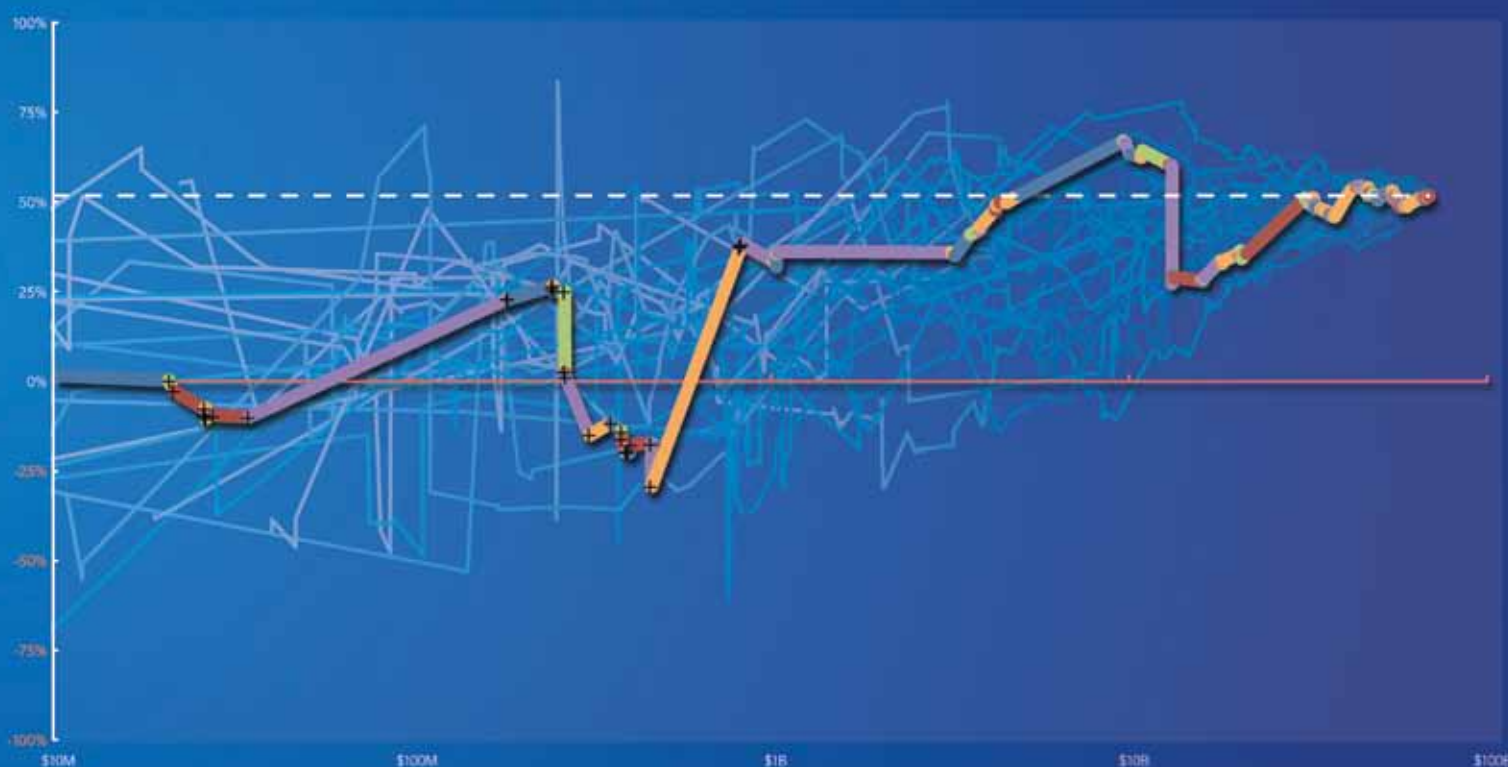


RISK AND OPPORTUNITY IN THE YEAR OF ORSA

ANNUAL STATISTICAL REVIEW



INSURANCE RISK
BENCHMARKS RESEARCH
OCTOBER 2015
GUY CARPENTER STRATEGIC ADVISORY

ON THE COVER

Historical correlation between loss ratios in workers compensation and general liability occurrence insurance has been 52 percent across the entire industry. The correlation experienced by individual companies is affected by a strong market signal but is also variable due to process noise. As a company grows its premium base, and effectively becomes a larger subset of the industry, the correlation it can expect to experience will increase and approach that of the industry. The process noise surrounding the correlation will also diminish. On the cover we plot 30 random “industry construction” paths wherein we “build” the industry repeatedly by adding randomly selected companies to a cumulative group. The colored line provides a single example. At each accretion point, illustrated with a black plus sign where the premium base remains below USD 1 billion, we calculate the experienced correlation for an expanding subset of the industry. The various paths illustrate the range of correlation results a company may experience given a certain premium base. Our new CMI (Correlation Modeling Index) chart tallies percentiles from this process. It provides practical guidance to capital modeling practitioners tasked with modeling the correlation between distinct underwriting operations.

TABLE OF CONTENTS

Executive Summary	3	V Correlation Concerns	50
I Overview	5	5.1 Introduction	50
1.1 Introduction to the Annual Statistical Review	6	5.2 Correlation in Ultimate Loss Ratio	51
1.2 Calculation Notes and Limitations	8	5.3 Importance of Market Share	52
1.3 Lines of Business Mapping for Expenses	9	VI Expense Benchmarking	56
1.4 Market Segments	10	6.1 Expense Ratios by Line of Business	57
1.5 Tables and Exhibits Inventory	12	6.3 Premium and Expense Trends	58
1.6 This Year's Contributors	13	VII Financial Management and Strategy	60
II Underwriting Performance and Volatility	14	7.1 Introduction	60
2.1 Introduction	14	7.2 Industry Operating Performance	61
2.2 Current and Long Term Loss Ratios	15	7.3 Industry Balance Sheet	62
2.3 Charting the Underwriting Cycle	16	7.4 Charting Policyholder Surplus	64
2.4 Competitive Differentiation	20	7.5 Industry Asset Profile	66
2.5 Market Inequality	33	7.6 BCAR Trends	68
2.6 Empirical Risk and Return	34	Appendix	69
2.7 Frequency and Severity Trends	35	A.1 Market Segmentation Detail	70
III Reserve Development Risk	37	A.2 Underwriting Performance and Volatility: Additional Detail	88
3.1 Introduction	37	A.3 Reserving Development Risk: Additional Detail	91
3.2 Industry Risk in Total	38	A.4 Uncertain Liability Duration: Additional Detail	95
3.3 Risk by Line of Business	41	A.5 Correlation Concerns: Additional Detail	99
3.4 Risk by Market Segment	43	A.6 Expense Benchmarking: Additional Detail	105
IV Uncertain Liability Duration	45	A.7 Guy Carpenter's Capital Modeling Solutions Suite	111
4.1 Introduction	45	A.8 What's Next	113
4.2 Mean Payment Pattern and Volatility	46		

EXECUTIVE SUMMARY



When Guy Carpenter released the first *Insurance Risk Benchmarks Report* in August of 2011, we knew we were setting out to make an important contribution to the understanding of risk in the U.S. property/casualty (P&C) insurance industry. Each successive report has expanded the depth and breadth of this analysis. These expansions developed naturally from an enthusiastic industry response, our investment in data and the growing demand for more robust industry analytics. We are proud to present our fifth Annual Statistical Review (ASR), and we believe it does not diverge from its own trend toward being more useful and more insightful.

The guiding principle for the ASR is to provide practical statistics without clutter or spin. A complete view on prospective risk necessarily considers the historical trends and volatility as well as scenarios not evident in the experience. The ASR, by design, faithfully supports the former consideration.

If one sought to model the performance of a single, large-cap stock, the first step may be to dive into an analysis of that company's financial statements and strategy. But this is not enough, as prospective risk also clearly depends on market conditions. A complete model will reflect both market and specific risk in the stock's performance. For the insurance industry, the ASR seeks to provide a robust understanding of market risk so that your company's own view on risk and solvency can reflect both concerns.

Indeed, we may call 2015 the Year of ORSA, as the requirements for "Own Risk and Solvency Assessment" are now live in more than half of the U.S. states. These requirements shoulder individual companies with a responsibility to assess their own risk profile. We believe the ASR can help.

We hope that this report provides you with unprecedented access to excellence in insurance industry risk analysis. We welcome feedback and discussion on the content provided, and we believe that the ASR clearly demonstrates why Guy Carpenter is a premier steward of risk transfer in the insurance industry.



WHAT'S NEW FOR OUR READERSHIP

Active dialogue with our readership has led to the emergence of three ASR audiences:

Capital Modeling Practitioners turn to the ASR for context in parameterizing risk. These readers will be interested in the addition of statistics for new lines of business (auto physical damage, fidelity and surety, special property, and special liability). They will also find value in the new Correlation Modeling Index Exhibit (Exhibit 15), which provides a practical reference sheet for modeling correlation. Our Appendix is also full of details to support tailored parameter risk benchmarking exercises.

Industry Analysts use our careful market segmentation for comparing the risk and return profile of individual companies to the marketplace. These readers will appreciate the new "Functional" market segment definitions found in the 2015 ASR, including the Mutual, Public and Workers Compensation Specialty segments. A stark contrast in reserving experience between mutual and public companies is highlighted for the first time. Combined ratio spread (Exhibits 4 and 5) clarifies the competitive landscape between carriers.

Company Stakeholders will find the Financial Management and Strategy section helpful in its discussion of key historical movements in industry capital and competitive conditions. An additional new section dedicated to Expenses will also prove useful in prioritizing plans for expense savings. Executives may be surprised to see evidence in Exhibits 2 and 10 of slowing in the benign reserve development patterns of the last several years and how it is driven by the largest carriers.

Whereas most of us wear multiple professional hats, there is no reason to classify ourselves into any one of the above groups. Enjoy, explore and please provide your own thoughts and ideas by emailing RiskBenchmarks@guycarp.com.

I. OVERVIEW



1.1 INTRODUCTION TO THE ANNUAL STATISTICAL REVIEW (ASR)

The ASR is produced annually through Guy Carpenter's ongoing Insurance Risk Benchmarks research project. For several years now, we have been constructing and refining a comprehensive database of statutory financial data for the entire P&C insurance industry. The database supports this report as well as our BenchmaRQ® capital modeling advisory service (an introduction to which is available in Section A.9 of the Appendix).

Certain irregularities can be found in the statutory loss history for individual companies. These irregularities may stem from mergers and acquisitions or simple data error. It is a painstaking exercise to detect and correct these irregularities, but we undertake this effort each year in order to ensure that our empirical view of industry risk is accurate.

Guiding Principle to the Risk Benchmarks

The risk benchmarks are based upon the observed financial results of hundreds of companies over a 36-year period. We have not applied models to derive the measures and we have deliberately minimized the amount of judgment applied. The ASR is intended to provide a pure snapshot of the observed risk.

Our Extensive Database

Our database contains Schedule P filings from 1989 to 2014, including experience back to Accident Year 1980. There are 1,076 companies and company groups, comprising approximately 96 percent of the industry, included in the creation of these statistics. The 324 companies not included are not allocated to any of the market segments in the ASR due to lack of credible loss history or a risk profile not consistent with one of the defined market segments (as discussed in Section 1.4).

General Line of Business Definitions

Lines of business are associated with the following Annual Statement Schedule P definitions and presented with the following acronyms:

T1 | LINE OF BUSINESS ACRONYMS AND INDUSTRYWIDE PREMIUMS (THOUSANDS)

Sched P Letter	ASR Acronym	Analyzed	Data Since	Full Description	2014 DWP	Percent of Industry
A	HO	Yes	1981	Homeowners/Farmowners	89,103,790	16.5%
B	PPA	Yes	1981	Private Passenger Auto Liability	115,144,338	21.3%
C	CAL	Yes	1980	Commercial Auto Liability	21,218,853	3.9%
D	WC	Yes	1980	Workers Compensation	50,562,640	9.3%
E	CMP	Yes	1980	Commercial Multiple Peril	37,526,491	6.9%
F1	MPLO	Yes	1980	Medical Professional Liability (Occurrence)	2,394,727	0.4%
F2	MPLC	Yes	1984	Medical Professional Liability (Claims Made)	6,985,947	1.3%
G	SL	Yes	1987	Special Liability	6,510,196	1.2%
H1	GLO	Yes	1980	General Liability (Occurrence)	34,726,511	6.4%
H2	GLC	Yes	1987	General Liability (Claims Made)	17,435,409	3.2%
I	SP	Yes	1997	Special Property	52,887,120	9.8%
J	APD	Yes	1997	Auto Physical Damage	81,145,584	15.0%
K	FS	Yes	1997	Fidelity and Surety	6,353,742	1.2%
L				Other Including Credit Accident Health	8,153,104	1.5%
M				International	78,993	0.0%
N				Reinsurance Nonproportional Assumed Property	-	
O				Reinsurance Nonproportional Assumed Liability	-	
P				Reinsurance Nonproportional Assumed Financial	-	
R1	PLO	Yes	1982	Products Liability (Occurrence)	2,791,828	0.5%
R2	PLC	Yes	1987	Products Liability (Claims Made)	533,942	0.1%
S				Financial Mortgage Guaranty	5,069,493	0.9%
T				Warranty	2,607,579	0.5%
Analyzed Lines					525,321,118	97.1%
All Lines					541,230,286	100.0%

Source: Guy Carpenter

We have been steadily expanding the lines of business included in the ASR, and this is the first year we present analysis for auto physical damage, special liability, special property and fidelity and surety.

1.2 CALCULATION NOTES AND LIMITATIONS

The following notes provide information about the calculations in this report.

- **Net/Gross of Reinsurance:** The risk benchmarks are calculated using data net of reinsurance.
- **Reserve Adequacy:** The risk benchmarks are based on the carried reserves as found in the financial statements. We have made no attempt to assess the potential redundancy or deficiency in carried amounts.
- **Ultimate Reserve Risk:** Our view of ultimate reserve risk is limited to 10 years of development for an accident year (AY). The duration and reserve risk for very long-tailed lines of business such as workers compensation must be reviewed with this caveat. Because 10 financial reports is the extent of explicit reporting in the financial statements, the metrics on ultimate reserve risk are based on accident years 1980 to 2005.
- **Definition of Loss:** In this report we use the term “loss” to mean loss and allocated loss adjustment expense, also known as defense and cost containment expense.
- **Pearson’s Correlation Coefficient:** The correlations in this report are Pearson’s correlation coefficient (the linear correlation). Other measures of correlation can be made available upon request.
- **Correlation Matrices:** The correlation matrices for the industry and for the market segments will necessarily include coefficients that are stronger than what an individual company should expect to experience. This is because an individual company experiences more noise, or “process risk.” The *expected* correlation between two lines of business for an individual company can be modeled as a function of that company’s market share in each line of business. This year’s *Correlation Modeling Index* reference chart provides practical guidance as to the range of correlation an individual company can expect to experience.
- **Payment Patterns Beyond Ten Years:** To measure duration, we assume that carried reserves are exactly adequate and that the incremental payment as a percentage of ultimate in the tenth payment period will repeat until either the ultimate loss burden is satisfied or the fifteenth year, whichever is earlier. In the event that the total losses are not fully disbursed by the fifteenth year under this projection, we assume that the entire remaining amount is then paid in the fifteenth year. Note that this methodology is consistent with the IRS method for discounting loss reserves, found in the Internal Revenue Code §§ 846(d)(3)(C) and (D), “Special rule for certain long-tail lines.”
- **Autocorrelation:** The series of single-year reserve development percentages exhibits a strong autocorrelation. By applying autoregressive integrated moving average (ARIMA) modeling to these time series, we estimate that 25 percent to 90 percent (depending on segment) of the volatility shown in industry underwriting results is explained by the cycle.
- **Length of Loss History:** Special Cases: For most lines of business, the data set begins in Accident Year 1980. For products liability, reporting as a line separate from general liability began in 1982. Reporting for products liability separately between occurrence and claims made business began in 1984. For certain lines of business within particular market segments, we did not include data for the earliest accident years due to credibility and data quality concerns.
- **Portfolio Size and Differences:** We are measuring the variability of the industry in aggregate. All things being equal, each individual insurer will likely experience more variability due to its smaller relative portfolio size. An individual insurer’s true risk will also differ from these benchmarks to the extent that the insurer’s portfolio is dissimilar to the industry or market segment in general.

1.3 LINE OF BUSINESS MAPPING FOR EXPENSES

The statutory Annual Statement contains two sets of line of business definitions. Schedule P has been designed with its own unique set of business definitions in order to serve its purpose to track the development of claims payments and reserves over 10 periods of accident year maturity. All other schedules and exhibits with line of business detail display some version of what we will call the Underwriting and Investment Exhibit lines (U&I lines). In the ASR, we make use of the U&I lines though Statutory Page 14, which contains individual state detail and assists in our regional segment definitions, as well as through the Insurance Expense Exhibit (IEE), which is the foundation for Section 6 (Expense Benchmarking).

T2 | MAPPING THE STATUTORY LINES OF BUSINESS

Sched P Letter	Schedule P Name	ASR Acronym	ASR Name	IEE Lines
A	Homeowners/Farmowners	HO	Homeowners	3. Farmowners Multiple Peril 4. Homeowners Multiple Peril
B	Private Passenger Auto Liability/Medical	PPA	Private Passenger Auto	19.1 Private passenger auto no fault (personal injury protection) 19.2 Other private passenger auto liability
C	Commercial Auto/Truck Liability/Medical	CAL	Commercial Auto	19.3 Commercial auto no fault (personal injury protection) 19.4 Other commercial auto liability
D	Workers Compensation (Excluding Excess Workers Compensation)	WC	Workers Compensation	16. Workers Compensation
E	Commercial Multiple Peril	CMP	Commercial Multiple Peril	5.1 Commercial Multiple Peril (Non-Liability Portion) 5.2 Commercial Multiple Peril (Liability Portion)
F1	Medical Professional Liability - Occurrence	MPLO	Medical Professional Liability Occurrence	11. Medical Professional Liability ¹
F2	Medical Professional Liability - Claims Made	MPLC	Medical Professional Liability Claims Made	11. Medical Professional Liability ¹
G	Special Liability (Ocean Marine, Aircraft (All Perils), Boiler and Machinery)	SL	Special Liability	8. Ocean Marine 22. Aircraft (All Perils) 27. Boiler and Machinery
H1	Other Liability - Occurrence	GLO	General Liability Occurrence	17.1 Other Liability - Occurrence 17.3 Excess Workers Compensation
H2	Other Liability - Claims-Made	GLC	General Liability Claims Made	17.2 Other Liability - Claims Made
I	Special Property (Fire, Allied Lines, Inland Marine, Earthquake, Burglary, and Theft)	SP	Special Property	1. Fire 2. Allied Lines 9. Inland Marine 12. Earthquake 26. Burglary and Theft
J	Auto Physical Damage	APD	Auto Physical Damage	21.1 Private Passenger Auto Physical Damage 21.2 Commercial Auto Physical Damage
K	Fidelity, Surety	FS	Fidelity and Surety	23. Fidelity 24. Surety
L	Other (Including Credit, Accident and Health)			13. Group Accident and Health 14. Credit Accident and Health 15. Other Accident and Health 28. Credit
M	International			29. International
N	Reinsurance Nonproportional Assumed Property			31, 32, 33. Reinsurance - Nonproportional Assumed ²
O	Reinsurance Nonproportional Assumed Liability			31, 32, 33. Reinsurance - Nonproportional Assumed ²
P	Reinsurance Nonproportional Assumed Financial Lines			31, 32, 33. Reinsurance - Nonproportional Assumed ²
R1	Products Liability - Occurrence	PLO	Products Liability Occurrence	11. Products Liability ³
R2	Products Liability - Claims-Made	PLC	Products Liability Claims Made	11. Products Liability ³
S	Financial Guaranty/Mortgage Guaranty			6. Mortgage Guaranty 10. Financial Guaranty
T	Warranty			30. Warranty

Source: Guy Carpenter

1. The Underwriting and Investment Exhibit provides a breakdown for MPL between Occurrence and Claims Made, but the IEE does not

2. Reinsurance lines are aggregated in the IEE

3. The Underwriting and Investment Exhibit provides a breakdown for PL between Occurrence and Claims Made, but the IEE does not

1.4 MARKET SEGMENTATION

We have carefully defined the market segments illustrated in this report to provide insurers a diverse collection of risk benchmarks comparable to their own profile. We present two types of segments: the “Divisional” segments and the “Functional” segments. Divisional segments represent a breakdown of the industry into mutually exclusive groups. Functional segments are defined on a stand-alone basis reflecting unique characteristics of the companies.

Four of the Divisional segments have a strong regional signature, providing insight into the dynamics companies will consider when exploring geographical expansion. In contrast, the new Functional market segments assist in understanding differentiation in ownership structure and product strategy.

