes auto physical damage (Property). Each line is analyzed for annual periods December 1, 1988 through December 31, 2019. The results of the report are not intended to apply to any other entities, lines of insurance, or periods.

Funding for MVRMA's loss and LAE is accomplished via annually budgeted contributions. In the event the pool requires additional funds, such amounts can be obtained via a call for special assessments by MVRMA's Board of Trustees for supplementary payments.

Prior to December 31, 1994, claim adjustment services were provided to MVRMA through Gallagher Bassett Insurance Services, Incorporated. Gallagher Bassett continued to adjust run-off claims for the period December 1, 1988 through December 31, 1994. As of December 31, 2008, there were no outstanding claims from this claim period. Effective January 1, 1995, MVRMA began to employ an in-house claims staff.

Data

We were provided with "gross" paid and incurred loss and ALAE by accident period, by line of business. The term "gross" means before consideration of recoverables from excess carriers and member deductibles. Paid losses are net of salvage and subrogation.

Detailed claims data was provided to us by MVRMA's claims department for accident periods 2014 through 2019. MVRMA also provided summaries by line of business for accident periods 2014 through 2019. It is our understanding that there has been no claim activity for any prior accident periods. Excess insurance limits were provided by MVRMA.

In my review, we have relied on listings and other relevant data, prepared by Tom Judy, Executive Director of MVRMA and Craig Blair, Claims Manager of MVRMA. We evaluated that data for reasonableness and consistency. We are relying on the audit procedures of MVRMA's independent public accountant and claims auditor to verify the accuracy of the data underlying our analysis. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete.

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Self-Insured Retention History

The following table details the MVRMA self-insured retention (SIR) per occurrence for casualty and property coverages separately by accident year.

Accident Year	Casualty - SIR	Property - SIR
1993 & Prior	\$250,000	\$250,000
1994	\$250,000	\$100,000
1995	\$250,000	\$150,000
1996	\$250,000	\$250,000
1997-1998	\$500,000	\$250,000
1999-2001	\$500,000	\$150,000
2002	\$500,000	\$250,000
2003-2004	\$1,000,000	\$250,000
2005-2008	\$1,000,000	\$200,000
2009	\$1,000,000	\$200,000/\$250,000
2010-2019	\$500,000	\$250,000

The first \$2,500 of each occurrence is treated as a deductible by the pool member who suffered the loss. MVRMA did not have an aggregate stop loss policy for periods prior to December 31, 1990; however, there is an \$850,000 aggregate “property and casualty combined” stop loss in place for the accident periods 1991 through 1993 and a \$950,000 aggregate “casualty only” stop loss for the 1994 and 1995 accident periods. There is no aggregate stop loss policy for accident periods 1996 and subsequent; rather MVRMA is aggregating premiums previously paid for such coverage into an accumulating “shock loss” fund to be used at the discretion of the MVRMA Board.

Excess Insurance

The following table is a synopsis of the historical excess liability coverage carried by MVRMA:

Accident Year	Liability Excess Coverage	Provider
1997-2002	\$10M excess of \$1M	National Public Entity Excess Program (NPX)
2003	\$11M excess of \$1M	Government Entities Mutual, Inc. (GEM)/ Endurance Specialty Insurance Limited
2004	\$1M excess of \$1M \$5M excess of \$2M	GEM Insurance Co. of the State of PA (AIG)
2005	\$1M excess of \$1M \$5M excess of \$2M	GEM Illinois Union Insurance Company (ACE)
2006-2008	\$1M excess of \$1M	GEM

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	\$8M excess of \$2M	Munich Reinsurance America
2009	\$1M excess of \$1M \$8M excess of \$2M	GEM General Reinsurance Corporation
2010-2012	\$1.5M excess of \$500K \$8M excess of \$2M	GEM General Reinsurance Corporation
2013-2015	\$2.5M excess of \$500K \$7M excess of \$3M	GEM Genesis
2016-2019	\$4.5M excess of \$500K \$7M excess of \$5M	GEM Genesis

GEM is a protected cell reinsurance captive domiciled in the District of Columbia. GEM is sponsored by the National Association of Government Entity Programs, Inc. (NAGeP), a non-profit association incorporated in the District of Columbia.

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Analysis of Unpaid Loss and LAE as of December 31, 2019

FINDINGS

Based on our analysis of MVRMA's experience as of December 31, 2019, and subject to the considerations set forth in the *Reliances and Limitations* section, we have reached the conclusions set forth below.

Unpaid Loss and LAE as of December 31, 2019

The estimated total undiscounted unpaid loss and LAE as of December 31, 2019 is \$3,428,442. This amount is net of reinsurance and member deductibles. It compares to an estimated unpaid amount of \$3,685,365 from our analysis at December 31, 2018.

Development in Net Loss Estimates from Prior Analysis

The table below compares our net ultimate loss estimate as of December 31, 2019 to our estimate as of December 31, 2018 for accident years 2018 and prior. Our estimates have decreased by \$0.9 million.

MIAMI VALLEY RISK MANAGEMENT ASSOCIATION				
Comparison of Net Ultimate Loss to Prior Ultimate Loss (in \$000s)				
Prior to Consideration of Member's Deductibles				
Accident Year	Evaluation Date		Difference	Percent Change
	@12/31/2018	@12/31/2019		
1989-2008	\$18,132	\$18,132	\$0	0.0%
2009	1,533	1,533	0	0.0%
2010	1,524	1,524	0	0.0%
2011	1,291	1,291	0	0.0%
2012	1,140	1,140	0	0.0%
2013	1,419	1,419	0	0.0%
2014	2,327	2,227	(100)	-4.3%
2015	1,224	1,134	(90)	-7.4%
2016	1,476	1,384	(92)	-6.2%
2017	1,827	1,622	(205)	-11.2%
2018	2,051	1,649	(402)	-19.6%
Total	\$33,944	\$33,055	(\$888)	-2.6%

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Analysis of Unpaid Loss and LAE as of December 31, 2019

ANALYSIS

Our analysis consisted of the steps outlined below.

Development Patterns

Our projection of future claim reporting and payment is based on MVRMA's historical experience. Using historical loss development experience provided by MVRMA, we select report-to-report (RTR) development factors. In cases for which MVRMA's historical data is not sufficiently credible, stable, or mature, we have supplemented MVRMA's experience with benchmark reporting and payment patterns.

Benchmark patterns are constructed internally by Pinnacle, drawing upon available relevant sources of loss development data. Benchmarks are revised periodically as new information and trends emerge. While each company's own development can be expected to vary from the benchmark based on individual circumstances, we believe the benchmark is an appropriate supplement to the analysis of MVRMA's data, as it represents our current judgment as to the typical emergence of loss that can be expected for that class of business.

The selected development patterns are used for both the development and Bornhuetter-Ferguson (B-F) projection methods.

Initial Expected Loss Costs

The selected initial expected loss costs (IELCs or loss per exposure) are based on a review of the paid and incurred loss development methods, the results of prior analyses, insurance industry indications, and observed trends. These IELCs form the basis of the B-F and expected loss projection methods.

Selected Ultimate Losses

In general, our selected ultimate losses are based on the results of various projection methods. Our selections are based on judgment reflecting the range of estimates produced by the methods, and the strengths and weaknesses of each method. These methods are described in the *Description of Projection Methods* section of this report.

Unallocated Loss Expense Reserve

We estimate the ULAE reserve based on a ratio of paid ULAE to paid loss by line of business. On Summary, Exhibit 4, the industry paid ULAE to paid loss ratio is applied to the estimated IBNR amounts and one-half of this ratio is applied to case reserves. This method is derived from the expectation that half of ULAE is incurred when a claim is opened and the other half at closure.

General Overview of Exhibits

The Summary exhibits combine all lines of business and compare the indicated reserves and carried reserves in total. Exhibit 1.4 shows our calculation of the indicated ULAE reserve. Exhibit 1.3 summarizes member deductible losses by AY, while Exhibit 1.2 summarizes ultimate losses by AY prior to the application of any member deductibles. Note that the aggregate retention is applied to the appropriate

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Analysis of Unpaid Loss and LAE as of December 31, 2019

AY's and affects AY 1993. Exhibit 1.1 summarizes the indicated reserves from Exhibit 1.2 before and after application of the member deductibles.

Automobile Liability

The auto liability analysis is arranged in 23 exhibits. Exhibit 23 shows the summarized data from the loss runs provided by MVRMA for this analysis. The claim summary and ultimate claim projection can be found in Exhibits 19 through 22. Exhibit 21 shows AL's historical reported claim experience and our selected development factors. For nearly all years, all claims are reported by 36 months. Exhibit 19 summarizes the claim indications including indicated IBNR claims.

Exhibits 15 and 16 show the incurred and paid loss triangles limited to \$500,000 and our initial selected development factors, respectively. Exhibits 17 and 18 show the average incurred and average paid loss triangles limited to \$500,000 and our initial selected development factors, respectively. On Exhibits 13 and 14, we estimate \$1,000,000 limits development patterns based on the \$500,000 limits development patterns and an assumed 6 month lag.

Exhibits 7 through 12 contain the development method indications using the selected development factors from Exhibits 13 and 14.

Exhibits 6.1 through 6.3 calculate the expected loss cost used in the B-F methods found in Exhibits 4 and 5. First, a limit factor is selected to adjust all AY's to a \$500,000 limit (Exhibit 6.3). Second, an initial ultimate loss is selected based on the development methods (Exhibit 6.2). Next, AY loss costs based on the initial selected ultimate losses are trended to AY 2019 with an initial loss cost selected for AY 2019. Finally, the expected loss cost for all AY's are calculated by detrending the selected AY 2019 loss cost (Exhibit 6.1).

We select ultimate losses at retained limits on Exhibit 3. Exhibit 2 provides a comparison of selected ultimate losses to those selected in our prior analysis. Exhibit 1 summarizes the loss indications including indicated IBNR losses.

The exhibits for GL and Property follow a similar layout as the AL exhibits.

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Analysis of Unpaid Loss and LAE as of December 31, 2019

RELIANCES AND LIMITATIONS

Inherent Uncertainty

Projections of loss and LAE liabilities are subject to potentially large errors of estimation, since the ultimate disposition of claims incurred prior to the financial statement date, whether reported or not, is subject to the outcome of events that have not yet occurred. Examples of these events include jury decisions, court interpretations, legislative changes, changes in the medical condition of claimants, public attitudes, and social/economic conditions such as inflation. Any estimate of future costs is subject to the inherent limitation on one's ability to predict the aggregate course of future events. It should therefore be expected that the actual emergence of losses and LAE will vary, perhaps materially, from any estimate. Thus, no assurance can be given that MVRMA's actual loss and LAE liabilities will not ultimately exceed the estimates contained herein. In our judgment, we have employed techniques and assumptions that are appropriate, and the estimates presented herein are reasonable, given the information currently available.

Note that a quantification of this uncertainty would likely reflect a range of reasonable, favorable and adverse scenarios, but not necessarily a range of all possible outcomes. Further, the proper application of any range is dependent on the context. MVRMA's financial reports are governed by accounting standards, and such standards vary among jurisdictions. Under current accounting standards, the ends of a range that is illustrative of uncertainty would likely not be suitable for financial reporting purposes.

Sensitivity Analysis

In performing this analysis, the sensitivity of key variables was considered. A number of assumptions about model variables are made in our analysis. We consider the key variables to include the selection of RTR factors, initial expected loss costs and loss cost trend factors. The overall results are potentially sensitive to any of these, and reasonable alternative selections could change the results significantly (favorably or adversely).

Data Reliance

Throughout this analysis, we have relied on historical data and other quantitative and qualitative information supplied by MVRMA. We have not independently audited or verified this information; however, we have reviewed it for reasonableness and internal consistency. We have assumed that the information is complete and accurate, and that we have been provided with all information relevant to the analysis of MVRMA's ultimate losses and LAE. The accuracy of our results is dependent upon the accuracy and completeness of the underlying data; therefore, any material discrepancies discovered in this data should be reported to us and this report amended accordingly, if warranted.

MVRMA has indicated that it will require that their independent certified public accountant subject the data significant to our loss and LAE projections to testing procedures.

Extraordinary Future Emergence

We have not anticipated any extraordinary changes to the legal, social, or economic environment that might affect the cost, frequency, or future reporting of claims. In addition, our estimates make no provision for potential future claims arising from loss causes not represented in the historical data (e.g.,

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Analysis of Unpaid Loss and LAE as of December 31, 2019

new types of mass torts or latent injuries, terrorist acts, etc.), except where claims of these types are included but not identified in the reported claims and are implicitly analyzed.

Projections by Accident Year

Consistent with the purpose of our engagement, the focus of our analysis was on MVRMA's overall reserves for unpaid claims. As such, projections shown in this report for each accident year should be viewed in the context of the entire portfolio of liabilities, not necessarily as best estimates for individual accident years.

Excess Insurance Collectability

Our estimates are presented net of excess insurance. Based solely on inquiries made of MVRMA management, we understand that none of MVRMA's excess insurance is considered uncollectible. An independent evaluation of the quality of security provided by MVRMA's excess insurers is outside the scope of our engagement. We have assumed that all of MVRMA's excess insurance protection will be valid and collectible. Contingent liability may exist for any excess insurance recoveries that may prove to be uncollectible. Should such liabilities materialize, they would be in addition to the net liability estimates contained herein.

Underlying Assets

We have not examined the assets underlying MVRMA's loss and LAE reserves, and we have formed no opinion as to the validity or value of these assets. We have assumed throughout the analysis that MVRMA's loss and LAE reserves are backed by valid assets with suitably scheduled maturities and/or adequate liquidity to meet cash flow requirements.

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Analysis of Unpaid Loss and LAE as of December 31, 2019

DESCRIPTION OF PROJECTION METHODS

The choice of method to estimate ultimate losses should consider, among other things, the line of business, the number of years of experience, and the age of the experience year being developed. In general, these methods can be applied to losses, ALAE, and various measures of claim counts.

Incurred Development Method

The incurred development method is based upon the assumption that the relative change in a given year's incurred loss estimates from one evaluation point to the next is similar to the relative change in prior years' incurred loss estimates at similar evaluation points. In utilizing this method, actual annual historical incurred loss data is evaluated. Successive years can be arranged to form a triangle of data.

RTR development factors are calculated to measure the change in cumulative incurred costs from one evaluation point to the next. These historical RTR factors and comparable benchmark factors form the basis for selecting the RTR factors used in projecting the current valuation of losses to an ultimate basis.

This method's implicit assumption is that the relative adequacy of case reserves has been consistent over time, and that there have been no material changes in the rate at which claims have been reported.

Paid Development Method

The paid development method is similar to the incurred development method; however, case reserves are excluded from the analysis. While this method has the disadvantage of not recognizing the information provided by current case reserves, it has the advantage of avoiding potential distortions in the data due to changes in case reserving methodology.

This method's implicit assumption is that the rate of payment of claims has been relatively consistent over time.

Case Reserve Development Method

The case reserve development technique derives case reserve development factors through an analysis of the historical development of case reserves by period. The changes measured by the case reserve development technique include payments associated with the historical case reserves and subsequent reserve amounts for those claims remaining open.

The case reserve development factors are applied to the current case reserves by period to estimate their ultimate settlement value. Payments to date are then added to determine the ultimate losses for each period.

Expected Loss Method

In the expected loss method, ultimate loss projections are based upon a prior measure of the anticipated losses, such as number of cars, expenditures, etc. An expected loss cost is applied to the measure of exposure to determine estimated ultimate losses for each year.

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Analysis of Unpaid Loss and LAE as of December 31, 2019

Actual losses are not considered in this calculation. This method has the advantage of stability over time because the ultimate loss estimates do not change unless the expected loss costs change. However, this advantage of stability is offset by a lack of responsiveness since this method does not consider actual loss experience as it emerges.

This method is entirely dependent on the assumption that the loss cost per unit of exposure is a good indication of ultimate losses.

Incurred Bornhuetter-Ferguson Method

The incurred B-F method is essentially a blend of two other methods. The first method is the loss development method whereby actual incurred losses are multiplied by an expected loss development factor. For slow reporting coverages, the loss development method can lead to erratic and unreliable projections because a relatively small swing in early reportings can result in a large swing in ultimate projections. The second method is the expected loss method whereby the IBNR estimate equals the difference between a predetermined estimate of expected losses and actual incurred losses. This has the advantage of stability, but it does not respond to actual results as they emerge.

The incurred B-F method combines these two methods by setting ultimate losses equal to actual incurred losses plus expected unreported losses. As an experience year matures and expected unreported losses become smaller, the initial expected loss assumption becomes gradually less important.

Two parameters are needed to apply the B-F method: the initial expected loss cost (IELC) and the expected reporting pattern. The IELC is selected as described in the *Analysis* section, while the expected reporting pattern is based on the incurred loss development method described above.

This method is often used for long-tail lines and in situations where the incurred loss experience is relatively immature or lacks sufficient credibility for the application of other methods.

Paid Bornhuetter-Ferguson Method

The paid B-F method is analogous to the incurred B-F method using paid losses and development patterns in place of incurred losses and patterns.

Counts and Averages Method

The counts and averages method calculates ultimate losses by separately projecting ultimate claim counts and ultimate claim severity (cost per claim) for each experience period. Typically, loss development methods are used to project ultimate claims and severity based on historical data. Ultimate losses are calculated as the product of the two items. This method is intended to avoid distortions that may exist with the other methods for the most recent years as the result of changes in case reserve levels, settlement rates, etc. In addition, it may provide insight into the drivers of the loss experience.

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Analysis of Unpaid Loss and LAE as of December 31, 2019

EXHIBITS

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Summary
December 31, 2019

Indicated Reserves

Gross of Member Deductible		
(1)	Selected Ultimate Loss	\$34,948,446
(2)	Application of Aggregate Retention	\$144,133
(3)	Retained Ultimate Loss	\$34,804,313
(4)	Retained Paid Loss	\$31,449,017
(5)	Indicated Loss Reserves	\$3,355,296
Member Deductible		
(6)	Indicated Ultimate Loss	\$3,003,448
(7)	Paid Loss	\$2,934,103
(8)	Indicated Loss Reserves	\$69,345
Net of Member Deductible		
(9)	Indicated Loss Reserves	\$3,285,951
(10)	Indicated Unallocated Loss Expense Reserves	\$142,491
(11)	Indicated Loss and Loss Expense Reserves	\$3,428,442

Notes:

- (1) From Summary, Exhibit 2, Col (5)
- (2) = Summary, Exhibit 2, Col (5) - Exhibit 2, Col (7)
- (3) From Summary, Exhibit 2, Col (7)
- (4) From Summary, Exhibit 2, Col (12)
- (5) = (3) - (4)
- (6) From Summary, Exhibit 3, Col (5)
- (7) From Summary, Exhibit 3, Col (9)
- (8) = (6) - (7)
- (9) = (5) - (8)
- (10) From Summary, Exhibit 4, Row (11)
- (11) = (9) + (10)

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Summary
December 31, 2019

Summary of Estimated Ultimate Retained Loss Prior to Consideration of Member Deductible
Retained Limits

Accident Year (1)	Ultimate Loss					Paid Loss					
	Automobile Liability (2)	General Liability (3)	Property Liability (4)	Total (5)	Aggregate Retention (6)	Retained Losses (7)	Automobile Liability (8)	General Liability (9)	Property Liability (10)	Total (11)	Retained Losses (12)
1989	\$111,919	\$207,853	\$124,141	\$443,913		\$443,913	\$111,919	\$207,853	\$124,141	\$443,913	\$443,913
1990	18,683	439,863	32,734	491,280		491,280	18,683	439,863	32,734	491,280	491,280
1991	13,946	84,015	75,626	173,587	850,000	173,587	13,946	84,015	75,626	173,587	173,587
1992	39,293	139,376	63,858	242,527	850,000	242,527	39,293	139,376	63,858	242,527	242,527
1993	329,494	600,979	63,660	994,133	850,000	850,000	329,494	600,979	63,660	994,133	850,000
1994	126,181	106,065	96,833	329,079	950,000	329,079	126,181	106,065	96,833	329,079	329,079
1995	157,537	156,790	85,639	399,966	950,000	399,966	157,537	156,790	85,639	399,966	399,966
1996	75,097	357,926	92,901	525,924		525,924	75,097	357,926	92,901	525,924	525,924
1997	572,332	706,526	225,205	1,504,063		1,504,063	572,332	706,526	225,205	1,504,063	1,504,063
1998	98,687	554,289	135,150	788,126		788,126	98,687	554,289	135,150	788,126	788,126
1999	203,725	657,094	392,466	1,253,285		1,253,285	203,725	657,094	392,466	1,253,285	1,253,285
2000	81,660	164,560	130,204	376,424		376,424	81,660	164,560	130,204	376,424	376,424
2001	555,168	497,423	505,931	1,558,522		1,558,522	555,168	497,423	505,931	1,558,522	1,558,522
2002	167,747	1,347,177	369,496	1,884,420		1,884,420	167,747	1,347,177	369,496	1,884,420	1,884,420
2003	168,870	269,762	265,463	704,095		704,095	168,870	269,762	265,463	704,095	704,095
2004	49,417	511,964	229,621	791,002		791,002	49,417	511,964	229,621	791,002	791,002
2005	243,966	857,801	369,470	1,471,237		1,471,237	243,966	857,801	369,470	1,471,237	1,471,237
2006	145,431	915,795	497,206	1,558,432		1,558,432	145,431	915,795	497,206	1,558,432	1,558,432
2007	275,826	312,120	405,891	993,837		993,837	275,826	312,120	405,891	993,837	993,837
2008	136,527	856,672	654,562	1,647,761		1,647,761	136,527	856,672	654,562	1,647,761	1,647,761
2009	31,122	1,177,813	324,515	1,533,450		1,533,450	31,122	1,177,813	324,515	1,533,450	1,533,450
2010	161,512	972,613	389,384	1,523,508		1,523,508	161,512	972,613	389,384	1,523,508	1,523,508
2011	87,731	323,802	879,940	1,291,472		1,291,472	87,731	323,802	879,940	1,291,472	1,291,472
2012	38,269	542,610	559,108	1,139,987		1,139,987	38,269	542,610	559,108	1,139,987	1,139,987
2013	234,785	601,882	582,706	1,419,374		1,419,374	234,785	601,882	582,706	1,419,374	1,419,374
2014	104,340	960,000	1,162,693	2,227,033		2,227,033	104,340	729,501	1,162,693	1,996,534	1,996,534
2015	82,316	400,000	651,268	1,133,584		1,133,584	82,316	314,175	651,268	1,047,759	1,047,759
2016	145,899	790,000	448,203	1,384,103		1,384,103	145,899	469,365	448,203	1,063,468	1,063,468
2017	65,054	950,000	606,847	1,621,901		1,621,901	65,054	506,669	606,847	1,178,570	1,178,570
2018	58,000	1,025,000	566,419	1,649,419		1,649,419	43,483	255,263	566,419	865,166	865,166
2019	112,000	1,025,000	756,000	1,893,000		1,893,000	39,969	37,442	324,837	402,248	402,248
Total	\$4,692,534	\$18,512,769	\$11,743,142	\$34,948,446		\$34,804,313	\$4,605,987	\$15,675,184	\$11,311,979	\$31,593,150	\$31,449,017

Notes:

- (2) From Auto Liability (AB, AD), Exhibit 1, Col (2)
- (3) From General Liability, Exhibit 1, Col (2)
- (4) From Property and Auto Physical Damage, Exhibit 1, Col (2)
- (5) = (2) + (3) + (4)
- (6) Provided by MVRMA
- (7) = (5) subject to (6)
- (8)-(10) Provided by MVRMA
- (11) = (8) + (9) + (10)
- (12) = (11) subject to (6)

Miami Valley Risk Management Association
Summary
December 31, 2019

Summary of Estimated Member Deductible Ultimate Loss

Accident Year	Ultimate Loss				Paid Loss			
	Automobile Liability	General Liability	Property Liability	Total	Automobile Liability	General Liability	Property Liability	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1989								
1990								
1991								
1992								
1993								
1994								
1995								
1996								
1997								
1998								
1999								
2000								
2001								
2002								
2003								
2004								
2005								
2006	\$48,974	\$55,888	\$103,904	\$208,766	\$48,974	\$55,888	\$103,904	\$208,766
2007	76,272	54,069	101,827	232,168	76,272	54,069	101,827	232,168
2008	46,288	71,826	134,525	252,640	46,288	71,826	134,525	252,640
2009	30,922	58,683	119,127	208,732	30,922	58,683	119,127	208,732
2010	43,334	68,618	87,270	199,222	43,334	68,618	87,270	199,222
2011	43,911	67,033	127,474	238,418	43,911	67,033	127,474	238,418
2012	24,213	48,604	92,085	164,902	24,213	48,604	92,085	164,902
2013	40,251	54,455	112,692	207,398	40,251	54,455	112,692	207,398
2014	63,678	72,365	104,646	240,689	63,678	72,365	104,646	240,689
2015	49,288	64,151	94,439	207,878	49,288	64,151	94,439	207,878
2016	57,898	62,281	116,907	237,085	57,898	60,559	116,907	235,363
2017	39,350	48,795	100,979	189,124	39,350	48,042	100,979	188,371
2018	29,580	66,263	127,330	223,173	29,580	54,475	127,330	211,385
2019	43,518	39,448	110,287	193,253	35,236	28,398	74,537	138,171
Total	\$637,477	\$832,481	\$1,533,490	\$3,003,448	\$629,195	\$807,168	\$1,497,740	\$2,934,103

Notes:

- (2)-(4) Provided by MVRMA
- (5) = (2) + (3) + (4)
- (6)-(8) Provided by MVRMA
- (9) = (6) + (7) + (8)

Miami Valley Risk Management Association
Summary
December 31, 2019

Indicated Unallocated Loss Adjustment Expense Reserves

Accident Year	Case Reserves				IBNR			
	Automobile Liability	General Liability	Property Liability	Total	Automobile Liability	General Liability	Property Liability	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1989								
1990								
1991								
1992								
1993								
1994								
1995								
1996								
1997								
1998								
1999								
2000								
2001								
2002								
2003								
2004								
2005								
2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2007	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	0
2014	0	196,366	0	196,366	0	34,133	0	34,133
2015	0	11,856	0	11,856	0	73,969	0	73,969
2016	0	80,157	0	80,157	0	240,478	0	240,478
2017	0	59,215	0	59,215	0	384,116	0	384,116
2018	0	98,585	0	98,585	14,517	671,152	0	685,668
2019	22,628	30,000	332,406	385,034	49,403	957,558	98,757	1,105,718
Total	\$22,628	\$476,179	\$332,406	\$831,213	\$63,920	\$2,361,406	\$98,757	\$2,524,083
	(10)		Selected ULAE Expense to Loss Ratio		5.3%	4.9%	4.2%	4.8%
	(11)		ULAE Reserves		\$3,987	\$127,375	\$11,128	\$142,491

- Notes:
- Losses Net of Deductibles
 - (2)-(4) Provided by MVRMA
 - (5) = (2) + (3) + (4)
 - (6) From Auto Liability (AB, AD), Exhibit 1, Col (6)
 - (7) From General Liability, Exhibit 1, Col (6)
 - (8) From Property and Auto Physical Damage, Exhibit 1, Col (6)
 - (9) = (6) + (7) + (8)
 - (10) Based on Pinnacle's analysis of industry data
 - (11) = 50% of ULAE Ratio x Case Reserves + 100% of ULAE Ratio x IBNR Reserves

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Summary of Loss Reserve Estimates
Retained Limits

Accident Year	Selected Ultimate Loss	Incurred Loss	Paid Loss	Case Reserves	Indicated IBNR	Estimated Total Reserves
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1989	\$111,919	\$111,919	\$111,919	\$0	\$0	\$0
1990	18,683	18,683	18,683	0	0	0
1991	13,946	13,946	13,946	0	0	0
1992	39,293	39,293	39,293	0	0	0
1993	329,494	329,494	329,494	0	0	0
1994	126,181	126,181	126,181	0	0	0
1995	157,537	157,537	157,537	0	0	0
1996	75,097	75,097	75,097	0	0	0
1997	572,332	572,332	572,332	0	0	0
1998	98,687	98,687	98,687	0	0	0
1999	203,725	203,725	203,725	0	0	0
2000	81,660	81,660	81,660	0	0	0
2001	555,168	555,168	555,168	0	0	0
2002	167,747	167,747	167,747	0	0	0
2003	168,870	168,870	168,870	0	0	0
2004	49,417	49,417	49,417	0	0	0
2005	243,966	243,966	243,966	0	0	0
2006	145,431	145,431	145,431	0	0	0
2007	275,826	275,826	275,826	0	0	0
2008	136,527	136,527	136,527	0	0	0
2009	31,122	31,122	31,122	0	0	0
2010	161,512	161,512	161,512	0	0	0
2011	87,731	87,731	87,731	0	0	0
2012	38,269	38,269	38,269	0	0	0
2013	234,785	234,785	234,785	0	0	0
2014	104,340	104,340	104,340	0	0	0
2015	82,316	82,316	82,316	0	0	0
2016	145,899	145,899	145,899	0	0	0
2017	65,054	65,054	65,054	0	0	0
2018	58,000	43,483	43,483	0	14,517	14,517
2019	112,000	62,597	39,969	22,628	49,403	72,031
Total	\$4,692,534	\$4,628,615	\$4,605,987	\$22,628	\$63,920	\$86,548