The market segments include:

T3 | DIVISIONAL AND FUNCTIONAL MARKET SEGMENTS, WITH PREMIUM AND MARKET SHARE

Divisional Segment	Number of Companies	Total DWP (Millions)			Average DWP (Millions)			% of Industry		
		2012	2013	2014	2012	2013	2014	2012	2013	2014
Top 15 Writers	15	288,598	295,470	307,627	19,240	19,698	20,508	55.9%	54.8%	54.5%
National	42	72,988	80,019	86,731	1,738	1,905	2,065	14.1%	14.8%	15.4%
Multi Regional	18	20,964	21,905	22,520	1,165	1,217	1,251	4.1%	4.1%	4.0%
Northeast/Atlantic	291	29,507	31,400	32,612	101	108	112	5.7%	5.8%	5.8%
West	158	21,719	23,249	24,802	137	147	157	4.2%	4.3%	4.4%
Midwest	206	20,406	22,123	23,556	99	107	114	4.0%	4.1%	4.2%
Southeast/Gulf	346	35,788	40,009	41,554	103	116	120	6.9%	7.4%	7.4%
Other*	283	2,995	2,053	1,828	11	7	6	0.6%	0.4%	0.3%
ASR Industry**	1359	492,965	516,227	541,230	363	380	398	95.5%	95.7%	95.9%

Functional Segment	Number of Companies	Total DWP (Millions)			Average DWP (Millions)			% of Industry		
		2012	2013	2014	2012	2013	2014	2012	2013	2014
E&S	53	8,177.6	9,595.7	10,792.8	154.3	181.1	203.6	1.6%	1.8%	1.9%
WC Specialty	84	17,311.9	19,840.5	22,570.7	206.1	236.2	268.7	3.4%	3.7%	4.0%
Mutual	313	47,817.7	52,033.8	54,222.0	152.8	166.2	173.2	9.3%	9.6%	9.6%
Public	92	270,058.8	278,322.9	293,208.4	2,935.4	3,025.2	3,187.0	52.3%	51.6%	52.0%

Source: Guy Carpenter

*Other segment is comprised of companies which do not fit any of the strict definitions set for the other segments.

**41 companies for which Annual Statements exist are not included in the ‘ASR Industry’ due to premium being less than \$1M in each state.

As noted in Section 1.2, 324 companies (approximately 4 percent of the industry) are not allocated to any of the market segments in the ASR due to lack of credible loss history or a risk profile not consistent with one of the defined segments.

The initial universe of companies reviewed to construct these market segments was A.M. Best’s listing of insurance groups and unaffiliated single entities, excluding excess and surplus lines (E&S). From that universe, companies with less than USD 1 million in direct written premium were removed due to lack of loss experience sufficiently credible for computing the risk benchmarks. The insurance groups and unaffiliated single entities were then segmented as follows:

- **Top 15 Writers** include the 15 largest insurance groups in the industry based on total direct written premium. These companies manage their insurance risks on a national scale.
- **National** includes companies with at least USD 500 million in direct written premium and that write business in at least 40 states.
- **Multi Regional** includes companies with at least USD 500 million in direct written premium and that write business in at least 25 states.

The four regional segments (Northeast/Atlantic, Southeast/Gulf, Midwest and West) represent the rest of the companies that write business in fewer than 25 states or have less than USD 500 million in direct written premium. The dominant region for these companies' premium is determined on an all lines combined basis. The following table lists the states allocated to each region and summarizes the P&C insurance penetration in each state:

T4 | REGIONAL MAPPING AND SUMMARY OF STATE PREMIUMS

Northeast/ Atlantic	All Lines 2014 DWP \$000's	Premium Per Capita	Southeast/ Gulf	All Lines 2014 DWP \$000's	Premium Per Capita	Midwest	All Lines 2014 DWP \$000's	Premium Per Capita	West	All Lines 2014 DWP \$000's	Premium Per Capita
CT	7,670,253	2,146	AL	7,227,729	1,512	IA	5,499,527	1,805	AK	1,685,351	2,373
DC	1,601,146	2,661	AR	4,437,855	1,522	IL	22,155,304	1,727	AZ	8,858,355	1,386
DE	2,126,569	2,368	FL	41,578,619	2,211	IN	9,778,925	1,508	CA	62,665,812	1,682
MA	12,793,742	1,954	GA	15,472,911	1,597	KS	5,665,629	1,986	CO	9,598,291	1,909
MD	10,090,005	1,748	LA	10,330,825	2,279	KY	6,430,645	1,482	HI	2,216,373	1,629
ME	1,989,303	1,498	MS	4,570,770	1,540	MI	17,002,276	1,720	ID	2,216,421	1,414
NH	2,177,242	1,654	NC	13,165,851	1,381	MN	9,986,591	1,883	MT	2,003,153	2,025
NJ	19,036,355	2,165	OK	7,402,619	1,973	MO	9,894,280	1,652	NM	2,886,216	1,402
NY	40,243,449	2,077	SC	7,633,106	1,650	ND	2,134,762	3,174	NV	4,122,535	1,527
PA	21,614,204	1,702	TN	9,796,570	1,544	NE	3,929,634	2,152	OR	5,747,494	1,500
RI	2,047,507	1,945	TX	45,322,549	1,802	OH	14,596,488	1,265	UT	3,767,392	1,363
VT	1,376,424	2,200	VA	11,888,583	1,486	SD	2,116,038	2,599	WA	9,730,471	1,447
WV	2,810,654	1,517				WI	9,042,095	1,590	WY	1,020,206	1,810
Total	125,576,854	1,949	Total	178,827,987	1,769	Total	118,232,193	1,659	Total	116,518,071	1,620

Source: Guy Carpenter

- The **E&S** market segment includes entities defined as "Surplus Lines" writers according to A.M. Best's database. E&S writers with less than USD 5 million in direct written premium were removed. Also removed were companies with zero net written premium and companies whose assumed written premium from affiliates was greater than 25 percent of direct plus reinsurance assumed from affiliates written premium. These definitions were necessary to remove companies that may be identified as E&S writers but because of the effects of intercompany reinsurance or pooling the net results do not reflect the E&S business.
- The **Workers Compensation Specialty** market segment includes all companies that satisfy two conditions. First, workers compensation direct written premium in 2014 was larger than USD 10 million. Second, 40 percent or more of total written premium for the company is collected from workers compensation policies. This composite is designed to reflect the experience of Workers Compensation State Funds and private companies that specialize in this line, while removing the impact of the top 15 writers and large national companies with broader, multiline portfolios.
- The **Mutual** market segment includes all U.S. companies with direct written premium less than USD 2 billion and defined by A.M. Best as having a "Mutual" ownership structure. This segment is designed to capture the experience of the majority of small- and medium-size mutual insurers. Larger mutual insurers such as State Farm and Liberty Mutual were excluded to prevent their experience from having a disproportionate effect on the statistics.
- The **Public** market segment includes all companies with 2014 net earned premium larger than USD 100 million that have equity shares listed for trade on a public exchange. Companies in this segment may be listed on a non-U.S. exchange, and may be operating subsidiaries of non-insurance conglomerates. This segment was designed to capture the experience of insurers who are owned and operated for the benefit of corporate shareholders and potentially subject to unique profitability pressures.

Detailed lists of the names of companies included in each segment can be found in Appendix A.1.

1.5 TABLES AND EXHIBIT INVENTORY

The following is an inventory of all tables and exhibits in this report:

TABLES AND EXHIBITS

Exhibit	Section	Page	Description
One	2.3	16	Ultimate Loss Ratio for All Lines Combined, with Percentiles
Two	2.3	17	Initial and Ultimate Loss Ratios by Line of Business
Three	2.4	20	Loss Ratio Spread by Line of Business
Four	2.4	23	Loss Ratio Spread by Divisional Market Segment
Five	2.4	26	Combined Ratio Spread by Line of Business
Six	2.4	30	Combined Ratio Spread by Market Segment
Seven	2.5	33	Lorenz Curves and Gini Coefficients by Line of Business
Eight	2.6	34	Underwriting Return, Volatility, and Premium Size Scatterplot
Nine	2.7	35	Frequency and Severity Trends
Ten	3.2	40	All Lines Reserve Development Cycle
Eleven	3.3	41	Reserve Development Cycle by Line of Business
Twelve	3.4	43	Reserve Development Cycle by Market Segment
Thirteen	4.2	48	Payment Pattern Mean and Volatility Illustrations
Fourteen	5.3	52	Illustrating Individual Company Correlation Experience
Fifteen	5.3	54	Portfolio Guidance for Correlation Experience Range Based on Total Premium
Sixteen	6.3	58	Industry Premium and Expense Trends
Seventeen	7.2	61	Historical Operating Performance in the P&C Industry
Eighteen	7.3	62	Historical Balance Sheet in the P&C Industry
Nineteen	7.4	64	Charting the Change in Policyholder Surplus: Public vs Mutual
Twenty	7.5	66	Asset Profile in the P&C Industry
Twenty One	7.6	68	Trends in Best's Capital Adequacy Ratio (BCAR): Public vs Mutual
Twenty Two	A.5	99	Underwriting Return, Volatility, and Premium Size Scatterplot by Line of Business For Individual Companies
Twenty Three	A.5	103	Correlation in the Ultimate Loss Ratio between Lines of Business, by Market Segment
Twenty Four	A.6	109	Expense Trends by Market Segment

Table	Section	Page	Description
One	1.1	7	Line of Business Acronyms and Industrywide Premiums
Two	1.3	9	Mapping the Statutory Lines of Business
Three	1.4	10	Divisional and Functional Market Segments, with Premium and Market Share
Four	1.4	11	Summary of State Premiums by Region
Five	2.2	15	Ultimate Loss Ratio Performance, with Individual Company Volatility
Six	3.2	38	One-Year Reserve Development by Line of Business
Seven	3.2	39	Ultimate Reserve Development by Line of Business
Eight	4.2	46	Mean Payment Pattern and Duration
Nine	4.2	47	Coefficient of Variation of Payment Pattern Increments
Ten	5.2	51	Correlation in the Ultimate Loss Ratio between Lines of Business
Eleven	6.2	57	Direct and Net Expenses by Line of Business
Twelve	A.1	70	List of Companies by Market Segment
Thirteen	A.2	88	Ultimate Loss Ratio Performance and Volatility by Market Segment
Fourteen	A.3	91	One-Year Reserve Development by Market Segment
Fifteen	A.3	93	Ultimate Development by Market Segment
Sixteen	A.4	95	Mean Payment Pattern and Duration by Market Segment
Seventeen	A.4	97	Coefficient of Variation of Payment Pattern Increments by Market Segment
Eighteen	A.6	105	Direct and Net Expenses by Market Segment and Line of Business

1.6 THIS YEAR'S CONTRIBUTORS



Micah Woolstenhulme is a Managing Director within Strategic Advisory leading efforts at Guy Carpenter to develop standards in economic capital modeling, expression of risk tolerances and quantification of risk profile. He has sixteen years of experience as a P&C actuary in insurance and reinsurance and is a regular speaker at industry forums on topics of financial modeling, enterprise risk management and ORSA compliance.



Gina Carlson is a Senior Vice President in Strategic Advisory focusing on ERM. She is an active leader in the BenchmaRQ Capital Advisory project that provides standardized economic capital modeling results to Guy Carpenter clients. She has 18 years of P&C experience with a focus on financial analysis, capital adequacy and reinsurance accounting.



Blake Berman is a Vice President in Guy Carpenter's Strategic Advisory practice specializing in enterprise risk management and capital modeling. Blake has six years of experience as a P&C actuary in insurance and reinsurance. He assists with the development of BenchmaRQ Capital Advisory and also has assisted with the development of MetaRisk® Reserve™, Guy Carpenter's patented stochastic reserving system. Blake is a Fellow of the Casualty Actuarial Society.



Phil Lee is a Vice President in Strategic Advisory working with the ERM Services Team. He has played a critical role in maintaining the process flows and data integrity for the Risk Benchmarks research for three years now. He serves many Guy Carpenter clients as an advisor in using BenchmaRQ capital modeling. He has eleven years of experience in reinsurance, actuarial science, risk management and electrical engineering.



HanBing He is an Assistant Vice President in Strategic Advisory providing technical solutions to address the increasingly complex questions posed by our clients. He supports the BenchmaRQ Capital Advisory project and is pursuing actuarial credentials via the examination system. He began his career with Guy Carpenter in 2014 as an actuarial intern supporting the 2014 ASR and developed the T6* exhibit from that report.



Junke He, Misha Jhaveri, and Zan Zhao designed tools and algorithms to update our extensive databases and create the complex exhibits in this report. They are students in the Masters of Actuarial Science Program at Columbia University and interned with Guy Carpenter during the summer of 2015. These stellar students exemplify the demanding technical and analytical aptitudes offered to our industry by the next generation of actuaries.

II. UNDERWRITING PERFORMANCE AND VOLATILITY

2.1 INTRODUCTION

Excellence in underwriting performance should be connected to a company's risk profile and appetite. Underwriters seeking more return will need to tolerate higher levels of risk in pursuit of improved profitability. Determining how much risk is acceptable can simply be a matter of preference. Our analysis seeks to support explicit expression of preferences to inform better decision making.

The need for a robust underwriting risk model becomes important when evaluating the tradeoff between *protection* and *projection*. Underwriting operations protect a company from loss and obsolescence when they develop stable, low-risk streams of revenue. In contrast, they project the company's goals and strategy when they assess the desirability of the risks inherent in various business opportunities.

This section explores many aspects of underwriting risk. For example, we follow the accumulation of risk across both competition-based and cost-based underwriting cycles; we investigate the present competitive underwriting landscape and we analyze the inequalities in market share leading to scale concerns for expense. The domain is rich and we continue to learn.

2.2 CURRENT AND LONG TERM LOSS RATIOS

T5 | ULTIMATE LOSS RATIO PERFORMANCE, WITH INDIVIDUAL COMPANY VOLATILITY Net of Reinsurance, Accident Years 1980 to 2014 Where Available

Table 5: Explanation

Table 5 provides performance statistics for the ultimate loss ratio in each line of business:

$$\text{Ultimate Loss Ratio} = \frac{\text{Paid and Reserved Losses and ALAE at 120 Months of Development}}{\text{Earned Premium}}$$

These accident year ratios do not reflect any development subsequent to 120 months of maturity. The long term mean (1) loss ratios are calculated across the entire period for which data is available (see Table 1). Five year mean (2) loss ratios are calculated across accident years 2010 to 2014.

Standard Deviation (4) is a measure of volatility in the loss experience and is expressed in loss ratio points for each line of business. Individual companies may experience more or less volatility than the industry and the Individual Company Volatility (standard deviation) section (columns 7, 8 and 9) illustrates the range of actual volatility experienced for individual companies. For example, 10 percent of the providers of commercial auto liability (CAL) experienced volatility less than 8 percent standard deviation and another 10 percent of providers experience volatility greater than 23 percent standard deviation.

Table 5: Discussion

Comparing long-term mean (1) to five-year mean (2) to AY 2014 Booked (3), the industry in total and nearly every line of business exhibits a positive trend. Current booked loss ratios are less than both recent and long term averages. Medical professional liability and auto physical damage are notable exceptions. The pure liability lines: general liability, products liability and medical professional liability have exhibited the greatest volatility, attributable to significant adverse reserve development in the early 1980s and again in the early part of this millennium. Comparing the ranges for individual experience in columns 7 to 9, fidelity & surety (FS), special liability (SL) and medical professional liability occurrence (MPLO) have exhibited the greatest differentiation in volatility among companies.

Line of Business	Averages			Volatility			Individual Company Volatility		
	Long-Term Mean	Five Year Mean	AY 2014 Booked	Standard Deviation	Minimum Loss Ratio	Maximum Loss Ratio	10th Percentile	Median	90th Percentile
Line of Business	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(10)
CAL	80%	67%	64%	14%	55%	113%	8%	14%	23%
CMP	70%	61%	57%	13%	49%	94%	7%	13%	26%
GLC	68%	67%	63%	23%	44%	113%	11%	19%	47%
GLO	83%	62%	60%	22%	52%	138%	7%	17%	34%
HO	71%	64%	55%	11%	60%	112%	9%	13%	24%
MPLC	87%	74%	78%	27%	48%	128%	10%	21%	47%
MPLO	110%	83%	86%	36%	60%	181%	14%	27%	97%
PPA	76%	70%	69%	7%	63%	88%	6%	9%	16%
PLC	69%	72%	69%	31%	24%	137%	17%	35%	57%
PLO	91%	62%	60%	31%	47%	164%	10%	23%	58%
WC	79%	73%	67%	14%	54%	99%	8%	15%	26%
APD	61%	63%	66%	5%	53%	69%	5%	10%	24%
FS	42%	33%	35%	13%	31%	73%	3%	15%	69%
SP	58%	61%	54%	11%	44%	75%	7%	14%	41%
SL	64%	59%	57%	11%	44%	76%	10%	20%	156%
All Lines	75%	67%	63%	8%	57%	90%			

Source: Guy Carpenter

2.3 CHARTING THE UNDERWRITING CYCLE

E1 | ULTIMATE LOSS RATIO FOR ALL LINES COMBINED, WITH PERCENTILES Net of reinsurance, accident years 1980 to 2014, all ten-year Schedule P lines combined

Exhibit 1: Explanation

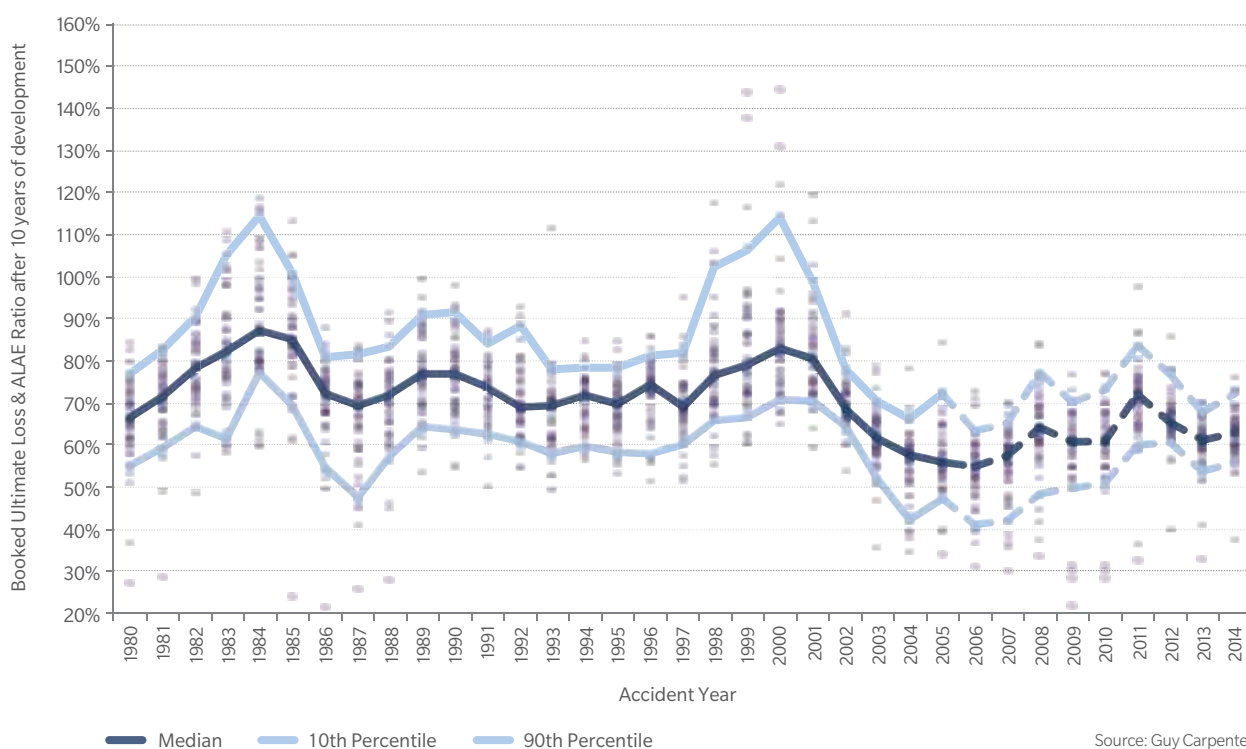
In Exhibit 1 we identify the largest 50 P&C insurers based on total premium in each year and plot the total ultimate loss ratio for all lines of business reporting 10 development periods in Schedule P. The solid lines illustrate the 10th, 50th and 90th percentile of individual company performance in each year. Note that the median loss ratio line is dashed subsequent to 2005, emphasizing that losses are not developed to 10-year maturity for these years.

Exhibit 1: Discussion

Exhibit 1 is a vivid picture of more than two full underwriting cycles, with loss ratios peaking between the years 1983 to 1985 and again between 1999 and 2001. The two peaks differed in that the poor performance in the 1980s affected individual carriers in a relatively consistent way, whereas between 1999 and 2001 certain insurers performed much worse than others. Some carriers competing aggressively on price were growing during a period of rising medical costs, the ultimate effect of which was unknown for several years.

A recent loss ratio high of 73 percent in 2011 was due in large part to elevated natural catastrophe losses on residential and commercial property. Loss ratios improved in 2012 and 2013 as a result of rate increases, particularly in commercial lines, until stabilizing in 2014.

Loss ratios are often not modeled with auto-correlation, but multi-year economic capital models should reflect the tendency for loss ratios to move with momentum over time. Exhibit 1 clarifies that a series of unprofitable years is as tangible a concern for P&C insurance companies as the exposure to a single, extremely unprofitable year. For more details on how to model the underwriting cycle see *U.S. Property-Casualty: Underwriting Cycle Modeling and Risk Benchmarks*¹.



Source: Guy Carpenter

1. The report, *U.S. Property-Casualty: Underwriting Cycle Modeling and Risk Benchmarks*, is available online: <http://www.variancejournal.org/issues/05-02/91.pdf>.

E2 | INITIAL AND ULTIMATE LOSS RATIOS BY LINE OF BUSINESS

Net of reinsurance, accident years 1980 to 2014 where available

Exhibit 2: Explanation

Each chart plots loss and ALAE ratios in industry aggregate for an individual line of business. The initial ratio as reported at 12 months of development is illustrated with a dashed blue line, whereas the developed ultimate loss ratio (as currently reported) is shown with a solid red line. Periods of adverse reserve development in successive accident years are shaded in red, while periods of reserve release are shown in blue. A third, gray line illustrates the calendar year loss ratio, the cyclicity of which trails the accident year patterns.

Axes are unified to facilitate direct comparison between the charts. Panel 1 collects lines of business with comparatively low historical loss ratio range, whereas Panel 2 collects those with wide historical range.

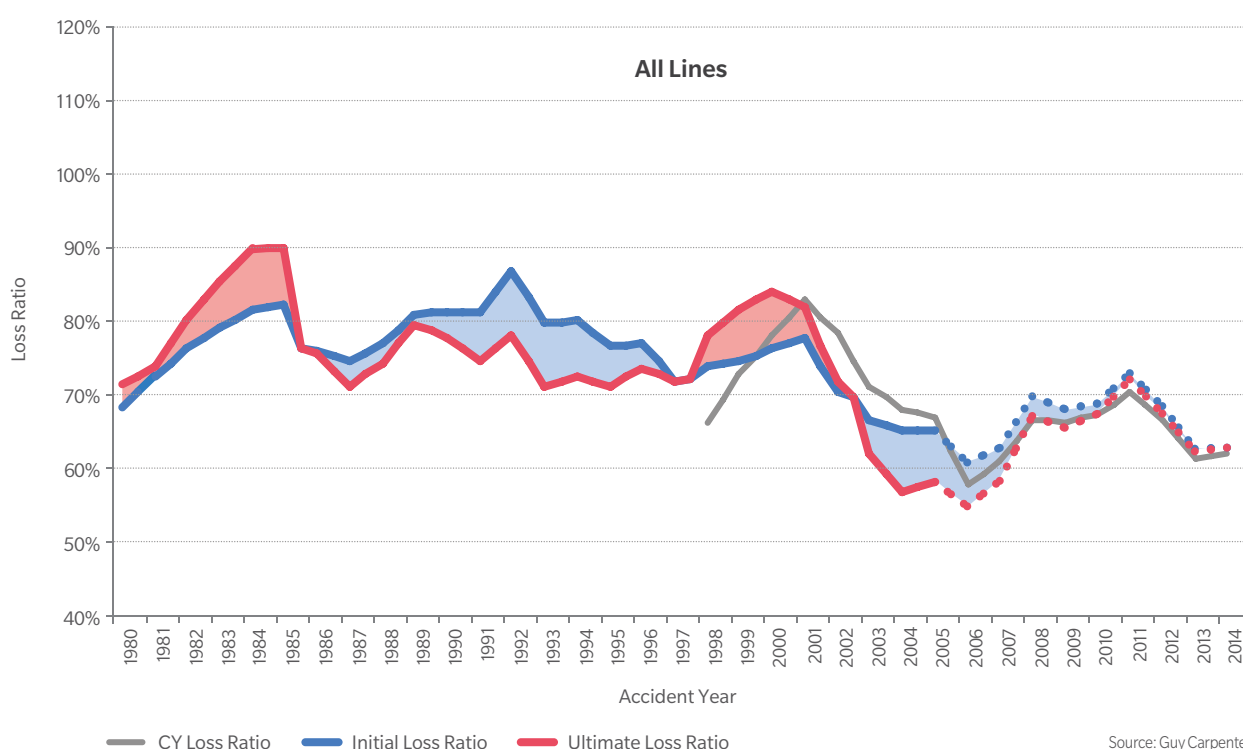
Exhibit 2: Discussion

In this composite exhibit we visualize the diversity of issues that need to be considered when managing different lines of business, including duration, cyclicity, reserving norms and distinct loss processes.

For example, in homeowners and special property we observe that the risk is strongly correlated with the occurrence or non-occurrence of natural catastrophes. Reserve risk is minimal, as demonstrated by the lack of shaded areas and the close alignment of the gray calendar year line with the red ultimate line.

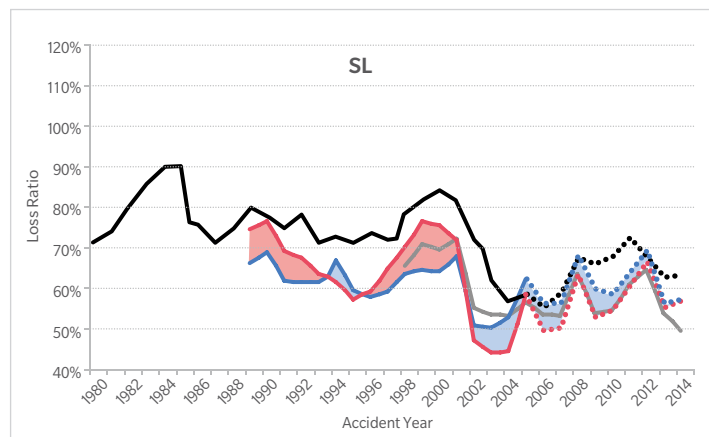
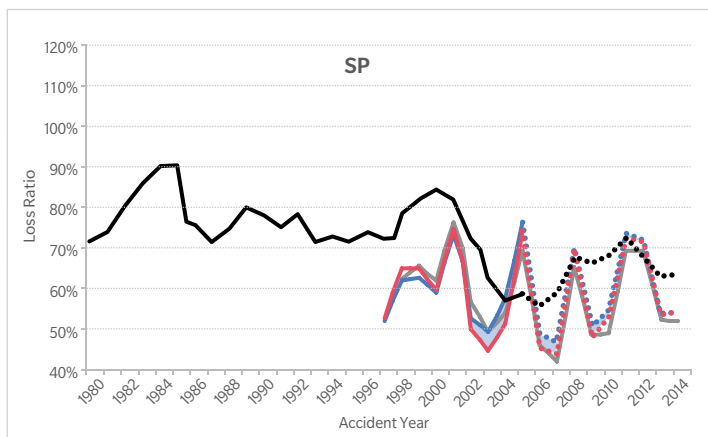
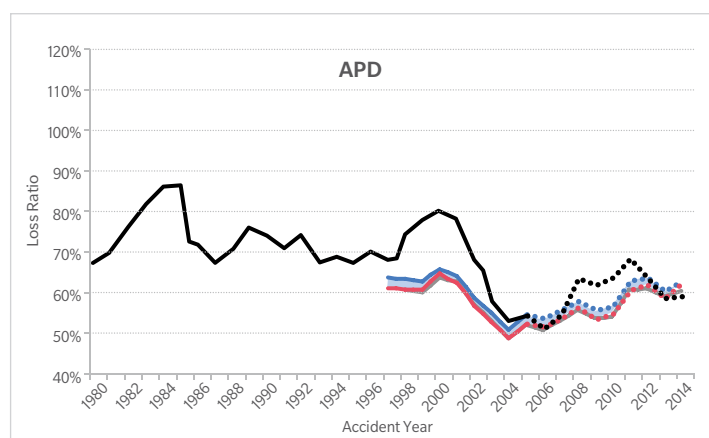
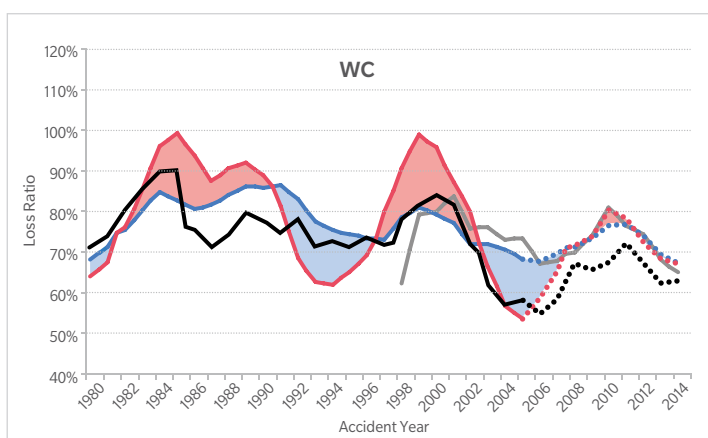
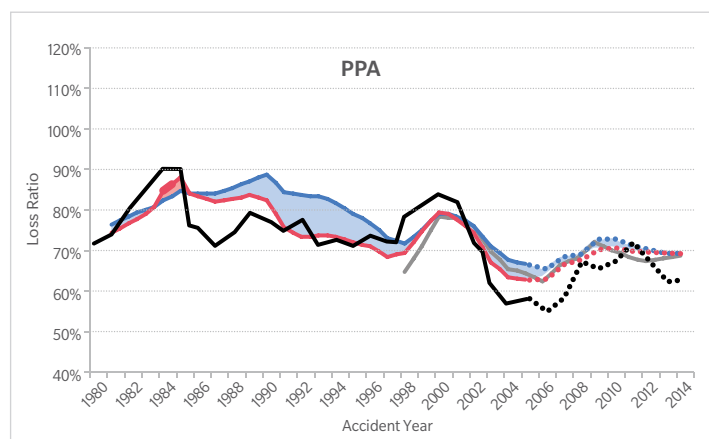
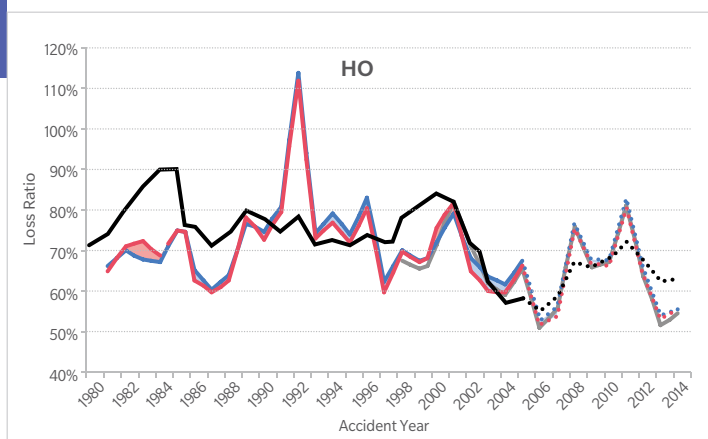
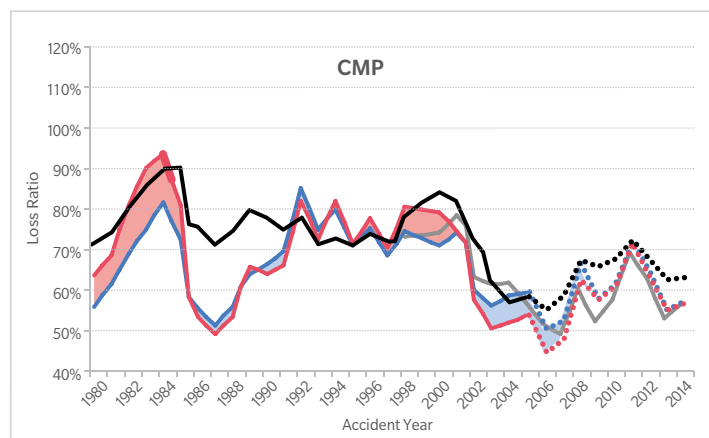
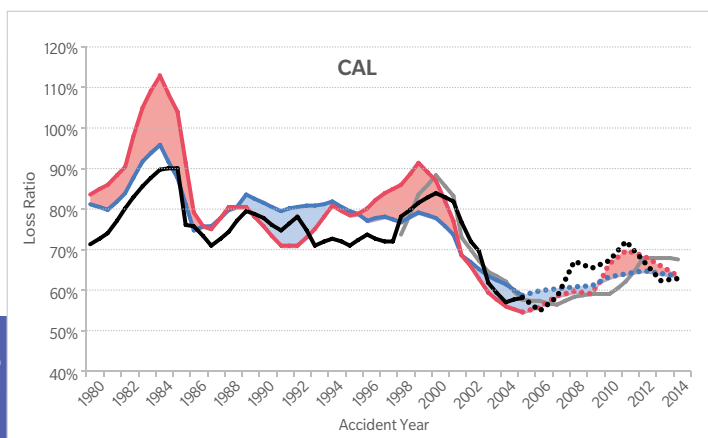
For auto insurance, while the industry did experience an increase in loss ratios between 1999 and 2001, the acceleration in losses was detected much sooner than it was in other casualty lines. In fact, the industry has not experienced much adverse reserve development in auto insurance at all since 1980 and there is a very consistent 'tradition' evident of over-reserving about 3 percent of loss ratio for auto physical damage at 12 months.

Casualty lines have exhibited the same pattern of alternating periods of adverse and benign reserve development across this history, but to different degrees. The amplitude of these reserve adjustments signifies sensitivity to the cycle, which is related to duration, competition and the degree to which medical inflation drives ultimate loss costs. Medical professional liability and products liability are among the most sensitive lines.

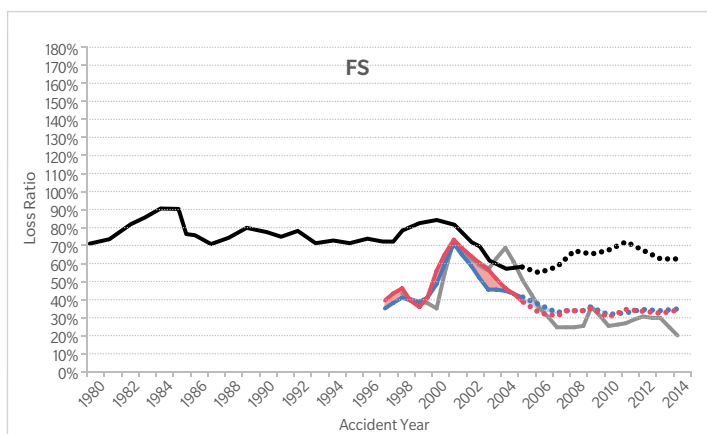
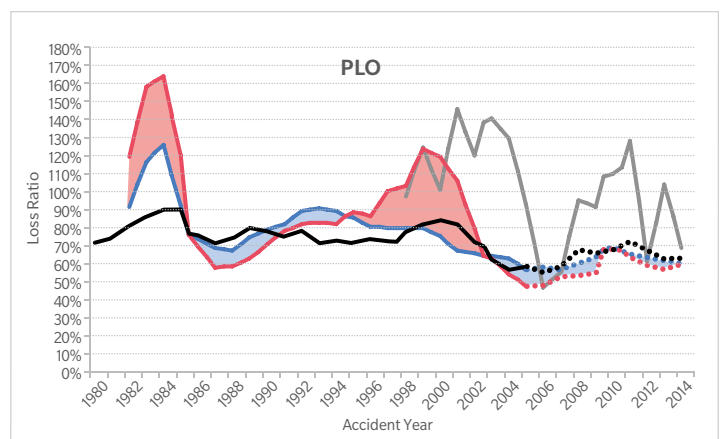
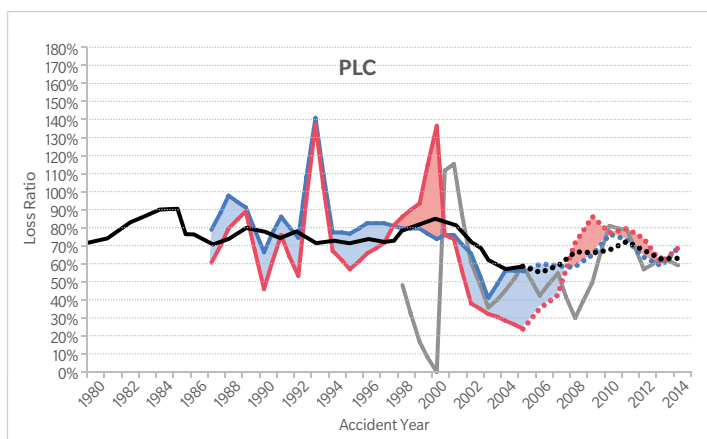
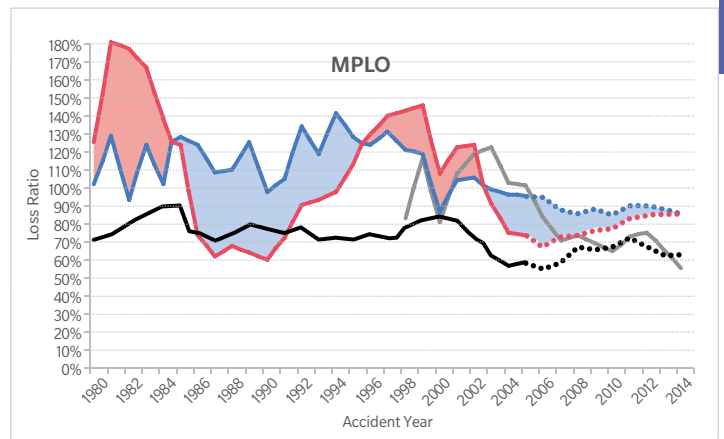
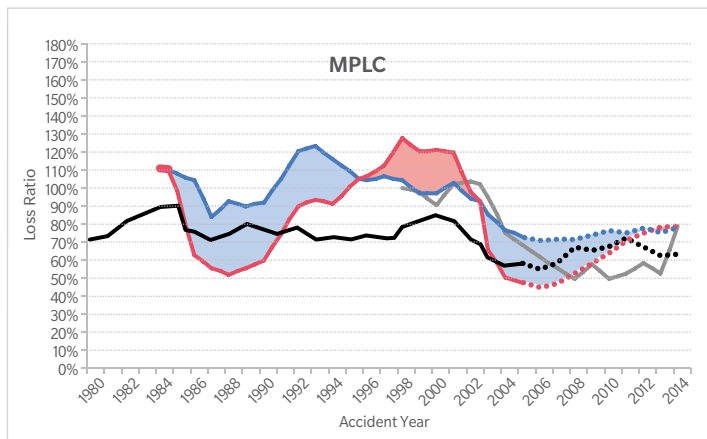
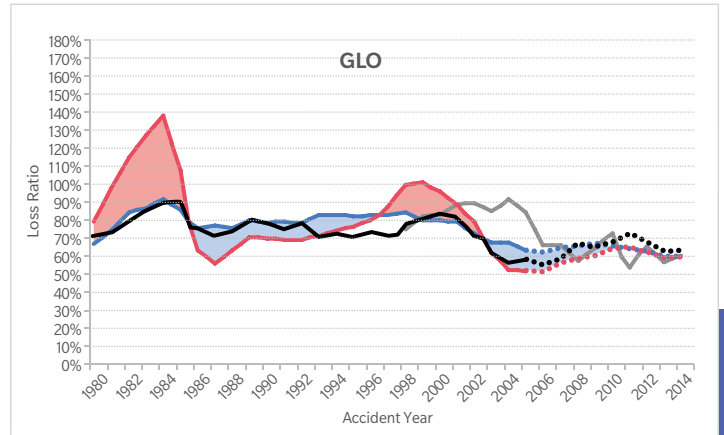
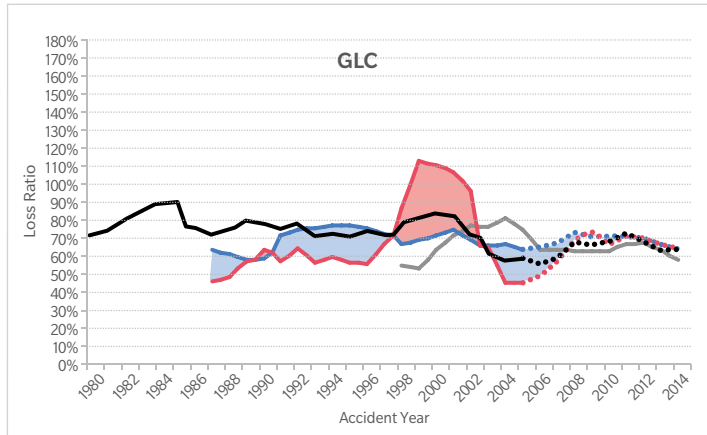




E2 | LINES WITH LOW HISTORICAL RANGE



E2 | LINES WITH WIDE HISTORICAL RANGE



— Initial Loss Ratio — Ultimate Loss Ratio
— CY Loss Ratio — All Lines Ultimate Loss Ratio

2.4 COMPETITIVE DIFFERENTIATION

E3 | LOSS RATIO SPREAD BY LINE OF BUSINESS

Sorted in ascending order of average performance from 2010 to 2014

Volatility estimated from accident years 2005 to 2014

Exhibit 3: Explanation

Exhibit 3 depicts recent performance and volatility for the largest writers in each line of business. As many as one hundred companies, where available, are included in each chart. We sort companies by mean loss ratio, from lowest to highest, and illustrate volatility with a colored bar spanning one standard deviation on either side of the loss ratio. The color of each bar is chosen according to the market segment to which each company belongs.

The *market slope* statistic measures the disparity in results across the companies – a higher market slope means some companies are performing much better than others. Please note that we have changed the calculation details for market slope this year, so that values are still comparable (and we believe better) between lines, but not with last year's report. The new calculation is simple — it is the average absolute deviation from median loss ratio across all companies, excluding the 5 percent best-performing and 5 percent worst-performing companies for statistical stability.

The mark in the center of each bar plots the mean loss ratio and the shape of the mark indicates the size quartile to which the company belongs for that line of business.

Exhibit 3: Discussion

Counting from left to right in the homeowners exhibit, six of the first 10 square marks (indicating the company is among the top size quartile for homeowners on a standalone basis) belong to companies allocated to the Top 15 market segment. This underscores the importance of regional diversification in that line of business. In fact, among the market segments, only the Top 15 and the West outperform the industry in total for homeowners.

In workers compensation many of the largest providers are companies belonging to regional market segments. The performance for many of these regional companies has been good, and two of the regional market segments (Midwest and Southeast/Gulf) outperform the Top 15 as a group (see Exhibit 4). In fact, we can show that it was the large national providers of workers compensation that experienced the strongest adverse reserve development during the peak of the last cycle from 1999 to 2001. This suggests that close contact with the claims process provides a meaningful advantage in this line of business.