Notes:

- (2) From Exhibit 3, Col (13)
(3)-(5) Provided by MVRMA
(6) = (2) - (3)
(7) = (5) + (6)

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Comparison of Ultimate Loss to Prior Ultimate Loss
Retained Limits

Accident Year (1)	Selected Ultimate Loss @ 12/31/2018 (2)	Selected Ultimate Loss @ 12/31/2019 (3)	Difference (4)	Percent Change (5)
1989	\$111,919	\$111,919	\$0	0.0%
1990	18,683	18,683	0	0.0%
1991	13,946	13,946	0	0.0%
1992	39,293	39,293	0	0.0%
1993	329,494	329,494	0	0.0%
1994	126,181	126,181	0	0.0%
1995	157,537	157,537	0	0.0%
1996	75,097	75,097	0	0.0%
1997	572,332	572,332	0	0.0%
1998	98,687	98,687	0	0.0%
1999	203,725	203,725	0	0.0%
2000	81,660	81,660	0	0.0%
2001	555,168	555,168	0	0.0%
2002	167,747	167,747	0	0.0%
2003	168,870	168,870	0	0.0%
2004	49,417	49,417	0	0.0%
2005	243,966	243,966	0	0.0%
2006	145,431	145,431	0	0.0%
2007	275,826	275,826	0	0.0%
2008	136,527	136,527	0	0.0%
2009	31,122	31,122	0	0.0%
2010	161,512	161,512	0	0.0%
2011	87,731	87,731	0	0.0%
2012	38,269	38,269	0	0.0%
2013	234,785	234,785	0	0.0%
2014	104,340	104,340	0	0.0%
2015	82,316	82,316	0	0.0%
2016	147,000	145,899	(1,101)	-0.7%
2017	90,000	65,054	(24,946)	-27.7%
2018	97,000	58,000	(39,000)	-40.2%
Total	\$4,645,581	\$4,580,534	(\$65,047)	-1.4%

Notes:

- (2) From Pinnacle's analysis of unpaid loss & LAE at 12/31/2018
- (3) From Exhibit 3, Col (13)
- (4) = (3) - (2)
- (5) = (4) / (2)

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Selected Ultimate Loss
Retained Limits

Accident Year	Retention	Industry Development		MVRMA's Loss Development					MVRMA Expected Loss	MVRMA Incurred BF	MVRMA Paid BF	Selected Ultimate Loss
		Incurred Loss	Paid Loss	Incurred Loss	Paid Loss	Case Reserve	Average Incurred	Average Paid				
(1)	(2)	Method	Method	Method	Method	Method	Method	Method	Method	Method	Method	(13)
1989	\$250,000	\$111,919	\$111,919	\$111,919	\$111,919	\$111,919	\$111,919	\$111,919	\$23,771	\$111,919	\$111,919	\$111,919
1990	250,000	18,683	18,683	18,683	18,683	18,683	18,683	18,683	29,809	18,683	18,683	18,683
1991	250,000	13,946	13,946	13,946	13,946	13,946	13,946	13,946	36,192	13,946	13,946	13,946
1992	250,000	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,902	39,293	39,293	39,293
1993	250,000	329,494	329,494	329,494	329,494	329,494	329,494	329,494	47,388	329,494	329,494	329,494
1994	250,000	126,181	126,181	126,181	126,181	126,181	126,181	126,181	53,944	126,181	126,181	126,181
1995	250,000	157,537	157,537	157,537	157,537	157,537	157,537	157,537	48,719	157,537	157,537	157,537
1996	250,000	75,097	75,097	75,097	75,097	75,097	75,097	75,097	53,979	75,097	75,097	75,097
1997	500,000	572,332	572,332	572,332	572,332	572,332	572,332	572,332	62,327	572,332	572,332	572,332
1998	500,000	98,687	98,687	98,687	98,687	98,687	98,687	98,687	67,138	98,687	98,687	98,687
1999	500,000	203,725	203,725	203,725	203,725	203,725	203,725	203,725	67,219	203,725	203,725	203,725
2000	500,000	81,660	81,660	81,660	81,660	81,660	81,660	81,660	71,070	81,660	81,660	81,660
2001	500,000	555,168	555,168	555,168	555,168	555,168	555,168	555,168	71,329	555,168	555,168	555,168
2002	500,000	167,750	167,752	167,747	167,747	167,747	167,747	167,747	78,882	167,747	167,747	167,747
2003	1,000,000	168,876	168,880	168,870	168,870	168,870	168,870	168,870	80,489	168,870	168,870	168,870
2004	1,000,000	49,420	49,423	49,417	49,417	49,417	49,417	49,417	90,183	49,417	49,417	49,417
2005	1,000,000	243,999	244,022	243,966	243,966	243,966	243,966	243,966	95,418	243,966	243,966	243,966
2006	1,000,000	145,470	145,498	145,431	145,431	145,431	145,431	145,431	95,528	145,431	145,431	145,431
2007	1,000,000	275,974	276,081	275,826	275,826	275,826	275,826	275,826	97,122	275,826	275,826	275,826
2008	1,000,000	136,674	136,779	136,527	136,527	136,527	136,527	136,527	101,697	136,527	136,527	136,527
2009	1,000,000	31,189	31,237	31,122	31,122	31,122	31,122	31,122	104,995	31,122	31,122	31,122
2010	500,000	162,206	162,707	161,512	161,512	161,512	161,512	161,512	105,661	161,512	161,512	161,512
2011	500,000	88,205	88,698	87,731	87,731	87,731	87,731	87,731	106,385	87,731	87,731	87,731
2012	500,000	38,572	38,920	38,269	38,269	38,269	38,269	38,269	108,512	38,269	38,269	38,269
2013	500,000	237,288	241,421	234,785	235,959	234,785	234,785	235,020	111,689	234,785	235,341	234,785
2014	500,000	106,106	109,810	104,340	105,596	104,340	104,340	104,758	109,837	104,340	105,646	104,340
2015	500,000	84,981	91,223	82,398	83,890	82,316	82,316	83,059	109,782	82,426	84,375	82,316
2016	500,000	156,888	182,705	147,506	150,919	145,899	147,067	148,688	112,161	147,121	149,630	145,899
2017	500,000	77,018	103,664	66,756	71,666	65,054	66,558	70,275	116,871	68,035	75,837	65,054
2018	500,000	61,262	103,937	58,008	67,064	43,483	53,386	57,542	119,406	73,381	85,469	58,000
2019	500,000	126,113	218,357	101,878	102,329	101,574	93,518	92,302	121,500	109,443	114,012	112,000
Total		\$4,741,712	\$4,944,834	\$4,685,811	\$4,707,563	\$4,667,592	\$4,672,110	\$4,681,784	\$2,538,907	\$4,709,671	\$4,740,450	\$4,692,534

Notes:

- (2) Provided by MVRMA
- (3) From Exhibit 12.1, Col (4)
- (4) From Exhibit 12.2, Col (4)
- (5) From Exhibit 7, Col (4)
- (6) From Exhibit 8, Col (4)
- (7) From Exhibit 9, Col (8)
- (8) From Exhibit 10, Col (7)
- (9) From Exhibit 11, Col (7)
- (10) From Exhibit 4, Col (4)
- (11) From Exhibit 4, Col (8)
- (12) From Exhibit 5, Col (8)

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Ultimate Loss Based on Bornhuetter-Ferguson Method Using Incurred Loss
Retained Limits

Accident Year	Number of Vehicles	Selected Loss Cost	Expected Loss	Percent Undeveloped	Undeveloped Loss	Cumulative Incurred Loss	Projected Ultimate Loss	Indicated Loss Cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1989	534	\$45	\$23,771	0.0%	\$0	\$111,919	\$111,919	\$210
1990	663	45	29,809	0.0%	0	18,683	18,683	28
1991	797	45	36,192	0.0%	0	13,946	13,946	17
1992	870	46	39,902	0.0%	0	39,293	39,293	45
1993	1,023	46	47,388	0.0%	0	329,494	329,494	322
1994	1,153	47	53,944	0.0%	0	126,181	126,181	109
1995	1,031	47	48,719	0.0%	0	157,537	157,537	153
1996	1,131	48	53,979	0.0%	0	75,097	75,097	66
1997	1,293	48	62,327	0.0%	0	572,332	572,332	443
1998	1,379	49	67,138	0.0%	0	98,687	98,687	72
1999	1,367	49	67,219	0.0%	0	203,725	203,725	149
2000	1,431	50	71,070	0.0%	0	81,660	81,660	57
2001	1,422	50	71,329	0.0%	0	555,168	555,168	390
2002	1,557	51	78,882	0.0%	0	167,747	167,747	108
2003	1,573	51	80,489	0.0%	0	168,870	168,870	107
2004	1,745	52	90,183	0.0%	0	49,417	49,417	28
2005	1,828	52	95,418	0.0%	0	243,966	243,966	133
2006	1,812	53	95,528	0.0%	0	145,431	145,431	80
2007	1,824	53	97,122	0.0%	0	275,826	275,826	151
2008	1,891	54	101,697	0.0%	0	136,527	136,527	72
2009	1,933	54	104,995	0.0%	0	31,122	31,122	16
2010	1,926	55	105,661	0.0%	0	161,512	161,512	84
2011	1,920	55	106,385	0.0%	0	87,731	87,731	46
2012	1,939	56	108,512	0.0%	0	38,269	38,269	20
2013	1,976	57	111,689	0.0%	0	234,785	234,785	119
2014	1,924	57	109,837	0.0%	0	104,340	104,340	54
2015	1,904	58	109,782	0.1%	110	82,316	82,426	43
2016	1,926	58	112,161	1.1%	1,221	145,899	147,121	76
2017	1,987	59	116,871	2.6%	2,981	65,054	68,035	34
2018	2,010	59	119,406	25.0%	29,898	43,483	73,381	37
2019	2,025	60	121,500	38.6%	46,846	62,597	109,443	54
Total	47,794		\$2,538,907		\$81,057	\$4,628,615	\$4,709,671	\$99

Notes:

- (2) Provided by MVRMA
- (3) From Exhibit 6.1, Col (8)
- (4) = (2) x (3)
- (5) Based on Exhibit 13
- (6) = (4) x (5)
- (7) Provided by MVRMA
- (8) = (6) + (7)
- (9) = (8) / (2)

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Ultimate Loss Based on Bornhuetter-Ferguson Method Using Paid Loss
Retained Limits

Accident Year	Number of Vehicles	Selected Loss Cost	Expected Loss	Percent Undeveloped	Undeveloped Loss	Cumulative Paid Loss	Projected Ultimate Loss	Indicated Loss Cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1989	534	\$45	\$23,771	0.0%	\$0	\$111,919	\$111,919	\$210
1990	663	45	29,809	0.0%	0	18,683	18,683	28
1991	797	45	36,192	0.0%	0	13,946	13,946	17
1992	870	46	39,902	0.0%	0	39,293	39,293	45
1993	1,023	46	47,388	0.0%	0	329,494	329,494	322
1994	1,153	47	53,944	0.0%	0	126,181	126,181	109
1995	1,031	47	48,719	0.0%	0	157,537	157,537	153
1996	1,131	48	53,979	0.0%	0	75,097	75,097	66
1997	1,293	48	62,327	0.0%	0	572,332	572,332	443
1998	1,379	49	67,138	0.0%	0	98,687	98,687	72
1999	1,367	49	67,219	0.0%	0	203,725	203,725	149
2000	1,431	50	71,070	0.0%	0	81,660	81,660	57
2001	1,422	50	71,329	0.0%	0	555,168	555,168	390
2002	1,557	51	78,882	0.0%	0	167,747	167,747	108
2003	1,573	51	80,489	0.0%	0	168,870	168,870	107
2004	1,745	52	90,183	0.0%	0	49,417	49,417	28
2005	1,828	52	95,418	0.0%	0	243,966	243,966	133
2006	1,812	53	95,528	0.0%	0	145,431	145,431	80
2007	1,824	53	97,122	0.0%	0	275,826	275,826	151
2008	1,891	54	101,697	0.0%	0	136,527	136,527	72
2009	1,933	54	104,995	0.0%	0	31,122	31,122	16
2010	1,926	55	105,661	0.0%	0	161,512	161,512	84
2011	1,920	55	106,385	0.0%	0	87,731	87,731	46
2012	1,939	56	108,512	0.0%	0	38,269	38,269	20
2013	1,976	57	111,689	0.5%	556	234,785	235,341	119
2014	1,924	57	109,837	1.2%	1,306	104,340	105,646	55
2015	1,904	58	109,782	1.9%	2,060	82,316	84,375	44
2016	1,926	58	112,161	3.3%	3,731	145,899	149,630	78
2017	1,987	59	116,871	9.2%	10,783	65,054	75,837	38
2018	2,010	59	119,406	35.2%	41,985	43,483	85,469	43
2019	2,025	60	121,500	60.9%	74,043	39,969	114,012	56
Total	47,794		\$2,538,907		\$134,463	\$4,605,987	\$4,740,450	\$99

Notes:

- (2) Provided by MVRMA
- (3) From Exhibit 6.1, Col (8)
- (4) = (2) x (3)
- (5) Based on Exhibit 13
- (6) = (4) x (5)
- (7) Provided by MVRMA
- (8) = (6) + (7)
- (9) = (8) / (2)

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Initial Expected Loss Cost
Retained Limits

Accident Year	Number of Vehicles	Initial Ultimate Loss	Indicated Loss Cost	Limits Factor to \$500K	Trend Factor to 2019	Trended \$500K Limits Loss Cost	Expected Loss Cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1989	534	\$111,919	\$210	1.000	1.348	\$282	\$45
1990	663	18,683	28	1.000	1.335	38	45
1991	797	13,946	17	1.000	1.321	23	45
1992	870	39,293	45	1.000	1.308	59	46
1993	1,023	329,494	322	1.000	1.295	417	46
1994	1,153	126,181	109	1.000	1.282	140	47
1995	1,031	157,537	153	1.000	1.270	194	47
1996	1,131	75,097	66	1.000	1.257	83	48
1997	1,293	572,332	443	1.000	1.245	551	48
1998	1,379	98,687	72	1.000	1.232	88	49
1999	1,367	203,725	149	1.000	1.220	182	49
2000	1,431	81,660	57	1.000	1.208	69	50
2001	1,422	555,168	390	1.000	1.196	467	50
2002	1,557	167,747	108	1.000	1.184	128	51
2003	1,573	168,870	107	1.000	1.173	126	51
2004	1,745	49,417	28	1.000	1.161	33	52
2005	1,828	243,966	133	1.000	1.149	153	52
2006	1,812	145,431	80	1.000	1.138	91	53
2007	1,824	275,826	151	1.000	1.127	170	53
2008	1,891	136,527	72	1.000	1.116	81	54
2009	1,933	31,122	16	1.000	1.105	18	54
2010	1,926	161,512	84	1.000	1.094	92	55
2011	1,920	87,731	46	1.000	1.083	49	55
2012	1,939	38,269	20	1.000	1.072	21	56
2013	1,976	234,785	119	1.000	1.062	126	57
2014	1,924	104,340	54	1.000	1.051	57	57
2015	1,904	82,398	43	1.000	1.041	45	58
2016	1,926	147,506	77	1.000	1.030	79	58
2017	1,987	66,756	34	1.000	1.020	34	59
2018	2,010	58,008	29	1.000	1.010	29	59
2019	2,025	101,878	50	1.000	1.000	50	60
Total	47,794	\$4,685,811	\$98				
					Weighted Average Ex. Hi/Lo	\$107	
					10-Year Weighted Avg	58	
					10-Year Weighted Avg Ex. Hi/Lo	54	
					5-Year Weighted Avg	47	
					Selected 2019 Loss Cost	\$60	

Notes:

- (2) Provided by MVRMA
- (3) From Exhibit 6.2, Col (5)
- (4) = (3) / (2)
- (5) From Exhibit 6.3, Col (7)
- (6) Based on selected trend of 1.0%
- (7) = (4) x (5) x (6)
- (8) = Selected Loss Cost / [(6) x (5)]

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Initial Selected Ultimate Loss
Retained Limits

Accident Year	Projected Ultimate Loss Based on			Initial Ultimate Loss
	Incurred	Paid	Case	
(1)	(2)	(3)	(4)	(5)
1989	\$111,919	\$111,919	\$111,919	\$111,919
1990	18,683	18,683	18,683	18,683
1991	13,946	13,946	13,946	13,946
1992	39,293	39,293	39,293	39,293
1993	329,494	329,494	329,494	329,494
1994	126,181	126,181	126,181	126,181
1995	157,537	157,537	157,537	157,537
1996	75,097	75,097	75,097	75,097
1997	572,332	572,332	572,332	572,332
1998	98,687	98,687	98,687	98,687
1999	203,725	203,725	203,725	203,725
2000	81,660	81,660	81,660	81,660
2001	555,168	555,168	555,168	555,168
2002	167,747	167,747	167,747	167,747
2003	168,870	168,870	168,870	168,870
2004	49,417	49,417	49,417	49,417
2005	243,966	243,966	243,966	243,966
2006	145,431	145,431	145,431	145,431
2007	275,826	275,826	275,826	275,826
2008	136,527	136,527	136,527	136,527
2009	31,122	31,122	31,122	31,122
2010	161,512	161,512	161,512	161,512
2011	87,731	87,731	87,731	87,731
2012	38,269	38,269	38,269	38,269
2013	234,785	235,959	234,785	234,785
2014	104,340	105,596	104,340	104,340
2015	82,398	83,890	82,316	82,398
2016	147,506	150,919	145,899	147,506
2017	66,756	71,666	65,054	66,756
2018	58,008	67,064	43,483	58,008
2019	101,878	102,329	101,574	101,878
Total	\$4,685,811	\$4,707,563	\$4,667,592	\$4,685,811

Notes:

- (2) From Exhibit 7, Col (4)
- (3) From Exhibit 8, Col (4)
- (4) From Exhibit 9, Col (8)

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Estimated Limits Factor

Accident Year	Retention	Incurred Losses at		Incurred Limits Factors	Industry Limits Factors	Selected Limits Factors
		\$500K Limits	Retention Limits			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1989	\$250,000	\$111,919	\$111,919	1.000		1.000
1990	250,000	18,683	18,683	1.000		1.000
1991	250,000	13,946	13,946	1.000		1.000
1992	250,000	39,293	39,293	1.000		1.000
1993	250,000	329,494	329,494	1.000		1.000
1994	250,000	126,181	126,181	1.000		1.000
1995	250,000	157,537	157,537	1.000		1.000
1996	250,000	75,097	75,097	1.000		1.000
1997	500,000	572,332	572,332	1.000	1.000	1.000
1998	500,000	98,687	98,687	1.000	1.000	1.000
1999	500,000	203,725	203,725	1.000	1.000	1.000
2000	500,000	81,660	81,660	1.000	1.000	1.000
2001	500,000	555,168	555,168	1.000	1.000	1.000
2002	500,000	167,747	167,747	1.000	1.000	1.000
2003	1,000,000	168,870	168,870	1.000	0.899	1.000
2004	1,000,000	49,417	49,417	1.000	0.896	1.000
2005	1,000,000	243,966	243,966	1.000	0.894	1.000
2006	1,000,000	145,431	145,431	1.000	0.891	1.000
2007	1,000,000	275,826	275,826	1.000	0.889	1.000
2008	1,000,000	136,527	136,527	1.000	0.886	1.000
2009	1,000,000	31,122	31,122	1.000	0.884	1.000
2010	500,000	161,512	161,512	1.000	1.000	1.000
2011	500,000	87,731	87,731	1.000	1.000	1.000
2012	500,000	38,269	38,269	1.000	1.000	1.000
2013	500,000	234,785	234,785	1.000	1.000	1.000
2014	500,000	104,340	104,340	1.000	1.000	1.000
2015	500,000	82,316	82,316	1.000	1.000	1.000
2016	500,000	145,899	145,899	1.000	1.000	1.000
2017	500,000	65,054	65,054	1.000	1.000	1.000
2018	500,000	43,483	43,483	1.000	1.000	1.000
2019	500,000	62,597	62,597	1.000	1.000	1.000
Total		\$4,628,615	\$4,628,615			

Notes:

- (2)-(4) Provided by MVRMA
- (5) = (3) / (4)
- (6) Based on insurance industry development

Miami Valley Risk Management Association

Auto Liability (AB, AD)

December 31, 2019

Ultimate Loss Based on Incurred Loss Development Method
Retained Limits

Accident Year	Cumulative Incurred Loss	Loss Development Factors	Projected Ultimate Loss
(1)	(2)	(3)	(4)
1989	\$111,919	1.000	\$111,919
1990	18,683	1.000	18,683
1991	13,946	1.000	13,946
1992	39,293	1.000	39,293
1993	329,494	1.000	329,494
1994	126,181	1.000	126,181
1995	157,537	1.000	157,537
1996	75,097	1.000	75,097
1997	572,332	1.000	572,332
1998	98,687	1.000	98,687
1999	203,725	1.000	203,725
2000	81,660	1.000	81,660
2001	555,168	1.000	555,168
2002	167,747	1.000	167,747
2003	168,870	1.000	168,870
2004	49,417	1.000	49,417
2005	243,966	1.000	243,966
2006	145,431	1.000	145,431
2007	275,826	1.000	275,826
2008	136,527	1.000	136,527
2009	31,122	1.000	31,122
2010	161,512	1.000	161,512
2011	87,731	1.000	87,731
2012	38,269	1.000	38,269
2013	234,785	1.000	234,785
2014	104,340	1.000	104,340
2015	82,316	1.001	82,398
2016	145,899	1.011	147,506
2017	65,054	1.026	66,756
2018	43,483	1.334	58,008
2019	62,597	1.628	101,878
Total	\$4,628,615		\$4,685,811

Notes:

- (2) Provided by MVRMA
(3) Based on Exhibit 13
(4) = (2) x (3)

Miami Valley Risk Management Association

Auto Liability (AB, AD)

December 31, 2019

Ultimate Loss Based on Paid Loss Development Method
Retained Limits

Accident Year	Cumulative Paid Loss	Loss Development Factors	Projected Ultimate Loss
(1)	(2)	(3)	(4)
1989	\$111,919	1.000	\$111,919
1990	18,683	1.000	18,683
1991	13,946	1.000	13,946
1992	39,293	1.000	39,293
1993	329,494	1.000	329,494
1994	126,181	1.000	126,181
1995	157,537	1.000	157,537
1996	75,097	1.000	75,097
1997	572,332	1.000	572,332
1998	98,687	1.000	98,687
1999	203,725	1.000	203,725
2000	81,660	1.000	81,660
2001	555,168	1.000	555,168
2002	167,747	1.000	167,747
2003	168,870	1.000	168,870
2004	49,417	1.000	49,417
2005	243,966	1.000	243,966
2006	145,431	1.000	145,431
2007	275,826	1.000	275,826
2008	136,527	1.000	136,527
2009	31,122	1.000	31,122
2010	161,512	1.000	161,512
2011	87,731	1.000	87,731
2012	38,269	1.000	38,269
2013	234,785	1.005	235,959
2014	104,340	1.012	105,596
2015	82,316	1.019	83,890
2016	145,899	1.034	150,919
2017	65,054	1.102	71,666
2018	43,483	1.542	67,064
2019	39,969	2.560	102,329
Total	\$4,605,987		\$4,707,563

Notes:

- (2) Provided by MVRMA
(3) Based on Exhibit 13
(4) = (2) x (3)

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Ultimate Loss Based on Case Reserve Development Method
Retained Limits

Accident Year	Retention	Cumulative Paid Loss	Case Reserves	Loss Development Factors			Projected Ultimate Loss
				Incurred	Paid	Reserve	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1989	\$250,000	\$111,919	\$0	100.0%	100.0%	100.0%	\$111,919
1990	250,000	18,683	0	100.0%	100.0%	100.0%	18,683
1991	250,000	13,946	0	100.0%	100.0%	100.0%	13,946
1992	250,000	39,293	0	100.0%	100.0%	100.0%	39,293
1993	250,000	329,494	0	100.0%	100.0%	100.0%	329,494
1994	250,000	126,181	0	100.0%	100.0%	100.0%	126,181
1995	250,000	157,537	0	100.0%	100.0%	100.0%	157,537
1996	250,000	75,097	0	100.0%	100.0%	100.0%	75,097
1997	500,000	572,332	0	100.0%	100.0%	100.0%	572,332
1998	500,000	98,687	0	100.0%	100.0%	100.0%	98,687
1999	500,000	203,725	0	100.0%	100.0%	100.0%	203,725
2000	500,000	81,660	0	100.0%	100.0%	100.0%	81,660
2001	500,000	555,168	0	100.0%	100.0%	100.0%	555,168
2002	500,000	167,747	0	100.0%	100.0%	100.0%	167,747
2003	1,000,000	168,870	0	100.0%	100.0%	100.0%	168,870
2004	1,000,000	49,417	0	100.0%	100.0%	100.0%	49,417
2005	1,000,000	243,966	0	100.0%	100.0%	100.0%	243,966
2006	1,000,000	145,431	0	100.0%	100.0%	100.0%	145,431
2007	1,000,000	275,826	0	100.0%	100.0%	100.0%	275,826
2008	1,000,000	136,527	0	100.0%	100.0%	100.0%	136,527
2009	1,000,000	31,122	0	100.0%	100.0%	100.0%	31,122
2010	500,000	161,512	0	100.0%	100.0%	100.0%	161,512
2011	500,000	87,731	0	100.0%	100.0%	100.0%	87,731
2012	500,000	38,269	0	100.0%	100.0%	100.0%	38,269
2013	500,000	234,785	0	100.0%	99.5%	100.0%	234,785
2014	500,000	104,340	0	100.0%	98.8%	100.0%	104,340
2015	500,000	82,316	0	99.9%	98.1%	94.7%	82,316
2016	500,000	145,899	0	98.9%	96.7%	67.3%	145,899
2017	500,000	65,054	0	97.4%	90.8%	72.4%	65,054
2018	500,000	43,483	0	75.0%	64.8%	28.8%	43,483
2019	500,000	39,969	22,628	61.4%	39.1%	36.7%	101,574
Total		\$4,605,987	\$22,628				\$4,667,592

Notes:

- (2)-(4) Provided by MVRMA
- (5)-(6) Based on Exhibit 13
- (7) = [(5) - (6)] / [(1.0 - (6))]
- (8) = (3) + [(4) / (7)]

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Ultimate Loss Based on Incurred Loss per Reported Claim Development Method
Retained Limits

Accident Year	Retention	Cumulative Incurred Loss per Reported Claim	Loss Development Factors	Projected Average Loss	Selected Ultimate Claims	Projected Ultimate Loss
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1989	\$250,000	\$2,603	1.000	\$2,603	43	\$111,919
1990	250,000	566	1.000	566	33	18,683
1991	250,000	536	1.000	536	26	13,946
1992	250,000	1,034	1.000	1,034	38	39,293
1993	250,000	5,492	1.000	5,492	60	329,494
1994	250,000	1,753	1.000	1,753	72	126,181
1995	250,000	1,853	1.000	1,853	85	157,537
1996	250,000	659	1.000	659	114	75,097
1997	500,000	5,840	1.000	5,840	98	572,332
1998	500,000	1,148	1.000	1,148	86	98,687
1999	500,000	1,684	1.000	1,684	121	203,725
2000	500,000	785	1.000	785	104	81,660
2001	500,000	6,455	1.000	6,455	86	555,168
2002	500,000	2,097	1.000	2,097	80	167,747
2003	1,000,000	1,443	1.000	1,443	117	168,870
2004	1,000,000	575	1.000	575	86	49,417
2005	1,000,000	2,489	1.000	2,489	98	243,966
2006	1,000,000	2,078	1.000	2,078	70	145,431
2007	1,000,000	2,815	1.000	2,815	98	275,826
2008	1,000,000	1,796	1.000	1,796	76	136,527
2009	1,000,000	546	1.000	546	57	31,122
2010	500,000	2,071	1.000	2,071	78	161,512
2011	500,000	1,186	1.000	1,186	74	87,731
2012	500,000	736	1.000	736	52	38,269
2013	500,000	5,104	1.000	5,104	46	234,785
2014	500,000	1,338	1.000	1,338	78	104,340
2015	500,000	1,614	1.000	1,614	51	82,316
2016	500,000	1,920	1.008	1,935	76	147,067
2017	500,000	1,276	1.023	1,305	51	66,558
2018	500,000	906	1.228	1,112	48	53,386
2019	500,000	1,277	1.381	1,764	53	93,518
Total				\$2,072	2,255	\$4,672,110

Notes:

- (2) Provided by MVRMA
- (3) Based on data provided by MVRMA
- (4) Based on Exhibit 14
- (5) = (3) x (4)
- (6) From Exhibit 19, Col (6)
- (7) = (5) x (6)

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Ultimate Loss Based on Paid Loss per Closed Claim Development Method
Retained Limits

Accident Year	Retention	Cumulative Paid Loss per Closed Claim	Loss Development Factors	Projected Average Loss	Selected Ultimate Claims	Projected Ultimate Loss
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1989	\$250,000	\$2,603	1.000	\$2,603	43	\$111,919
1990	250,000	566	1.000	566	33	18,683
1991	250,000	536	1.000	536	26	13,946
1992	250,000	1,034	1.000	1,034	38	39,293
1993	250,000	5,492	1.000	5,492	60	329,494
1994	250,000	1,753	1.000	1,753	72	126,181
1995	250,000	1,853	1.000	1,853	85	157,537
1996	250,000	659	1.000	659	114	75,097
1997	500,000	5,840	1.000	5,840	98	572,332
1998	500,000	1,148	1.000	1,148	86	98,687
1999	500,000	1,684	1.000	1,684	121	203,725
2000	500,000	785	1.000	785	104	81,660
2001	500,000	6,455	1.000	6,455	86	555,168
2002	500,000	2,097	1.000	2,097	80	167,747
2003	1,000,000	1,443	1.000	1,443	117	168,870
2004	1,000,000	575	1.000	575	86	49,417
2005	1,000,000	2,489	1.000	2,489	98	243,966
2006	1,000,000	2,078	1.000	2,078	70	145,431
2007	1,000,000	2,815	1.000	2,815	98	275,826
2008	1,000,000	1,796	1.000	1,796	76	136,527
2009	1,000,000	546	1.000	546	57	31,122
2010	500,000	2,071	1.000	2,071	78	161,512
2011	500,000	1,186	1.000	1,186	74	87,731
2012	500,000	736	1.000	736	52	38,269
2013	500,000	5,104	1.001	5,109	46	235,020
2014	500,000	1,338	1.004	1,343	78	104,758
2015	500,000	1,614	1.009	1,629	51	83,059
2016	500,000	1,920	1.019	1,956	76	148,688
2017	500,000	1,276	1.080	1,378	51	70,275
2018	500,000	906	1.323	1,199	48	57,542
2019	500,000	975	1.786	1,742	53	92,302
Total				\$2,076	2,255	\$4,681,784

Notes:

- (2) Provided by MVRMA
- (3) Based on data provided by MVRMA
- (4) Based on Exhibit 14
- (5) = (3) x (4)
- (6) From Exhibit 19, Col (6)
- (7) = (5) x (6)

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Ultimate Loss Based on Incurred Loss Development Method Using Industry Factors
Retained Limits

Accident Year	Cumulative Incurred Loss	Industry Loss Development Factors	Projected Ultimate Loss
(1)	(2)	(3)	(4)
1989	\$111,919	1.000	\$111,919
1990	18,683	1.000	18,683
1991	13,946	1.000	13,946
1992	39,293	1.000	39,293
1993	329,494	1.000	329,494
1994	126,181	1.000	126,181
1995	157,537	1.000	157,537
1996	75,097	1.000	75,097
1997	572,332	1.000	572,332
1998	98,687	1.000	98,687
1999	203,725	1.000	203,725
2000	81,660	1.000	81,660
2001	555,168	1.000	555,168
2002	167,747	1.000	167,750
2003	168,870	1.000	168,876
2004	49,417	1.000	49,420
2005	243,966	1.000	243,999
2006	145,431	1.000	145,470
2007	275,826	1.001	275,974
2008	136,527	1.001	136,674
2009	31,122	1.002	31,189
2010	161,512	1.004	162,206
2011	87,731	1.005	88,205
2012	38,269	1.008	38,572
2013	234,785	1.011	237,288
2014	104,340	1.017	106,106
2015	82,316	1.032	84,981
2016	145,899	1.075	156,888
2017	65,054	1.184	77,018
2018	43,483	1.409	61,262
2019	62,597	2.015	126,113
Total	\$4,628,615		\$4,741,712

Notes:

- (2) Provided by MVRMA
- (3) Based on insurance industry development
- (4) = (2) x (3)

Miami Valley Risk Management Association
Auto Liability (AB, AD)
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Ultimate Loss Based on Paid Loss Development Method Using Industry Factors
Retained Limits

Accident Year	Cumulative Paid Loss	Industry Loss Development Factors	Projected Ultimate Loss
(1)	(2)	(3)	(4)
1989	\$111,919	1.000	\$111,919
1990	18,683	1.000	18,683
1991	13,946	1.000	13,946
1992	39,293	1.000	39,293
1993	329,494	1.000	329,494
1994	126,181	1.000	126,181
1995	157,537	1.000	157,537
1996	75,097	1.000	75,097
1997	572,332	1.000	572,332
1998	98,687	1.000	98,687
1999	203,725	1.000	203,725
2000	81,660	1.000	81,660
2001	555,168	1.000	555,168
2002	167,747	1.000	167,752
2003	168,870	1.000	168,880
2004	49,417	1.000	49,423
2005	243,966	1.000	244,022
2006	145,431	1.000	145,498
2007	275,826	1.001	276,081
2008	136,527	1.002	136,779
2009	31,122	1.004	31,237
2010	161,512	1.007	162,707
2011	87,731	1.011	88,698
2012	38,269	1.017	38,920
2013	234,785	1.028	241,421
2014	104,340	1.052	109,810
2015	82,316	1.108	91,223
2016	145,899	1.252	182,705
2017	65,054	1.594	103,664
2018	43,483	2.390	103,937
2019	39,969	5.463	218,357
Total	\$4,605,987		\$4,944,834

Notes:

- (2) Provided by MVRMA
- (3) Based on insurance industry development
- (4) = (2) x (3)

Miami Valley Risk Management Association
Auto Liability (AB, AD)
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Loss Development Patterns

Month of Development (1)	\$500K Limits % Developed		\$1M Limits % Developed		Industry % Developed	
	Incurred (2)	Paid (3)	Incurred (4)	Paid (5)	Incurred (6)	Paid (7)
372	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
360	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
348	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
336	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
324	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
312	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
300	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
288	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
276	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
264	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
252	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
240	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
228	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
216	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
204	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
192	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
180	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
168	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
156	100.0%	100.0%	100.0%	100.0%	99.9%	99.9%
144	100.0%	100.0%	100.0%	100.0%	99.9%	99.8%
132	100.0%	100.0%	100.0%	100.0%	99.8%	99.6%
120	100.0%	100.0%	100.0%	100.0%	99.6%	99.3%
108	100.0%	100.0%	100.0%	100.0%	99.5%	98.9%
96	100.0%	100.0%	100.0%	100.0%	99.2%	98.3%
84	100.0%	99.5%	100.0%	99.2%	98.9%	97.3%
72	100.0%	98.8%	100.0%	98.5%	98.3%	95.0%
60	99.9%	98.1%	99.7%	97.5%	96.9%	90.2%
48	98.9%	96.7%	98.4%	94.6%	93.0%	79.9%
36	97.4%	90.8%	92.4%	82.3%	84.5%	62.8%
24	75.0%	64.8%	69.7%	54.3%	71.0%	41.8%
12	61.4%	39.1%	45.9%	18.2%	49.6%	18.3%

Notes:

- (2) Based on Exhibit 15
- (3) Based on Exhibit 16
- (4) = Col (2) lagged 6 months
- (5) = Col (3) lagged 6 months
- (6)-(7) Based on insurance industry development

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Severity Development Patterns

Month of Development (1)	\$500K Limits % Developed		\$1M Limits % Developed	
	Incurred (2)	Paid (3)	Incurred (4)	Paid (5)
372	100.0%	100.0%	100.0%	100.0%
360	100.0%	100.0%	100.0%	100.0%
348	100.0%	100.0%	100.0%	100.0%
336	100.0%	100.0%	100.0%	100.0%
324	100.0%	100.0%	100.0%	100.0%
312	100.0%	100.0%	100.0%	100.0%
300	100.0%	100.0%	100.0%	100.0%
288	100.0%	100.0%	100.0%	100.0%
276	100.0%	100.0%	100.0%	100.0%
264	100.0%	100.0%	100.0%	100.0%
252	100.0%	100.0%	100.0%	100.0%
240	100.0%	100.0%	100.0%	100.0%
228	100.0%	100.0%	100.0%	100.0%
216	100.0%	100.0%	100.0%	100.0%
204	100.0%	100.0%	100.0%	100.0%
192	100.0%	100.0%	100.0%	100.0%
180	100.0%	100.0%	100.0%	100.0%
168	100.0%	100.0%	100.0%	100.0%
156	100.0%	100.0%	100.0%	100.0%
144	100.0%	100.0%	100.0%	100.0%
132	100.0%	100.0%	100.0%	100.0%
120	100.0%	100.0%	100.0%	100.0%
108	100.0%	100.0%	100.0%	100.0%
96	100.0%	100.0%	100.0%	100.0%
84	100.0%	99.9%	100.0%	99.8%
72	100.0%	99.6%	100.0%	99.4%
60	100.0%	99.1%	100.0%	98.7%
48	99.2%	98.1%	98.7%	96.4%
36	97.7%	92.6%	93.9%	86.9%
24	81.5%	75.6%	78.0%	68.1%
12	72.4%	56.0%	61.0%	34.3%

Notes:

- (2) Based on Exhibit 17
- (3) Based on Exhibit 18
- (4) = Col (2) lagged 6 months
- (5) = Col (3) lagged 6 months

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Incurred Loss at \$500K SIR

Accident Year	Maturity (Age in Months)															
	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919
1990	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683
1991	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946
1992	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293
1993	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494
1994	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181
1995	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537
1996	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097
1997	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332
1998	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687
1999	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725
2000	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660
2001	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168
2002	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747
2003	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870
2004	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417
2005																
2006																
2007																
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2012																
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2016																
2017																
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2019																

Accident Year	Age-to-Age Factors															
	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-Ult
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004																
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2008																
2009																
2010																
2011																
2012																
2013																
2014																
2015																
2016																
2017																
2018																
2019																
All Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Incurred	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Paid Loss at \$500K SIR

Accident Year	Maturity (Age in Months)														
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
1989	8,614	8,614	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919
1990	8,126	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683
1991	8,719	8,874	12,838	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946
1992	14,941	16,632	21,357	25,418	25,418	25,418	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293
1993	23,877	53,454	78,551	324,172	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494
1994	27,039	43,451	125,930	126,992	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181
1995	38,520	60,033	134,606	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537
1996	44,173	53,678	72,802	74,641	74,641	74,641	74,641	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097
1997	34,298	68,453	565,604	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332
1998	42,307	55,723	68,250	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687
1999	40,519	134,607	152,208	176,501	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725
2000	52,991	72,765	74,962	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660
2001	32,751	422,055	466,966	483,944	527,259	534,626	534,626	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168
2002	34,887	101,869	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747
2003	64,611	82,622	114,099	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870
2004	41,711	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417
2005	43,005	143,482	153,587	170,181	186,079	215,596	243,966	243,966	243,966	243,966	243,966	243,966	243,966	243,966	243,966
2006	46,100	75,431	145,431	145,431	145,431	145,431	145,431	145,431	145,431	145,431	145,431	145,431	145,431	145,431	145,431
2007	72,271	151,506	250,574	275,715	275,826	275,826	275,826	275,826	275,826	275,826	275,826	275,826	275,826	275,826	275,826
2008	56,070	79,446	96,111	136,527	136,527	136,527	136,527	136,527	136,527	136,527	136,527	136,527	136,527	136,527	136,527
2009	30,372	31,122	31,122	31,122	31,122	31,122	31,122	31,122	31,122	31,122	31,122	31,122	31,122	31,122	31,122
2010	67,993	127,233	161,512	161,512	161,512	161,512	161,512	161,512	161,512	161,512	161,512	161,512	161,512	161,512	161,512
2011	65,650	77,534	87,731	87,731	87,731	87,731	87,731	87,731	87,731	87,731	87,731	87,731	87,731	87,731	87,731
2012	22,340	38,269	38,269	38,269	38,269	38,269	38,269	38,269	38,269	38,269	38,269	38,269	38,269	38,269	38,269
2013	71,513	83,494	234,785	234,785	243,573	234,785	234,785	234,785	234,785	234,785	234,785	234,785	234,785	234,785	234,785
2014	77,184	82,740	104,340	104,340	104,340	104,340	104,340	104,340	104,340	104,340	104,340	104,340	104,340	104,340	104,340
2015	48,868	76,478	76,478	82,316	82,316	82,316	82,316	82,316	82,316	82,316	82,316	82,316	82,316	82,316	82,316
2016	50,913	115,081	135,625	145,899	145,899	145,899	145,899	145,899	145,899	145,899	145,899	145,899	145,899	145,899	145,899
2017	35,035	65,054	65,054	65,054	65,054	65,054	65,054	65,054	65,054	65,054	65,054	65,054	65,054	65,054	65,054
2018	25,849	43,483	43,483	43,483	43,483	43,483	43,483	43,483	43,483	43,483	43,483	43,483	43,483	43,483	43,483
2019	39,969	39,969	39,969	39,969	39,969	39,969	39,969	39,969	39,969	39,969	39,969	39,969	39,969	39,969	39,969

Accident Year	Age-to-Age Factors														
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192
1989	1.000	12.993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	2.299	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.018	1.447	1.086	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.113	1.284	1.190	1.000	1.546	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	2.239	1.470	4.127	1.016	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.607	2.898	1.008	0.994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.558	2.242	1.170	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.215	1.356	1.025	1.000	1.000	1.000	1.006	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.996	8.263	1.012	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.317	1.225	1.446	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	3.322	1.131	1.160	1.154	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.373	1.030	1.089	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	12.887	1.106	1.036	1.090	1.014	1.000	1.038	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	2.920	1.647	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.279	1.381	1.480	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	1.185	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005	3.336	1.070	1.108	1.093	1.159	1.132	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2006	1.636	1.928	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2007	2.096	1.654	1.100	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2008	1.417	1.210	1.421	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2009	1.025	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2010	1.871	1.269	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2011	1.181	1.132	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2012	1.713	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2013	1.168	2.812	1.000	1.037	0.964	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2014	1.072	1.261	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2015	1.565	1.000	1.076	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2016	2.260	1.179	1.076	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2017	1.857	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2018	1.682	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol	1.983	1.592	1.137	1.024	1.010	1.007	1.005	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.690	1.566	1.075	1.019	1.010	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.494	1.328	1.067	1.007	1.015	1.021	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.434	1.164	1.040	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.610	1.457	1.027	1.016	0.986	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.686	1.154	1.025	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	2.000	1.080	1.05												

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Paid Loss at \$500K SIR

Accident Year	Maturity (Age in Months)															
	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919	111,919
1990	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683	18,683
1991	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946	13,946
1992	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293	39,293
1993	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494	329,494
1994	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181	126,181
1995	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537	157,537
1996	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097	75,097
1997	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332	572,332
1998	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687	98,687
1999	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725	203,725
2000	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660	81,660
2001	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168	555,168
2002	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747	167,747
2003	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870	168,870
2004	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417	49,417
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Accident Year	Age-to-Age Factors															
	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-Ult
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
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All Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Paid	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Incurred Loss per Reported Claim at \$500K SIR

Accident Year	Maturity (Age in Months)														
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
1989	212	205	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603
1990	317	566	566	566	566	566	566	566	566	566	566	566	566	566	566
1991	388	363	618	536	536	536	536	536	536	536	536	536	536	536	536
1992	560	552	825	966	1,058	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034
1993	1,744	4,779	5,615	5,677	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492
1994	913	2,152	1,749	1,764	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753
1995	1,820	1,757	1,950	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853
1996	698	745	730	679	679	672	677	659	659	659	659	659	659	659	659
1997	2,371	2,859	6,051	5,900	5,900	5,900	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840
1998	1,015	1,084	1,113	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148
1999	1,226	1,227	1,368	1,621	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684
2000	755	772	796	785	785	785	785	785	785	785	785	785	785	785	785
2001	1,143	5,673	7,554	10,921	9,807	6,217	6,217	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455
2002	1,080	2,372	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097
2003	806	1,167	1,629	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443
2004	696	646	575	575	575	575	575	575	575	575	575	575	575	575	575
2005	1,188	1,634	2,003	2,266	2,431	2,662	2,489	2,489	2,489	2,489	2,489	2,489	2,489	2,489	2,489
2006	1,002	1,199	2,078	2,078	2,078	2,078	2,078	2,078	2,078	2,078	2,078	2,078	2,078	2,078	2,078
2007	969	1,869	2,743	2,813	2,815	2,815	2,815	2,815	2,815	2,815	2,815	2,815	2,815	2,815	2,815
2008	1,140	1,177	1,736	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796
2009	699	546	546	546	546	546	546	546	546	546	546	546	546	546	546
2010	1,413	1,759	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071
2011	1,179	1,551	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186
2012	894	750	736	736	736	736	736	736	736	736	736	736	736	736	736
2013	2,526	2,359	5,104	5,104	5,295	5,104	5,104	5,104	5,104	5,104	5,104	5,104	5,104	5,104	5,104
2014	1,199	1,157	1,338	1,338	1,338	1,338	1,338	1,338	1,338	1,338	1,338	1,338	1,338	1,338	1,338
2015	1,765	1,500	1,500	1,614	1,614	1,614	1,614	1,614	1,614	1,614	1,614	1,614	1,614	1,614	1,614
2016	1,307	1,675	1,889	1,920	1,920	1,920	1,920	1,920	1,920	1,920	1,920	1,920	1,920	1,920	1,920
2017	1,074	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276
2018	1,063	906	906	906	906	906	906	906	906	906	906	906	906	906	906
2019	1,277	1,277	1,277	1,277	1,277	1,277	1,277	1,277	1,277	1,277	1,277	1,277	1,277	1,277	1,277

Accident Year	Age-to-Age Factors														
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192
1989	0.966	12.691	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.785	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	0.936	1.703	0.868	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	0.987	1.493	1.171	1.095	0.977	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	2.741	1.175	1.011	0.967	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	2.357	0.813	1.008	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	0.965	1.110	0.950	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.067	0.980	0.930	1.000	0.991	1.000	1.006	0.974	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.206	2.116	0.975	1.000	1.000	0.990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.068	1.027	1.031	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.001	1.115	1.185	1.039	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.023	1.031	0.987	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	4.961	1.332	1.446	0.898	0.634	1.000	1.038	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	2.196	0.884	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.447	1.396	0.886	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	0.928	0.889	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005	1.376	1.226	1.131	1.073	1.095	0.935	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2006	1.197	1.733	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2007	1.928	1.468	1.026	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2008	1.032	1.475	1.035	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2009	0.782	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2010	1.245	1.177	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2011	1.316	0.764	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2012	0.840	0.981	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2013	0.934	2.164	1.000	1.037	0.964	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2014	0.965	1.156	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2015	0.849	1.000	1.076	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2016	1.282	1.128	1.016	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2017	1.188	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2018	0.852	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Avg	1.381	1.622	1.026	1.004	0.987	0.997	1.002	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Avg Ex. H/L	1.274	1.243	1.016	1.004	0.997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Avg	1.025	1.185	1.015	1.004	1.006	0.994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Avg Ex. H/L	1.019	1.115	1.010	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Avg	1.027	1.290	1.019	1.007	0.993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Avg Ex. H/L	1.002	1.095	1.005	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Avg	1.107	1.043	1.031	1.012	0.988	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.150	1.230	1.015	1.008	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.125	1.200	1.015	1.008	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.381	1.228	1.023	1.008	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Incurred	72.4%	81.5%	97.7%	99.2%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Incurred Loss per Reported Claim at \$500K SIR

Accident Year	Maturity (Age in Months)															
	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603
1990	566	566	566	566	566	566	566	566	566	566	566	566	566	566	566	566
1991	536	536	536	536	536	536	536	536	536	536	536	536	536	536	536	536
1992	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034
1993	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492
1994	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753
1995	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853
1996	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659
1997	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840
1998	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148
1999	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684
2000	785	785	785	785	785	785	785	785	785	785	785	785	785	785	785	785
2001	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455
2002	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097
2003	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443
2004	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575
2005																
2006																
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Accident Year	Age-to-Age Factors															
	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-Ult
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
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2018																
2019																
All Yr Avg	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Avg Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Avg Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Avg Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Incurred	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Paid Loss per Closed Claim at \$500K SIR

Accident Year	Maturity (Age in Months)														
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
1989	210	205	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603
1990	301	566	566	566	566	566	566	566	566	566	566	566	566	566	566
1991	415	370	535	536	536	536	536	536	536	536	536	536	536	536	536
1992	498	475	610	687	706	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034
1993	645	1,009	1,403	5,494	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492
1994	520	668	1,749	1,764	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753
1995	803	834	1,642	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853
1996	502	502	668	679	672	672	672	677	659	659	659	659	659	659	659
1997	413	736	6,017	5,900	5,900	5,900	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840
1998	613	688	813	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148
1999	386	1,202	1,301	1,483	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684
2000	646	706	728	785	785	785	785	785	785	785	785	785	785	785	785
2001	512	5,553	5,626	5,761	6,277	6,217	6,217	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455
2002	634	1,340	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097
2003	646	744	1,010	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443
2004	662	588	575	575	575	575	575	575	575	575	575	575	575	575	575
2005	672	1,526	1,651	1,810	1,980	2,269	2,489	2,489	2,489	2,489	2,489	2,489	2,489	2,489	2,489
2006	854	1,109	2,078	2,078	2,078	2,078	2,078	2,078	2,078	2,078	2,078	2,078	2,078	2,078	2,078
2007	881	1,612	2,557	2,813	2,815	2,815	2,815	2,815	2,815	2,815	2,815	2,815	2,815	2,815	2,815
2008	950	1,059	1,281	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796
2009	596	546	546	546	546	546	546	546	546	546	546	546	546	546	546
2010	1,115	1,652	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071
2011	995	1,077	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186
2012	573	750	736	736	736	736	736	736	736	736	736	736	736	736	736
2013	1,933	1,855	5,104	5,104	5,295	5,104	5,104	5,104	5,104	5,104	5,104	5,104	5,104	5,104	5,104
2014	1,135	1,075	1,338	1,338	1,338	1,338	1,338	1,338	1,338	1,338	1,338	1,338	1,338	1,338	1,338
2015	1,136	1,500	1,500	1,614	1,614	1,614	1,614	1,614	1,614	1,614	1,614	1,614	1,614	1,614	1,614
2016	1,083	1,576	1,808	1,920	1,920	1,920	1,920	1,920	1,920	1,920	1,920	1,920	1,920	1,920	1,920
2017	876	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276
2018	760	906	906	906	906	906	906	906	906	906	906	906	906	906	906
2019	975	975	975	975	975	975	975	975	975	975	975	975	975	975	975

Accident Year	Age-to-Age Factors														
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192
1989	0.976	12.691	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.881	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	0.891	1.447	1.003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	0.954	1.284	1.126	1.028	1.465	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.563	1.391	3.917	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.286	2.616	1.008	0.994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.039	1.969	1.129	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	0.999	1.331	1.016	1.000	0.991	1.000	1.006	0.974	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.781	8.175	0.981	1.000	1.000	0.990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.122	1.181	1.412	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	3.114	1.082	1.140	1.135	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.093	1.030	1.079	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	10.852	1.013	1.024	1.090	0.990	1.000	1.038	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	2.113	1.564	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.152	1.357	1.429	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	0.889	0.977	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005	2.272	1.082	1.096	1.093	1.146	1.097	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2006	1.299	1.873	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2007	1.829	1.586	1.100	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2008	1.115	1.210	1.402	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2009	0.917	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2010	1.482	1.253	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2011	1.083	1.101	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2012	1.310	0.981	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2013	0.960	2.751	1.000	1.037	0.964	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2014	0.947	1.245	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2015	1.320	1.000	1.076	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2016	1.455	1.147	1.062	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2017	1.456	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2018	1.192	1.192	1.192	1.192	1.192	1.192	1.192	1.192	1.192	1.192	1.192	1.192	1.192	1.192	1.192
All Yr Avg	1.678	1.977	1.179	1.014	1.021	1.003	1.002	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Avg Ex. H/L	1.379	1.617	1.081	1.010	1.005	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Avg	1.212	1.269	1.064	1.004	1.011	1.010	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Avg Ex. H/L	1.215	1.119	1.030	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Avg	1.274	1.429	1.028	1.007	0.993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Avg Ex. H/L	1.322	1.131	1.021	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Avg	1.368	1.049	1.046	1.012	0.988	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Avg Ex. H/L	1.380	1.250	1.060	1.010	1.005	1.003	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.350	1.225	1.060	1.010	1.005	1.003	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.786	1.323	1.080	1.019	1.009	1.004	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Incurred	56.0%	75.6%	92.6%	98.1%	99.1%	99.6%	99.9%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Paid Loss per Closed Claim at \$500K SIR

Accident Year	Maturity (Age in Months)															
	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603	2,603
1990	566	566	566	566	566	566	566	566	566	566	566	566	566	566	566	566
1991	536	536	536	536	536	536	536	536	536	536	536	536	536	536	536	536
1992	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034	1,034
1993	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492	5,492
1994	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753	1,753
1995	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853	1,853
1996	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659
1997	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840	5,840
1998	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148
1999	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684	1,684
2000	785	785	785	785	785	785	785	785	785	785	785	785	785	785	785	785
2001	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455	6,455
2002	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097	2,097
2003	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443
2004	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575
2005																
2006																
2007																
2008																
2009																
2010																
2011																
2012																
2013																
2014																
2015																
2016																
2017																
2018																
2019																

Accident Year	Age-to-Age Factors															
	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-Ult
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004																
2005																
2006																
2007																
2008																
2009																
2010																
2011																
2012																
2013																
2014																
2015																
2016																
2017																
2018																
2019																
All Yr Avg	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Avg Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Avg Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Avg Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Incurred	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Summary of Claim Counts

Accident Year	Closed Claims	Open Claims	Reported Claims	Indicated IBNR Claims	Selected Ultimate Claims
(1)	(2)	(3)	(4)	(5)	(6)
1989	43	0	43	0	43
1990	33	0	33	0	33
1991	26	0	26	0	26
1992	38	0	38	0	38
1993	60	0	60	0	60
1994	72	0	72	0	72
1995	85	0	85	0	85
1996	114	0	114	0	114
1997	98	0	98	0	98
1998	86	0	86	0	86
1999	121	0	121	0	121
2000	104	0	104	0	104
2001	86	0	86	0	86
2002	80	0	80	0	80
2003	117	0	117	0	117
2004	86	0	86	0	86
2005	98	0	98	0	98
2006	70	0	70	0	70
2007	98	0	98	0	98
2008	76	0	76	0	76
2009	57	0	57	0	57
2010	78	0	78	0	78
2011	74	0	74	0	74
2012	52	0	52	0	52
2013	46	0	46	0	46
2014	78	0	78	0	78
2015	51	0	51	0	51
2016	76	0	76	0	76
2017	51	0	51	0	51
2018	48	0	48	0	48
2019	41	8	49	4	53
Total	2,243	8	2,251	4	2,255

Notes:

- (2)-(4) Provided by MVRMA
(5) = (6) - (4)
(6) From Exhibit 20, Col (4)

Miami Valley Risk Management Association

Auto Liability (AB, AD)

December 31, 2019

Ultimate Claims Based on Reported Claim Development Method

Accident Year (1)	Cumulative Reported Claims (2)	Claim Development Factors (3)	Projected Ultimate Claims (4)
1989	43	1.000	43
1990	33	1.000	33
1991	26	1.000	26
1992	38	1.000	38
1993	60	1.000	60
1994	72	1.000	72
1995	85	1.000	85
1996	114	1.000	114
1997	98	1.000	98
1998	86	1.000	86
1999	121	1.000	121
2000	104	1.000	104
2001	86	1.000	86
2002	80	1.000	80
2003	117	1.000	117
2004	86	1.000	86
2005	98	1.000	98
2006	70	1.000	70
2007	98	1.000	98
2008	76	1.000	76
2009	57	1.000	57
2010	78	1.000	78
2011	74	1.000	74
2012	52	1.000	52
2013	46	1.000	46
2014	78	1.000	78
2015	51	1.000	51
2016	76	1.000	76
2017	51	1.000	51
2018	48	1.005	48
2019	49	1.080	53
Total	2,251		2,255