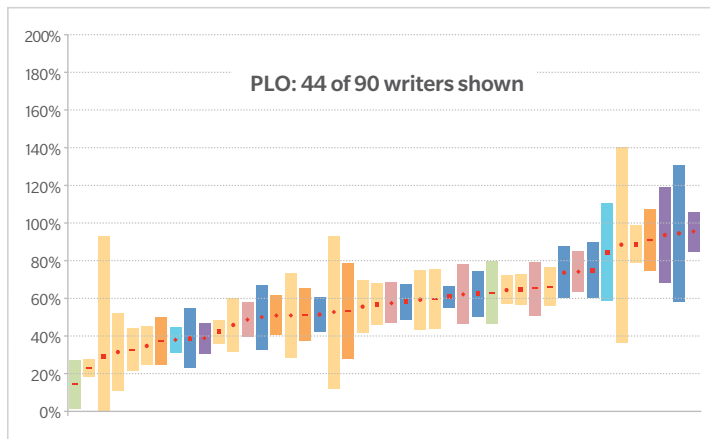
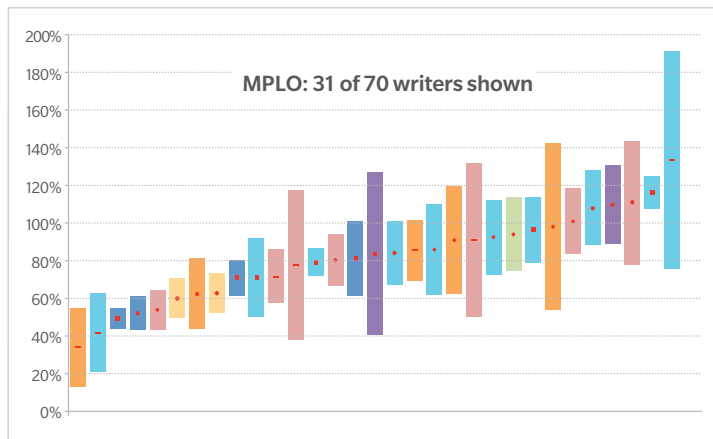
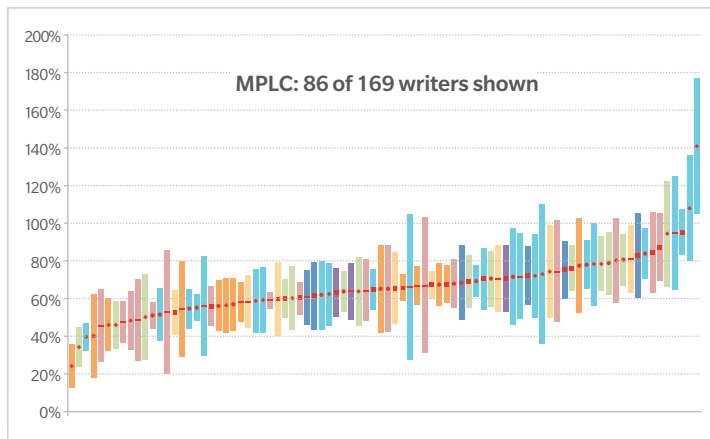
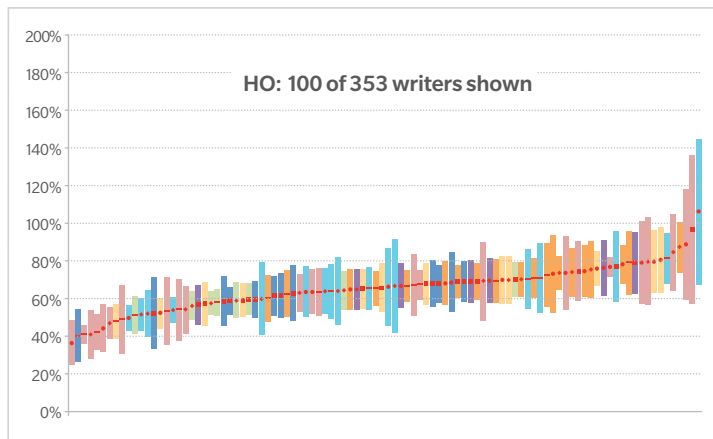
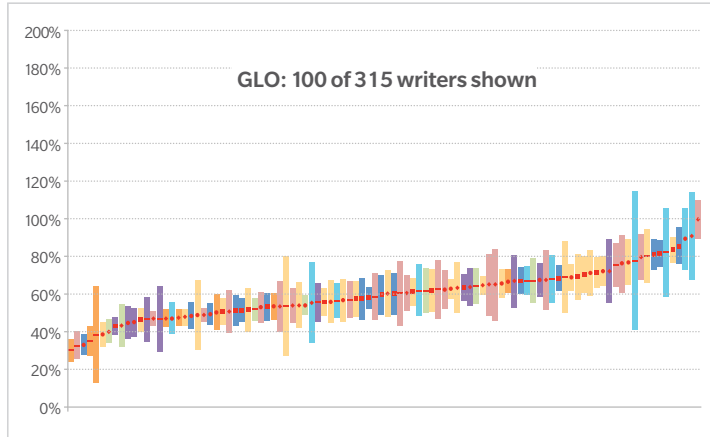
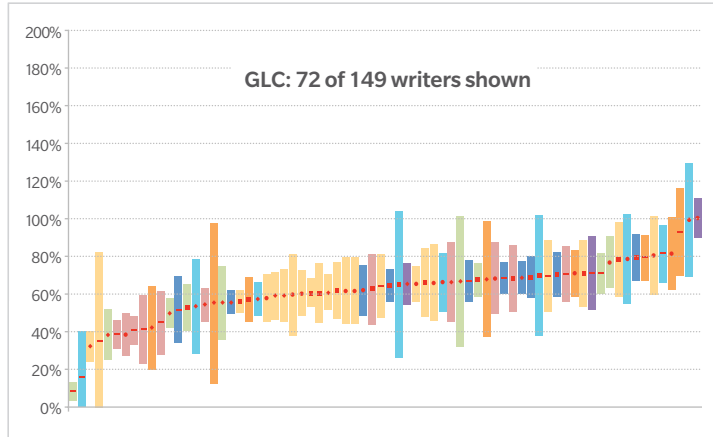
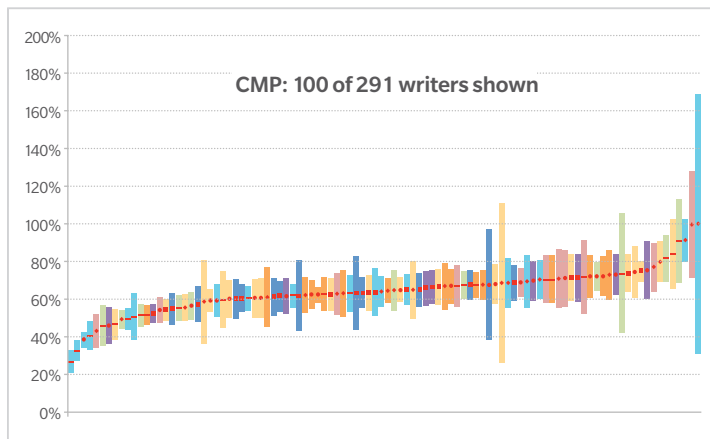
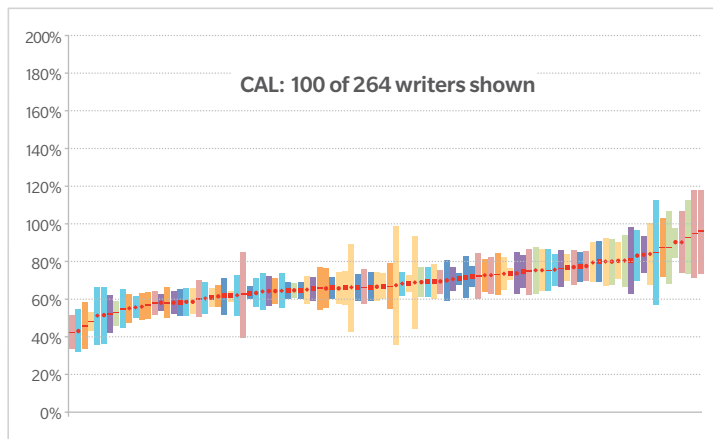
Line of Business	Number of Companies		
	Shown	All*	Market Slope
CAL	100	264	12%
CMP	100	291	10%
GLC	72	149	16%
GLO	100	315	14%
HO	100	353	10%
MPLC	86	169	14%
MPLO	31	70	19%
PLO	44	90	16%
PPA	100	274	7%
WC	100	244	9%
APD	100	340	8%
FS	60	101	15%
SL	42	65	14%
SP	100	409	15%

*Recent five year average net earned premium at least \$1M

Source: Guy Carpenter



Midwest Northeast/Atlantic Top 15 Writers National Multi Regional West Southeast/Gulf



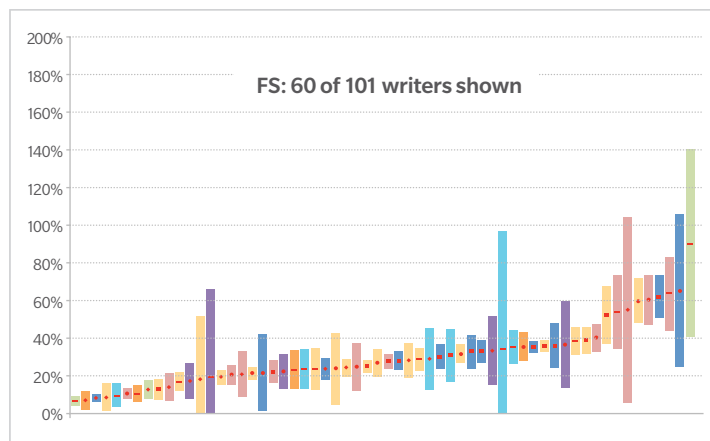
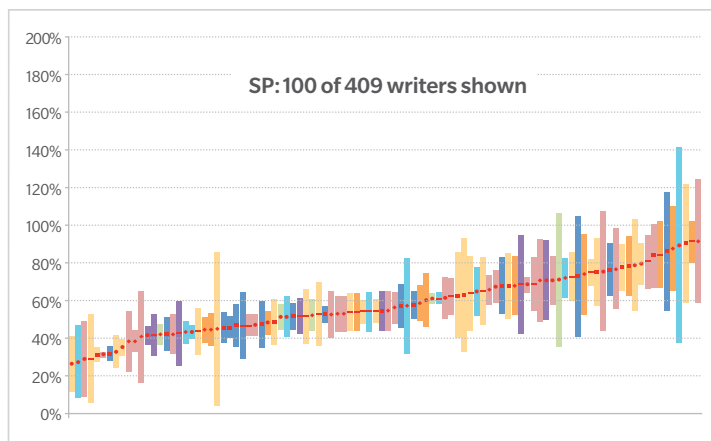
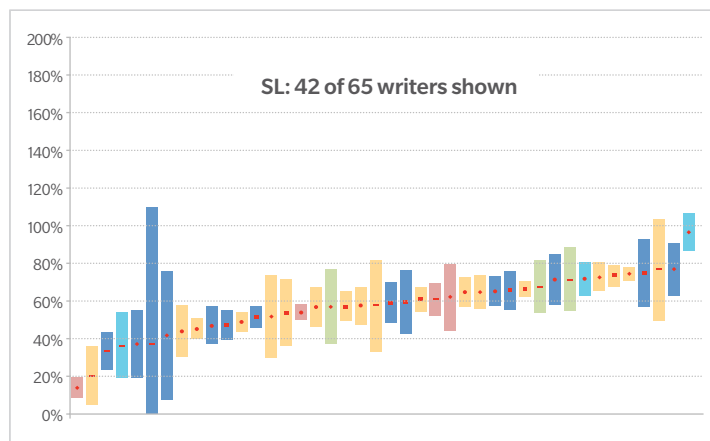
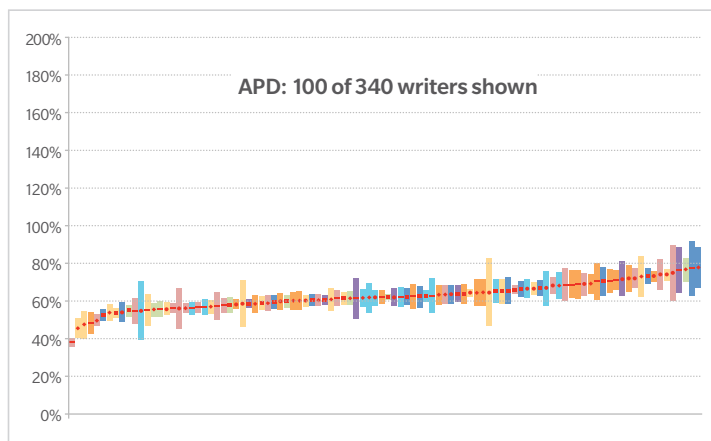
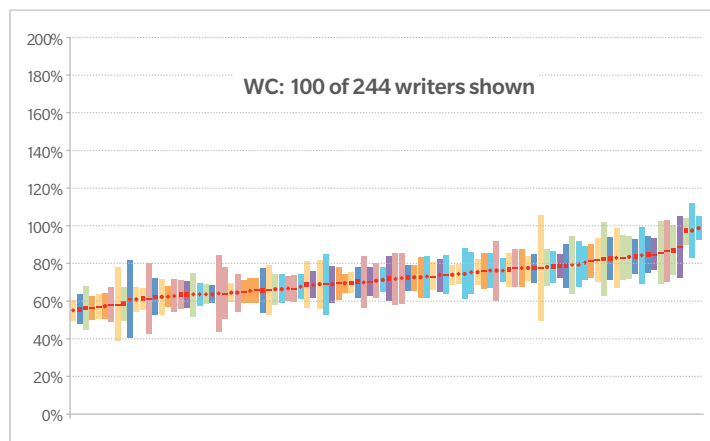
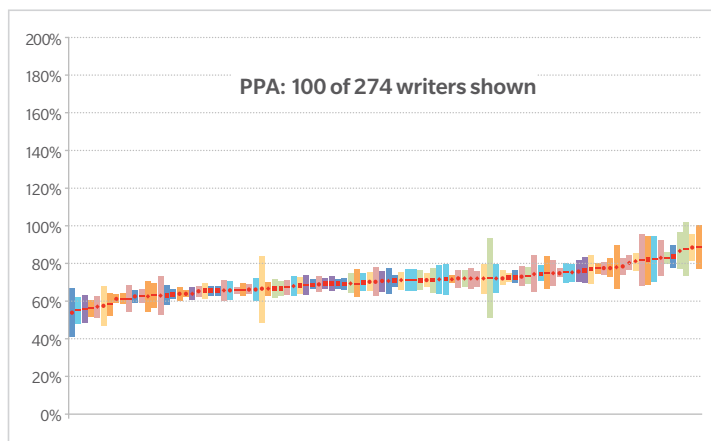
Among writers shown: ■ Five-Year NEP is among the first quartile in size for the line of business — 2nd Quartile ● 3rd Quartile ◆ 4th Quartile

Source: Guy Carpenter



E3 | LOSS RATIO SPREAD BY LINE OF BUSINESS (CONTINUED)

Underwriting



Source: Guy Carpenter

Midwest Northeast/Atlantic Top 15 Writers National Multi Regional West Southeast/Gulf

Among writers shown: ■ Five-Year NEP is among the first quartile in size for the line of business — 2nd Quartile ● 3rd Quartile ◆ 4th Quartile



E4 | LOSS RATIO SPREAD BY DIVISIONAL MARKET SEGMENT

Mean loss ratios computed over period from 2010 to 2014

Volatility estimated from accident years 2005-2014

Exhibit 4: Explanation

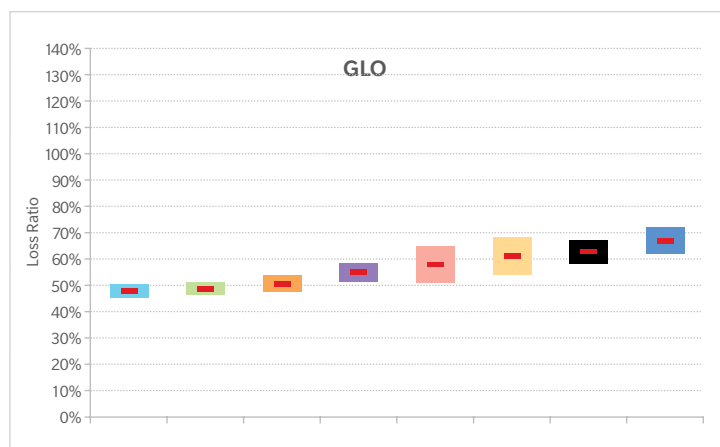
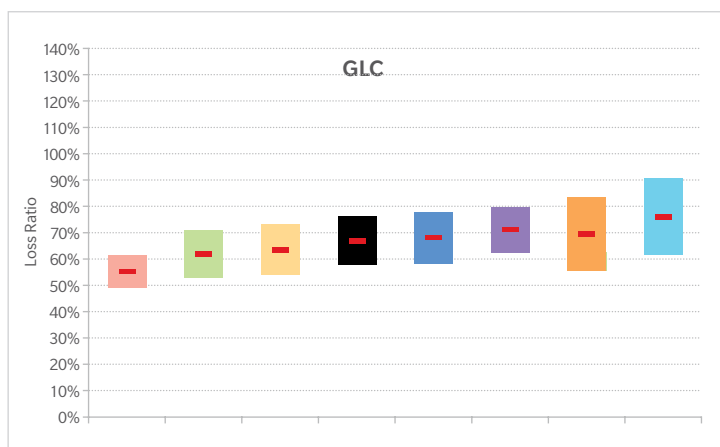
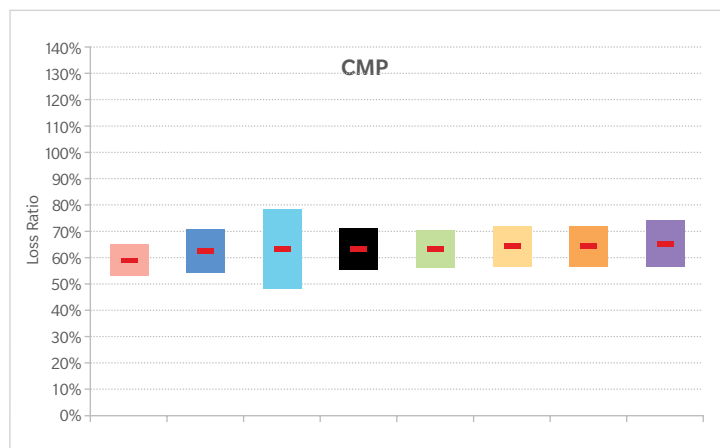
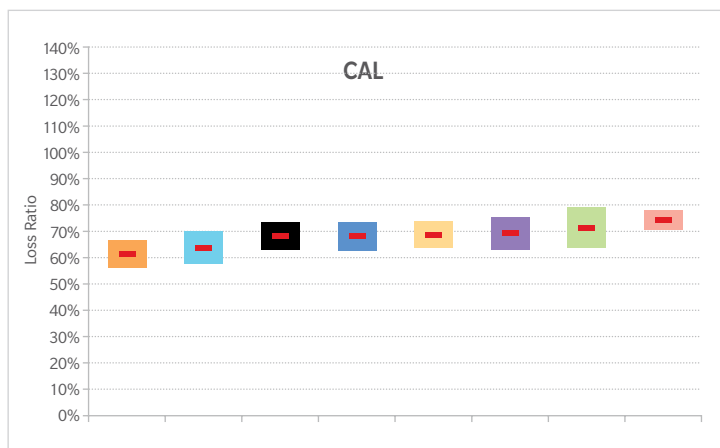
Exhibit 4 depicts recent performance and volatility in each line of business, aggregated by divisional market segment (see Table 3). We sort the market segments by mean loss ratio, from lowest to highest, and illustrate volatility with a colored bar spanning one standard deviation on either side of the loss ratio. The color of each bar is associated with that market segment throughout this report.

Exhibit 4: Discussion

The Top 15 writers have produced the lowest loss ratios in personal lines over recent years due to economies of scale and regional diversification across different natural perils. For auto insurance, it is not only the loss ratios that are notably lower, but also the volatility.

The regional segments as a whole are very competitive in other lines of business. Exhibit 3 showed that there is significant differentiation in performance between individual providers for commercial lines. This exhibit expands that insight by demonstrating that in some of the long tail casualty lines such as general liability and products liability, many regional segments have outperformed the Top 15 writers and industry overall.