Notes:

- (2) Provided by MVRMA
(3) From Exhibit 21
(4) = (2) x (3)

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Accident Year	Reported Claim Counts														
	Maturity (Age in Months)														
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
1989	42	42	43	43	43	43	43	43	43	43	43	43	43	43	43
1990	32	33	33	33	33	33	33	33	33	33	33	33	33	33	33
1991	23	25	26	26	26	26	26	26	26	26	26	26	26	26	26
1992	35	36	38	38	38	38	38	38	38	38	38	38	38	38	38
1993	54	60	60	60	60	60	60	60	60	60	60	60	60	60	60
1994	68	72	72	72	72	72	72	72	72	72	72	72	72	72	72
1995	80	80	85	85	85	85	85	85	85	85	85	85	85	85	85
1996	99	109	110	110	110	111	111	111	114	114	114	114	114	114	114
1997	96	96	97	97	97	97	98	98	98	98	98	98	98	98	98
1998	83	86	86	86	86	86	86	86	86	86	86	86	86	86	86
1999	111	113	120	121	121	121	121	121	121	121	121	121	121	121	121
2000	101	104	104	104	104	104	104	104	104	104	104	104	104	104	104
2001	82	85	86	86	86	86	86	86	86	86	86	86	86	86	86
2002	68	79	80	80	80	80	80	80	80	80	80	80	80	80	80
2003	108	116	117	117	117	117	117	117	117	117	117	117	117	117	117
2004	73	85	86	86	86	86	86	86	86	86	86	86	86	86	86
2005	85	96	97	97	97	98	98	98	98	98	98	98	98	98	98
2006	65	70	70	70	70	70	70	70	70	70	70	70	70	70	70
2007	89	97	99	98	98	98	98	98	98	98	98	98	98	98	98
2008	70	76	76	76	76	76	76	76	76	76	76	76	76	76	76
2009	56	57	57	57	57	57	57	57	57	57	57	57	57	57	57
2010	75	78	78	78	78	78	78	78	78	78	78	78	78	78	78
2011	73	74	74	74	74	74	74	74	74	74	74	74	74	74	74
2012	45	51	52	52	52	52	52	52	52	52	52	52	52	52	52
2013	42	46	46	46	46	46	46	46	46	46	46	46	46	46	46
2014	74	78	78	78	78	78	78	78	78	78	78	78	78	78	78
2015	49	51	51	51	51	51	51	51	51	51	51	51	51	51	51
2016	69	76	76	76	76	76	76	76	76	76	76	76	76	76	76
2017	48	51	51	51	51	51	51	51	51	51	51	51	51	51	51
2018	44	48	48	48	48	48	48	48	48	48	48	48	48	48	48
2019	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49

Accident Year	Age-to-Age Factors														
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192
1989	1.000	1.024	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.031	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.087	1.040	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.029	1.056	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.111	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.059	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.063	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.101	1.009	1.000	1.000	1.009	1.000	1.000	1.027	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.010	1.000	1.000	1.000	1.010	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.036	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.018	1.062	1.008	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.030	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.037	1.012	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.162	1.013	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.074	1.009	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	1.164	1.012	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005	1.129	1.010	1.000	1.000	1.010	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2006	1.077	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2007	1.090	1.021	0.990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2008	1.086	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2009	1.018	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2010	1.040	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2011	1.014	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2012	1.133	1.020	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2013	1.095	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2014	1.054	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2015	1.041	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2016	1.101	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2017	1.063	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2018	1.091	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

All Yr Vol	1.064	1.012	1.000	1.000	1.001	1.001	1.000	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.064	1.011	1.000	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.061	1.002	0.999	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.061	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.070	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.066	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	1.087	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.070	1.005	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.075	1.005	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.080	1.005	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Developed	92.6%	99.5%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Reported Claim Counts

Accident Year	Maturity (Age in Months)															
	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
1990	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
1991	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
1992	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
1993	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
1994	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
1995	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
1996	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114
1997	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98
1998	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
1999	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
2000	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
2001	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
2002	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
2003	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
2004	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
2005																
2006																
2007																
2008																
2009																
2010																
2011																
2012																
2013																
2014																
2015																
2016																
2017																
2018																
2019																

Accident Year	Age-to-Age Factors															
	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-Ult
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004																
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2011																
2012																
2013																
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2015																
2016																
2017																
2018																
All Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Developed	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Closed Claim Counts

Accident Year	Maturity (Age in Months)														
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
1989	41	42	43	43	43	43	43	43	43	43	43	43	43	43	43
1990	27	33	33	33	33	33	33	33	33	33	33	33	33	33	33
1991	21	24	24	26	26	26	26	26	26	26	26	26	26	26	26
1992	30	35	35	37	36	38	38	38	38	38	38	38	38	38	38
1993	37	53	56	59	60	60	60	60	60	60	60	60	60	60	60
1994	52	65	72	72	72	72	72	72	72	72	72	72	72	72	72
1995	48	72	82	85	85	85	85	85	85	85	85	85	85	85	85
1996	88	107	109	110	110	111	111	111	114	114	114	114	114	114	114
1997	83	93	94	97	97	97	98	98	98	98	98	98	98	98	98
1998	69	81	84	86	86	86	86	86	86	86	86	86	86	86	86
1999	105	112	117	119	121	121	121	121	121	121	121	121	121	121	121
2000	82	103	103	104	104	104	104	104	104	104	104	104	104	104	104
2001	64	76	83	84	84	86	86	86	86	86	86	86	86	86	86
2002	55	76	80	80	80	80	80	80	80	80	80	80	80	80	80
2003	100	111	113	117	117	117	117	117	117	117	117	117	117	117	117
2004	63	84	86	86	86	86	86	86	86	86	86	86	86	86	86
2005	64	94	93	94	94	95	98	98	98	98	98	98	98	98	98
2006	54	68	70	70	70	70	70	70	70	70	70	70	70	70	70
2007	82	94	98	98	98	98	98	98	98	98	98	98	98	98	98
2008	59	75	75	76	76	76	76	76	76	76	76	76	76	76	76
2009	51	57	57	57	57	57	57	57	57	57	57	57	57	57	57
2010	61	77	78	78	78	78	78	78	78	78	78	78	78	78	78
2011	66	72	74	74	74	74	74	74	74	74	74	74	74	74	74
2012	39	51	52	52	52	52	52	52	52	52	52	52	52	52	52
2013	37	45	46	46	46	46	46	46	46	46	46	46	46	46	46
2014	68	77	78	78	78	78	78	78	78	78	78	78	78	78	78
2015	43	51	51	51	51	51	51	51	51	51	51	51	51	51	51
2016	47	73	75	76	76	76	76	76	76	76	76	76	76	76	76
2017	40	51	51	51	51	51	51	51	51	51	51	51	51	51	51
2018	34	48	48	48	48	48	48	48	48	48	48	48	48	48	48
2019	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41

Accident Year	Age-to-Age Factors														
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192
1989	1.024	1.024	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.222	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.143	1.000	1.083	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.167	1.000	1.057	0.973	1.056	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.432	1.057	1.054	1.017	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.250	1.108	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.500	1.139	1.037	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.216	1.019	1.009	1.000	1.009	1.000	1.000	1.027	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.120	1.011	1.032	1.000	1.000	1.010	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.174	1.037	1.024	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.067	1.045	1.017	1.017	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.256	1.000	1.010	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.188	1.092	1.012	1.000	1.024	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.382	1.053	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.110	1.018	1.035	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	1.333	1.024	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005	1.469	0.989	1.011	1.000	1.011	1.032	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2006	1.259	1.029	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2007	1.146	1.043	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2008	1.271	1.000	1.013	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2009	1.118	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2010	1.262	1.013	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2011	1.091	1.028	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2012	1.308	1.020	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2013	1.216	1.022	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2014	1.132	1.013	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2015	1.186	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2016	1.553	1.027	1.013	1.013	1.013	1.013	1.013	1.013	1.013	1.013	1.013	1.013	1.013	1.013	1.013
2017	1.275	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2018	1.412	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol	1.228	1.029	1.013	1.001	1.003	1.002	1.000	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.224	1.027	1.013	1.001	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.239	1.013	1.003	1.000	1.001	1.004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.225	1.012	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.293	1.013	1.003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.282	1.012	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	1.421	1.011	1.005	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Closed Claim Counts

Accident Year	Maturity (Age in Months)															
	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
1990	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
1991	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
1992	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
1993	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
1994	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
1995	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
1996	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114
1997	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98
1998	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
1999	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
2000	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
2001	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
2002	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
2003	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
2004	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
2005																
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2018																
2019																

Accident Year	Age-to-Age Factors															
	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-Ult
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004																
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2016																
2017																
2018																
All Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Miami Valley Risk Management Association
Auto Liability (AB, AD)
December 31, 2019

Loss Summary

Accident Year	Retention	Total Limits		Retention Limits		\$500K Limits		Deductibles	
		Incurred	Paid	Incurred	Paid	Incurred	Paid	Incurred	Paid
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1989	\$250,000	\$111,919	\$111,919	\$111,919	\$111,919	\$111,919	\$111,919		
1990	250,000	18,683	18,683	18,683	18,683	18,683	18,683		
1991	250,000	13,946	13,946	13,946	13,946	13,946	13,946		
1992	250,000	39,293	39,293	39,293	39,293	39,293	39,293		
1993	250,000	329,494	329,494	329,494	329,494	329,494	329,494		
1994	250,000	126,181	126,181	126,181	126,181	126,181	126,181		
1995	250,000	157,537	157,537	157,537	157,537	157,537	157,537		
1996	250,000	75,097	75,097	75,097	75,097	75,097	75,097		
1997	500,000	1,018,826	1,018,826	572,332	572,332	572,332	572,332		
1998	500,000	98,687	98,687	98,687	98,687	98,687	98,687		
1999	500,000	203,725	203,725	203,725	203,725	203,725	203,725		
2000	500,000	81,660	81,660	81,660	81,660	81,660	81,660		
2001	500,000	555,168	555,168	555,168	555,168	555,168	555,168		
2002	500,000	167,747	167,747	167,747	167,747	167,747	167,747		
2003	1,000,000	168,870	168,870	168,870	168,870	168,870	168,870		
2004	1,000,000	49,417	49,417	49,417	49,417	49,417	49,417		
2005	1,000,000	243,966	243,966	243,966	243,966	243,966	243,966		
2006	1,000,000	145,431	145,431	145,431	145,431	145,431	145,431	\$48,974	\$48,974
2007	1,000,000	275,826	275,826	275,826	275,826	275,826	275,826	76,272	76,272
2008	1,000,000	136,527	136,527	136,527	136,527	136,527	136,527	46,288	46,288
2009	1,000,000	31,122	31,122	31,122	31,122	31,122	31,122	30,922	30,922
2010	500,000	161,512	161,512	161,512	161,512	161,512	161,512	43,334	43,334
2011	500,000	87,731	87,731	87,731	87,731	87,731	87,731	43,911	43,911
2012	500,000	38,269	38,269	38,269	38,269	38,269	38,269	24,213	24,213
2013	500,000	234,785	234,785	234,785	234,785	234,785	234,785	40,251	40,251
2014	500,000	104,340	104,340	104,340	104,340	104,340	104,340	63,678	63,678
2015	500,000	82,316	82,316	82,316	82,316	82,316	82,316	49,288	49,288
2016	500,000	145,899	145,899	145,899	145,899	145,899	145,899	57,898	57,898
2017	500,000	65,054	65,054	65,054	65,054	65,054	65,054	39,350	39,350
2018	500,000	43,483	43,483	43,483	43,483	43,483	43,483	29,580	29,580
2019	500,000	62,597	39,969	62,597	39,969	62,597	39,969	43,518	35,236
Total		\$5,075,109	\$5,052,481	\$4,628,615	\$4,605,987	\$4,628,615	\$4,605,987	\$637,477	\$629,195

Notes:
(2)-(10) Provided by MVRMA

Miami Valley Risk Management Association
General Liability
December 31, 2019

Summary of Loss Reserve Estimates
Retained Limits

Accident Year	Selected Ultimate Loss	Incurred Loss	Paid Loss	Case Reserves	Indicated IBNR	Estimated Total Reserves
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1989	\$207,853	\$207,853	\$207,853	\$0	\$0	\$0
1990	439,863	439,863	439,863	0	0	0
1991	84,015	84,015	84,015	0	0	0
1992	139,376	139,376	139,376	0	0	0
1993	600,979	600,979	600,979	0	0	0
1994	106,065	106,065	106,065	0	0	0
1995	156,790	156,790	156,790	0	0	0
1996	357,926	357,926	357,926	0	0	0
1997	706,526	706,526	706,526	0	0	0
1998	554,289	554,289	554,289	0	0	0
1999	657,094	657,094	657,094	0	0	0
2000	164,560	164,560	164,560	0	0	0
2001	497,423	497,423	497,423	0	0	0
2002	1,347,177	1,347,177	1,347,177	0	0	0
2003	269,762	269,762	269,762	0	0	0
2004	511,964	511,964	511,964	0	0	0
2005	857,801	857,801	857,801	0	0	0
2006	915,795	915,795	915,795	0	0	0
2007	312,120	312,120	312,120	0	0	0
2008	856,672	856,672	856,672	0	0	0
2009	1,177,813	1,177,813	1,177,813	0	0	0
2010	972,613	972,613	972,613	0	0	0
2011	323,802	323,802	323,802	0	0	0
2012	542,610	542,610	542,610	0	0	0
2013	601,882	601,882	601,882	0	0	0
2014	960,000	925,867	729,501	196,366	34,133	230,499
2015	400,000	326,031	314,175	11,856	73,969	85,825
2016	790,000	549,522	469,365	80,157	240,478	320,635
2017	950,000	565,884	506,669	59,215	384,116	443,331
2018	1,025,000	353,848	255,263	98,585	671,152	769,737
2019	1,025,000	67,442	37,442	30,000	957,558	987,558
Total	\$18,512,769	\$16,151,363	\$15,675,184	\$476,179	\$2,361,406	\$2,837,585

Notes:

- (2) From Exhibit 3, Col (13)
- (3)-(5) Provided by MVRMA
- (6) = (2) - (3)
- (7) = (5) + (6)

Miami Valley Risk Management Association
General Liability
December 31, 2019

Comparison of Ultimate Loss to Prior Ultimate Loss
Retained Limits

Accident Year	Selected Ultimate Loss @ 12/31/2018	Selected Ultimate Loss @ 12/31/2019	Difference	Percent Change
(1)	(2)	(3)	(4)	(5)
1989	\$207,853	\$207,853	\$0	0.0%
1990	439,863	439,863	0	0.0%
1991	84,015	84,015	0	0.0%
1992	139,376	139,376	0	0.0%
1993	600,979	600,979	0	0.0%
1994	106,065	106,065	0	0.0%
1995	156,790	156,790	0	0.0%
1996	357,926	357,926	0	0.0%
1997	706,526	706,526	0	0.0%
1998	554,289	554,289	0	0.0%
1999	657,094	657,094	0	0.0%
2000	164,560	164,560	0	0.0%
2001	497,423	497,423	0	0.0%
2002	1,347,177	1,347,177	0	0.0%
2003	269,762	269,762	0	0.0%
2004	511,964	511,964	0	0.0%
2005	857,801	857,801	0	0.0%
2006	915,795	915,795	0	0.0%
2007	312,120	312,120	0	0.0%
2008	856,672	856,672	0	0.0%
2009	1,177,813	1,177,813	0	0.0%
2010	972,613	972,613	0	0.0%
2011	323,802	323,802	0	0.0%
2012	542,610	542,610	0	0.0%
2013	601,882	601,882	0	0.0%
2014	1,060,000	960,000	(100,000)	-9.4%
2015	490,000	400,000	(90,000)	-18.4%
2016	880,000	790,000	(90,000)	-10.2%
2017	1,125,000	950,000	(175,000)	-15.6%
2018	1,025,000	1,025,000	0	0.0%
Total	\$17,942,769	\$17,487,769	(\$455,000)	-2.5%

Notes:

- (2) From Pinnacle's analysis of unpaid loss & LAE at 12/31/2018
- (3) From Exhibit 3, Col (13)
- (4) = (3) - (2)
- (5) = (4) / (2)

Miami Valley Risk Management Association
General Liability
December 31, 2019

Selected Ultimate Loss
Retained Limits

Accident Year	Retention	Industry Development		MVRMA's Loss Development					MVRMA Expected Loss Method	MVRMA Incurred BF Method	MVRMA Paid BF Method	Selected Ultimate Loss
		Incurred Loss Method	Paid Loss Method	Incurred Loss Method	Paid Loss Method	Case Reserve Method	Average Incurred Method	Average Paid Method				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1989	\$250,000	\$207,853	\$207,853	\$207,853	\$207,853	\$207,853	\$207,853	\$207,853	\$58,842	\$207,853	\$207,853	\$207,853
1990	250,000	439,863	439,863	439,863	439,863	439,863	439,863	439,863	77,604	439,863	439,863	439,863
1991	250,000	84,015	84,015	84,015	84,015	84,015	84,015	84,015	91,500	84,015	84,015	84,015
1992	250,000	139,376	139,376	139,376	139,376	139,376	139,376	139,376	114,102	139,376	139,376	139,376
1993	250,000	600,979	600,979	600,979	600,979	600,979	600,979	600,979	102,573	600,979	600,979	600,979
1994	250,000	106,065	106,065	106,065	106,065	106,065	106,065	106,065	167,703	106,065	106,065	106,065
1995	250,000	156,790	156,790	156,790	156,790	156,790	156,790	156,790	180,157	156,790	156,790	156,790
1996	250,000	357,926	357,926	357,926	357,926	357,926	357,926	357,926	189,538	357,926	357,926	357,926
1997	500,000	706,526	706,526	706,526	706,526	706,526	706,526	706,526	243,157	706,526	706,526	706,526
1998	500,000	554,289	554,289	554,289	554,289	554,289	554,289	554,289	263,456	554,289	554,289	554,289
1999	500,000	657,094	657,094	657,094	657,094	657,094	657,094	657,094	290,207	657,094	657,094	657,094
2000	500,000	164,572	164,577	164,560	164,560	164,560	164,560	164,560	312,277	164,560	164,560	164,560
2001	500,000	497,493	497,529	497,423	497,423	497,423	497,423	497,423	354,000	497,423	497,423	497,423
2002	500,000	1,347,558	1,347,750	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	396,246	1,347,177	1,347,177	1,347,177
2003	1,000,000	269,914	269,992	269,762	269,762	269,762	269,762	269,762	442,413	269,762	269,762	269,762
2004	1,000,000	512,543	512,836	511,964	511,964	511,964	511,964	511,964	483,518	511,964	511,964	511,964
2005	1,000,000	859,742	860,724	857,801	857,801	857,801	857,801	857,801	537,103	857,801	857,801	857,801
2006	1,000,000	919,944	922,047	915,795	915,795	915,795	915,795	915,795	573,052	915,795	915,795	915,795
2007	1,000,000	314,954	316,396	312,120	312,120	312,120	312,120	312,120	600,137	312,120	312,120	312,120
2008	1,000,000	872,302	880,305	856,672	856,672	856,672	856,672	856,672	663,027	856,672	856,672	856,672
2009	1,000,000	1,221,182	1,243,694	1,177,813	1,177,813	1,177,813	1,177,813	1,177,813	722,107	1,177,813	1,177,813	1,177,813
2010	500,000	1,045,559	1,084,464	972,613	979,421	972,613	972,613	979,421	715,759	972,613	977,589	972,613
2011	500,000	354,353	370,246	323,802	326,395	323,802	323,802	326,395	763,621	323,802	329,868	323,802
2012	500,000	608,056	641,532	542,610	551,330	542,610	543,152	549,689	753,458	542,610	554,527	542,610
2013	500,000	695,387	752,884	616,929	617,671	601,882	607,304	615,832	772,295	620,719	621,623	601,882
2014	500,000	1,117,840	985,522	958,504	763,609	1,555,564	937,010	757,455	800,483	953,123	765,257	960,000
2015	500,000	421,658	479,613	357,775	434,101	331,640	346,452	400,050	837,426	400,332	545,525	400,000
2016	500,000	791,010	892,071	663,329	762,024	614,244	635,099	743,509	887,795	701,840	810,327	790,000
2017	500,000	1,005,984	1,399,194	819,695	1,151,621	639,109	805,890	1,079,570	930,629	854,045	1,027,857	950,000
2018	500,000	886,952	1,233,616	973,858	1,131,379	809,570	972,499	1,021,716	1,024,157	1,005,881	1,048,349	1,025,000
2019	500,000	329,645	497,602	426,909	663,800	316,140	461,353	684,278	1,126,336	1,015,843	1,100,246	1,025,000
Total		\$18,247,424	\$19,363,369	\$17,577,887	\$18,303,214	\$17,629,036	\$17,527,037	\$18,079,777	\$15,474,678	\$18,312,670	\$18,703,029	\$18,512,769

Notes:

- (2) Provided by MVRMA
- (3) From Exhibit 12.1, Col (4)
- (4) From Exhibit 12.2, Col (4)
- (5) From Exhibit 7, Col (4)
- (6) From Exhibit 8, Col (4)
- (7) From Exhibit 9, Col (8)
- (8) From Exhibit 10, Col (7)
- (9) From Exhibit 11, Col (7)
- (10) From Exhibit 4, Col (4)
- (11) From Exhibit 4, Col (8)
- (12) From Exhibit 5, Col (8)

Miami Valley Risk Management Association
General Liability
December 31, 2019

Ultimate Loss Based on Bornhuetter-Ferguson Method Using Exposures and Incurred Loss
Retained Limits

Accident Year	Net Operating Funds (\$00,000's)	Selected Loss Cost	Expected Loss	Percent Undeveloped	Undeveloped Loss	Cumulative Incurred Loss	Projected Ultimate Loss	Indicated Loss Cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1989	\$561	\$105	\$58,842	0.0%	\$0	\$207,853	\$207,853	\$370
1990	722	108	77,604	0.0%	0	439,863	439,863	609
1991	830	110	91,500	0.0%	0	84,015	84,015	101
1992	1,010	113	114,102	0.0%	0	139,376	139,376	138
1993	1,255	82	102,573	0.0%	0	600,979	600,979	479
1994	1,413	119	167,703	0.0%	0	106,065	106,065	75
1995	1,481	122	180,157	0.0%	0	156,790	156,790	106
1996	1,520	125	189,538	0.0%	0	357,926	357,926	235
1997	1,903	128	243,157	0.0%	0	706,526	706,526	371
1998	2,011	131	263,456	0.0%	0	554,289	554,289	276
1999	2,162	134	290,207	0.0%	0	657,094	657,094	304
2000	2,269	138	312,277	0.0%	0	164,560	164,560	73
2001	2,510	141	354,000	0.0%	0	497,423	497,423	198
2002	2,741	145	396,246	0.0%	0	1,347,177	1,347,177	492
2003	2,985	148	442,413	0.0%	0	269,762	269,762	90
2004	3,183	152	483,518	0.0%	0	511,964	511,964	161
2005	3,450	156	537,103	0.0%	0	857,801	857,801	249
2006	3,591	160	573,052	0.0%	0	915,795	915,795	255
2007	3,669	164	600,137	0.0%	0	312,120	312,120	85
2008	3,954	168	663,027	0.0%	0	856,672	856,672	217
2009	4,058	178	722,107	0.0%	0	1,177,813	1,177,813	290
2010	4,063	176	715,759	0.0%	0	972,613	972,613	239
2011	4,229	181	763,621	0.0%	0	323,802	323,802	77
2012	4,071	185	753,458	0.0%	0	542,610	542,610	133
2013	4,071	190	772,295	2.4%	18,836	601,882	620,719	152
2014	4,117	194	800,483	3.4%	27,256	925,867	953,123	232
2015	4,202	199	837,426	8.9%	74,302	326,031	400,332	95
2016	4,346	204	887,795	17.2%	152,318	549,522	701,840	162
2017	4,444	209	930,629	31.0%	288,161	565,884	854,045	192
2018	4,772	215	1,024,157	63.7%	652,033	353,848	1,005,881	211
2019	5,120	220	1,126,336	84.2%	948,401	67,442	1,015,843	198
Total	\$90,712		\$15,474,678		\$2,161,307	\$16,151,363	\$18,312,670	\$202

Notes:

- (2) Provided by MVRMA
- (3) From Exhibit 6.1, Col (8)
- (4) = (2) x (3)
- (5) Based on Exhibit 13;
\$500K limits for 1989-2002 and 2010-2019; \$1M limits for 2003-2009
- (6) = (4) x (5)
- (7) Provided by MVRMA
- (8) = (6) + (7)
- (9) = (8) / (2)

Miami Valley Risk Management Association
General Liability
December 31, 2019

Ultimate Loss Based on Bornhuetter-Ferguson Method Using Exposures and Paid Loss
Retained Limits

Accident Year	Net Operating Funds (\$00,000's)	Selected Loss Cost	Expected Loss	Percent Unpaid	Undeveloped Loss	Cumulative Paid Loss	Projected Ultimate Loss	Indicated Loss Cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1989	\$561	\$105	\$58,842	0.0%	\$0	\$207,853	\$207,853	\$370
1990	722	108	77,604	0.0%	0	439,863	439,863	609
1991	830	110	91,500	0.0%	0	84,015	84,015	101
1992	1,010	113	114,102	0.0%	0	139,376	139,376	138
1993	1,255	82	102,573	0.0%	0	600,979	600,979	479
1994	1,413	119	167,703	0.0%	0	106,065	106,065	75
1995	1,481	122	180,157	0.0%	0	156,790	156,790	106
1996	1,520	125	189,538	0.0%	0	357,926	357,926	235
1997	1,903	128	243,157	0.0%	0	706,526	706,526	371
1998	2,011	131	263,456	0.0%	0	554,289	554,289	276
1999	2,162	134	290,207	0.0%	0	657,094	657,094	304
2000	2,269	138	312,277	0.0%	0	164,560	164,560	73
2001	2,510	141	354,000	0.0%	0	497,423	497,423	198
2002	2,741	145	396,246	0.0%	0	1,347,177	1,347,177	492
2003	2,985	148	442,413	0.0%	0	269,762	269,762	90
2004	3,183	152	483,518	0.0%	0	511,964	511,964	161
2005	3,450	156	537,103	0.0%	0	857,801	857,801	249
2006	3,591	160	573,052	0.0%	0	915,795	915,795	255
2007	3,669	164	600,137	0.0%	0	312,120	312,120	85
2008	3,954	168	663,027	0.0%	0	856,672	856,672	217
2009	4,058	178	722,107	0.0%	0	1,177,813	1,177,813	290
2010	4,063	176	715,759	0.7%	4,975	972,613	977,589	241
2011	4,229	181	763,621	0.8%	6,066	323,802	329,868	78
2012	4,071	185	753,458	1.6%	11,917	542,610	554,527	136
2013	4,071	190	772,295	2.6%	19,741	601,882	621,623	153
2014	4,117	194	800,483	4.5%	35,756	729,501	765,257	186
2015	4,202	199	837,426	27.6%	231,350	314,175	545,525	130
2016	4,346	204	887,795	38.4%	340,961	469,365	810,327	186
2017	4,444	209	930,629	56.0%	521,188	506,669	1,027,857	231
2018	4,772	215	1,024,157	77.4%	793,086	255,263	1,048,349	220
2019	5,120	220	1,126,336	94.4%	1,062,804	37,442	1,100,246	215
Total	\$90,712		\$15,474,678		\$3,027,845	\$15,675,184	\$18,703,029	\$206

Notes:

- (2) Provided by MVRMA
- (3) From Exhibit 6.1, Col (8)
- (4) = (2) x (3)
- (5) Based on Exhibit 13;
\$500K limits for 1989-2002 and 2010-2019; \$1M limits for 2003-2009
- (6) = (4) x (5)
- (7) Provided by MVRMA
- (8) = (6) + (7)
- (9) = (8) / (2)

Miami Valley Risk Management Association
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Initial Expected Loss Cost
Retained Limits

Accident Year	Net Operating Funds (\$00,000's)	Initial Ultimate Loss	Indicated Loss Cost	Limits Factor to \$500K	Trend Factor to 2019	Trended \$500K Limits Loss Cost	Expected Loss Cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1989	\$561	\$207,853	\$370	1.000	2.098	\$777	\$105
1990	722	439,863	609	1.000	2.046	1,247	108
1991	830	84,015	101	1.000	1.996	202	110
1992	1,010	139,376	138	1.000	1.948	269	113
1993	1,255	600,979	479	1.416	1.900	1,289	82
1994	1,413	106,065	75	1.000	1.854	139	119
1995	1,481	156,790	106	1.000	1.809	191	122
1996	1,520	357,926	235	1.000	1.765	415	125
1997	1,903	706,526	371	1.000	1.722	639	128
1998	2,011	554,289	276	1.000	1.680	463	131
1999	2,162	657,094	304	1.000	1.639	498	134
2000	2,269	164,560	73	1.000	1.599	116	138
2001	2,510	497,423	198	1.000	1.560	309	141
2002	2,741	1,347,177	492	1.000	1.522	748	145
2003	2,985	269,762	90	1.000	1.485	134	148
2004	3,183	511,964	161	1.000	1.448	233	152
2005	3,450	857,801	249	1.000	1.413	351	156
2006	3,591	915,795	255	1.000	1.379	352	160
2007	3,669	312,120	85	1.000	1.345	114	164
2008	3,954	856,672	217	1.000	1.312	284	168
2009	4,058	1,177,813	290	0.966	1.280	359	178
2010	4,063	972,613	239	1.000	1.249	299	176
2011	4,229	323,802	77	1.000	1.218	93	181
2012	4,071	542,610	133	1.000	1.189	158	185
2013	4,071	616,929	152	1.000	1.160	176	190
2014	4,117	958,504	233	1.000	1.131	263	194
2015	4,202	357,775	85	1.000	1.104	94	199
2016	4,346	663,329	153	1.000	1.077	164	204
2017	4,444	819,695	184	1.000	1.051	194	209
2018	4,772	973,858	204	1.000	1.025	209	215
2019	5,120	426,909	83	1.000	1.000	83	220
Total	\$90,712	\$17,577,887	\$194				
					Weighted Average Ex. Hi/Lo	\$271	
					10-Year Weighted Avg	172	
					10-Year Weighted Avg Ex. Hi/Lo	170	
					5-Year Weighted Avg	148	
					Selected 2019 Loss Cost	\$220	

Notes:

- (2) Provided by MVRMA
- (3) From Exhibit 6.2, Col (5)
- (4) = (3) / (2)
- (5) From Exhibit 6.3, Col (7)
- (6) Based on selected trend of 2.5%
- (7) = (4) x (5) x (6)
- (8) = Selected Loss Cost / [(6) x (5)]

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Initial Selected Ultimate Loss
Retained Limits

Accident Year	Projected Ultimate Loss Based on			Initial Ultimate Loss
	Incurred	Paid	Case	
(1)	(2)	(3)	(4)	(5)
1989	\$207,853	\$207,853	\$207,853	\$207,853
1990	439,863	439,863	439,863	439,863
1991	84,015	84,015	84,015	84,015
1992	139,376	139,376	139,376	139,376
1993	600,979	600,979	600,979	600,979
1994	106,065	106,065	106,065	106,065
1995	156,790	156,790	156,790	156,790
1996	357,926	357,926	357,926	357,926
1997	706,526	706,526	706,526	706,526
1998	554,289	554,289	554,289	554,289
1999	657,094	657,094	657,094	657,094
2000	164,560	164,560	164,560	164,560
2001	497,423	497,423	497,423	497,423
2002	1,347,177	1,347,177	1,347,177	1,347,177
2003	269,762	269,762	269,762	269,762
2004	511,964	511,964	511,964	511,964
2005	857,801	857,801	857,801	857,801
2006	915,795	915,795	915,795	915,795
2007	312,120	312,120	312,120	312,120
2008	856,672	856,672	856,672	856,672
2009	1,177,813	1,177,813	1,177,813	1,177,813
2010	972,613	979,421	972,613	972,613
2011	323,802	326,395	323,802	323,802
2012	542,610	551,330	542,610	542,610
2013	616,929	617,671	601,882	616,929
2014	958,504	763,609	1,555,564	958,504
2015	357,775	434,101	331,640	357,775
2016	663,329	762,024	614,244	663,329
2017	819,695	1,151,621	639,109	819,695
2018	973,858	1,131,379	809,570	973,858
2019	426,909	663,800	316,140	426,909
Total	\$17,577,887	\$18,303,214	\$17,629,036	\$17,577,887

Notes:

- (2) From Exhibit 7, Col (4)
- (3) From Exhibit 8, Col (4)
- (4) From Exhibit 9, Col (8)

Miami Valley Risk Management Association
General Liability
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Estimated Limits Factor

Accident Year (1)	Retention (2)	Incurred Losses at		Incurred Limits Factors (5)	Industry Limits Factors (6)	Selected Limits Factors (7)
		\$500K Limits (3)	Retention Limits (4)			
1989	\$250,000	\$207,853	\$207,853	1.000		1.000
1990	250,000	439,863	439,863	1.000		1.000
1991	250,000	84,015	84,015	1.000		1.000
1992	250,000	139,376	139,376	1.000		1.000
1993	250,000	850,979	600,979	1.416		1.416
1994	250,000	106,065	106,065	1.000		1.000
1995	250,000	156,790	156,790	1.000		1.000
1996	250,000	357,926	357,926	1.000		1.000
1997	500,000	706,526	706,526	1.000	1.000	1.000
1998	500,000	554,289	554,289	1.000	1.000	1.000
1999	500,000	657,094	657,094	1.000	1.000	1.000
2000	500,000	164,560	164,560	1.000	1.000	1.000
2001	500,000	497,423	497,423	1.000	1.000	1.000
2002	500,000	1,347,177	1,347,177	1.000	1.000	1.000
2003	1,000,000	269,762	269,762	1.000	0.914	1.000
2004	1,000,000	511,964	511,964	1.000	0.911	1.000
2005	1,000,000	857,801	857,801	1.000	0.909	1.000
2006	1,000,000	915,795	915,795	1.000	0.906	1.000
2007	1,000,000	312,120	312,120	1.000	0.904	1.000
2008	1,000,000	856,672	856,672	1.000	0.901	1.000
2009	1,000,000	1,137,677	1,177,813	0.966	0.898	0.966
2010	500,000	972,613	972,613	1.000	1.000	1.000
2011	500,000	323,802	323,802	1.000	1.000	1.000
2012	500,000	542,610	542,610	1.000	1.000	1.000
2013	500,000	601,882	601,882	1.000	1.000	1.000
2014	500,000	925,867	925,867	1.000	1.000	1.000
2015	500,000	326,031	326,031	1.000	1.000	1.000
2016	500,000	549,522	549,522	1.000	1.000	1.000
2017	500,000	565,884	565,884	1.000	1.000	1.000
2018	500,000	353,848	353,848	1.000	1.000	1.000
2019	500,000	67,442	67,442	1.000	1.000	1.000
Total		\$16,361,227	\$16,151,363			

Notes:

- (2)-(4) Provided by MVRMA
- (5) = (3) / (4)
- (6) Based on insurance industry development

Miami Valley Risk Management Association
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Ultimate Loss Based on Incurred Loss Development Method
Retained Limits

Accident Year	Cumulative Incurred Loss	Loss Development Factors	Projected Ultimate Loss
(1)	(2)	(3)	(4)
1989	\$207,853	1.000	\$207,853
1990	439,863	1.000	439,863
1991	84,015	1.000	84,015
1992	139,376	1.000	139,376
1993	600,979	1.000	600,979
1994	106,065	1.000	106,065
1995	156,790	1.000	156,790
1996	357,926	1.000	357,926
1997	706,526	1.000	706,526
1998	554,289	1.000	554,289
1999	657,094	1.000	657,094
2000	164,560	1.000	164,560
2001	497,423	1.000	497,423
2002	1,347,177	1.000	1,347,177
2003	269,762	1.000	269,762
2004	511,964	1.000	511,964
2005	857,801	1.000	857,801
2006	915,795	1.000	915,795
2007	312,120	1.000	312,120
2008	856,672	1.000	856,672
2009	1,177,813	1.000	1,177,813
2010	972,613	1.000	972,613
2011	323,802	1.000	323,802
2012	542,610	1.000	542,610
2013	601,882	1.025	616,929
2014	925,867	1.035	958,504
2015	326,031	1.097	357,775
2016	549,522	1.207	663,329
2017	565,884	1.449	819,695
2018	353,848	2.752	973,858
2019	67,442	6.330	426,909
Total	\$16,151,363		\$17,577,887

Notes:

- (2) Provided by MVRMA
- (3) Based on Exhibit 13
- (4) = (2) x (3)

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Ultimate Loss Based on Paid Loss Development Method
Retained Limits

Accident Year	Cumulative Paid Loss	Loss Development Factors	Projected Ultimate Loss
(1)	(2)	(3)	(4)
1989	\$207,853	1.000	\$207,853
1990	439,863	1.000	439,863
1991	84,015	1.000	84,015
1992	139,376	1.000	139,376
1993	600,979	1.000	600,979
1994	106,065	1.000	106,065
1995	156,790	1.000	156,790
1996	357,926	1.000	357,926
1997	706,526	1.000	706,526
1998	554,289	1.000	554,289
1999	657,094	1.000	657,094
2000	164,560	1.000	164,560
2001	497,423	1.000	497,423
2002	1,347,177	1.000	1,347,177
2003	269,762	1.000	269,762
2004	511,964	1.000	511,964
2005	857,801	1.000	857,801
2006	915,795	1.000	915,795
2007	312,120	1.000	312,120
2008	856,672	1.000	856,672
2009	1,177,813	1.000	1,177,813
2010	972,613	1.007	979,421
2011	323,802	1.008	326,395
2012	542,610	1.016	551,330
2013	601,882	1.026	617,671
2014	729,501	1.047	763,609
2015	314,175	1.382	434,101
2016	469,365	1.624	762,024
2017	506,669	2.273	1,151,621
2018	255,263	4.432	1,131,379
2019	37,442	17.729	663,800
Total	\$15,675,184		\$18,303,214

Notes:

- (2) Provided by MVRMA
- (3) Based on Exhibit 13
- (4) = (2) x (3)

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Ultimate Loss Based on Case Reserve Development Method
Retained Limits

Accident Year	Retention	Cumulative Paid Loss	Case Reserves	Percent Developed			Projected Ultimate Loss
				Incurred	Paid	Reserve	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1989	\$250,000	\$207,853	\$0	100.0%	100.0%	100.0%	\$207,853
1990	250,000	439,863	0	100.0%	100.0%	100.0%	439,863
1991	250,000	84,015	0	100.0%	100.0%	100.0%	84,015
1992	250,000	139,376	0	100.0%	100.0%	100.0%	139,376
1993	250,000	600,979	0	100.0%	100.0%	100.0%	600,979
1994	250,000	106,065	0	100.0%	100.0%	100.0%	106,065
1995	250,000	156,790	0	100.0%	100.0%	100.0%	156,790
1996	250,000	357,926	0	100.0%	100.0%	100.0%	357,926
1997	500,000	706,526	0	100.0%	100.0%	100.0%	706,526
1998	500,000	554,289	0	100.0%	100.0%	100.0%	554,289
1999	500,000	657,094	0	100.0%	100.0%	100.0%	657,094
2000	500,000	164,560	0	100.0%	100.0%	100.0%	164,560
2001	500,000	497,423	0	100.0%	100.0%	100.0%	497,423
2002	500,000	1,347,177	0	100.0%	100.0%	100.0%	1,347,177
2003	1,000,000	269,762	0	100.0%	100.0%	100.0%	269,762
2004	1,000,000	511,964	0	100.0%	100.0%	100.0%	511,964
2005	1,000,000	857,801	0	100.0%	100.0%	100.0%	857,801
2006	1,000,000	915,795	0	100.0%	100.0%	100.0%	915,795
2007	1,000,000	312,120	0	100.0%	100.0%	100.0%	312,120
2008	1,000,000	856,672	0	100.0%	100.0%	100.0%	856,672
2009	1,000,000	1,177,813	0	100.0%	100.0%	100.0%	1,177,813
2010	500,000	972,613	0	100.0%	99.3%	100.0%	972,613
2011	500,000	323,802	0	100.0%	99.2%	100.0%	323,802
2012	500,000	542,610	0	100.0%	98.4%	100.0%	542,610
2013	500,000	601,882	0	97.6%	97.4%	4.6%	601,882
2014	500,000	729,501	196,366	96.6%	95.5%	23.8%	1,555,564
2015	500,000	314,175	11,856	91.1%	72.4%	67.9%	331,640
2016	500,000	469,365	80,157	82.8%	61.6%	55.3%	614,244
2017	500,000	506,669	59,215	69.0%	44.0%	44.7%	639,109
2018	500,000	255,263	98,585	36.3%	22.6%	17.8%	809,570
2019	500,000	37,442	30,000	15.8%	5.6%	10.8%	316,140
Total		\$15,675,184	\$476,179				\$17,629,036

Notes:

- (2)-(4) Provided by MVRMA
- (5)-(6) Based on Exhibit 13
- (7) = [(5) - (6)] / [(1.0 - (6))]
- (8) = (3) + [(4) / (7)]

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Ultimate Loss Based on Incurred Loss per Reported Claim Development Method
Retained Limits

Accident Year	Retention	Cumulative Incurred Loss per Reported Claim	Loss Development Factors	Projected Average Loss	Selected Ultimate Claims	Projected Ultimate Loss
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1989	\$250,000	\$2,335	1.000	\$2,335	89	\$207,853
1990	250,000	4,443	1.000	4,443	99	439,863
1991	250,000	1,500	1.000	1,500	56	84,015
1992	250,000	1,936	1.000	1,936	72	139,376
1993	250,000	6,462	1.000	6,462	93	600,979
1994	250,000	982	1.000	982	108	106,065
1995	250,000	1,845	1.000	1,845	85	156,790
1996	250,000	2,958	1.000	2,958	121	357,926
1997	500,000	7,137	1.000	7,137	99	706,526
1998	500,000	3,903	1.000	3,903	142	554,289
1999	500,000	4,627	1.000	4,627	142	657,094
2000	500,000	1,127	1.000	1,127	146	164,560
2001	500,000	4,215	1.000	4,215	118	497,423
2002	500,000	8,214	1.000	8,214	164	1,347,177
2003	1,000,000	1,823	1.000	1,823	148	269,762
2004	1,000,000	4,302	1.000	4,302	119	511,964
2005	1,000,000	6,702	1.000	6,702	128	857,801
2006	1,000,000	8,325	1.000	8,325	110	915,795
2007	1,000,000	2,183	1.000	2,183	143	312,120
2008	1,000,000	4,840	1.000	4,840	177	856,672
2009	1,000,000	10,067	1.000	10,067	117	1,177,813
2010	500,000	6,357	1.000	6,357	153	972,613
2011	500,000	1,741	1.000	1,741	186	323,802
2012	500,000	3,961	1.001	3,965	137	543,152
2013	500,000	3,785	1.009	3,820	159	607,304
2014	500,000	5,291	1.012	5,354	175	937,010
2015	500,000	2,218	1.063	2,357	147	346,452
2016	500,000	3,870	1.148	4,441	143	635,099
2017	500,000	3,675	1.406	5,166	156	805,890
2018	500,000	2,045	2.671	5,463	178	972,499
2019	500,000	548	6.010	3,295	140	461,353
Total				\$4,328	4,050	\$17,527,037

Notes:

- (2) Provided by MVRMA
- (3) Based on data provided by MVRMA
- (4) Based on Exhibit 14
- (5) = (3) x (4)
- (6) From Exhibit 19, Col (6)
- (7) = (5) x (6)

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Ultimate Loss Based on Paid Loss per Closed Claim Development Method
Retained Limits

Accident Year	Retention	Cumulative Paid Loss per Closed Claim	Loss Development Factors	Projected Average Loss	Selected Ultimate Claims	Projected Ultimate Loss
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1989	\$250,000	\$2,335	1.000	\$2,335	89	\$207,853
1990	250,000	4,443	1.000	4,443	99	439,863
1991	250,000	1,500	1.000	1,500	56	84,015
1992	250,000	1,936	1.000	1,936	72	139,376
1993	250,000	6,462	1.000	6,462	93	600,979
1994	250,000	982	1.000	982	108	106,065
1995	250,000	1,845	1.000	1,845	85	156,790
1996	250,000	2,958	1.000	2,958	121	357,926
1997	500,000	7,137	1.000	7,137	99	706,526
1998	500,000	3,903	1.000	3,903	142	554,289
1999	500,000	4,627	1.000	4,627	142	657,094
2000	500,000	1,127	1.000	1,127	146	164,560
2001	500,000	4,215	1.000	4,215	118	497,423
2002	500,000	8,214	1.000	8,214	164	1,347,177
2003	1,000,000	1,823	1.000	1,823	148	269,762
2004	1,000,000	4,302	1.000	4,302	119	511,964
2005	1,000,000	6,702	1.000	6,702	128	857,801
2006	1,000,000	8,325	1.000	8,325	110	915,795
2007	1,000,000	2,183	1.000	2,183	143	312,120
2008	1,000,000	4,840	1.000	4,840	177	856,672
2009	1,000,000	10,067	1.000	10,067	117	1,177,813
2010	500,000	6,357	1.007	6,401	153	979,421
2011	500,000	1,741	1.008	1,755	186	326,395
2012	500,000	3,961	1.013	4,012	137	549,689
2013	500,000	3,785	1.023	3,873	159	615,832
2014	500,000	4,193	1.032	4,328	175	757,455
2015	500,000	2,152	1.265	2,721	147	400,050
2016	500,000	3,426	1.518	5,199	143	743,509
2017	500,000	3,378	2.049	6,920	156	1,079,570
2018	500,000	1,556	3.688	5,740	178	1,021,716
2019	500,000	331	14.751	4,888	140	684,278
Total				\$4,464	4,050	\$18,079,777

Notes:

- (2) Provided by MVRMA
- (3) Based on data provided by MVRMA
- (4) Based on Exhibit 14
- (5) = (3) x (4)
- (6) From Exhibit 19, Col (6)
- (7) = (5) x (6)

Miami Valley Risk Management Association
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Ultimate Loss Based on Incurred Loss Development Method Using Industry Factors
Retained Limits

Accident Year	Cumulative Incurred Loss	Industry Loss Development Factors	Projected Ultimate Loss
(1)	(2)	(3)	(4)
1989	\$207,853	1.000	\$207,853
1990	439,863	1.000	439,863
1991	84,015	1.000	84,015
1992	139,376	1.000	139,376
1993	600,979	1.000	600,979
1994	106,065	1.000	106,065
1995	156,790	1.000	156,790
1996	357,926	1.000	357,926
1997	706,526	1.000	706,526
1998	554,289	1.000	554,289
1999	657,094	1.000	657,094
2000	164,560	1.000	164,572
2001	497,423	1.000	497,493
2002	1,347,177	1.000	1,347,558
2003	269,762	1.001	269,914
2004	511,964	1.001	512,543
2005	857,801	1.002	859,742
2006	915,795	1.005	919,944
2007	312,120	1.009	314,954
2008	856,672	1.018	872,302
2009	1,177,813	1.037	1,221,182
2010	972,613	1.075	1,045,559
2011	323,802	1.094	354,353
2012	542,610	1.121	608,056
2013	601,882	1.155	695,387
2014	925,867	1.207	1,117,840
2015	326,031	1.293	421,658
2016	549,522	1.439	791,010
2017	565,884	1.778	1,005,984
2018	353,848	2.507	886,952
2019	67,442	4.888	329,645
Total	\$16,151,363		\$18,247,424

Notes:

- (2) Provided by MVRMA
- (3) Based on insurance industry development
- (4) = (2) x (3)

Miami Valley Risk Management Association
General Liability
December 31, 2019

Ultimate Loss Based on Paid Loss Development Method Using Industry Factors
Retained Limits

Accident Year	Cumulative Paid Loss	Industry Loss Development Factors	Projected Ultimate Loss
(1)	(2)	(3)	(4)
1989	\$207,853	1.000	\$207,853
1990	439,863	1.000	439,863
1991	84,015	1.000	84,015
1992	139,376	1.000	139,376
1993	600,979	1.000	600,979
1994	106,065	1.000	106,065
1995	156,790	1.000	156,790
1996	357,926	1.000	357,926
1997	706,526	1.000	706,526
1998	554,289	1.000	554,289
1999	657,094	1.000	657,094
2000	164,560	1.000	164,577
2001	497,423	1.000	497,529
2002	1,347,177	1.000	1,347,750
2003	269,762	1.001	269,992
2004	511,964	1.002	512,836
2005	857,801	1.003	860,724
2006	915,795	1.007	922,047
2007	312,120	1.014	316,396
2008	856,672	1.028	880,305
2009	1,177,813	1.056	1,243,694
2010	972,613	1.115	1,084,464
2011	323,802	1.143	370,246
2012	542,610	1.182	641,532
2013	601,882	1.251	752,884
2014	729,501	1.351	985,522
2015	314,175	1.527	479,613
2016	469,365	1.901	892,071
2017	506,669	2.762	1,399,194
2018	255,263	4.833	1,233,616
2019	37,442	13.290	497,602
Total	\$15,675,184		\$19,363,369

Notes:

- (2) Provided by MVRMA
- (3) Based on insurance industry development
- (4) = (2) x (3)

Miami Valley Risk Management Association
General Liability
December 31, 2019

Loss Development Patterns

Month of Development (1)	\$500K Limits % Developed		\$1M Limits % Developed		Industry % Developed	
	Incurred (2)	Paid (3)	Incurred (4)	Paid (5)	Incurred (6)	Paid (7)
372	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
360	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
348	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
336	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
324	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
312	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
300	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
288	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
276	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
264	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
252	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
240	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
228	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
216	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
204	100.0%	100.0%	100.0%	100.0%	99.9%	99.9%
192	100.0%	100.0%	100.0%	100.0%	99.9%	99.8%
180	100.0%	100.0%	100.0%	100.0%	99.8%	99.7%
168	100.0%	100.0%	100.0%	100.0%	99.5%	99.3%
156	100.0%	100.0%	100.0%	100.0%	99.1%	98.6%
144	100.0%	100.0%	100.0%	100.0%	98.2%	97.3%
132	100.0%	100.0%	100.0%	100.0%	96.4%	94.7%
120	100.0%	99.3%	100.0%	99.3%	93.0%	89.7%
108	100.0%	99.2%	100.0%	98.9%	91.4%	87.5%
96	100.0%	98.4%	100.0%	98.0%	89.2%	84.6%
84	97.6%	97.4%	97.1%	96.7%	86.6%	79.9%
72	96.6%	95.5%	94.6%	88.7%	82.8%	74.0%
60	91.1%	72.4%	87.8%	67.5%	77.3%	65.5%
48	82.8%	61.6%	77.1%	53.5%	69.5%	52.6%
36	69.0%	44.0%	54.7%	33.5%	56.3%	36.2%
24	36.3%	22.6%	26.5%	13.1%	39.9%	20.7%
12	15.8%	5.6%	5.8%	1.2%	20.5%	7.5%

Notes:

- (2) Based on Exhibit 15
- (3) Based on Exhibit 16
- (4) = Col (2) lagged 6 months
- (5) = Col (3) lagged 6 months
- (6)-(7) Based on insurance industry development

Miami Valley Risk Management Association
General Liability
December 31, 2019

Severity Development Patterns

Month of Development (1)	\$500K Limits % Developed		\$1M Limits % Developed	
	Incurred (2)	Paid (3)	Incurred (4)	Paid (5)
372	100.0%	100.0%	100.0%	100.0%
360	100.0%	100.0%	100.0%	100.0%
348	100.0%	100.0%	100.0%	100.0%
336	100.0%	100.0%	100.0%	100.0%
324	100.0%	100.0%	100.0%	100.0%
312	100.0%	100.0%	100.0%	100.0%
300	100.0%	100.0%	100.0%	100.0%
288	100.0%	100.0%	100.0%	100.0%
276	100.0%	100.0%	100.0%	100.0%
264	100.0%	100.0%	100.0%	100.0%
252	100.0%	100.0%	100.0%	100.0%
240	100.0%	100.0%	100.0%	100.0%
228	100.0%	100.0%	100.0%	100.0%
216	100.0%	100.0%	100.0%	100.0%
204	100.0%	100.0%	100.0%	100.0%
192	100.0%	100.0%	100.0%	100.0%
180	100.0%	100.0%	100.0%	100.0%
168	100.0%	100.0%	100.0%	100.0%
156	100.0%	100.0%	100.0%	100.0%
144	100.0%	100.0%	100.0%	100.0%
132	100.0%	100.0%	100.0%	100.0%
120	100.0%	99.3%	100.0%	99.3%
108	100.0%	99.2%	100.0%	99.0%
96	99.9%	98.7%	99.7%	98.3%
84	99.1%	97.7%	99.0%	97.3%
72	98.8%	96.9%	97.4%	91.9%
60	94.1%	79.1%	91.4%	73.4%
48	87.1%	65.9%	80.9%	58.2%
36	71.1%	48.8%	56.6%	38.4%
24	37.4%	27.1%	27.5%	15.9%
12	16.6%	6.8%	6.2%	1.4%

Notes:

- (2) Based on Exhibit 17
- (3) Based on Exhibit 18
- (4) = Col (2) lagged 6 months
- (5) = Col (3) lagged 6 months

Miami Valley Risk Management Association
General Liability
December 31, 2019

Incurred Loss at \$500K SIR

Accident Year	Maturity (Age in Months)															
	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853
1990	439,863	439,863	439,863	439,863	439,863	439,863	439,863	439,863	439,863	439,863	439,863	439,863	439,863	439,863	439,863	439,863
1991	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015
1992	139,376	139,376	139,376	139,376	139,376	139,376	139,376	139,376	139,376	139,376	139,376	139,376	139,376	139,376	139,376	139,376
1993	850,979	850,979	850,979	850,979	850,979	850,979	850,979	850,979	850,979	850,979	850,979	850,979	850,979	850,979	850,979	850,979
1994	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065
1995	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790
1996	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926
1997	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526
1998	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289
1999	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094
2000	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560
2001	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423
2002	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177
2003	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762
2004	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964
2005																
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2019																

Accident Year	Age-to-Age Factors															
	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-Ult
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004																
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2009																
2010																
2011																
2012																
2013																
2014																
2015																
2016																
2017																
2018																
2019																
All Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Incurred	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
General Liability
December 31, 2019

Paid Loss at \$500K SIR

Accident Year	Maturity (Age in Months)														
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
1989	43,838	169,390	126,482	200,212	201,189	206,198	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853
1990	36,218	72,223	101,376	172,281	429,216	429,282	431,947	432,379	439,863	439,863	439,863	439,863	439,863	439,863	439,863
1991	8,182	13,655	34,548	52,484	56,233	82,219	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015
1992	4,787	16,680	48,844	84,126	96,940	133,151	138,407	138,779	139,376	139,376	139,376	139,376	139,376	139,376	139,376
1993	43,219	164,451	289,999	378,014	831,120	838,929	847,999	848,735	850,979	850,979	850,979	850,979	850,979	850,979	850,979
1994	6,926	65,029	86,321	97,658	99,653	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065
1995	3,794	31,144	84,188	108,916	128,988	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790
1996	9,115	94,177	201,725	247,114	331,060	336,010	339,152	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926
1997	19,900	56,485	170,375	690,512	705,609	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526
1998	15,685	138,193	201,920	252,856	546,353	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289
1999	38,571	112,133	261,977	387,683	638,399	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094
2000	42,870	76,054	105,748	162,267	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560
2001	18,952	123,618	283,857	432,734	470,949	483,429	493,049	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423
2002	61,435	146,396	268,703	639,459	872,109	897,035	975,645	1,021,028	1,053,852	1,060,070	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177
2003	24,232	49,373	196,632	234,046	243,534	267,728	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762
2004	22,372	50,964	124,762	343,096	401,681	444,143	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964
2005	48,390	139,464	288,461	436,538	464,294	510,368	521,409	857,801	857,801	857,801	857,801	857,801	857,801	857,801	857,801
2006	28,487	78,525	207,322	489,371	564,195	848,934	860,568	860,568	915,795	915,795	915,795	915,795	915,795	915,795	915,795
2007	31,341	88,861	203,485	233,905	297,482	312,120	312,120	312,120	312,120	312,120	312,120	312,120	312,120	312,120	312,120
2008	78,741	150,771	677,316	737,628	818,200	819,263	856,672	856,672	856,672	856,672	856,672	856,672	856,672	856,672	856,672
2009	18,347	164,997	414,887	670,003	774,798	1,137,596	1,137,677	1,137,677	1,137,677	1,137,677	1,137,677	1,137,677	1,137,677	1,137,677	1,137,677
2010	36,625	94,473	335,590	531,550	660,802	972,613	972,613	972,613	972,613	972,613	972,613	972,613	972,613	972,613	972,613
2011	58,248	132,329	170,021	218,842	252,485	316,697	323,802	323,802	323,802	323,802	323,802	323,802	323,802	323,802	323,802
2012	41,813	72,238	168,777	216,588	281,284	542,610	542,610	542,610	542,610	542,610	542,610	542,610	542,610	542,610	542,610
2013	71,626	172,455	278,864	536,112	601,435	601,882	601,882	601,882	601,882	601,882	601,882	601,882	601,882	601,882	601,882
2014	105,074	233,752	375,369	431,494	541,145	729,501									
2015	85,569	129,660	275,208	297,225	314,175										
2016	65,365	272,746	408,529	469,365											
2017	73,929	386,031	506,669												
2018	48,041	255,263													
2019	37,442														

Accident Year	Age-to-Age Factors														
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192
1989	3.864	0.747	1.583	1.005	1.025	1.008	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.994	1.404	1.699	2.491	1.000	1.006	1.001	1.017	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.669	2.530	1.519	1.071	1.462	1.022	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	3.484	2.928	1.722	1.152	1.374	1.039	1.003	1.004	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	3.805	1.763	1.304	2.199	1.009	1.011	1.001	1.003	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	9.389	1.327	1.131	1.020	1.064	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	8.209	2.703	1.294	1.184	1.216	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	10.332	2.142	1.225	1.340	1.015	1.009	1.055	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	2.838	3.016	4.053	1.022	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	8.811	1.461	1.252	2.161	1.015	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	2.907	2.336	1.480	1.647	1.029	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.774	1.390	1.534	1.014	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	6.523	2.296	1.524	1.088	1.026	1.020	1.009	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	2.383	1.835	2.380	1.364	1.029	1.088	1.047	1.032	1.006	1.271	1.000	1.000	1.000	1.000	1.000
2003	2.038	3.983	1.190	1.041	1.099	1.008	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	2.278	2.448	2.750	1.171	1.106	1.153	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005	2.882	2.068	1.513	1.064	1.099	1.022	1.645	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2006	2.757	2.640	2.360	1.153	1.505	1.014	1.000	1.064	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2007	2.835	2.290	1.149	1.272	1.049	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2008	1.915	4.492	1.089	1.109	1.001	1.046	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2009	8.993	2.515	1.615	1.156	1.468	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2010	2.579	3.552	1.584	1.243	1.472	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2011	2.272	1.285	1.287	1.154	1.254	1.022	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2012	1.728	2.336	1.283	1.299	1.929	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2013	2.408	1.617	1.922	1.122	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2014	2.225	1.606	1.150	1.254	1.348										
2015	1.515	2.123	1.080	1.057											
2016	4.173	1.498	1.149												
2017	5.222	1.313													
2018	5.313														
All Yr Vol	3.148	1.973	1.526	1.270	1.155	1.020	1.033	1.008	1.001	1.026	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	3.216	1.919	1.474	1.252	1.138	1.016	1.006	1.004	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	3.165	1.996	1.313	1.170	1.292	1.021	1.053	1.012	1.001	1.044	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	3.234	1.811	1.274	1.172	1.291	1.012	1.000	1.006	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	3.380	1.544	1.295	1.171	1.353	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	3.652	1.565	1.173	1.176	1.388	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	4.879	1.510	1.131	1.152	1.316	1.005	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol Ex. H/L	3.000	2.100	1.500	1.200	1.300	1.020	1.010	1.008	1.001	1.008	1.000	1.000	1.000	1.000	1.000
Selected	4.000	1.950	1.400	1.175	1.320	1.020	1.010	1.008	1.001	1.007	1.000	1.000	1.000	1.000	1.000
LDFs	17.729	4.432	2.273	1.624	1.382	1.047	1.026	1.016	1.008	1.007	1.000	1.000	1.000	1.000	1.000
% Paid	5.6%	22.6%	44.0%	61.6%	72.4%	95.5%	97.4%	98.4%	99.2%	99.					