Midwest Northeast/Atlantic Industry Top 15 Writers National Multi Regional West Southeast/Gulf

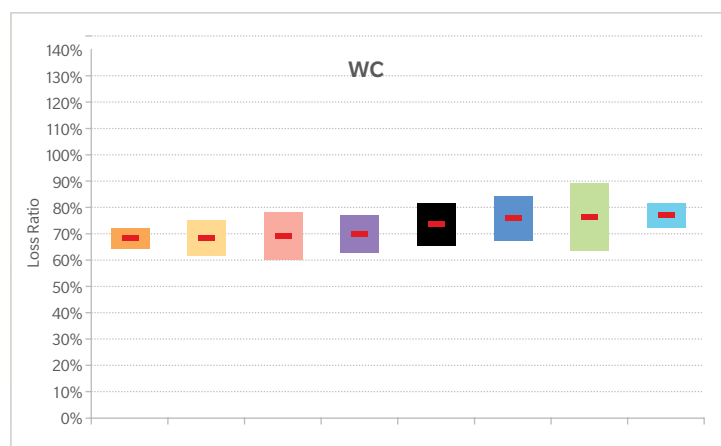
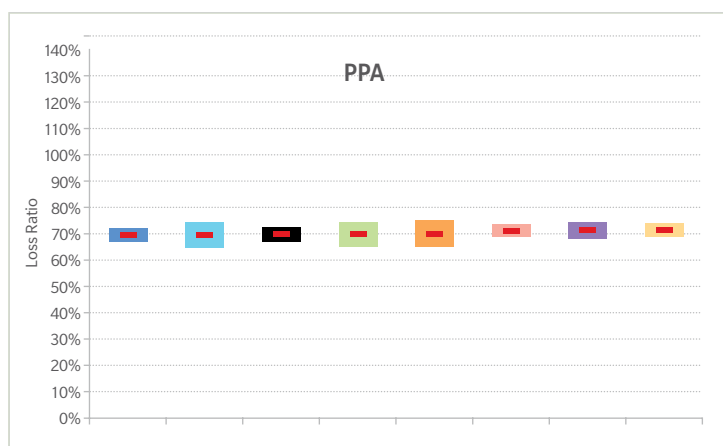
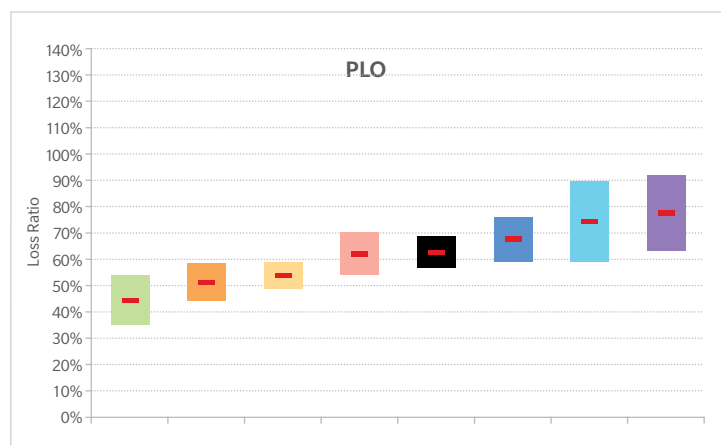
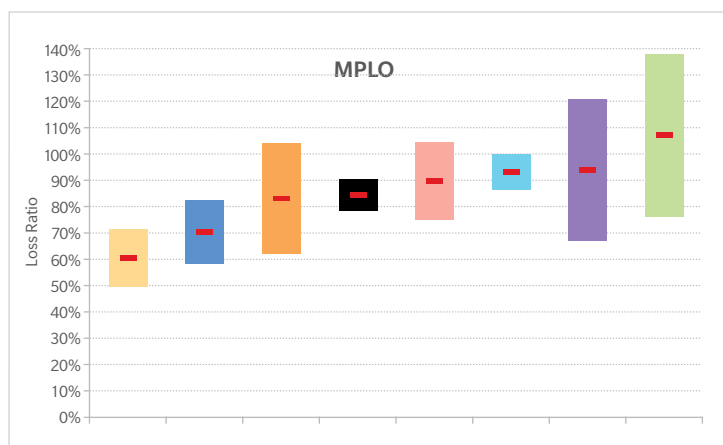
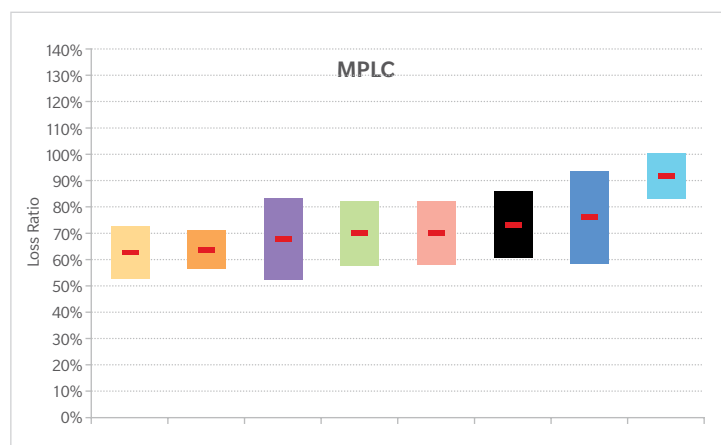
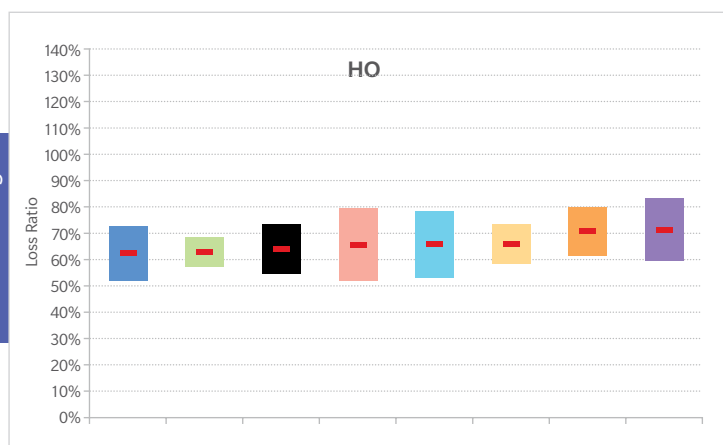


Source: Guy Carpenter

E4 | LOSS RATIO SPREAD BY DIVISIONAL MARKET SEGMENT (CONTINUED)

Midwest Northeast/Atlantic Industry Top 15 Writers National Multi Regional West Southeast/Gulf

Underwriting

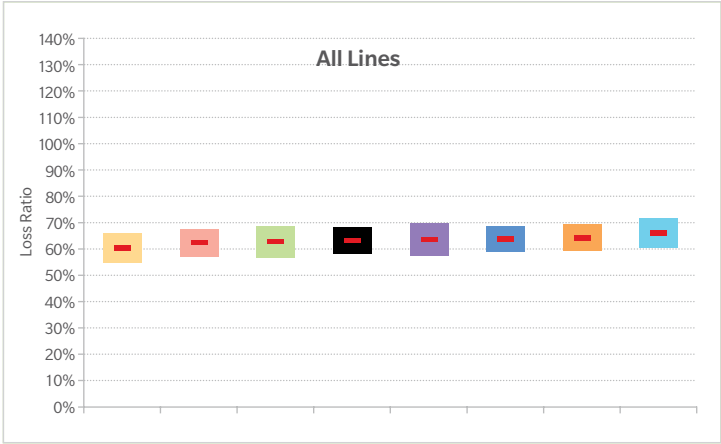
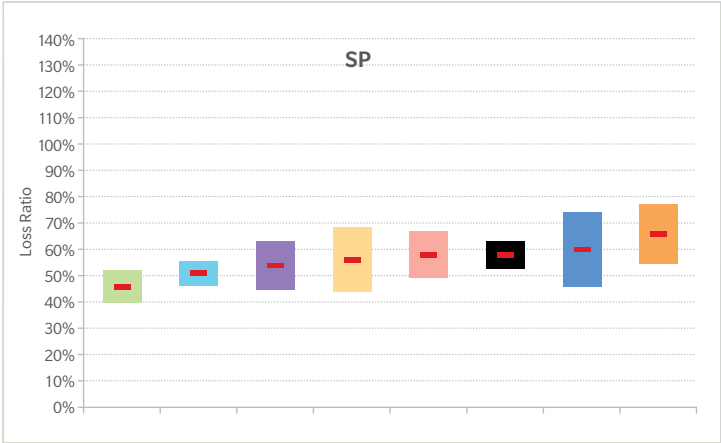
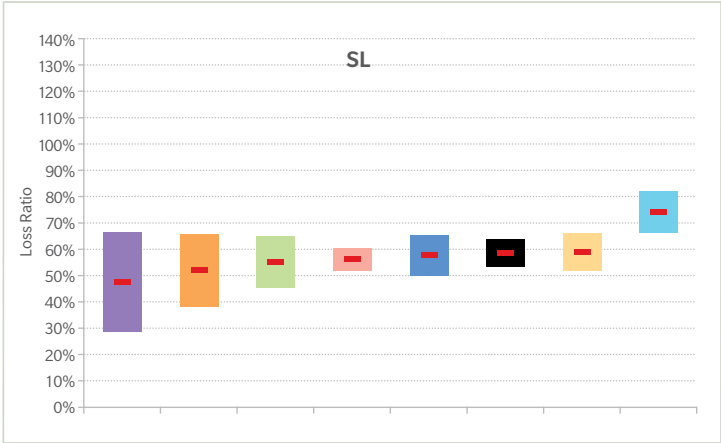
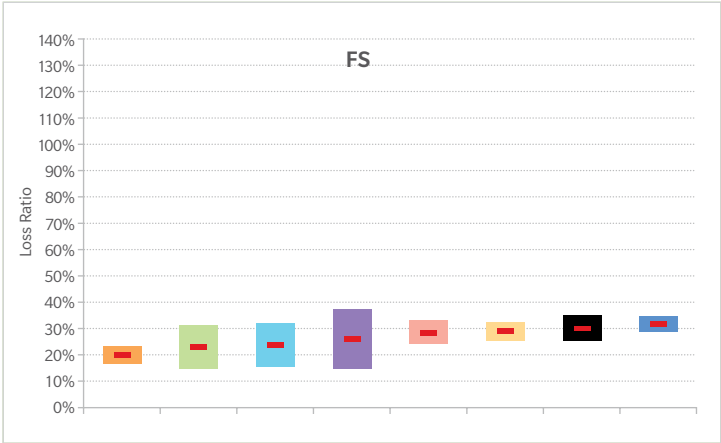
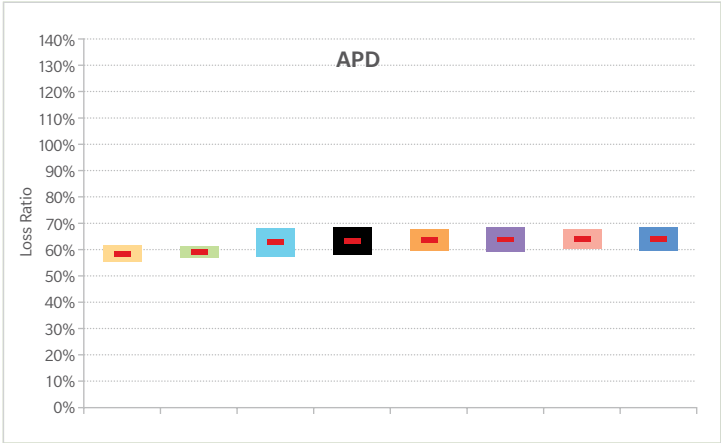


Source: Guy Carpenter



E4 | LOSS RATIO SPREAD BY DIVISIONAL MARKET SEGMENT (CONTINUED)

Midwest Northeast/Atlantic Industry Top 15 Writers National Multi Regional West Southeast/Gulf



Source: Guy Carpenter

E5 | COMBINED RATIO SPREAD BY LINE OF BUSINESS

Mean combined ratios computed over period from 2010 to 2014

Exhibit 5: Explanation

Exhibit 5 charts the combined ratio for the largest one hundred providers of each line of insurance or as many as available if the total number of providers is less than one hundred. Each combined ratio is illustrated with a stacked bar and the bars are sorted in ascending order of profitability. Categories of loss and expense are styled differently according to cost category and the color of each bar represents the market segment to which each company belongs. The *market slope* measures the degree to which good performance differs from poor performance and is an indicator of upside potential due to excellence in underwriting, pricing and claims handling. Higher market slope relates to more differentiation.

Exhibit 5: Discussion

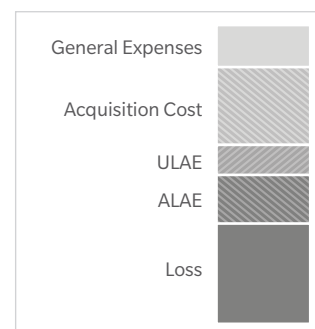
Exhibit Five tells the remainder of the story in performance differentiation: expenses. Interestingly, the five best all lines performers belong to the National segment, defined as companies that write at least USD 500 million in all-lines premiums and also operate in at least 40 states, but are not among the group of the 15 largest carriers.

In Exhibit 3 we saw that six of the best performing 11 companies for CMP were part of the Northeast segment, but here we see that some of these companies fall out of that group due to high expense ratios. Only three of the best performing 11 combined ratios are part of the Northeast segment.

The Top 15 segment providers perform very well in homeowners, with several Southeast/Gulf providers outperforming during this experience period due to a lull in hurricane activity when compared to the previous decade. Regional diversification will work to these companies' benefit when this experience is compared to the long term risk.

The chart for PPA illustrates the intense competition in this highly commoditized line of business. The Top 15 writers tend to have lower loss ratios, but due to higher expenses (in some cases) this market segment does not dominate overall profitability. In fact, there is little segment signature to the ordering of good performance, and only approximately 20 percent of the carriers have been able to write this line at 100 percent combined ratio or below. In recent years it has been commonplace to attempt offsetting these underwriting losses with profitable results in APD, where approximately half of the providers have produced combined ratios below 100 percent.

Line of Business	Number of Companies		
	Shown	All*	Market Slope
CAL	100	264	18%
CMP	100	291	12%
GLC	72	149	14%
GLO	100	315	16%
HO	100	353	10%
MPLC	86	169	14%
MPLO	31	70	67%
PLO	44	90	16%
PPA	100	274	8%
WC	100	244	9%
APD	100	340	10%
FS	60	101	14%
SL	42	65	21%
SP	100	409	15%

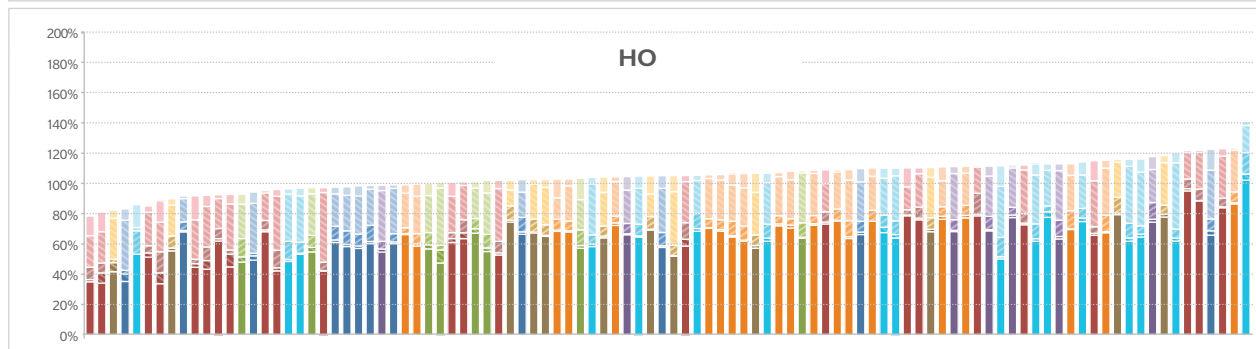
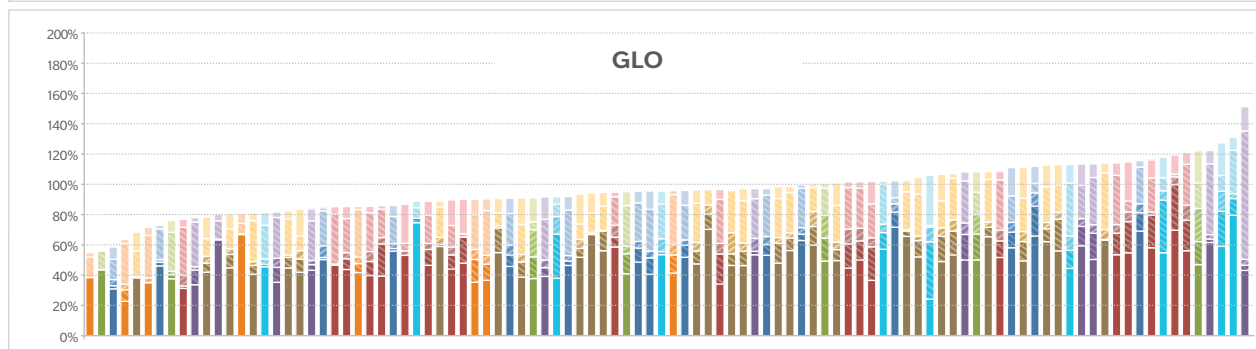
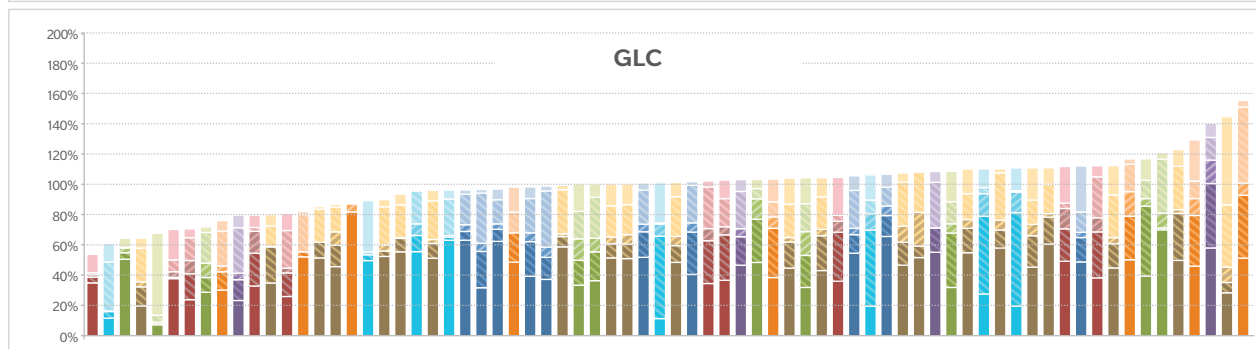
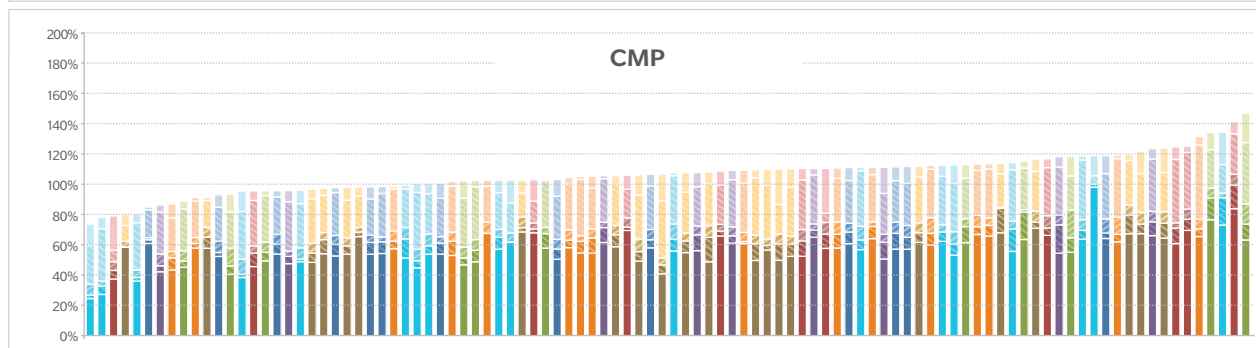
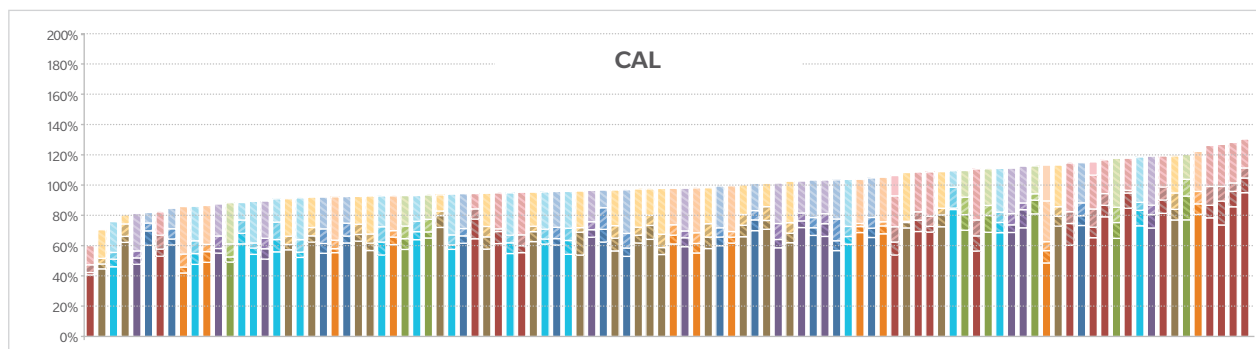