Miami Valley Risk Management Association
General Liability
December 31, 2019

Paid Loss at \$500K SIR

Accident Year	Maturity (Age in Months)															
	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853	207,853
1990	439,863	439,863	439,863	439,863	439,863	439,863	439,863	439,863	439,863	439,863	439,863	439,863	439,863	439,863	439,863	439,863
1991	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015	84,015
1992	139,376	139,376	139,376	139,376	139,376	139,376	139,376	139,376	139,376	139,376	139,376	139,376	139,376	139,376	139,376	139,376
1993	850,979	850,979	850,979	850,979	850,979	850,979	850,979	850,979	850,979	850,979	850,979	850,979	850,979	850,979	850,979	850,979
1994	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065	106,065
1995	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790	156,790
1996	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926	357,926
1997	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526	706,526
1998	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289	554,289
1999	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094	657,094
2000	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560	164,560
2001	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423	497,423
2002	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177	1,347,177
2003	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762	269,762
2004	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964	511,964
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Accident Year	Age-to-Age Factors															
	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-Ult
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
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All Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Paid	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
General Liability
December 31, 2019

Incurred Loss per Reported Claim at \$500K SIR

Accident Year	Maturity (Age in Months)														
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
1989	1,251	3,184	2,462	2,381	2,361	2,406	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335
1990	1,260	1,752	2,231	2,605	4,458	4,458	4,402	4,367	4,443	4,443	4,443	4,443	4,443	4,443	4,443
1991	287	1,394	1,141	993	1,807	2,492	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
1992	465	461	2,429	1,933	1,714	1,945	1,999	1,999	1,936	1,936	1,936	1,936	1,936	1,936	1,936
1993	5,280	6,368	6,026	8,843	9,456	9,253	9,306	9,306	9,150	9,150	9,150	9,150	9,150	9,150	9,150
1994	335	811	2,056	904	985	982	982	982	982	982	982	982	982	982	982
1995	1,230	952	1,467	1,578	2,228	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845
1996	663	1,638	2,262	2,382	3,063	2,923	2,910	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958
1997	601	1,021	6,905	7,693	7,290	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137
1998	315	1,674	2,010	3,916	4,030	3,931	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903
1999	669	1,409	2,688	3,341	4,786	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627
2000	789	657	1,349	1,341	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127
2001	856	2,543	3,877	4,355	4,355	4,352	4,352	4,145	4,215	4,215	4,215	4,215	4,215	4,215	4,215
2002	2,155	1,995	4,027	4,861	6,310	6,617	6,949	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214
2003	414	950	1,897	2,113	1,788	1,869	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823
2004	544	845	2,242	3,269	3,714	3,815	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302
2005	977	2,085	4,133	3,689	3,769	4,159	4,198	6,650	6,702	6,702	6,702	6,702	6,702	6,702	6,702
2006	1,013	2,733	3,889	5,906	6,344	8,733	8,505	8,505	8,325	8,325	8,325	8,325	8,325	8,325	8,325
2007	554	1,029	1,831	2,236	2,261	2,183	2,183	2,183	2,183	2,183	2,183	2,183	2,183	2,183	2,183
2008	711	1,205	4,371	4,594	4,690	4,629	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840
2009	649	2,001	4,286	6,868	10,318	9,956	9,724	9,724	9,724	9,724	9,724	9,724	9,724	9,724	9,724
2010	444	1,103	3,912	5,534	6,079	6,357	6,357	6,357	6,357	6,357	6,357	6,357	6,357	6,357	6,357
2011	764	786	1,149	1,306	1,580	1,816	1,741	1,741	1,741	1,741	1,741	1,741	1,741	1,741	1,741
2012	613	1,488	2,145	2,696	2,987	3,961	3,961	3,961	3,961	3,961	3,961	3,961	3,961	3,961	3,961
2013	696	1,778	2,228	3,745	3,834	3,785	3,785	3,785	3,785	3,785	3,785	3,785	3,785	3,785	3,785
2014	1,044	1,920	5,414	5,350	5,464	5,291	5,291	5,291	5,291	5,291	5,291	5,291	5,291	5,291	5,291
2015	736	1,426	1,978	2,150	2,218	2,218	2,218	2,218	2,218	2,218	2,218	2,218	2,218	2,218	2,218
2016	823	3,062	3,532	3,870	3,870	3,870	3,870	3,870	3,870	3,870	3,870	3,870	3,870	3,870	3,870
2017	2,914	2,827	3,675	3,675	3,675	3,675	3,675	3,675	3,675	3,675	3,675	3,675	3,675	3,675	3,675
2018	701	2,045	2,045	2,045	2,045	2,045	2,045	2,045	2,045	2,045	2,045	2,045	2,045	2,045	2,045
2019	548	548	548	548	548	548	548	548	548	548	548	548	548	548	548

Accident Year	Age-to-Age Factors														
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192
1989	2.545	0.773	0.967	0.992	1.019	0.971	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.391	1.273	1.167	1.711	1.000	0.987	0.992	1.017	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	4.863	0.819	0.870	1.820	1.379	0.602	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	0.993	5.265	0.796	0.887	1.134	1.028	1.000	0.968	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.206	0.946	1.467	1.069	0.978	1.006	1.000	0.983	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	2.419	2.534	0.440	1.089	0.997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	0.774	1.542	1.076	1.412	0.828	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	2.470	1.381	1.053	1.286	0.955	0.996	1.016	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.698	6.764	1.114	0.948	0.979	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	5.319	1.201	1.948	1.029	0.976	0.993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	2.106	1.907	1.243	1.433	0.967	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	0.833	2.054	0.994	0.841	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	2.972	1.525	1.123	1.000	0.999	1.000	0.952	1.017	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	0.926	2.018	1.207	1.298	1.049	1.050	1.182	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	2.293	1.997	1.114	0.846	1.045	0.975	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	1.554	2.653	1.458	1.136	1.027	1.128	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005	2.135	1.982	0.892	1.022	1.103	1.009	1.584	1.008	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2006	2.697	1.423	1.518	1.074	1.377	0.974	1.000	0.979	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2007	1.858	1.779	1.221	1.011	0.965	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2008	1.694	3.628	1.051	1.021	0.987	1.046	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2009	3.084	2.142	1.602	1.502	0.965	0.977	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2010	2.483	3.546	1.415	1.099	1.046	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2011	1.029	1.461	1.136	1.210	1.149	0.959	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2012	2.427	1.442	1.257	1.108	1.326	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2013	2.555	1.253	1.680	1.024	0.987	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2014	1.839	2.820	0.988	1.021	0.968	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2015	1.937	1.388	1.087	1.032	1.032	1.032	1.032	1.032	1.032	1.032	1.032	1.032	1.032	1.032	1.032
2016	3.722	1.153	1.096	1.096	1.096	1.096	1.096	1.096	1.096	1.096	1.096	1.096	1.096	1.096	1.096
2017	0.970	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300	1.300
2018	2.919	2.919	2.919	2.919	2.919	2.919	2.919	2.919	2.919	2.919	2.919	2.919	2.919	2.919	2.919
2019	548	548	548	548	548	548	548	548	548	548	548	548	548	548	548

All Yr Avg	2.190	2.068	1.178	1.145	1.046	0.988	1.030	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Avg Ex. H/L	2.129	1.942	1.177	1.130	1.042	0.999	1.009	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Avg	2.296	2.013	1.253	1.110	1.087	1.009	1.058	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Avg Ex. H/L	2.284	1.919	1.233	1.074	1.066	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Avg	2.277	1.583	1.222	1.079	1.095	0.987	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Avg Ex. H/L	2.231	1.314	1.147	1.055	1.061	0.992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Avg	2.537	1.280	1.057	1.026	1.094	0.986	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	2.200	1.950	1.250	1.090	1.060	1.004	1.009	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	2.250	1.900	1.225	1.080	1.050	1.003	1.008	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	6.010	2.671	1.406	1.148	1.063	1.									

Miami Valley Risk Management Association
General Liability
December 31, 2019

Incurred Loss per Reported Claim at \$500K SIR

Accident Year	Maturity (Age in Months)															
	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335
1990	4,443	4,443	4,443	4,443	4,443	4,443	4,443	4,443	4,443	4,443	4,443	4,443	4,443	4,443	4,443	4,443
1991	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
1992	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936
1993	9,150	9,150	9,150	9,150	9,150	9,150	9,150	9,150	9,150	9,150	9,150	9,150	9,150	9,150	9,150	9,150
1994	982	982	982	982	982	982	982	982	982	982	982	982	982	982	982	982
1995	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845
1996	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958
1997	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137
1998	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903
1999	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627
2000	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127
2001	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215
2002	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214
2003	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823
2004	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302
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Accident Year	Age-to-Age Factors															
	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-Ult
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
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All Yr Avg	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Avg Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Avg	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Avg Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Avg	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Avg Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Avg	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Incurred	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
General Liability
December 31, 2019

Paid Loss per Closed Claim at \$500K SIR

Accident Year	Maturity (Age in Months)														
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
1989	719	2,200	1,562	2,275	2,286	2,343	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335
1990	541	881	1,179	1,893	4,425	4,426	4,408	4,367	4,443	4,443	4,443	4,443	4,443	4,443	4,443
1991	215	303	705	1,009	1,061	1,523	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
1992	117	293	814	1,275	1,405	1,902	1,949	1,955	1,936	1,936	1,936	1,936	1,936	1,936	1,936
1993	786	2,284	3,537	4,345	9,445	9,533	9,422	9,225	9,150	9,150	9,150	9,150	9,150	9,150	9,150
1994	75	638	807	904	931	991	982	982	982	982	982	982	982	982	982
1995	67	421	1,066	1,345	1,554	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845
1996	104	880	1,770	2,112	2,759	2,800	2,826	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958
1997	258	649	1,893	7,269	7,274	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137
1998	149	1,124	1,541	1,859	3,931	3,931	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903
1999	344	897	2,015	2,872	4,660	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627
2000	390	576	778	1,159	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127
2001	220	1,261	2,678	3,796	4,025	4,097	4,178	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215
2002	544	996	1,816	4,179	5,451	5,606	5,986	6,264	6,465	6,503	8,214	8,214	8,214	8,214	8,214
2003	216	374	1,425	1,696	1,703	1,834	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823
2004	291	525	1,248	3,063	3,433	3,764	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302
2005	526	1,245	2,445	3,520	3,656	4,019	4,106	6,650	6,702	6,702	6,702	6,702	6,702	6,702	6,702
2006	352	844	2,116	4,798	5,425	8,009	7,895	7,895	8,325	8,325	8,325	8,325	8,325	8,325	8,325
2007	277	684	1,485	1,707	2,110	2,183	2,183	2,183	2,183	2,183	2,183	2,183	2,183	2,183	2,183
2008	532	919	4,056	4,339	4,675	4,629	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840
2009	197	1,557	3,806	5,982	6,918	9,807	9,724	9,724	9,724	9,724	9,724	9,724	9,724	9,724	9,724
2010	293	665	2,314	3,592	4,435	6,357	6,357	6,357	6,357	6,357	6,357	6,357	6,357	6,357	6,357
2011	371	735	945	1,202	1,380	1,721	1,741	1,741	1,741	1,741	1,741	1,741	1,741	1,741	1,741
2012	394	543	1,260	1,616	2,099	3,961	3,961	3,961	3,961	3,961	3,961	3,961	3,961	3,961	3,961
2013	582	1,142	1,823	3,481	3,831	3,785	3,785	3,785	3,785	3,785	3,785	3,785	3,785	3,785	3,785
2014	705	1,391	2,182	2,494	3,128	4,193	4,193	4,193	4,193	4,193	4,193	4,193	4,193	4,193	4,193
2015	674	940	1,911	2,036	2,152	2,152	2,152	2,152	2,152	2,152	2,152	2,152	2,152	2,152	2,152
2016	641	2,114	3,026	3,426	3,426	3,426	3,426	3,426	3,426	3,426	3,426	3,426	3,426	3,426	3,426
2017	560	2,591	3,378	3,378	3,378	3,378	3,378	3,378	3,378	3,378	3,378	3,378	3,378	3,378	3,378
2018	338	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556
2019	331	331	331	331	331	331	331	331	331	331	331	331	331	331	331

Accident Year	Age-to-Age Factors														
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192
1989	3.061	0.710	1.457	1.005	1.025	0.997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.629	1.338	1.606	2.337	1.000	0.996	0.991	1.017	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.409	2.324	1.432	1.051	1.435	0.985	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	2.506	2.782	1.566	1.102	1.354	1.025	1.003	0.990	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	2.907	1.548	1.229	2.174	1.009	0.988	0.979	0.992	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	8.469	1.265	1.121	1.030	1.064	0.991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	6.323	2.532	1.262	1.156	1.187	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	8.497	2.010	1.194	1.306	1.015	1.009	1.047	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	2.512	2.916	3.840	1.001	0.981	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	7.521	1.372	1.206	2.114	1.000	0.993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	2.605	2.246	1.425	1.623	0.993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.478	1.350	1.491	0.972	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	5.724	2.123	1.417	1.060	1.018	1.020	1.009	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.832	1.823	2.302	1.304	1.029	1.068	1.047	1.032	1.006	1.263	1.000	1.000	1.000	1.000	1.000
2003	1.729	3.809	1.190	1.004	1.077	0.994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	1.808	2.375	2.455	1.121	1.096	1.143	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005	2.367	1.963	1.440	1.038	1.099	1.022	1.620	1.008	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2006	2.401	2.505	2.268	1.131	1.476	0.986	1.000	1.055	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2007	2.465	2.173	1.149	1.236	1.035	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2008	1.728	4.412	1.070	1.078	0.990	1.046	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2009	7.890	2.445	1.572	1.156	1.418	0.992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2010	2.271	3.479	1.552	1.235	1.433	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2011	1.982	1.285	1.273	1.147	1.248	1.011	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2012	1.377	2.319	1.283	1.299	1.887	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2013	1.961	1.596	1.910	1.100	0.988	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2014	1.973	1.569	1.143	1.254	1.340	1.340	1.340	1.340	1.340	1.340	1.340	1.340	1.340	1.340	1.340
2015	1.394	2.034	1.065	1.057	1.057	1.057	1.057	1.057	1.057	1.057	1.057	1.057	1.057	1.057	1.057
2016	3.299	1.431	1.132	1.132	1.132	1.132	1.132	1.132	1.132	1.132	1.132	1.132	1.132	1.132	1.132
2017	4.626	1.304	1.304	1.304	1.304	1.304	1.304	1.304	1.304	1.304	1.304	1.304	1.304	1.304	1.304
2018	4.601	4.601	4.601	4.601	4.601	4.601	4.601	4.601	4.601	4.601	4.601	4.601	4.601	4.601	4.601
All Yr Avg	3.345	2.105	1.537	1.263	1.161	1.011	1.029	1.004	1.000	1.013	1.000	1.000	1.000	1.000	1.000
All Yr Avg Ex. H/L	3.231	2.071	1.467	1.231	1.139	1.006	1.004	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Avg	3.137	2.187	1.315	1.169	1.291	1.020	1.062	1.009	1.001	1.026	1.000	1.000	1.000	1.000	1.000
10 Yr Avg Ex. H/L	2.763	2.022	1.272	1.167	1.255	1.009	1.000	1.005	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Avg	3.179	1.587	1.307	1.172	1.379	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Avg Ex. H/L	3.291	1.532	1.186	1.167	1.340	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Avg	4.175	1.590	1.113	1.137	1.405	1.004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	2.750	2.100	1.400	1.220	1.225	1.010	1.010	1.005	1.001	1.008	1.000	1.000	1.000	1.000	1.000
Selected	4.000	1.800	1.350	1.200	1.225	1.009	1.010	1.005	1.001	1.007	1.000	1.000	1.000	1.000	1.000
LDFs	14.751	3.688	2.049	1.518	1.265	1.032	1.023	1.013	1.008	1.007	1.000	1.000	1.000	1.000	1.000
% Paid	6.8%	27.1%	48.8%	65.9%	79.1%	96.9%	97.7%	98.7%	99.2%	99.3%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
General Liability
December 31, 2019

Paid Loss per Closed Claim at \$500K SIR

Accident Year	Maturity (Age in Months)															
	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335
1990	4,443	4,443	4,443	4,443	4,443	4,443	4,443	4,443	4,443	4,443	4,443	4,443	4,443	4,443	4,443	4,443
1991	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
1992	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936
1993	9,150	9,250	9,150	9,150	9,150	9,150	9,150	9,150	9,150	9,150	9,150	9,150	9,150	9,150	9,150	9,150
1994	982	982	982	982	982	982	982	982	982	982	982	982	982	982	982	982
1995	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845	1,845
1996	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958
1997	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137	7,137
1998	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903	3,903
1999	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627	4,627
2000	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127	1,127
2001	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215	4,215
2002	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214
2003	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823	1,823
2004	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302	4,302
2005																
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2019																

Accident Year	Age-to-Age Factors															
	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-Ult
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.011	0.989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005																
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2016																
2017																
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2019																
All Yr Avg	1.001	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Avg Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Avg	1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Avg Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Avg	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Avg Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Avg	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Paid	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
General Liability
December 31, 2019

Summary of Claim Counts

Accident Year	Closed Claims	Open Claims	Reported Claims	Indicated IBNR Claims	Selected Ultimate Claims
(1)	(2)	(3)	(4)	(5)	(6)
1989	89	0	89	0	89
1990	99	0	99	0	99
1991	56	0	56	0	56
1992	72	0	72	0	72
1993	93	0	93	0	93
1994	108	0	108	0	108
1995	85	0	85	0	85
1996	121	0	121	0	121
1997	99	0	99	0	99
1998	142	0	142	0	142
1999	142	0	142	0	142
2000	146	0	146	0	146
2001	118	0	118	0	118
2002	164	0	164	0	164
2003	148	0	148	0	148
2004	119	0	119	0	119
2005	128	0	128	0	128
2006	110	0	110	0	110
2007	143	0	143	0	143
2008	177	0	177	0	177
2009	117	0	117	0	117
2010	153	0	153	0	153
2011	186	0	186	0	186
2012	137	0	137	0	137
2013	159	0	159	0	159
2014	174	1	175	0	175
2015	146	1	147	0	147
2016	137	5	142	1	143
2017	150	4	154	2	156
2018	164	9	173	5	178
2019	113	10	123	17	140
Total	3,995	30	4,025	25	4,050

Notes:

- (2)-(4) Provided by MVRMA
- (5) = (6) - (4)
- (6) From Exhibit 20, Col (4)

Miami Valley Risk Management Association
General Liability
December 31, 2019

Ultimate Claims Based on Reported Claim Development Method

Accident Year (1)	Cumulative Reported Claims (2)	Claim Development Factors (3)	Projected Ultimate Claims (4)
1989	89	1.000	89
1990	99	1.000	99
1991	56	1.000	56
1992	72	1.000	72
1993	93	1.000	93
1994	108	1.000	108
1995	85	1.000	85
1996	121	1.000	121
1997	99	1.000	99
1998	142	1.000	142
1999	142	1.000	142
2000	146	1.000	146
2001	118	1.000	118
2002	164	1.000	164
2003	148	1.000	148
2004	119	1.000	119
2005	128	1.000	128
2006	110	1.000	110
2007	143	1.000	143
2008	177	1.000	177
2009	117	1.000	117
2010	153	1.000	153
2011	186	1.000	186
2012	137	1.000	137
2013	159	1.000	159
2014	175	1.001	175
2015	147	1.003	147
2016	142	1.005	143
2017	154	1.010	156
2018	173	1.026	178
2019	123	1.139	140
Total	4,025		4,050

Notes:

- (2) Provided by MVRMA
- (3) From Exhibit 21
- (4) = (2) x (3)

Miami Valley Risk Management Association
General Liability
December 31, 2019

Reported Claim Counts

Accident Year	Maturity (Age in Months)														
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
1989	78	87	88	89	89	89	89	89	89	89	89	89	89	89	89
1990	81	89	94	97	98	98	99	99	99	99	99	99	99	99	99
1991	43	51	54	54	54	56	56	56	56	56	56	56	56	56	56
1992	47	61	67	71	72	72	72	72	72	72	72	72	72	72	72
1993	70	83	89	90	91	93	93	93	93	93	93	93	93	93	93
1994	103	106	108	108	108	108	108	108	108	108	108	108	108	108	108
1995	73	78	84	85	85	85	85	85	85	85	85	85	85	85	85
1996	102	114	120	122	122	122	121	121	121	121	121	121	121	121	121
1997	85	94	99	99	99	99	99	99	99	99	99	99	99	99	99
1998	117	133	139	141	141	141	142	142	142	142	142	142	142	142	142
1999	122	133	141	141	141	142	142	142	142	142	142	142	142	142	142
2000	125	138	143	143	146	146	146	146	146	146	146	146	146	146	146
2001	105	111	115	120	120	120	120	120	118	118	118	118	118	118	118
2002	119	155	160	163	163	163	164	164	164	164	164	164	164	164	164
2003	122	142	144	145	145	148	148	148	148	148	148	148	148	148	148
2004	85	105	114	118	119	119	119	119	119	119	119	119	119	119	119
2005	111	124	128	129	129	129	129	129	128	128	128	128	128	128	128
2006	91	102	105	108	108	110	110	110	110	110	110	110	110	110	110
2007	128	142	142	143	143	143	143	143	143	143	143	143	143	143	143
2008	160	171	175	177	177	177	177	177	177	177	177	177	177	177	177
2009	102	113	117	117	117	117	117	117	117	117	117	117	117	117	117
2010	133	148	151	152	153	153	153	153	153	153	153	153	153	153	153
2011	172	181	185	185	186	186	186	186	186	186	186	186	186	186	186
2012	121	135	136	136	136	137	137	137	137	137	137	137	137	137	137
2013	137	156	159	159	159	159	159	159	159	159	159	159	159	159	159
2014	158	174	175	175	175	175	175	175	175	175	175	175	175	175	175
2015	137	144	147	147	147	147	147	147	147	147	147	147	147	147	147
2016	116	138	141	142	142	142	142	142	142	142	142	142	142	142	142
2017	147	156	154	154	154	154	154	154	154	154	154	154	154	154	154
2018	162	173	173	173	173	173	173	173	173	173	173	173	173	173	173
2019	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123

Accident Year	Age-to-Age Factors														
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192
1989	1.115	1.011	1.011	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.099	1.056	1.032	1.010	1.000	1.010	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.186	1.059	1.000	1.000	1.037	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.298	1.098	1.060	1.014	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.186	1.072	1.011	1.011	1.022	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.029	1.019	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.068	1.077	1.012	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.118	1.053	1.017	1.000	1.000	0.992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.106	1.053	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.137	1.045	1.014	1.000	1.000	1.007	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.090	1.060	1.000	1.000	1.007	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.104	1.036	1.000	1.021	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.057	1.036	1.043	1.000	1.000	1.000	1.000	0.983	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.303	1.032	1.019	1.000	1.000	1.006	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.164	1.014	1.007	1.000	1.021	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	1.235	1.086	1.035	1.008	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005	1.117	1.032	1.008	1.000	1.000	1.000	1.000	0.992	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2006	1.121	1.029	1.029	1.000	1.019	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2007	1.109	1.000	1.007	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2008	1.069	1.023	1.011	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2009	1.108	1.035	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2010	1.113	1.020	1.007	1.007	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2011	1.052	1.022	1.000	1.005	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2012	1.116	1.007	1.000	1.000	1.007	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2013	1.139	1.019	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2014	1.101	1.006	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2015	1.051	1.021	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2016	1.190	1.022	1.007	1.007	1.007	1.007	1.007	1.007	1.007	1.007	1.007	1.007	1.007	1.007	1.007
2017	1.061	0.987	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2018	1.068	1.068	1.068	1.068	1.068	1.068	1.068	1.068	1.068	1.068	1.068	1.068	1.068	1.068	1.068

All Yr Vol	1.115	1.031	1.010	1.003	1.003	1.001	1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.111	1.032	1.010	1.002	1.003	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.096	1.016	1.003	1.001	1.002	1.000	1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.092	1.018	1.002	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.090	1.010	1.001	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.077	1.015	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	1.099	1.009	1.002	1.000	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.115	1.018	1.005	1.002	1.003	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.110	1.016	1.005	1.002	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDfs	1.139	1.026	1.010	1.005	1.003	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Developed	87.8%	97.4%	99.0%	99.5%	99.7%	99.9%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
General Liability
December 31, 2019

Reported Claim Counts

Accident Year	Maturity (Age in Months)															
	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89
1990	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
1991	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
1992	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
1993	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93
1994	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108
1995	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
1996	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
1997	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
1998	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142
1999	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142
2000	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146
2001	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118
2002	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164
2003	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148
2004	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119
2005																
2006																
2007																
2008																
2009																
2010																
2011																
2012																
2013																
2014																
2015																
2016																
2017																
2018																
2019																

Accident Year	Age-to-Age Factors															
	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-Ult
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004																
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2012																
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2015																
2016																
2017																
2018																
All Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Developed	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
General Liability
December 31, 2019

Closed Claim Counts

Accident Year	Maturity (Age in Months)														
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
1989	61	77	81	88	88	88	89	89	89	89	89	89	89	89	89
1990	67	82	86	91	97	97	98	99	99	99	99	99	99	99	99
1991	38	45	49	52	53	54	56	56	56	56	56	56	56	56	56
1992	41	57	60	66	69	70	71	71	72	72	72	72	72	72	72
1993	55	72	82	87	88	88	90	92	93	93	93	93	93	93	93
1994	92	102	107	108	107	107	108	108	108	108	108	108	108	108	108
1995	57	74	79	81	83	85	85	85	85	85	85	85	85	85	85
1996	88	107	114	117	120	120	120	121	121	121	121	121	121	121	121
1997	77	87	90	95	97	99	99	99	99	99	99	99	99	99	99
1998	105	123	131	136	139	141	142	142	142	142	142	142	142	142	142
1999	112	125	130	135	137	142	142	142	142	142	142	142	142	142	142
2000	110	132	136	140	146	146	146	146	146	146	146	146	146	146	146
2001	86	98	106	114	117	118	118	118	118	118	118	118	118	118	118
2002	113	147	148	153	160	160	163	163	163	163	164	164	164	164	164
2003	112	132	138	138	143	146	148	148	148	148	148	148	148	148	148
2004	77	97	100	112	117	118	119	119	119	119	119	119	119	119	119
2005	92	112	118	124	127	127	127	129	128	128	128	128	128	128	128
2006	81	93	98	102	104	106	109	109	110	110	110	110	110	110	110
2007	113	130	137	137	141	143	143	143	143	143	143	143	143	143	143
2008	148	164	167	170	175	177	177	177	177	177	177	177	177	177	177
2009	93	106	109	112	112	116	117	117	117	117	117	117	117	117	117
2010	125	142	145	148	149	153	153	153	153	153	153	153	153	153	153
2011	157	180	180	182	183	184	186	186	186	186	186	186	186	186	186
2012	106	133	134	134	134	137	137	137	137	137	137	137	137	137	137
2013	123	151	153	154	157	159	159	159	159	159	159	159	159	159	159
2014	149	168	172	173	173	174	174	174	174	174	174	174	174	174	174
2015	127	138	144	146	146	146	146	146	146	146	146	146	146	146	146
2016	102	129	135	137	137	137	137	137	137	137	137	137	137	137	137
2017	132	149	150	150	150	150	150	150	150	150	150	150	150	150	150
2018	142	164	164	164	164	164	164	164	164	164	164	164	164	164	164
2019	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113

Accident Year	Age-to-Age Factors														
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192
1989	1.262	1.052	1.086	1.000	1.000	1.011	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.224	1.049	1.058	1.066	1.000	1.010	1.010	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.184	1.089	1.061	1.019	1.019	1.037	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.390	1.053	1.100	1.045	1.014	1.014	1.000	1.014	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.309	1.139	1.061	1.011	1.000	1.023	1.022	1.011	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.109	1.049	1.009	0.991	1.000	1.009	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.298	1.068	1.025	1.025	1.024	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.216	1.065	1.026	1.026	1.000	1.000	1.008	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.130	1.034	1.056	1.021	1.021	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.171	1.065	1.038	1.022	1.014	1.007	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.116	1.040	1.038	1.015	1.036	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.200	1.030	1.029	1.043	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.140	1.082	1.075	1.026	1.009	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.301	1.007	1.034	1.046	1.000	1.019	1.000	1.000	1.000	1.006	1.000	1.000	1.000	1.000	1.000
2003	1.179	1.045	1.000	1.036	1.021	1.014	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	1.260	1.031	1.120	1.045	1.009	1.008	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005	1.217	1.054	1.051	1.024	1.000	1.000	1.016	0.992	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2006	1.148	1.054	1.041	1.020	1.019	1.028	1.000	1.009	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2007	1.150	1.054	1.000	1.029	1.014	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2008	1.108	1.018	1.018	1.029	1.011	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2009	1.140	1.028	1.028	1.000	1.036	1.009	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2010	1.136	1.021	1.021	1.007	1.027	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2011	1.146	1.000	1.011	1.005	1.005	1.011	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2012	1.255	1.008	1.000	1.000	1.022	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2013	1.228	1.013	1.007	1.019	1.013	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2014	1.128	1.024	1.006	1.000	1.006	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2015	1.087	1.043	1.014	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2016	1.265	1.047	1.015	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2017	1.129	1.007	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2018	1.155	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol	1.179	1.038	1.031	1.020	1.012	1.007	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.181	1.038	1.029	1.020	1.012	1.007	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.162	1.020	1.012	1.011	1.014	1.005	1.001	1.000	1.000	1.001	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.162	1.020	1.011	1.010	1.014	1.003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.147	1.026	1.008	1.005	1.014	1.004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.137	1.026	1.009	1.002	1.013	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	1.176	1.031	1.011	1.006	1.013	1.004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Miami Valley Risk Management Association
General Liability
December 31, 2019

Closed Claim Counts

Accident Year	Maturity (Age in Months)															
	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89
1990	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
1991	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
1992	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
1993	93	92	93	93	93	93	93	93	93	93	93	93	93	93	93	93
1994	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108
1995	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
1996	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
1997	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
1998	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142
1999	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142
2000	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146
2001	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118
2002	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164
2003	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148
2004	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119
2005																
2006																
2007																
2008																
2009																
2010																
2011																
2012																
2013																
2014																
2015																
2016																
2017																
2018																
2019																

Accident Year	Age-to-Age Factors															
	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-Ult
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	0.989	1.011	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004																
2005																
2006																
2007																
2008																
2009																
2010																
2011																
2012																
2013																
2014																
2015																
2016																
2017																
2018																
2019																
All Yr Vol	0.999	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Miami Valley Risk Management Association
General Liability
December 31, 2019

Loss Summary

Accident Year	Retention	Total Limits		Retention Limits		\$500K Limits		Deductibles	
		Incurred	Paid	Incurred	Paid	Incurred	Paid	Incurred	Paid
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1989	\$250,000	\$207,853	\$207,853	\$207,853	\$207,853	\$207,853	\$207,853		
1990	250,000	439,863	439,863	439,863	439,863	439,863	439,863		
1991	250,000	84,015	84,015	84,015	84,015	84,015	84,015		
1992	250,000	139,376	139,376	139,376	139,376	139,376	139,376		
1993	250,000	1,207,079	1,207,079	600,979	600,979	850,979	850,979		
1994	250,000	106,065	106,065	106,065	106,065	106,065	106,065		
1995	250,000	156,790	156,790	156,790	156,790	156,790	156,790		
1996	250,000	357,926	357,926	357,926	357,926	357,926	357,926		
1997	500,000	1,331,066	1,331,066	706,526	706,526	706,526	706,526		
1998	500,000	554,289	554,289	554,289	554,289	554,289	554,289		
1999	500,000	657,094	657,094	657,094	657,094	657,094	657,094		
2000	500,000	164,560	164,560	164,560	164,560	164,560	164,560		
2001	500,000	497,423	497,423	497,423	497,423	497,423	497,423		
2002	500,000	1,566,330	1,566,330	1,347,177	1,347,177	1,347,177	1,347,177		
2003	1,000,000	269,762	269,762	269,762	269,762	269,762	269,762		
2004	1,000,000	511,964	511,964	511,964	511,964	511,964	511,964		
2005	1,000,000	857,801	857,801	857,801	857,801	857,801	857,801		
2006	1,000,000	915,795	915,795	915,795	915,795	915,795	915,795	\$55,888	\$55,888
2007	1,000,000	312,120	312,120	312,120	312,120	312,120	312,120	54,069	54,069
2008	1,000,000	856,672	856,672	856,672	856,672	856,672	856,672	71,826	71,826
2009	1,000,000	1,177,813	1,177,813	1,177,813	1,177,813	1,137,677	1,137,677	58,683	58,683
2010	500,000	1,036,784	1,036,784	972,613	972,613	972,613	972,613	68,618	68,618
2011	500,000	323,802	323,802	323,802	323,802	323,802	323,802	67,033	67,033
2012	500,000	542,610	542,610	542,610	542,610	542,610	542,610	48,604	48,604
2013	500,000	601,882	601,882	601,882	601,882	601,882	601,882	54,455	54,455
2014	500,000	2,746,367	729,501	925,867	729,501	925,867	729,501	72,365	72,365
2015	500,000	326,031	314,175	326,031	314,175	326,031	314,175	64,151	64,151
2016	500,000	549,522	469,365	549,522	469,365	549,522	469,365	62,281	60,559
2017	500,000	565,884	506,669	565,884	506,669	565,884	506,669	48,795	48,042
2018	500,000	353,848	255,263	353,848	255,263	353,848	255,263	66,263	54,475
2019	500,000	67,442	37,442	67,442	37,442	67,442	37,442	39,448	28,398
Total		\$19,485,826	\$17,189,147	\$16,151,363	\$15,675,184	\$16,361,227	\$15,885,048	\$832,481	\$807,168

Notes:
(2)-(10) Provided by MVRMA

Miami Valley Risk Management Association
Property and Auto Physical Damage
December 31, 2019

Summary of Loss Reserve Estimates
Retained Limits

Accident Year	Selected Ultimate Loss	Incurred Loss	Paid Loss	Case Reserves	Indicated IBNR	Estimated Total Reserves
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1989	\$124,141	\$124,141	\$124,141	\$0	\$0	\$0
1990	32,734	32,734	32,734	0	0	0
1991	75,626	75,626	75,626	0	0	0
1992	63,858	63,858	63,858	0	0	0
1993	63,660	63,660	63,660	0	0	0
1994	96,833	96,833	96,833	0	0	0
1995	85,639	85,639	85,639	0	0	0
1996	92,901	92,901	92,901	0	0	0
1997	225,205	225,205	225,205	0	0	0
1998	135,150	135,150	135,150	0	0	0
1999	392,466	392,466	392,466	0	0	0
2000	130,204	130,204	130,204	0	0	0
2001	505,931	505,931	505,931	0	0	0
2002	369,496	369,496	369,496	0	0	0
2003	265,463	265,463	265,463	0	0	0
2004	229,621	229,621	229,621	0	0	0
2005	369,470	369,470	369,470	0	0	0
2006	497,206	497,206	497,206	0	0	0
2007	405,891	405,891	405,891	0	0	0
2008	654,562	654,562	654,562	0	0	0
2009	324,515	324,515	324,515	0	0	0
2010	389,384	389,384	389,384	0	0	0
2011	879,940	879,940	879,940	0	0	0
2012	559,108	559,108	559,108	0	0	0
2013	582,706	582,706	582,706	0	0	0
2014	1,162,693	1,162,693	1,162,693	0	0	0
2015	651,268	651,268	651,268	0	0	0
2016	448,203	448,203	448,203	0	0	0
2017	606,847	606,847	606,847	0	0	0
2018	566,419	566,419	566,419	0	0	0
2019	756,000	657,243	324,837	332,406	98,757	431,163
Total	\$11,743,142	\$11,644,385	\$11,311,979	\$332,406	\$98,757	\$431,163

Notes:

- (2) From Exhibit 3, Col (10)
- (3)-(5) Provided by MVRMA
- (6) = (2) - (3)
- (7) = (5) + (6)

Miami Valley Risk Management Association
Property and Auto Physical Damage
December 31, 2019

Comparison of Ultimate Loss to Prior Ultimate Loss
Retained Limits

Accident Year	Selected Ultimate Loss @ 12/31/2018	Selected Ultimate Loss @ 12/31/2019	Difference	Percent Change
(1)	(2)	(3)	(4)	(5)
1989	\$124,141	\$124,141	\$0	0.0%
1990	32,734	32,734	0	0.0%
1991	75,626	75,626	0	0.0%
1992	63,858	63,858	0	0.0%
1993	63,660	63,660	0	0.0%
1994	96,833	96,833	0	0.0%
1995	85,639	85,639	0	0.0%
1996	92,901	92,901	0	0.0%
1997	225,205	225,205	0	0.0%
1998	135,150	135,150	0	0.0%
1999	392,466	392,466	0	0.0%
2000	130,204	130,204	0	0.0%
2001	505,931	505,931	0	0.0%
2002	369,496	369,496	0	0.0%
2003	265,463	265,463	0	0.0%
2004	229,621	229,621	0	0.0%
2005	369,470	369,470	0	0.0%
2006	497,206	497,206	0	0.0%
2007	405,891	405,891	0	0.0%
2008	654,562	654,562	0	0.0%
2009	324,515	324,515	0	0.0%
2010	389,384	389,384	0	0.0%
2011	879,940	879,940	0	0.0%
2012	559,108	559,108	0	0.0%
2013	582,706	582,706	0	0.0%
2014	1,162,693	1,162,693	0	0.0%
2015	651,268	651,268	0	0.0%
2016	448,758	448,203	(554)	-0.1%
2017	612,000	606,847	(5,153)	-0.8%
2018	929,000	566,419	(362,581)	-39.0%
Total	\$11,355,430	\$10,987,142	(\$368,288)	-3.2%

Notes:

- (2) From Pinnacle's analysis of unpaid loss & LAE at 12/31/2018
- (3) From Exhibit 3, Col (10)
- (4) = (3) - (2)
- (5) = (4) / (2)

Miami Valley Risk Management Association
Property and Auto Physical Damage
December 31, 2019

Selected Ultimate Loss
Retained Limits

Accident Year	Retention	Industry Development		MVRMA's Loss Development					Selected Ultimate Loss
		Incurring Loss Method	Paid Loss Method	Incurring Loss Method	Paid Loss Method	Case Reserve Method	Average Incurring Method	Average Paid Method	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1989	\$250,000	\$124,141	\$124,141	\$124,141	\$124,141	\$124,141	\$124,141	\$124,141	\$124,141
1990	250,000	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734
1991	250,000	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626
1992	250,000	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858
1993	250,000	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660
1994	100,000	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833
1995	150,000	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639
1996	250,000	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901
1997	250,000	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205
1998	250,000	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150
1999	150,000	392,466	392,466	392,466	392,466	392,466	392,466	392,466	392,466
2000	150,000	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204
2001	150,000	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931
2002	250,000	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496
2003	250,000	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463
2004	250,000	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621
2005	200,000	369,470	369,470	369,470	369,470	369,470	369,470	369,470	369,470
2006	200,000	497,206	497,206	497,206	497,206	497,206	497,206	497,206	497,206
2007	200,000	405,891	405,891	405,891	405,891	405,891	405,891	405,891	405,891
2008	200,000	654,584	654,652	654,562	654,562	654,562	654,562	654,562	654,562
2009	200,000	324,537	324,605	324,515	324,515	324,515	324,515	324,515	324,515
2010	250,000	389,437	389,598	389,384	389,384	389,384	389,384	389,384	389,384
2011	250,000	880,179	880,909	879,940	879,940	879,940	879,940	879,940	879,940
2012	250,000	559,412	560,341	559,108	559,108	559,108	559,108	559,108	559,108
2013	250,000	583,340	585,278	582,706	582,706	582,706	582,706	582,706	582,706
2014	250,000	1,165,224	1,172,979	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693
2015	250,000	654,107	662,842	651,268	651,268	651,268	651,268	651,268	651,268
2016	250,000	452,119	464,275	448,203	448,203	448,203	448,203	448,203	448,203
2017	250,000	617,496	651,149	606,847	606,847	606,847	606,847	606,847	606,847
2018	250,000	586,473	652,139	566,419	571,517	566,419	563,676	570,508	566,419
2019	250,000	803,603	588,031	755,829	537,527	820,702	748,696	591,809	756,000
Total		\$11,832,007	\$11,748,293	\$11,742,971	\$11,529,767	\$11,807,844	\$11,733,095	\$11,583,040	\$11,743,142

Notes:

- (2) Provided by MVRMA
- (3) From Exhibit 9.1, Col (4)
- (4) From Exhibit 9.2, Col (4)
- (5) From Exhibit 4, Col (4)
- (6) From Exhibit 5, Col (4)
- (7) From Exhibit 6, Col (8)
- (8) From Exhibit 7, Col (7)
- (9) From Exhibit 8, Col (7)

Miami Valley Risk Management Association
Property and Auto Physical Damage
December 31, 2019

Ultimate Loss Based on Incurred Loss Development Method
Retained Limits

Accident Year	Cumulative Incurred Loss	Loss Development Factors	Projected Ultimate Loss
(1)	(2)	(3)	(4)
1989	\$124,141	1.000	\$124,141
1990	32,734	1.000	32,734
1991	75,626	1.000	75,626
1992	63,858	1.000	63,858
1993	63,660	1.000	63,660
1994	96,833	1.000	96,833
1995	85,639	1.000	85,639
1996	92,901	1.000	92,901
1997	225,205	1.000	225,205
1998	135,150	1.000	135,150
1999	392,466	1.000	392,466
2000	130,204	1.000	130,204
2001	505,931	1.000	505,931
2002	369,496	1.000	369,496
2003	265,463	1.000	265,463
2004	229,621	1.000	229,621
2005	369,470	1.000	369,470
2006	497,206	1.000	497,206
2007	405,891	1.000	405,891
2008	654,562	1.000	654,562
2009	324,515	1.000	324,515
2010	389,384	1.000	389,384
2011	879,940	1.000	879,940
2012	559,108	1.000	559,108
2013	582,706	1.000	582,706
2014	1,162,693	1.000	1,162,693
2015	651,268	1.000	651,268
2016	448,203	1.000	448,203
2017	606,847	1.000	606,847
2018	566,419	1.000	566,419
2019	657,243	1.150	755,829
Total	\$11,644,385		\$11,742,971

Notes:

- (2) Provided by MVRMA
- (3) From Exhibit 10
- (4) = (2) x (3)

Miami Valley Risk Management Association
Property and Auto Physical Damage
December 31, 2019

Ultimate Loss Based on Paid Loss Development Method
Retained Limits

Accident Year	Cumulative Paid Loss	Loss Development Factors	Projected Ultimate Loss
(1)	(2)	(3)	(4)
1989	\$124,141	1.000	\$124,141
1990	32,734	1.000	32,734
1991	75,626	1.000	75,626
1992	63,858	1.000	63,858
1993	63,660	1.000	63,660
1994	96,833	1.000	96,833
1995	85,639	1.000	85,639
1996	92,901	1.000	92,901
1997	225,205	1.000	225,205
1998	135,150	1.000	135,150
1999	392,466	1.000	392,466
2000	130,204	1.000	130,204
2001	505,931	1.000	505,931
2002	369,496	1.000	369,496
2003	265,463	1.000	265,463
2004	229,621	1.000	229,621
2005	369,470	1.000	369,470
2006	497,206	1.000	497,206
2007	405,891	1.000	405,891
2008	654,562	1.000	654,562
2009	324,515	1.000	324,515
2010	389,384	1.000	389,384
2011	879,940	1.000	879,940
2012	559,108	1.000	559,108
2013	582,706	1.000	582,706
2014	1,162,693	1.000	1,162,693
2015	651,268	1.000	651,268
2016	448,203	1.000	448,203
2017	606,847	1.000	606,847
2018	566,419	1.009	571,517
2019	324,837	1.655	537,527
Total	\$11,311,979		\$11,529,767

Notes:

- (2) Provided by MVRMA
- (3) From Exhibit 11
- (4) = (2) x (3)

Miami Valley Risk Management Association
Property and Auto Physical Damage
December 31, 2019

Ultimate Loss Based on Case Reserve Development Method
Retained Limits

Accident Year	Retention	Cumulative Paid Loss	Case Reserves	Percent Developed			Projected Ultimate Loss
				Incurred	Paid	Reserve	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1989	\$250,000	\$124,141	\$0	100.0%	100.0%	100.0%	\$124,141
1990	250,000	32,734	0	100.0%	100.0%	100.0%	32,734
1991	250,000	75,626	0	100.0%	100.0%	100.0%	75,626
1992	250,000	63,858	0	100.0%	100.0%	100.0%	63,858
1993	250,000	63,660	0	100.0%	100.0%	100.0%	63,660
1994	100,000	96,833	0	100.0%	100.0%	100.0%	96,833
1995	150,000	85,639	0	100.0%	100.0%	100.0%	85,639
1996	250,000	92,901	0	100.0%	100.0%	100.0%	92,901
1997	250,000	225,205	0	100.0%	100.0%	100.0%	225,205
1998	250,000	135,150	0	100.0%	100.0%	100.0%	135,150
1999	150,000	392,466	0	100.0%	100.0%	100.0%	392,466
2000	150,000	130,204	0	100.0%	100.0%	100.0%	130,204
2001	150,000	505,931	0	100.0%	100.0%	100.0%	505,931
2002	250,000	369,496	0	100.0%	100.0%	100.0%	369,496
2003	250,000	265,463	0	100.0%	100.0%	100.0%	265,463
2004	250,000	229,621	0	100.0%	100.0%	100.0%	229,621
2005	200,000	369,470	0	100.0%	100.0%	100.0%	369,470
2006	200,000	497,206	0	100.0%	100.0%	100.0%	497,206
2007	200,000	405,891	0	100.0%	100.0%	100.0%	405,891
2008	200,000	654,562	0	100.0%	100.0%	100.0%	654,562
2009	200,000	324,515	0	100.0%	100.0%	100.0%	324,515
2010	250,000	389,384	0	100.0%	100.0%	100.0%	389,384
2011	250,000	879,940	0	100.0%	100.0%	100.0%	879,940
2012	250,000	559,108	0	100.0%	100.0%	100.0%	559,108
2013	250,000	582,706	0	100.0%	100.0%	100.0%	582,706
2014	250,000	1,162,693	0	100.0%	100.0%	100.0%	1,162,693
2015	250,000	651,268	0	100.0%	100.0%	100.0%	651,268
2016	250,000	448,203	0	100.0%	100.0%	100.0%	448,203
2017	250,000	606,847	0	100.0%	100.0%	100.0%	606,847
2018	250,000	566,419	0	100.0%	99.1%	100.0%	566,419
2019	250,000	324,837	332,406	87.0%	60.4%	67.0%	820,702
Total		\$11,311,979	\$332,406				\$11,807,844

Notes:

- (2)-(4) Provided by MVRMA
- (5) Based on Exhibit 4, Col (3)
- (6) Based on Exhibit 5, Col (3)
- (7) = [(5) - (6)] / [(1.0 - (6))]
- (8) = (3) + [(4) / (7)]

Miami Valley Risk Management Association
Property and Auto Physical Damage
December 31, 2019

Ultimate Loss Based on Incurred Loss per Reported Claim Development Method
Retained Limits

Accident Year	Retention	Cumulative Incurred Loss per Reported Claim	Loss Development Factors	Projected Average Loss	Selected Ultimate Claims	Projected Ultimate Loss
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1989	\$250,000	\$7,302	1.000	\$7,302	17	\$124,141
1990	250,000	1,488	1.000	1,488	22	32,734
1991	250,000	2,801	1.000	2,801	27	75,626
1992	250,000	2,661	1.000	2,661	24	63,858
1993	250,000	2,274	1.000	2,274	28	63,660
1994	100,000	2,201	1.000	2,201	44	96,833
1995	150,000	1,259	1.000	1,259	68	85,639
1996	250,000	1,010	1.000	1,010	92	92,901
1997	250,000	2,559	1.000	2,559	88	225,205
1998	250,000	1,186	1.000	1,186	114	135,150
1999	150,000	2,548	1.000	2,548	154	392,466
2000	150,000	819	1.000	819	159	130,204
2001	150,000	3,862	1.000	3,862	131	505,931
2002	250,000	2,463	1.000	2,463	150	369,496
2003	250,000	1,435	1.000	1,435	185	265,463
2004	250,000	1,290	1.000	1,290	178	229,621
2005	200,000	2,186	1.000	2,186	169	369,470
2006	200,000	2,874	1.000	2,874	173	497,206
2007	200,000	2,490	1.000	2,490	163	405,891
2008	200,000	3,719	1.000	3,719	176	654,562
2009	200,000	1,876	1.000	1,876	173	324,515
2010	250,000	2,842	1.000	2,842	137	389,384
2011	250,000	4,782	1.000	4,782	184	879,940
2012	250,000	3,106	1.000	3,106	180	559,108
2013	250,000	3,428	1.000	3,428	170	582,706
2014	250,000	6,880	1.000	6,880	169	1,162,693
2015	250,000	3,809	1.000	3,809	171	651,268
2016	250,000	2,606	1.000	2,606	172	448,203
2017	250,000	3,549	1.000	3,549	171	606,847
2018	250,000	2,950	0.990	2,921	193	563,676
2019	250,000	6,142	1.069	6,568	114	748,696
Total				\$2,936	3,996	\$11,733,095

Notes:

- (2) Provided by MVRMA
- (3) Based on data provided by MVRMA
- (4) From Exhibit 12
- (5) = (3) x (4)
- (6) From Exhibit 14, Col (6)
- (7) = (5) x (6)

Miami Valley Risk Management Association
Property and Auto Physical Damage
December 31, 2019

Ultimate Loss Based on Paid Loss per Closed Claim Development Method
Retained Limits

Accident Year	Retention	Cumulative Paid Loss per Closed Claim	Loss Development Factors	Projected Average Loss	Selected Ultimate Claims	Projected Ultimate Loss
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1989	\$250,000	\$7,302	1.000	\$7,302	17	\$124,141
1990	250,000	1,488	1.000	1,488	22	32,734
1991	250,000	2,801	1.000	2,801	27	75,626
1992	250,000	2,661	1.000	2,661	24	63,858
1993	250,000	2,274	1.000	2,274	28	63,660
1994	100,000	2,201	1.000	2,201	44	96,833
1995	150,000	1,259	1.000	1,259	68	85,639
1996	250,000	1,010	1.000	1,010	92	92,901
1997	250,000	2,559	1.000	2,559	88	225,205
1998	250,000	1,186	1.000	1,186	114	135,150
1999	150,000	2,548	1.000	2,548	154	392,466
2000	150,000	819	1.000	819	159	130,204
2001	150,000	3,862	1.000	3,862	131	505,931
2002	250,000	2,463	1.000	2,463	150	369,496
2003	250,000	1,435	1.000	1,435	185	265,463
2004	250,000	1,290	1.000	1,290	178	229,621
2005	200,000	2,186	1.000	2,186	169	369,470
2006	200,000	2,874	1.000	2,874	173	497,206
2007	200,000	2,490	1.000	2,490	163	405,891
2008	200,000	3,719	1.000	3,719	176	654,562
2009	200,000	1,876	1.000	1,876	173	324,515
2010	250,000	2,842	1.000	2,842	137	389,384
2011	250,000	4,782	1.000	4,782	184	879,940
2012	250,000	3,106	1.000	3,106	180	559,108
2013	250,000	3,428	1.000	3,428	170	582,706
2014	250,000	6,880	1.000	6,880	169	1,162,693
2015	250,000	3,809	1.000	3,809	171	651,268
2016	250,000	2,606	1.000	2,606	172	448,203
2017	250,000	3,549	1.000	3,549	171	606,847
2018	250,000	2,950	1.002	2,956	193	570,508
2019	250,000	4,112	1.263	5,191	114	591,809
Total				\$2,899	3,996	\$11,583,040

Notes:

- (2) Provided by MVRMA
- (3) Based on data provided by MVRMA
- (4) From Exhibit 13
- (5) = (3) x (4)
- (6) From Exhibit 14, Col (6)
- (7) = (5) x (6)

Miami Valley Risk Management Association
Property and Auto Physical Damage
December 31, 2019

Ultimate Loss Based on Incurred Loss Development Method Using Industry Factors
Retained Limits

Accident Year	Cumulative Incurred Loss	Industry Loss Development Factors	Projected Ultimate Loss
(1)	(2)	(3)	(4)
1989	\$124,141	1.000	\$124,141
1990	32,734	1.000	32,734
1991	75,626	1.000	75,626
1992	63,858	1.000	63,858
1993	63,660	1.000	63,660
1994	96,833	1.000	96,833
1995	85,639	1.000	85,639
1996	92,901	1.000	92,901
1997	225,205	1.000	225,205
1998	135,150	1.000	135,150
1999	392,466	1.000	392,466
2000	130,204	1.000	130,204
2001	505,931	1.000	505,931
2002	369,496	1.000	369,496
2003	265,463	1.000	265,463
2004	229,621	1.000	229,621
2005	369,470	1.000	369,470
2006	497,206	1.000	497,206
2007	405,891	1.000	405,891
2008	654,562	1.000	654,584
2009	324,515	1.000	324,537
2010	389,384	1.000	389,437
2011	879,940	1.000	880,179
2012	559,108	1.001	559,412
2013	582,706	1.001	583,340
2014	1,162,693	1.002	1,165,224
2015	651,268	1.004	654,107
2016	448,203	1.009	452,119
2017	606,847	1.018	617,496
2018	566,419	1.035	586,473
2019	657,243	1.223	803,603
Total	\$11,644,385		\$11,832,007