Source: Guy Carpenter

*Recent five year average net earned premium at least \$1M



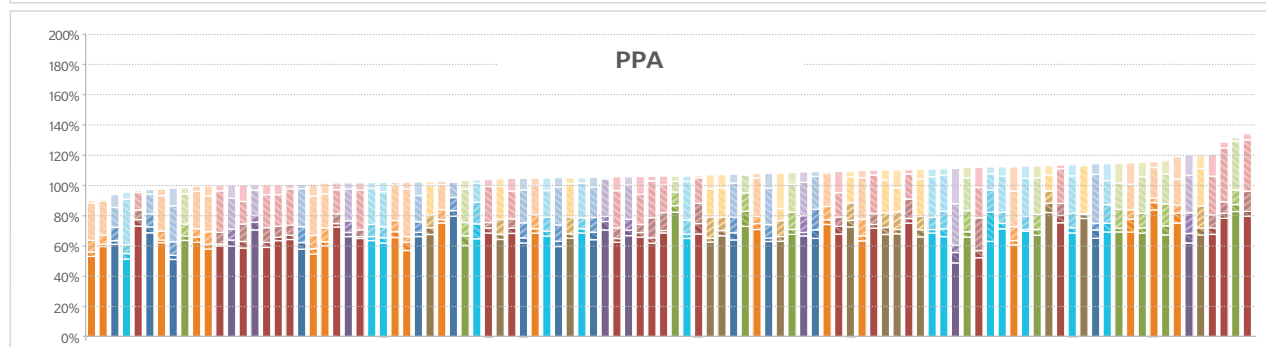
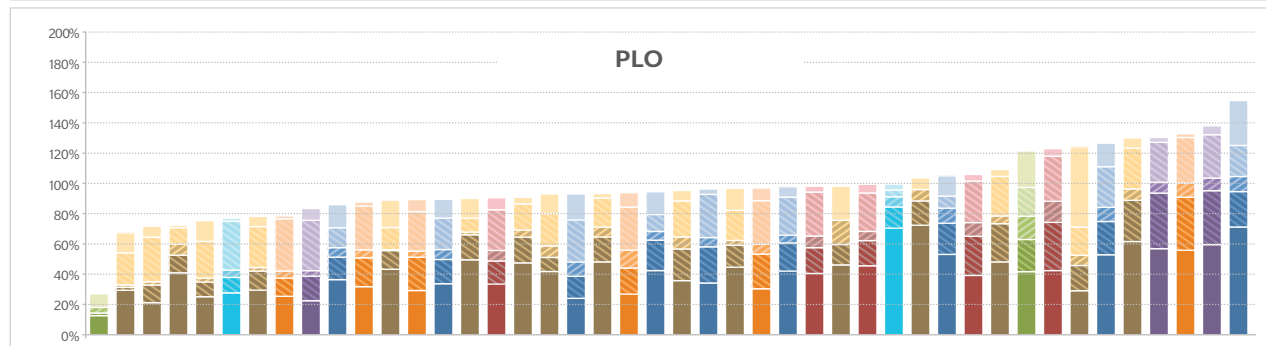
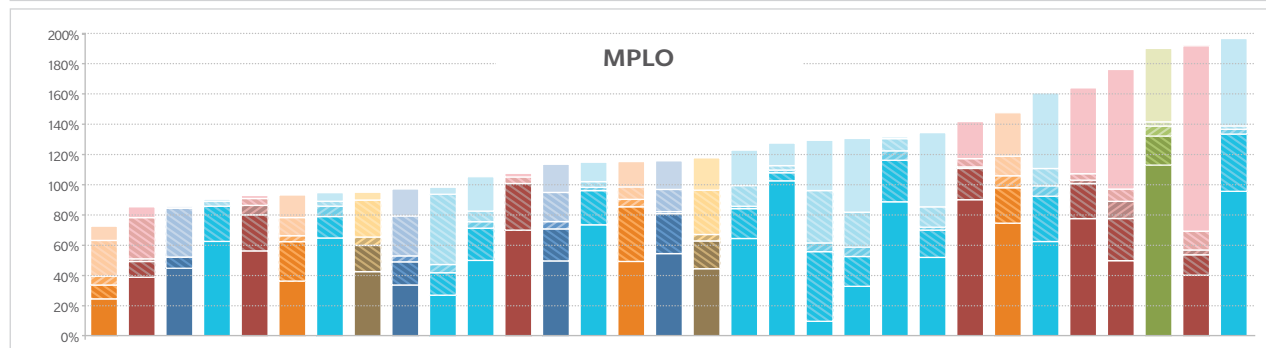
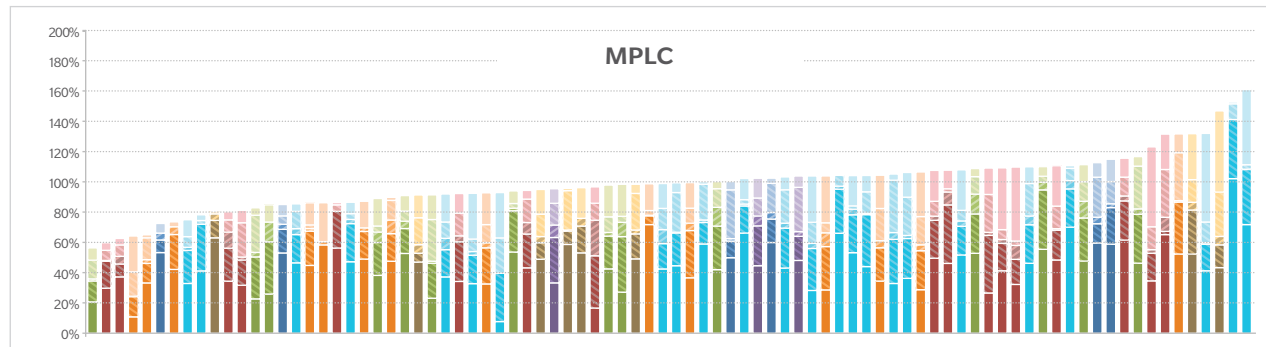
Midwest Northeast/Atlantic Top 15 Writers National Multi Regional West Southeast/Gulf



E5 | COMBINED RATIO SPREAD BY LINE OF BUSINESS (CONTINUED)

Midwest Northeast/Atlantic Top 15 Writers National Multi Regional West Southeast/Gulf

Underwriting





E5 | COMBINED RATIO SPREAD BY LINE OF BUSINESS (CONTINUED)

Midwest Northeast/Atlantic Top 15 Writers National Multi Regional West Southeast/Gulf



Source: Guy Carpenter



E6 | COMBINED RATIO SPREAD BY MARKET SEGMENT

Mean combined ratios computed over period from 2010 to 2014

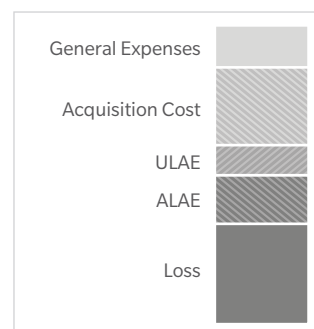
Exhibit 6: Explanation

Exhibit 6 charts the combined ratio by line of business for each market segment in the ASR. Each combined ratio is illustrated with a stacked bar and the bars are sorted in ascending order of profitability. Categories of loss and expense are styled differently according to cost category, and each bar is colored with that market segment's standard color. In the All Lines exhibits, the Functional market segments (see Table 3) are colored in gray – these segments by definition overlap with others. Mean combined ratios are computed over the period 2010 to 2014.

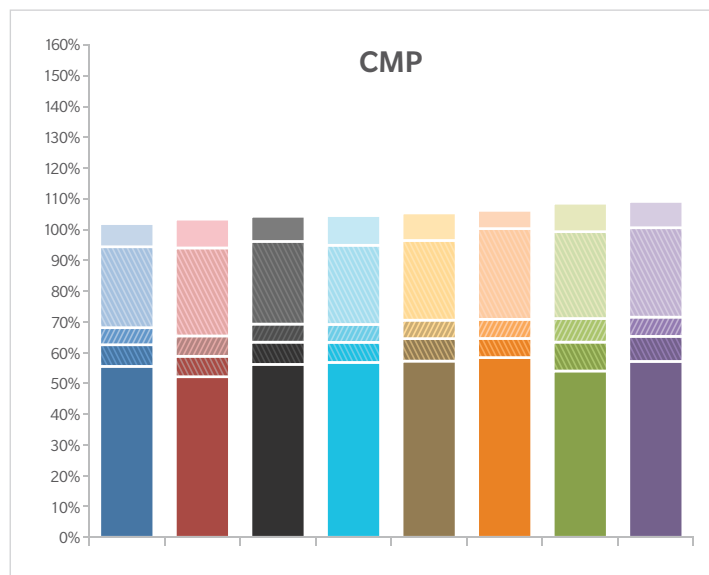
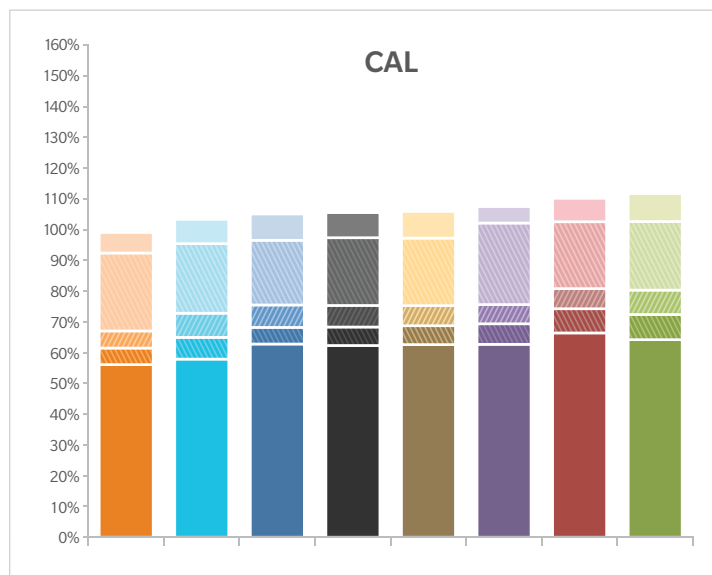
Exhibit 6: Discussion

These charts illustrate low expense ratios in personal lines and commercial multiple peril as being a key strategic advantage enjoyed by the Top 15 writers. In homeowners, the Top 15 writers have also benefited from comparatively low losses due to diversification across regions. On the other hand, in many commercial lines of business these larger carriers are not able to exploit size alone in the competition for profitability. The Top 15 have indeed outperformed the overall industry in many lines of business, but companies in the regional segments have exhibited competitive performance in multiple ways:

- The Northeast/Atlantic has performed well in commercial auto and general liability, though poorly overall.
- The Southeast/Gulf has performed well in total, primarily due to low losses in commercial multiple peril and homeowners
- The Midwest has performed well in commercial auto and workers compensation
- The West has performed poorly overall apart from excellent experience in homeowners and auto insurance
- The large expense ratio for MPLC and FS in some regions is driven by a small number of large RRGs underwriting this business.



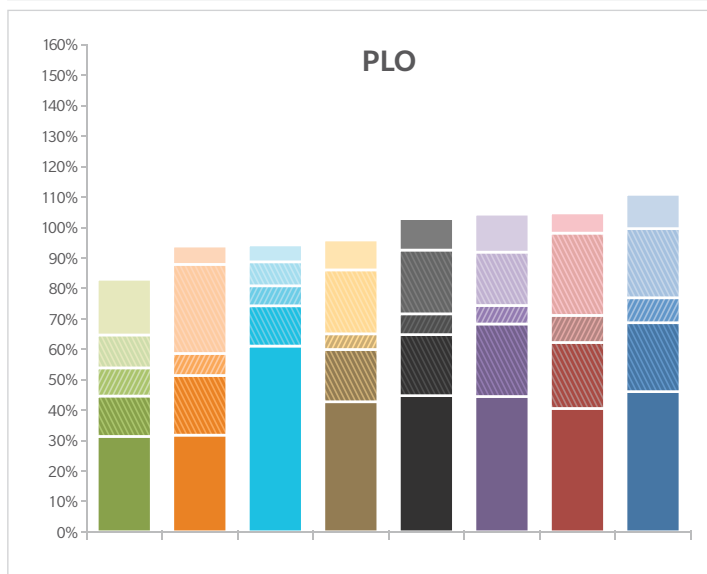
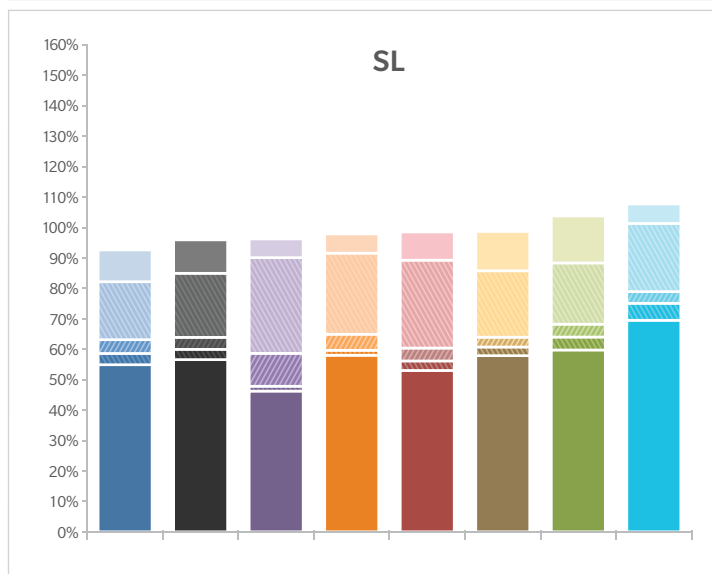
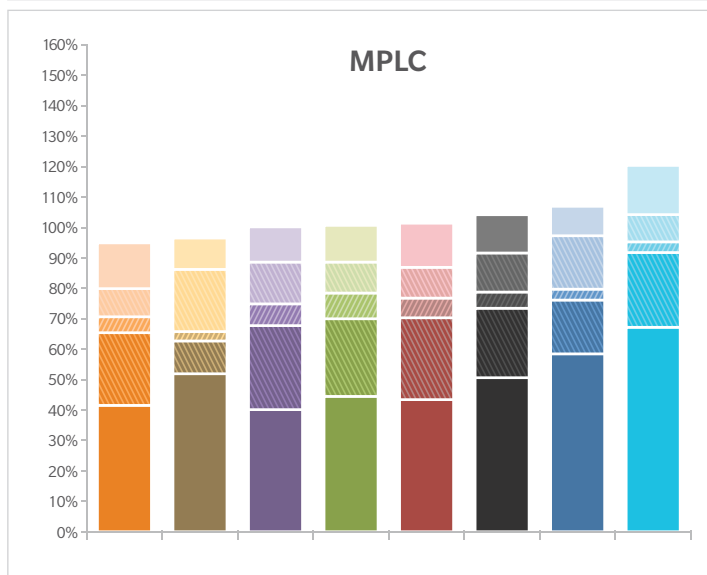
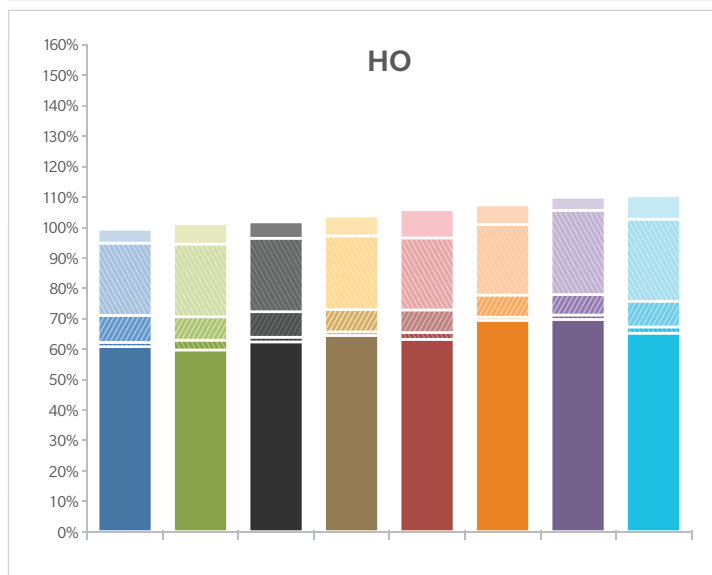
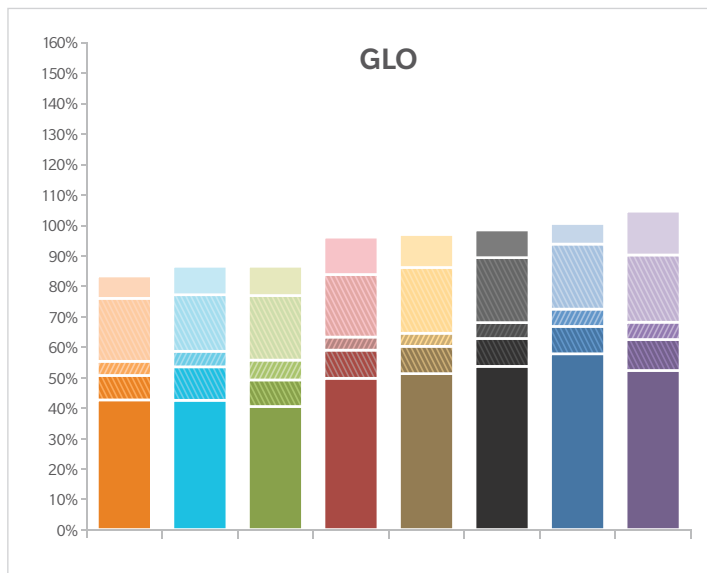
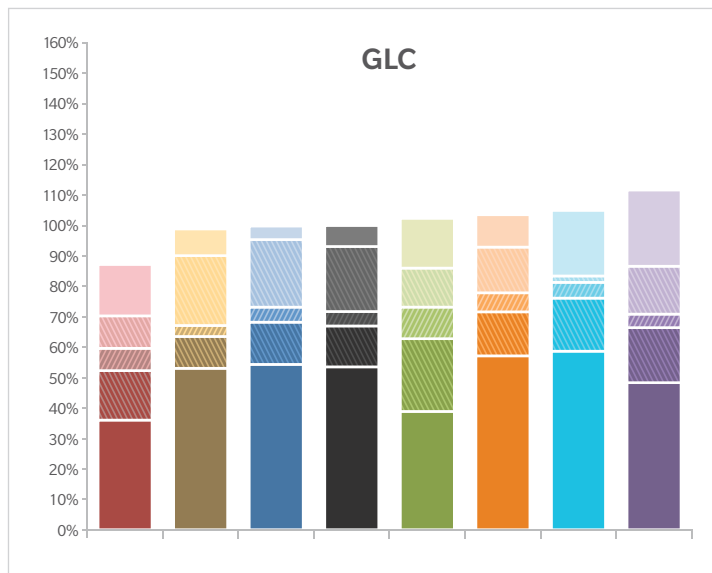
Midwest Northeast/Atlantic Industry Top 15 Writers National Multi Regional West Southeast/Gulf



Source: Guy Carpenter



Midwest Northeast/Atlantic Industry Top 15 Writers National Multi Regional West Southeast/Gulf