Notes:

- (2) Provided by MVRMA
- (3) Based on insurance industry development
- (4) = (2) x (3)

Miami Valley Risk Management Association
Property and Auto Physical Damage
December 31, 2019

Ultimate Loss Based on Paid Loss Development Method Using Industry Factors
Retained Limits

Accident Year	Cumulative Paid Loss	Industry Loss Development Factors	Projected Ultimate Loss
(1)	(2)	(3)	(4)
1989	\$124,141	1.000	\$124,141
1990	32,734	1.000	32,734
1991	75,626	1.000	75,626
1992	63,858	1.000	63,858
1993	63,660	1.000	63,660
1994	96,833	1.000	96,833
1995	85,639	1.000	85,639
1996	92,901	1.000	92,901
1997	225,205	1.000	225,205
1998	135,150	1.000	135,150
1999	392,466	1.000	392,466
2000	130,204	1.000	130,204
2001	505,931	1.000	505,931
2002	369,496	1.000	369,496
2003	265,463	1.000	265,463
2004	229,621	1.000	229,621
2005	369,470	1.000	369,470
2006	497,206	1.000	497,206
2007	405,891	1.000	405,891
2008	654,562	1.000	654,652
2009	324,515	1.000	324,605
2010	389,384	1.001	389,598
2011	879,940	1.001	880,909
2012	559,108	1.002	560,341
2013	582,706	1.004	585,278
2014	1,162,693	1.009	1,172,979
2015	651,268	1.018	662,842
2016	448,203	1.036	464,275
2017	606,847	1.073	651,149
2018	566,419	1.151	652,139
2019	324,837	1.810	588,031
Total	\$11,311,979		\$11,748,293

Notes:

- (2) Provided by MVRMA
- (3) Based on insurance industry development
- (4) = (2) x (3)

Miami Valley Risk Management Association
Property and Auto Physical Damage
December 31, 2019

Accident Year	Incurred Loss at \$250K SIR														
	Maturity (Age in Months)														
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
1989	129,614	124,280	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141
1990	35,099	36,757	36,757	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734
1991	48,696	68,976	68,021	68,232	68,232	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626
1992	92,696	65,630	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858
1993	77,321	70,484	63,871	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660
1994	97,749	91,568	96,834	96,023	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833
1995	94,348	130,765	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639
1996	108,016	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901
1997	230,682	225,205	224,935	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205
1998	132,322	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150
1999	489,714	495,092	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466
2000	144,984	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204
2001	372,970	505,710	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931
2002	337,524	364,735	369,940	369,940	369,940	369,940	369,940	369,940	369,940	369,940	369,940	369,940	369,940	369,940	369,940
2003	274,711	265,711	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463
2004	236,522	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621
2005	410,159	369,470	369,470	369,470	369,470	369,470	369,470	369,470	369,470	369,470	369,470	369,470	369,470	369,470	369,470
2006	393,270	497,210	497,210	497,210	497,210	497,210	497,210	497,210	497,206	497,206	497,206	497,206	497,206	497,206	497,206
2007	257,082	405,890	405,890	405,890	405,890	405,890	405,890	405,891	405,891	405,891	405,891	405,891	405,891	405,891	405,891
2008	708,253	704,562	704,562	704,562	704,562	704,562	704,562	704,562	704,562	704,562	704,562	704,562	704,562	704,562	704,562
2009	327,630	324,516	324,516	324,516	324,516	324,515	324,515	324,515	324,515	324,515	324,515	324,515	324,515	324,515	324,515
2010	354,134	389,384	389,384	389,384	389,384	389,384	389,384	389,384	389,384	389,384	389,384	389,384	389,384	389,384	389,384
2011	888,222	879,940	879,940	879,940	879,940	879,940	879,940	879,940	879,940	879,940	879,940	879,940	879,940	879,940	879,940
2012	549,819	569,608	559,108	559,108	559,108	559,108	559,108	559,108	559,108	559,108	559,108	559,108	559,108	559,108	559,108
2013	433,542	566,557	582,706	582,706	582,706	582,706	582,706	582,706	582,706	582,706	582,706	582,706	582,706	582,706	582,706
2014	1,223,786	1,202,519	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693
2015	438,921	665,068	651,268	651,268	651,268	651,268	651,268	651,268	651,268	651,268	651,268	651,268	651,268	651,268	651,268
2016	390,601	448,758	448,758	448,758	448,758	448,758	448,758	448,758	448,758	448,758	448,758	448,758	448,758	448,758	448,758
2017	483,981	607,276	606,847	606,847	606,847	606,847	606,847	606,847	606,847	606,847	606,847	606,847	606,847	606,847	606,847
2018	780,520	566,419	566,419	566,419	566,419	566,419	566,419	566,419	566,419	566,419	566,419	566,419	566,419	566,419	566,419
2019	657,243	657,243	657,243	657,243	657,243	657,243	657,243	657,243	657,243	657,243	657,243	657,243	657,243	657,243	657,243

Accident Year	Age-to-Age Factors														
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192
1989	0.959	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.047	1.000	0.891	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.416	0.986	1.003	1.000	1.108	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	0.708	0.973	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	0.912	0.906	0.997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	0.937	1.058	0.992	1.008	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.386	0.655	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	0.860	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	0.976	0.999	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.021	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.011	0.995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	0.898	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.356	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.081	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	0.967	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	0.971	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005	0.901	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2006	1.264	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2007	1.579	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2008	0.995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2009	0.990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2010	1.100	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2011	0.991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2012	1.020	0.998	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2013	1.307	1.029	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2014	0.983	0.967	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2015	1.515	0.979	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2016	1.149	1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2017	1.255	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2018	0.726	0.726	0.726	0.726	0.726	0.726	0.726	0.726	0.726	0.726	0.726	0.726	0.726	0.726	0.726
All Yr Vol	1.064	0.992	0.999	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.055	0.996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.058	0.994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.071	0.997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.052	0.989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.076	0.992	1.000	1.000											

Miami Valley Risk Management Association
 Property and Auto Physical Damage
 December 31, 2019

Incurred Loss at \$250K SIR

Accident Year	Maturity (Age in Months)															
	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141
1990	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734
1991	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626
1992	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858
1993	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660
1994	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833
1995	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639
1996	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901
1997	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205
1998	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150
1999	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466
2000	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204
2001	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931
2002	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496
2003	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463
2004	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621
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Accident Year	Age-to-Age Factors															
	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-Ult
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
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2019																
All Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Incurred	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
Property and Auto Physical Damage
December 31, 2019

Paid Loss at \$250K SIR

Accident Year	Maturity (Age in Months)														
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
1989	10,609	114,275	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141
1990	30,499	36,756	36,756	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734
1991	33,797	68,021	68,021	68,232	68,232	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626
1992	23,506	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858
1993	56,571	56,571	56,571	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660
1994	85,569	91,568	96,834	96,834	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833
1995	67,455	85,765	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639
1996	82,416	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901
1997	159,932	225,205	224,935	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205
1998	121,352	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150
1999	232,722	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466
2000	89,084	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204
2001	250,862	483,069	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931
2002	197,648	364,735	367,177	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496
2003	243,339	265,711	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463
2004	209,790	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621
2005	301,573	369,470	369,470	369,470	369,470	369,470	369,470	369,470	369,470	369,470	369,470	369,470	369,470	369,470	369,470
2006	282,983	497,210	497,210	497,210	497,210	497,210	497,210	497,210	497,206	497,206	497,206	497,206	497,206	497,206	497,206
2007	222,617	400,890	405,890	405,890	405,890	405,890	405,890	405,890	405,891	405,891	405,891	405,891	405,891	405,891	405,891
2008	478,667	704,562	704,562	704,562	704,562	704,562	704,562	704,562	704,562	704,562	704,562	704,562	704,562	704,562	704,562
2009	316,051	324,516	324,516	324,516	324,516	324,515	324,515	324,515	324,515	324,515	324,515	324,515	324,515	324,515	324,515
2010	306,514	389,384	389,384	389,384	389,384	389,384	389,384	389,384	389,384	389,384	389,384	389,384	389,384	389,384	389,384
2011	801,509	874,790	879,940	879,940	879,940	879,940	879,940	879,940	879,940	879,940	879,940	879,940	879,940	879,940	879,940
2012	369,587	551,608	559,108	559,108	559,108	559,108	559,108	559,108	559,108	559,108	559,108	559,108	559,108	559,108	559,108
2013	356,625	562,244	582,706	582,706	582,706	582,706	582,706	582,706	582,706	582,706	582,706	582,706	582,706	582,706	582,706
2014	909,279	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693	1,162,693
2015	264,349	639,435	651,268	651,268	651,268	651,268	651,268	651,268	651,268	651,268	651,268	651,268	651,268	651,268	651,268
2016	302,576	448,203	448,203	448,203	448,203	448,203	448,203	448,203	448,203	448,203	448,203	448,203	448,203	448,203	448,203
2017	287,037	605,776	606,847	606,847	606,847	606,847	606,847	606,847	606,847	606,847	606,847	606,847	606,847	606,847	606,847
2018	325,151	566,420	566,420	566,420	566,420	566,420	566,420	566,420	566,420	566,420	566,420	566,420	566,420	566,420	566,420
2019	324,837	324,837	324,837	324,837	324,837	324,837	324,837	324,837	324,837	324,837	324,837	324,837	324,837	324,837	324,837

Accident Year	Age-to-Age Factors														
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192
1989	10.772	1.086	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.205	1.000	0.891	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	2.013	1.000	1.003	1.000	1.108	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	2.717	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.000	1.000	1.125	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.070	1.058	0.992	1.008	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.271	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.127	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.408	0.999	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.114	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	2.116	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.462	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.926	1.047	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.845	1.007	1.006	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.092	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	1.095	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005	1.225	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2006	1.757	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2007	1.801	1.012	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2008	1.472	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2009	1.027	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2010	1.270	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2011	1.091	1.006	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2012	1.492	1.014	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2013	1.577	1.036	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2014	1.279	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2015	2.419	1.019	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2016	1.481	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2017	2.110	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2018	1.742	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2019	1.742	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol	1.487	1.009	1.001	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.477	1.008	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.445	1.007	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.411	1.005	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.639	1.010	1.000	1.											

Miami Valley Risk Management Association
 Property and Auto Physical Damage
 December 31, 2019

Paid Loss at \$250K SIR

Accident Year	Maturity (Age in Months)															
	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141	124,141
1990	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734	32,734
1991	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626	75,626
1992	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858	63,858
1993	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660	63,660
1994	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833
1995	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639	85,639
1996	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901	92,901
1997	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205	225,205
1998	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150	135,150
1999	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466	492,466
2000	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204	130,204
2001	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931	505,931
2002	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496	369,496
2003	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463	265,463
2004	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621	229,621
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Accident Year	Age-to-Age Factors															
	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-Ult
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
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All Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Paid	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
 Property and Auto Physical Damage
 December 31, 2019

Incurred Loss per Reported Claim at \$250K SIR

Accident Year	Maturity (Age in Months)															
	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989	7,302	7,302	7,302	7,302	7,302	7,302	7,302	7,302	7,302	7,302	7,302	7,302	7,302	7,302	7,302	7,302
1990	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488
1991	2,801	2,801	2,801	2,801	2,801	2,801	2,801	2,801	2,801	2,801	2,801	2,801	2,801	2,801	2,801	2,801
1992	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661
1993	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274
1994	2,201	2,201	2,201	2,201	2,201	2,201	2,201	2,201	2,201	2,201	2,201	2,201	2,201	2,201	2,201	2,201
1995	1,259	1,259	1,259	1,259	1,259	1,259	1,259	1,259	1,259	1,259	1,259	1,259	1,259	1,259	1,259	1,259
1996	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010
1997	2,559	2,559	2,559	2,559	2,559	2,559	2,559	2,559	2,559	2,559	2,559	2,559	2,559	2,559	2,559	2,559
1998	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186
1999	3,198	3,198	3,198	3,198	3,198	3,198	3,198	3,198	3,198	3,198	3,198	3,198	3,198	3,198	3,198	3,198
2000	819	819	819	819	819	819	819	819	819	819	819	819	819	819	819	819
2001	3,862	3,862	3,862	3,862	3,862	3,862	3,862	3,862	3,862	3,862	3,862	3,862	3,862	3,862	3,862	3,862
2002	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463
2003	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435
2004	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290
2005																
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Accident Year	Age-to-Age Factors															
	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-Ult
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
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2019																
All Yr Avg	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Avg Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Avg	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Avg Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Avg	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Avg Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Avg	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Incurred	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
 Property and Auto Physical Damage
 December 31, 2019

Paid Loss per Closed Claim at \$250K SIR

Accident Year	Maturity (Age in Months)															
	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989	7,302	7,302	7,302	7,302	7,302	7,302	7,302	7,302	7,302	7,302	7,302	7,302	7,302	7,302	7,302	7,302
1990	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488
1991	2,801	2,801	2,801	2,801	2,801	2,801	2,801	2,801	2,801	2,801	2,801	2,801	2,801	2,801	2,801	2,801
1992	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661
1993	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274
1994	2,201	2,201	2,201	2,201	2,201	2,201	2,201	2,201	2,201	2,201	2,201	2,201	2,201	2,201	2,201	2,201
1995	1,259	1,259	1,259	1,259	1,259	1,259	1,259	1,259	1,259	1,259	1,259	1,259	1,259	1,259	1,259	1,259
1996	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010
1997	2,559	2,559	2,559	2,559	2,559	2,559	2,559	2,559	2,559	2,559	2,559	2,559	2,559	2,559	2,559	2,559
1998	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186
1999	3,198	3,198	3,198	3,198	3,198	3,198	3,198	3,198	3,198	3,198	3,198	3,198	3,198	3,198	3,198	3,198
2000	819	819	819	819	819	819	819	819	819	819	819	819	819	819	819	819
2001	3,862	3,862	3,862	3,862	3,862	3,862	3,862	3,862	3,862	3,862	3,862	3,862	3,862	3,862	3,862	3,862
2002	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463
2003	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435
2004	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290
2005																
2006																
2007																
2008																
2009																
2010																
2011																
2012																
2013																
2014																
2015																
2016																
2017																
2018																
2019																

Accident Year	Age-to-Age Factors															
	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-Ult
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004																
2005																
2006																
2007																
2008																
2009																
2010																
2011																
2012																
2013																
2014																
2015																
2016																
2017																
2018																
2019																
All Yr Avg	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Avg Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Avg	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Avg Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Avg	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Avg Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Avg	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Paid	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
Property and Auto Physical Damage
December 31, 2019

Summary of Claim Counts

Accident Year	Closed Claims	Open Claims	Reported Claims	Indicated IBNR Claims	Selected Ultimate Claims
(1)	(2)	(3)	(4)	(5)	(6)
1989	17	0	17	0	17
1990	22	0	22	0	22
1991	27	0	27	0	27
1992	24	0	24	0	24
1993	28	0	28	0	28
1994	44	0	44	0	44
1995	68	0	68	0	68
1996	92	0	92	0	92
1997	88	0	88	0	88
1998	114	0	114	0	114
1999	154	0	154	0	154
2000	159	0	159	0	159
2001	131	0	131	0	131
2002	150	0	150	0	150
2003	185	0	185	0	185
2004	178	0	178	0	178
2005	169	0	169	0	169
2006	173	0	173	0	173
2007	163	0	163	0	163
2008	176	0	176	0	176
2009	173	0	173	0	173
2010	137	0	137	0	137
2011	184	0	184	0	184
2012	180	0	180	0	180
2013	170	0	170	0	170
2014	169	0	169	0	169
2015	171	0	171	0	171
2016	172	0	172	0	172
2017	171	0	171	0	171
2018	192	0	192	1	193
2019	79	28	107	7	114
Total	3,960	28	3,988	8	3,996

Notes:

- (2)-(4) Provided by MVRMA
- (5) = (6) - (4)
- (6) From Exhibit 15, Col (4)

Miami Valley Risk Management Association
Property and Auto Physical Damage
December 31, 2019

Ultimate Claims Based on Reported Claim Development Method

Accident Year (1)	Cumulative Reported Claims (2)	Claim Development Factors (3)	Projected Ultimate Claims (4)
1989	17	1.000	17
1990	22	1.000	22
1991	27	1.000	27
1992	24	1.000	24
1993	28	1.000	28
1994	44	1.000	44
1995	68	1.000	68
1996	92	1.000	92
1997	88	1.000	88
1998	114	1.000	114
1999	154	1.000	154
2000	159	1.000	159
2001	131	1.000	131
2002	150	1.000	150
2003	185	1.000	185
2004	178	1.000	178
2005	169	1.000	169
2006	173	1.000	173
2007	163	1.000	163
2008	176	1.000	176
2009	173	1.000	173
2010	137	1.000	137
2011	184	1.000	184
2012	180	1.000	180
2013	170	1.000	170
2014	169	1.000	169
2015	171	1.000	171
2016	172	1.000	172
2017	171	1.000	171
2018	192	1.004	193
2019	107	1.066	114
Total	3,988		3,996

Notes:

- (2) Provided by MVRMA
(3) From Exhibit 16
(4) = (2) x (3)

Miami Valley Risk Management Association
 Property and Auto Physical Damage
 December 31, 2019

Reported Claim Counts

Accident Year	Maturity (Age in Months)														
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
1989	15	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1990	21	22	22	22	22	22	22	22	22	22	22	22	22	22	22
1991	23	26	26	27	27	27	27	27	27	27	27	27	27	27	27
1992	21	24	24	24	24	24	24	24	24	24	24	24	24	24	24
1993	26	28	28	28	28	28	28	28	28	28	28	28	28	28	28
1994	42	43	44	44	44	44	44	44	44	44	44	44	44	44	44
1995	64	68	68	68	68	68	68	68	68	68	68	68	68	68	68
1996	83	92	92	92	92	92	92	92	92	92	92	92	92	92	92
1997	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
1998	109	114	114	114	114	114	114	114	114	114	114	114	114	114	114
1999	148	154	154	154	154	154	154	154	154	154	154	154	154	154	154
2000	157	159	159	159	159	159	159	159	159	159	159	159	159	159	159
2001	124	131	131	131	131	131	131	131	131	131	131	131	131	131	131
2002	136	150	150	150	150	150	150	150	150	150	150	150	150	150	150
2003	175	185	185	185	185	185	185	185	185	185	185	185	185	185	185
2004	156	178	178	178	178	178	178	178	178	178	178	178	178	178	178
2005	149	169	169	169	169	169	169	169	169	169	169	169	169	169	169
2006	162	173	173	173	173	173	173	173	173	173	173	173	173	173	173
2007	150	163	163	163	163	163	163	163	163	163	163	163	163	163	163
2008	166	176	176	176	176	176	176	176	176	176	176	176	176	176	176
2009	164	173	173	173	173	173	173	173	173	173	173	173	173	173	173
2010	123	137	137	137	137	137	137	137	137	137	137	137	137	137	137
2011	171	184	184	184	184	184	184	184	184	184	184	184	184	184	184
2012	171	180	180	180	180	180	180	180	180	180	180	180	180	180	180
2013	158	169	169	169	170	170	170	170	170	170	170	170	170	170	170
2014	163	169	169	169	169	169	169	169	169	169	169	169	169	169	169
2015	158	169	171	171	171	171	171	171	171	171	171	171	171	171	171
2016	164	172	172	172	172	172	172	172	172	172	172	172	172	172	172
2017	157	167	171	171	171	171	171	171	171	171	171	171	171	171	171
2018	183	192	192	192	192	192	192	192	192	192	192	192	192	192	192
2019	107														

Accident Year	Age-to-Age Factors														
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192
1989	1.133	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.048	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.130	1.000	1.038	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.143	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.077	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.024	1.023	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.063	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.108	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.046	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.041	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.013	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.056	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.103	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.057	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	1.141	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005	1.134	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2006	1.068	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2007	1.087	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2008	1.060	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2009	1.055	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2010	1.114	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2011	1.076	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2012	1.053	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2013	1.070	1.000	1.000	1.006	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2014	1.037	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2015	1.070	1.012	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2016	1.049	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2017	1.064	1.024	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2018	1.049	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol	1.068	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.069	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.062	1.004	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.060	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.053	1.007	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.054	1.004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	1.054	1.012	1.000	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.055	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.062	1.004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.066	1.004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Developed	93.8%	99.6%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
 Property and Auto Physical Damage
 December 31, 2019

Accident Year	Reported Claim Counts															
	Maturity (Age in Months)															
	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1990	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
1991	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
1992	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
1993	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
1994	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
1995	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
1996	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92
1997	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
1998	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114
1999	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154
2000	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159
2001	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131
2002	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
2003	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185
2004	178	178	178	178	178	178	178	178	178	178	178	178	178	178	178	178
2005																
2006																
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2019																

Accident Year	Age-to-Age Factors															
	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-Ult
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005																
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2016																
2017																
2018																
2019																

All Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prior	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LDFs	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% Developed	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Miami Valley Risk Management Association
 Property and Auto Physical Damage
 December 31, 2019

Closed Claim Counts

Accident Year	Maturity (Age in Months)														
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
1989	10	15	17	17	17	17	17	17	17	17	17	17	17	17	17
1990	17	21	21	22	22	22	22	22	22	22	22	22	22	22	22
1991	17	24	26	27	27	27	27	27	27	27	27	27	27	27	27
1992	12	23	24	24	24	24	24	24	24	24	24	24	24	24	24
1993	22	25	28	28	28	28	28	28	28	28	28	28	28	28	28
1994	36	43	44	44	44	44	44	44	44	44	44	44	44	44	44
1995	52	68	68	68	68	68	68	68	68	68	68	68	68	68	68
1996	70	92	92	92	92	92	92	92	92	92	92	92	92	92	92
1997	76	88	88	88	88	88	88	88	88	88	88	88	88	88	88
1998	99	114	114	114	114	114	114	114	114	114	114	114	114	114	114
1999	130	153	154	154	154	154	154	154	154	154	154	154	154	154	154
2000	124	159	159	159	159	159	159	159	159	159	159	159	159	159	159
2001	107	130	131	131	131	131	131	131	131	131	131	131	131	131	131
2002	120	150	149	150	150	150	150	150	150	150	150	150	150	150	150
2003	148	185	185	185	185	185	185	185	185	185	185	185	185	185	185
2004	131	178	178	178	178	178	178	178	178	178	178	178	178	178	178
2005	129	169	169	169	169	169	169	169	169	169	169	169	169	169	169
2006	128	173	173	173	173	173	173	173	173	173	173	173	173	173	173
2007	123	162	163	163	163	163	163	163	163	163	163	163	163	163	163
2008	166	176	176	176	176	176	176	176	176	176	176	176	176	176	176
2009	147	173	173	173	173	173	173	173	173	173	173	173	173	173	173
2010	95	137	137	137	137	137	137	137	137	137	137	137	137	137	137
2011	142	183	183	184	184	184	184	184	184	184	184	184	184	184	184
2012	135	179	179	180	180	180	180	180	180	180	180	180	180	180	180
2013	132	168	169	169	170	170	170	170	170	170	170	170	170	170	170
2014	127	168	169	169	169	169	169	169	169	169	169	169	169	169	169
2015	121	168	171	171	171	171	171	171	171	171	171	171	171	171	171
2016	125	171	171	172	172	172	172	172	172	172	172	172	172	172	172
2017	106	164	171	171	171	171	171	171	171	171	171	171	171	171	171
2018	147	192	192	192	192	192	192	192	192	192	192	192	192	192	192
2019	79	114	114	114	114	114	114	114	114	114	114	114	114	114	114

Accident Year	Age-to-Age Factors														
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192
1989	1.500	1.133	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.235	1.000	1.048	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.412	1.083	1.038	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.917	1.043	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.136	1.120	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.194	1.023	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.308	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.314	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.158	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.152	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.177	1.007	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.282	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.215	1.008	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.250	0.993	1.007	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.250	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	1.359	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005	1.310	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2006	1.352	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2007	1.317	1.006	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2008	1.060	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2009	1.177	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2010	1.442	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2011	1.289	1.000	1.005	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2012	1.326	1.000	1.006	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2013	1.273	1.006	1.000	1.006	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2014	1.323	1.006	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2015	1.388	1.018	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2016	1.368	1.000	1.006	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2017	1.547	1.043	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2018	1.306	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

All Yr Vol	1.286	1.006	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.297	1.006	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.334	1.007	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.334	1.004	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.379	1.014	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.359	1.010	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	1.394	1.020	1.002	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Miami Valley Risk Management Association
 Property and Auto Physical Damage
 December 31, 2019

Closed Claim Counts

Accident Year	Maturity (Age in Months)															
	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372
1989	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1990	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
1991	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
1992	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
1993	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
1994	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
1995	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
1996	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92
1997	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
1998	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114
1999	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154
2000	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159
2001	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131
2002	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
2003	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185
2004	178	178	178	178	178	178	178	178	178	178	178	178	178	178	178	178
2005																
2006																
2007																
2008																
2009																
2010																
2011																
2012																
2013																
2014																
2015																
2016																
2017																
2018																
2019																

Accident Year	Age-to-Age Factors															
	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-Ult
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005																
2006																
2007																
2008																
2009																
2010																
2011																
2012																
2013																
2014																
2015																
2016																
2017																
2018																
2019																
All Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
All Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr Vol Ex. H/L	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr Vol	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Miami Valley Risk Management Association
Property and Auto Physical Damage
December 31, 2019

Loss Summary

Accident Year	Retention	Total Limits		Retention Limits		Deductibles	
		Incurred	Paid	Incurred	Paid	Incurred	Paid
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1989	\$250,000	\$124,141	\$124,141	\$124,141	\$124,141		
1990	250,000	32,734	32,734	32,734	32,734		
1991	250,000	75,626	75,626	75,626	75,626		
1992	250,000	63,858	63,858	63,858	63,858		
1993	250,000	63,660	63,660	63,660	63,660		
1994	100,000	96,833	96,833	96,833	96,833		
1995	150,000	85,639	85,639	85,639	85,639		
1996	250,000	92,901	92,901	92,901	92,901		
1997	250,000	225,205	225,205	225,205	225,205		
1998	250,000	135,150	135,150	135,150	135,150		
1999	150,000	541,763	541,763	392,466	392,466		
2000	150,000	130,204	130,204	130,204	130,204		
2001	150,000	505,931	505,931	505,931	505,931		
2002	250,000	369,496	369,496	369,496	369,496		
2003	250,000	265,463	265,463	265,463	265,463		
2004	250,000	229,621	229,621	229,621	229,621		
2005	200,000	369,470	369,470	369,470	369,470		
2006	200,000	497,206	497,206	497,206	497,206	\$103,904	\$103,904
2007	200,000	405,891	405,891	405,891	405,891	101,827	101,827
2008	*	774,978	774,978	654,562	654,562	134,525	134,525
2009	200,000	324,515	324,515	324,515	324,515	119,127	119,127
2010	250,000	389,384	389,384	389,384	389,384	87,270	87,270
2011	*	2,092,816	2,092,816	879,940	879,940	127,474	127,474
2012	250,000	559,108	559,108	559,108	559,108	92,085	92,085
2013	250,000	582,706	582,706	582,706	582,706	112,692	112,692
2014	250,000	1,176,859	1,176,859	1,162,693	1,162,693	104,646	104,646
2015	250,000	651,268	651,268	651,268	651,268	94,439	94,439
2016	250,000	448,203	448,203	448,203	448,203	116,907	116,907
2017	250,000	606,847	606,847	606,847	606,847	100,979	100,979
2018	250,000	566,419	566,420	566,419	566,419	127,330	127,330
2019	250,000	657,243	324,837	657,243	324,837	110,287	74,537
Total		\$13,141,140	\$12,808,735	\$11,644,385	\$11,311,979	\$1,533,490	\$1,497,740

Notes: Retentions apply to indemnity and ALAE; the deductible is \$2,500 per occurrence
 (2)-(8) Provided by MVRMA
 (*) 2008 retained losses reflect capping a wind storm totaling \$320,356
 2011 retained losses reflect capping a hail storm totaling \$628,004

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OHIO AUDITOR OF STATE KEITH FABER



MIAMI VALLEY RISK MANAGEMENT ASSOCIATION

MONTGOMERY COUNTY

AUDITOR OF STATE OF OHIO CERTIFICATION

This is a true and correct copy of the report, which is required to be filed pursuant to Section 117.26, Revised Code, and which is filed in the Office of the Ohio Auditor of State in Columbus, Ohio.



Certified for Release 8/25/2020

88 East Broad Street, Columbus, Ohio 43215
Phone: 614-466-4514 or 800-282-0370

This report is a matter of public record and is available online at
www.ohioauditor.gov