Underwriting

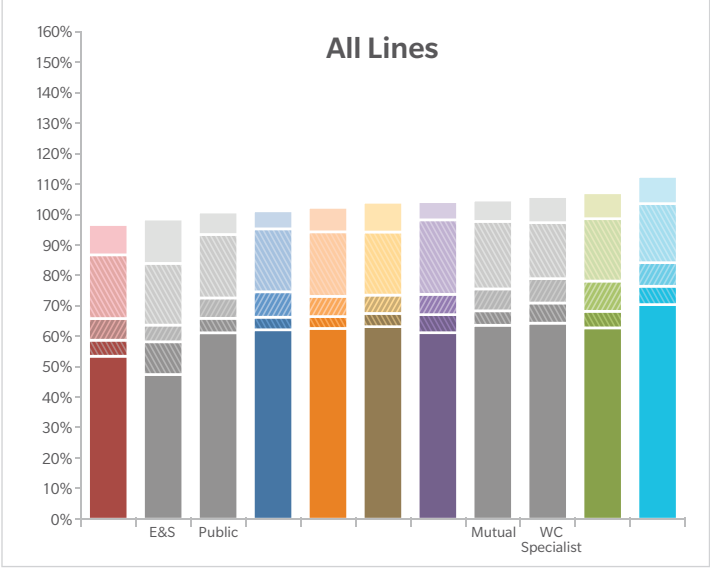
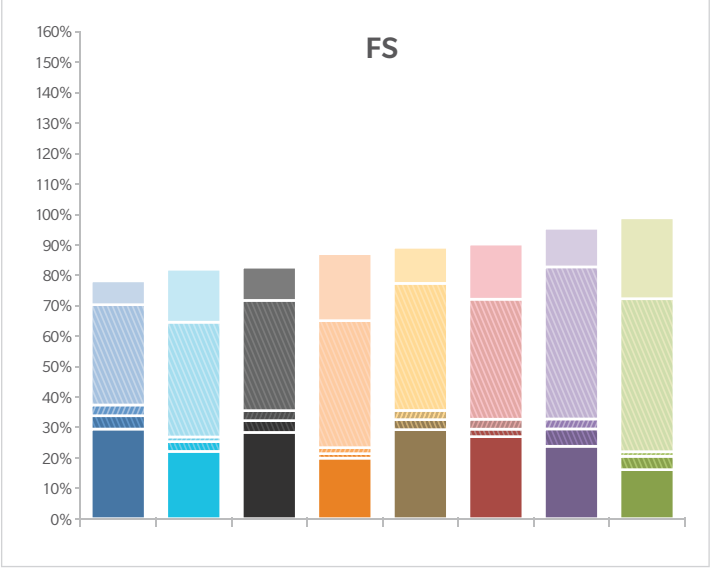
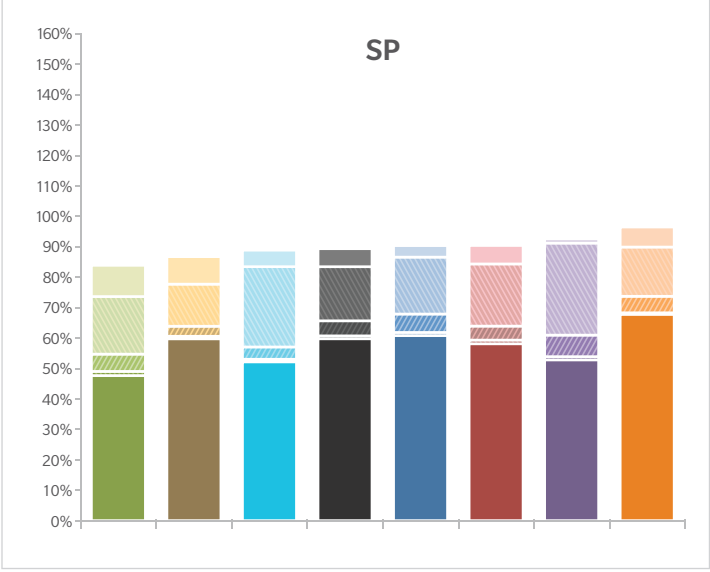
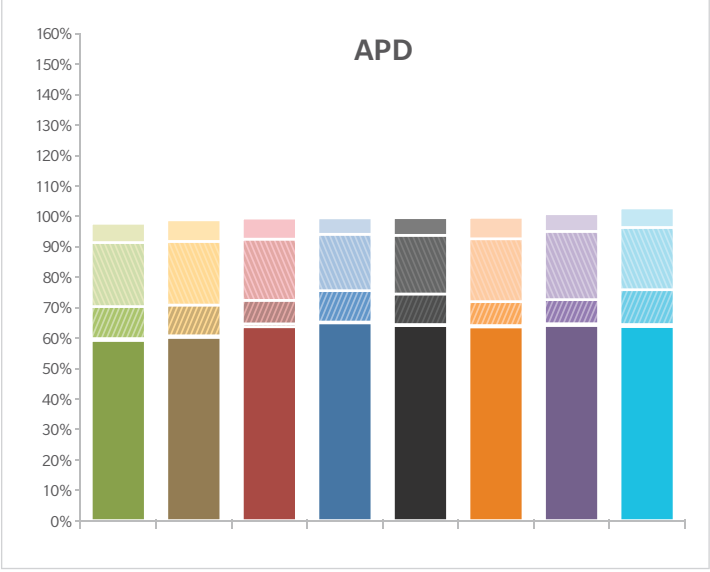
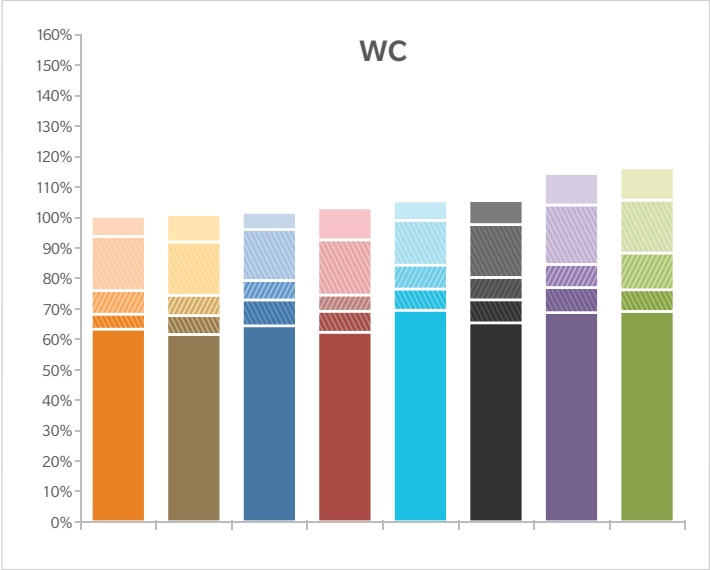
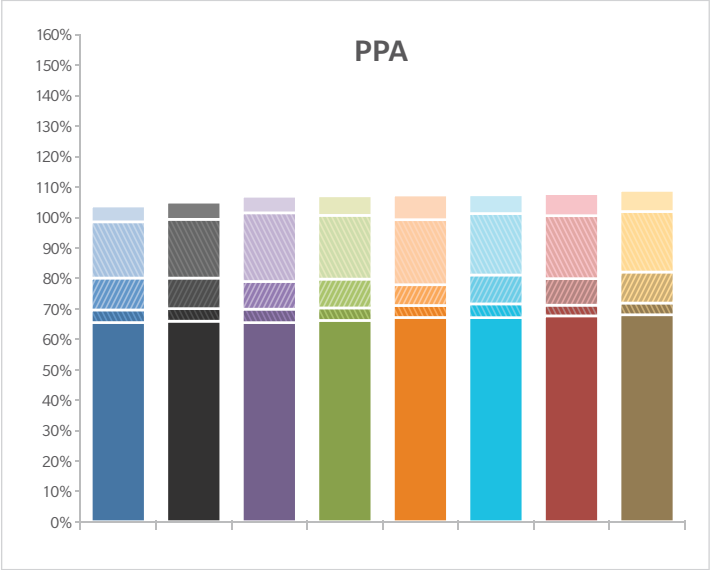
Source: Guy Carpenter



E6 | COMBINED RATIO SPREAD BY MARKET SEGMENT (CONTINUED)

Midwest Northeast/Atlantic Industry Top 15 Writers National Multi Regional West Southeast/Gulf

Underwriting



Source: Guy Carpenter

2.5 MARKET INEQUALITY

E7 | LORENZ CURVES AND GINI COEFFICIENTS BY LINE OF BUSINESS

Exhibit 7: Explanation

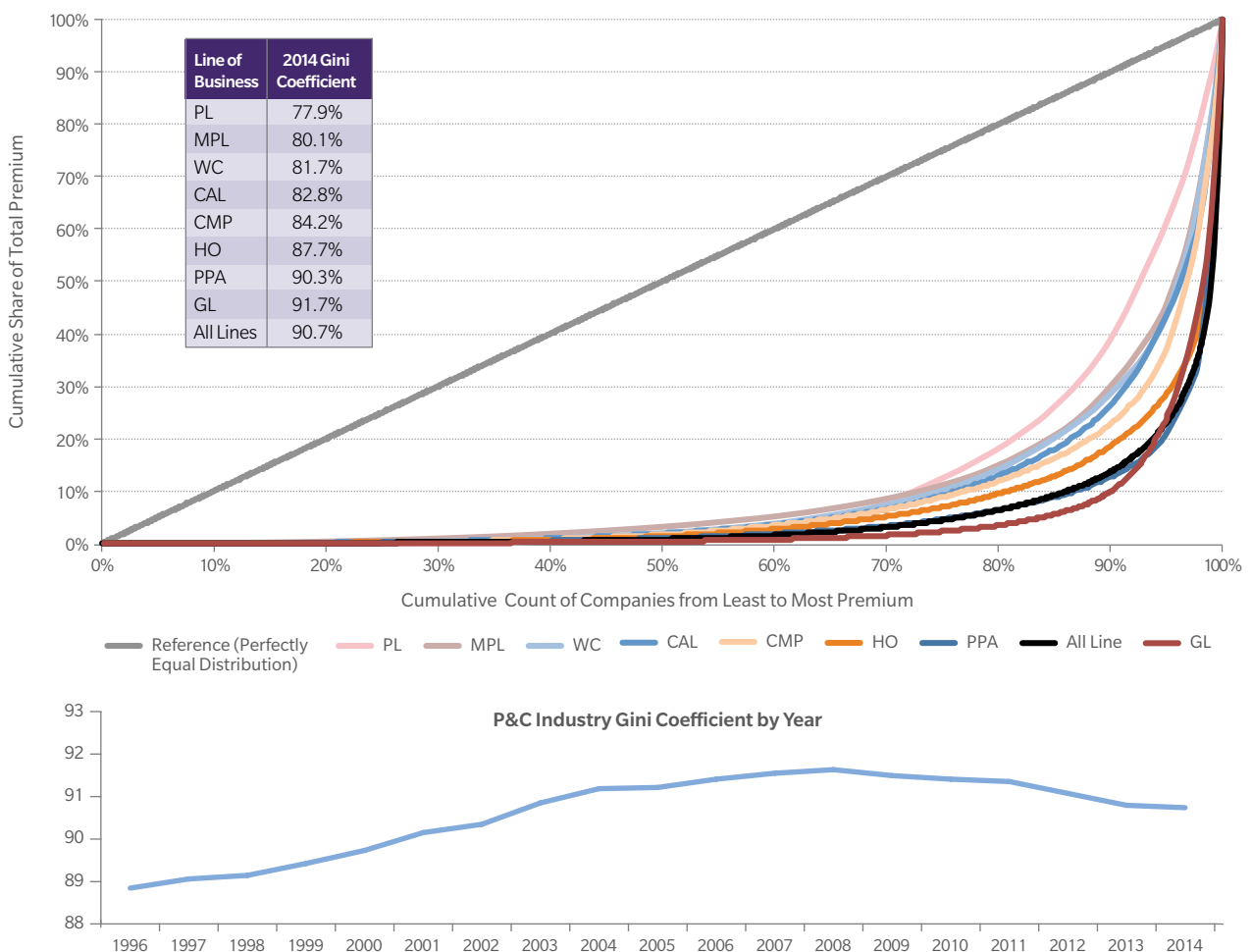
Exhibit 7 depicts a *Lorenz Curve* for eight lines of business as well as for the industry overall. To construct these curves, we sort the companies in ascending order of total direct written premium. We then proceed to count the number of companies and the running total of cumulative premium they write. For example, the black line is the Lorenz curve for all lines combined and it shows that approximately 90 percent of the companies write only 14 percent of the total premium. The remaining 10 percent of the companies, the largest companies in the industry, write the remaining 86 percent.

A reference line illustrates how a Lorenz curve would appear if each company in the industry wrote an equal amount of premium. The *Gini Coefficient* is a simple metric calculating the proportion of total area under the reference line that is outlined by each Lorenz curve. Comparatively unequal marketplaces have larger Gini coefficients, which mean that they are dominated by fewer and larger companies.

Exhibit 7: Discussion

In general, the P&C industry is very unequal and exhibits very high Gini coefficients. Certain pure liability lines such as products liability and medical professional liability are comparatively equal and present competitive opportunities for smaller carriers. Indeed, we saw in Exhibit 6 that regional companies are competing well in these lines for profitability as well.

The Gini coefficient for the entire industry has trended downward since a high in 2008 at 91.6 percent, demonstrating that the current environment is conducive to market growth for smaller carriers. We have confirmed the existence of this trend even when making corrections for mergers and acquisitions.



Source: Guy Carpenter

2.6 EMPIRICAL RISK AND RETURN

E8 | UNDERWRITING RETURN, VOLATILITY, AND PREMIUM SIZE SCATTERPLOT

Mean loss ratios computed over period from 2010 to 2014

Volatility estimated from accident years 2005 to 2014

Exhibit 8: Explanation

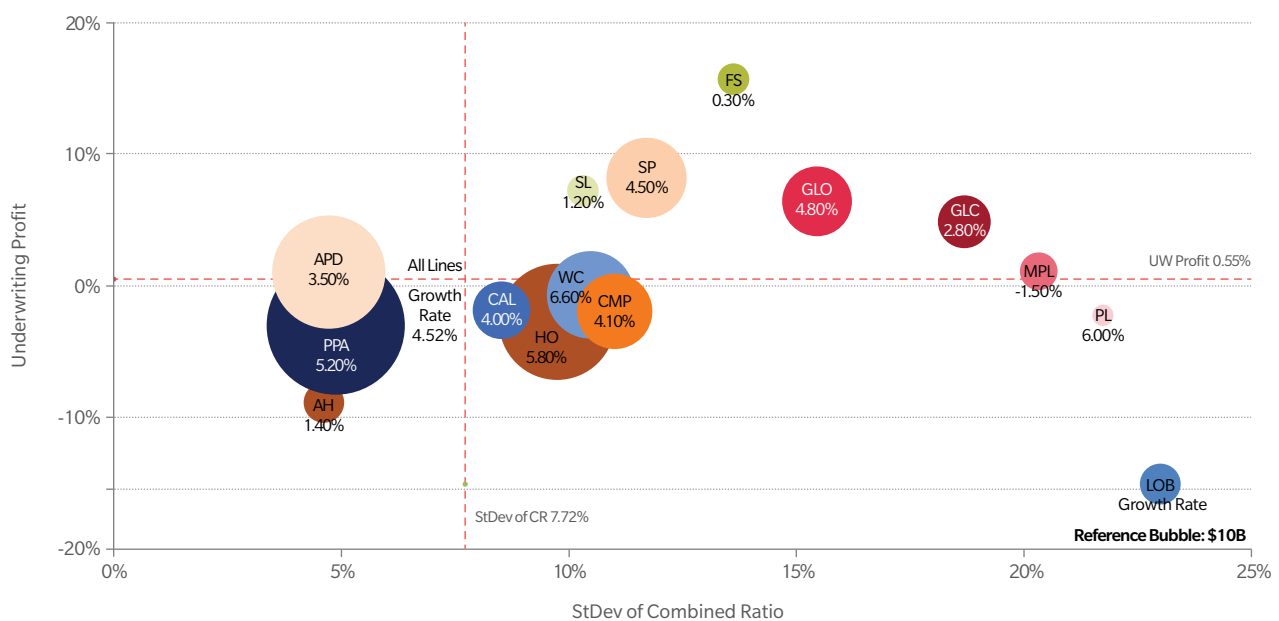
Exhibit 8 plots average underwriting return, as a percentage of earned premium dollars, against historical volatility for each line of business. The size of each bubble corresponds to the total premium earned in each line of business and the percentage in each label represents the premium growth rate over the past year.

Exhibit 8: Discussion

This scatterplot presents one perspective for comparing risk versus return between lines of business: the historical view. As we saw in Table 5, the pure liability lines (general liability, products liability, medical professional liability) have experienced the most volatility since 1980 due to adverse experience in the early 1980s and in the late 1990s (see Exhibit 2). Even though recent experience has been favorable for these lines, one has to wonder whether the profit margins are sufficient comparison to both the historical risk as well as the present risk of accelerating loss inflation.

For carriers that are able to write homeowners and commercial multiple peril profitably (despite overall industry experience), one has to interpret this exhibit with healthy skepticism. These lines are exposed to natural perils and the true range of potential results is not extant in the loss history. It is difficult for an individual company to draw conclusions from this industry-wide exhibit. However, it highlights the need for both refined understanding of property exposures as well as the reserve development cycle. The former affects the accuracy of the horizontal positioning for homeowners, commercial multiple peril and specialty property, while the latter affects the accuracy of the vertical positioning for general liability, products liability and medical professional liability. The complexity of this comparison should be properly reflected in a multiple-year economic capital model for a company's individual business profile.

For a risk and return scatterplot by line of business, please refer to E22 in the appendix.



Source: Guy Carpenter

2.7 FREQUENCY AND SEVERITY TRENDS

E9 | FREQUENCY AND SEVERITY TRENDS

Claim frequency and severity since 1995

Supplemented by macroeconomic data for estimates of exposure

Exhibit 9: Explanation

Exhibit 9 combines loss experience and claim counts from the industry statutory database with macroeconomic proxies for insured exposure base. With this combined data we present standard actuarial measures by line of business: frequency (claims per exposure unit) and severity (loss dollars per claim). Trends over time reflect changes to the pure premium (expected loss dollars per exposure unit) for which insurance policies are purchased.

As noted in the table, we cite various sources for the exposure base proxies:

- **BEA:** U.S. Bureau of Economic Analysis, Department of Commerce
- **CPS:** U.S. Census Bureau, Current Population Survey/Housing Vacancy Survey, Series H-111
- **BLS:** U.S. Bureau of Labor Statistics, Labor Force Statistics, Department of Labor
- **DOT:** U.S. Department of Transportation RITA (Research and Innovative Technology Administration), Bureau of Transportation Statistics
- **EIA:** U.S. Energy Information Administration, Independent Statistics and Analysis.

These proxies are not perfect measures of insured exposure base, but nevertheless provide insightful views on long term trends in the loss experience.

Exhibit 9: Discussion

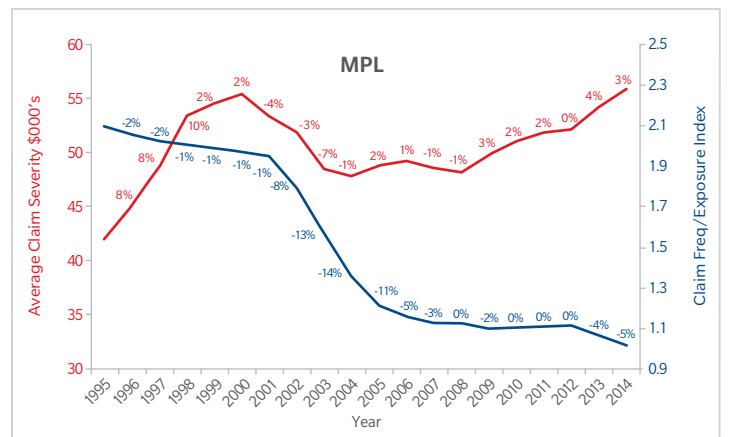
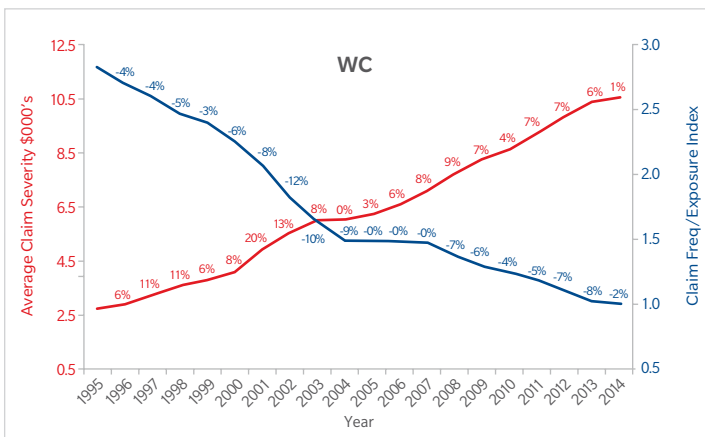
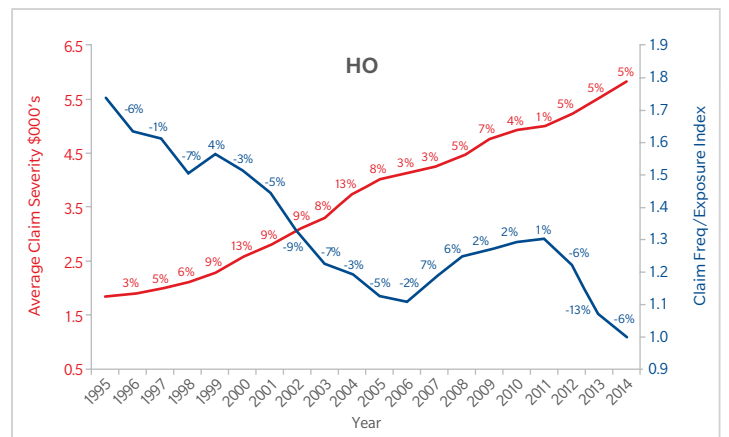
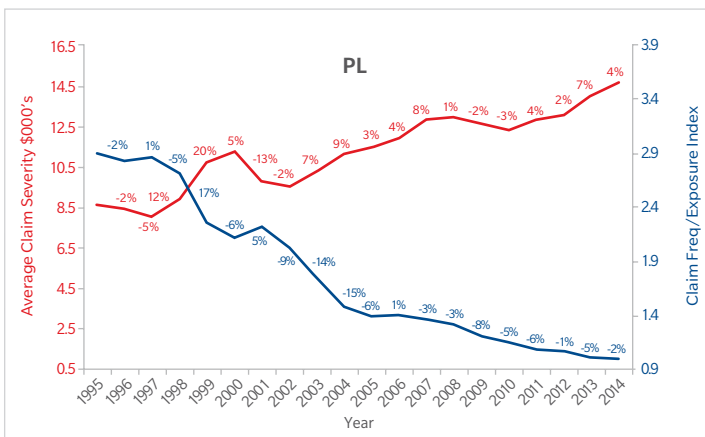
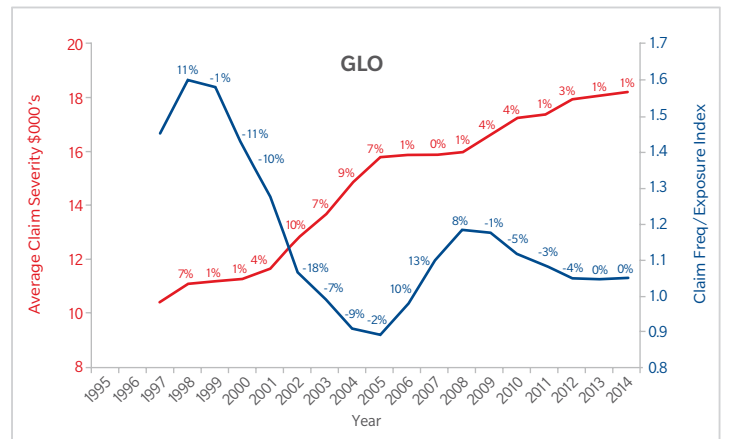
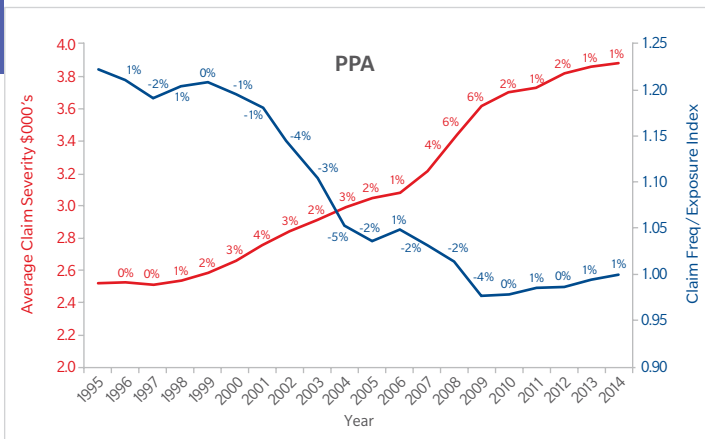
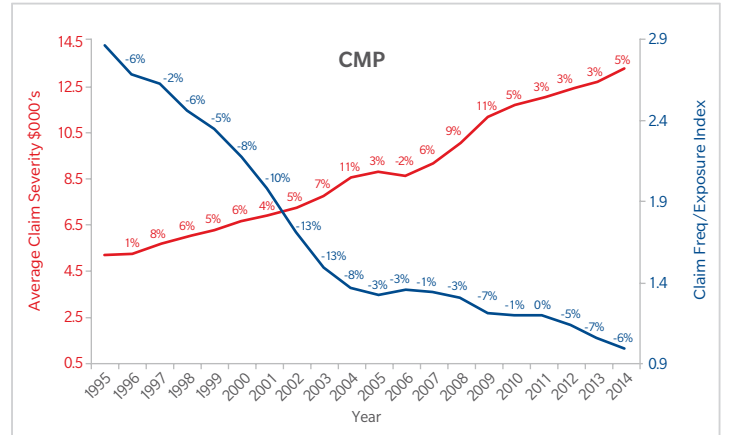
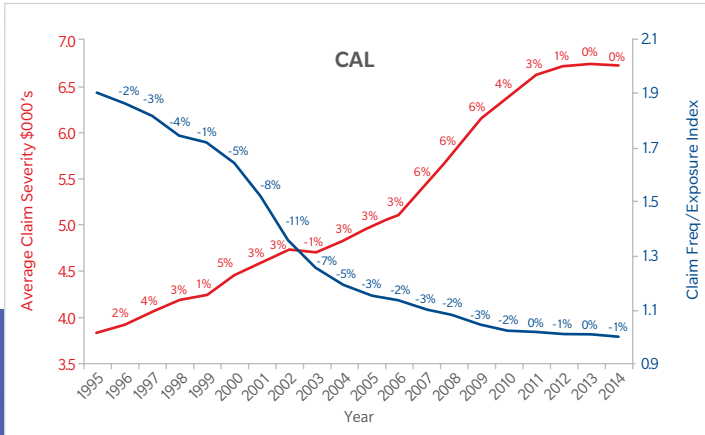
In general, industry pure premium for the last two decades has shifted towards fewer, more expensive claims in two ways. First, claims have become more expensive. Significant growth in claim severity arose at the turn of the millennium due to accelerated medical inflation and utilization and has continued at a slower but positive rate since. Second, frequency trends have generally been negative. Improvements in technology and infrastructure (such as workplace safety programs affecting workers compensation and improved roads affecting private passenger auto) have led to fewer claims per exposure unit.

While the trend toward lower claim frequency seems to have stabilized in recent years for auto insurance policies, it continues at a significant pace for the long-tailed casualty lines. These lines (general liability, medical professional liability and products liability) have the highest severities as they do not include property or indemnity coverages.

Line of Business	Avg Claim Severity	Severity Trend	Frequency Trend	Exposure Base
	2012-2014	2009-2014	2009-2014	
CAL	6.7	1.85%	-0.86%	EIA: Gallons of diesel fuels for highway use
CMP	12.7	3.51%	-4.00%	BEA: Personal Consumption Quantity Index - Goods & Services
GLO	18.2	1.87%	-2.41%	BEA: Personal Consumption Quantity Index - Goods & Services
HO	5.5	4.10%	-4.65%	CPS: Number of Owner Occupied Housing Units
MPL	54.0	2.35%	-1.61%	BEA: Personal Consumption Quantity Index - Healthcare Services
PPA	3.8	1.43%	0.46%	DOT: Number of Road Miles Traveled
PL	13.9	2.96%	-3.99%	BEA: Personal Consumption Quantity Index - Goods
WC	10.2	4.96%	-5.02%	BLS: Number of Employed Workers

Source: Guy Carpenter

E9 | FREQUENCY AND SEVERITY TRENDS (CONTINUED)





III. RESERVE DEVELOPMENT RISK

3.1 INTRODUCTION

The gray lines in Exhibit 2, particularly those for the lines of business with wide historical range, illustrate an obvious truth: ultimately claims will be paid and accounted for, regardless of current profitability views. We will see in this section that the empirical volatility in claims reserves is closely correlated with claims duration. We do not opine on the adequacy of the industry's current reserves but we do note that current conditions and trends broadcast a need for careful attention. These statistics serve as empirical reminders of the potential magnitude of the risk.

3.2 INDUSTRY RISK IN TOTAL

T6 | ONE CALENDAR YEAR DEVELOPMENT BY LINE OF BUSINESS For groups of ten accident years, net of reinsurance

Table 6: Explanation

Table 6 compares the potential for one-year adverse development in claims reserves between lines of business based on industry experience since 1980. We compute the *One Calendar Year Development* across that time period using groups of 10 consecutive accident years at a time. This metric measures the change in the booked reserve beyond what was expected between 12/XX to 12/XX+1. For example, we calculate:

$$\text{One Calendar Year Development} = \frac{\text{Reserve at 12/2014} + \text{Paid During 2014} - \text{Reserve at 12/2013}}{\text{Reserve at 12/2013}}$$

Where the reserve at 12/2014 is the total reserve for prior Accident Years 2004 to 2013 and the paid during 2014 is also for prior accident years 2004 to 2013.

We repeat this calculation for all periods 12/2013, 12/2012 . . . to 12/1989 to produce 25 measures of One Calendar Year Development for each line of business. Table 6 presents basic statistics from that array of measures.

Table 6: Discussion

Exhibit 10 makes it clear that the statistics from 1980 to 2014 provide a robust view of several peaks and troughs in the reserve development cycle. Column (1) shows that *on average*, across the cyclical pattern of reserve development, reserves have been released rather than increased for all lines of business. This observation may be surprising, yet it underscores the existence of the benign side of volatility.

It is also interesting to note that claims-made reserve experience for all three relevant lines of business (general liability, medical professional liability and products liability) has been more volatile than the experience for occurrence-based reserves. This suggests that the driving factor for severe adverse development potential is the exposure of existing claims to unanticipated medical cost inflation rather than the reporting of incurred-but-unknown claims. Upon closer inspection, we also see in column (3) that significant reserve decreases have been larger for claims made business, contributing volatility to the metrics via benign development.

Line of Business	Mean (1)	CV = StDev/Mean (2)	Minimum (3)	Maximum (4)
CAL	0%	3%	-4%	8%
CMP	-1%	3%	-6%	4%
GLC	-1%	7%	-10%	17%
GLO	-1%	3%	-5%	6%
HO	-4%	6%	-11%	11%
MPLC	-4%	6%	-11%	12%
MPLO	-3%	5%	-8%	9%
PPA	-4%	3%	-8%	-1%
PLC	-2%	8%	-19%	16%
PLO	0%	5%	-9%	10%
WC	-1%	3%	-5%	6%

Source: Guy Carpenter

T7 | ULTIMATE RESERVE DEVELOPMENT BY LINE OF BUSINESS

For groups of ten accident years, net of reinsurance

Table 7: Explanation

Table 7 compares the potential for ultimate adverse development in claims reserves between lines of business based on industry experience since 1980. We compute the *Ultimate Reserve Development* across that time period using groups of 10 consecutive accident years at a time. This metric measures the change in the booked reserve over nine development years, from 12/XX to 12/XX+9. For example, for 2005 we calculate:

$$\text{Ultimate Reserve Development} = \frac{\text{Sum (Booked Ultimate Loss at 120 Months – Total Paid Loss at 12/2005)}}{\text{Reserve at 12/2005}}$$

Where the summation is for all values for Accident Years 1996 to 2005.²

When we repeat this calculation as of 12/2004, the values are for accident years 1995 to 2004. We perform this calculation for all periods 12/2005, 12/2004 . . . to 12/1989 to produce 17 measures of Ultimate Reserve Development for each line of business. Table 7 presents basic statistics from that array.

It is important to emphasize that because the statistic requires 10 development years to compute, the Ultimate Reserve Development that will emerge for accident years 2006 to present is not included in the metric.

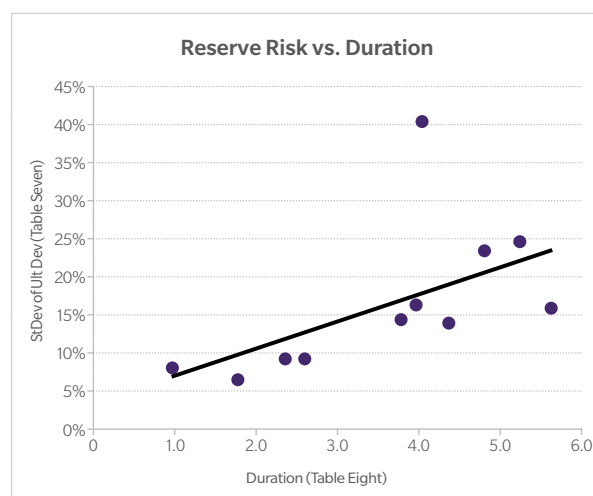
Table 7: Discussion

In Table 6 we saw that One Calendar Year Development has averaged to a reserve release rather than a reserve increase since 1980. In this table, in contrast we see that certain lines of business (commercial multiple peril, general liability (claims made), products liability (occurrence) and workers compensation) have averaged to an ultimate increase. As expected, personal lines, commercial multiple peril and commercial auto liability have shown the least volatility in Ultimate Reserve Development. In fact, for private passenger auto liability ultimate reserve development was not adverse for any cohort of 10 accident years across this experience period.

The volatility in Ultimate Reserve Development is directly related to claims duration (shown in Table 8). The supplemental scatterplot illustrates the strong relationship and can serve as a benchmarking reference when validating volatility assumptions for more bespoke portfolios in economic capital models:

Line of Business	Mean (1)	Standard Dev (2)	Minimum (3)	Maximum (4)
CAL	0.99	9%	0.88	1.16
CMP	1.02	9%	0.91	1.21
GLC	1.16	41%	0.67	1.65
GLO	0.98	14%	0.85	1.25
HO	0.90	8%	0.77	1.11
MPLC	0.92	16%	0.71	1.20
MPLO	0.90	16%	0.68	1.14
PPA	0.89	7%	0.79	0.99
PLC	0.97	23%	0.62	1.43
PLO	1.21	24%	0.99	1.58
WC	1.02	14%	0.82	1.22

Source: Guy Carpenter



In general, history suggests that low-duration lines of business possess an intrinsic ultimate reserve volatility of between 5 percent and 10 percent, and each additional year of duration beyond one contributes about 3 percent volatility. General liability (claims made) is the lone outlier, with experienced volatility of 35 percent against fitted volatility of 18 percent (based on duration of 4.0).

2. It is assumed the booked ultimate loss does not change for the oldest accident year.

E10 | ALL LINES RESERVE DEVELOPMENT CYCLE

By accident year, all ten year Schedule P lines combined, net of reinsurance

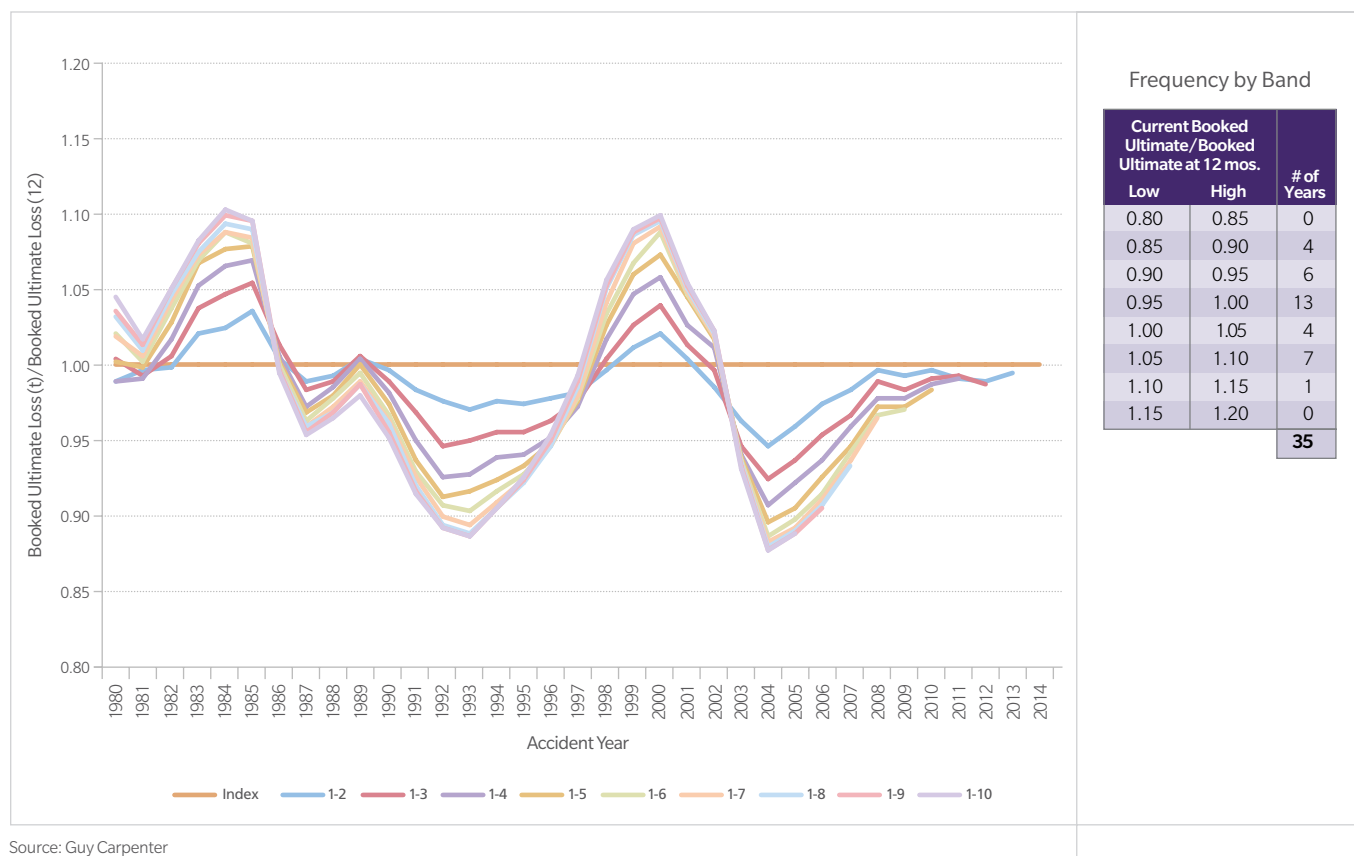
Exhibit 10: Explanation

The reserve for a particular accident year is re-estimated periodically. Exhibit 10 illustrates these re-estimates, where each line is the booked ultimate loss at subsequently older evaluations, indexed on the initial booked ultimate loss at 12 months of development. For example, after 10 years of re-estimates, the booked ultimate loss for accident year 2000 was 10 percent higher than the initial estimate of the ultimate loss booked at 12/31/2000. In this exhibit all 10-year Schedule P lines are combined since accident year 1980.

Exhibit 10: Discussion

In 2014, the reserve releases to which the industry had been accustomed in recent years clearly slowed. For Accident Year 2013, reserves were released by approximately 0.5 percent, the smallest release of the previous accident year since 2010. Accident Years 2012 and 2011 experienced no change at all and older accident years all experienced benign development, but less than 0.5 percent.

Technical analysis of this chart would suggest the possibility of adverse reserve development in the near future. Time elapsed between significant peaks and troughs (for example 1984, 1993, 2000 and 2004) has averaged at approximately seven years and Accident Year 2014 is 10 years removed from the most recent trough. The benign development of Accident Year 2013 is not necessarily predictive of future releases, as the chart indicates that Accident Years 1997 and 1998 initially saw releases before the inadequacy was apparent and reserves began their yearly bleed upward. In the current environment of low overall inflation, but healthy growth in the medical sector of the U.S. economy, the prospect of adverse reserve development in new accident years is becoming a relevant going concern.



3.3 RISK BY LINE OF BUSINESS

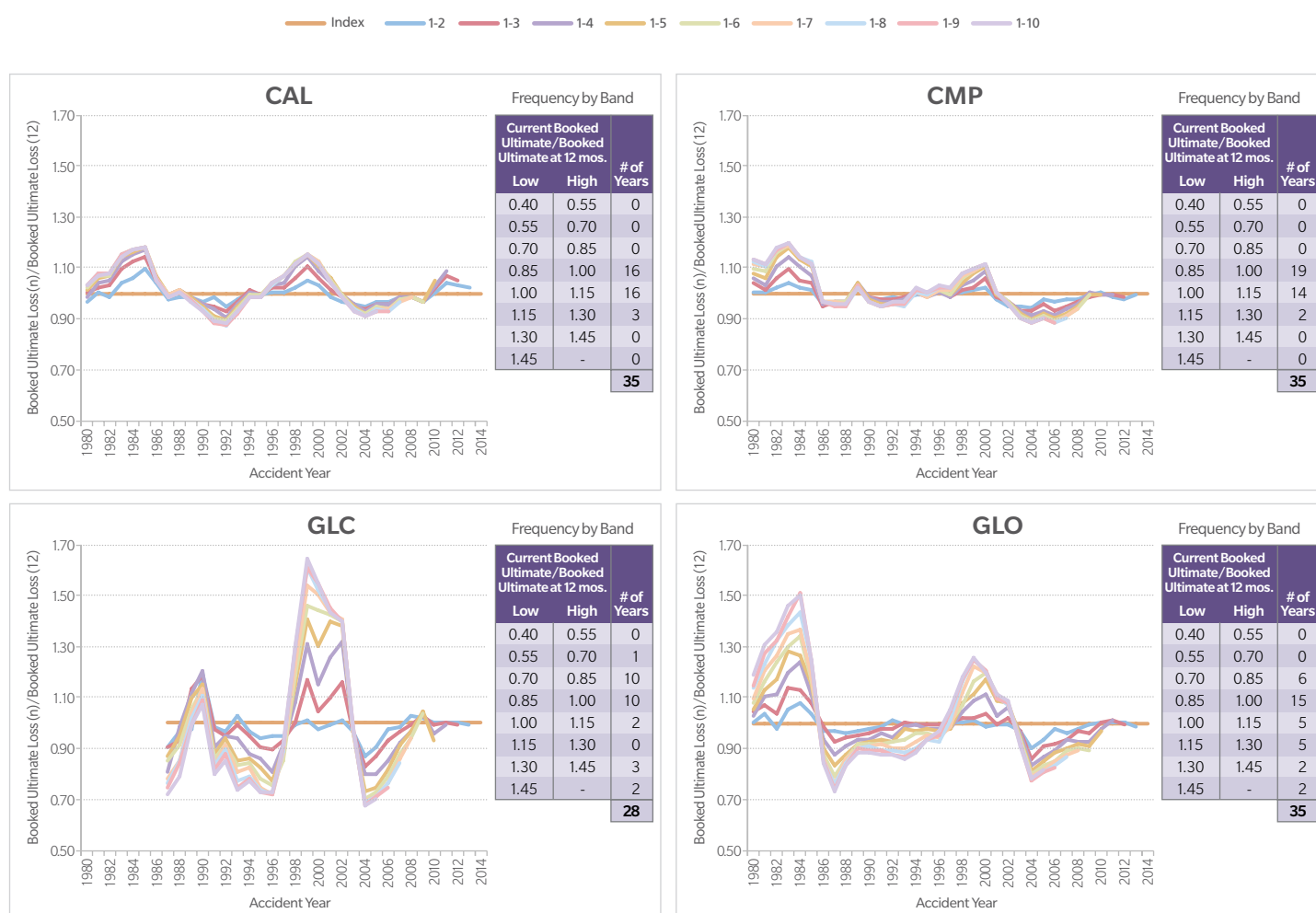
E11 | RESERVE DEVELOPMENT CYCLE BY LINE OF BUSINESS By accident year, net of reinsurance

Exhibit 11: Explanation

Exhibit 11 illustrates the successive evaluation of ultimate losses at yearly intervals for each accident year since 1980, similar to that shown in Exhibit 10 but expanded by line of business detail.

Exhibit 11: Discussion

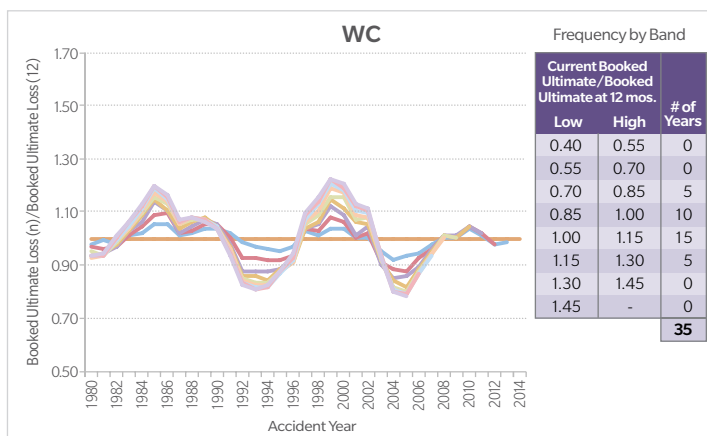
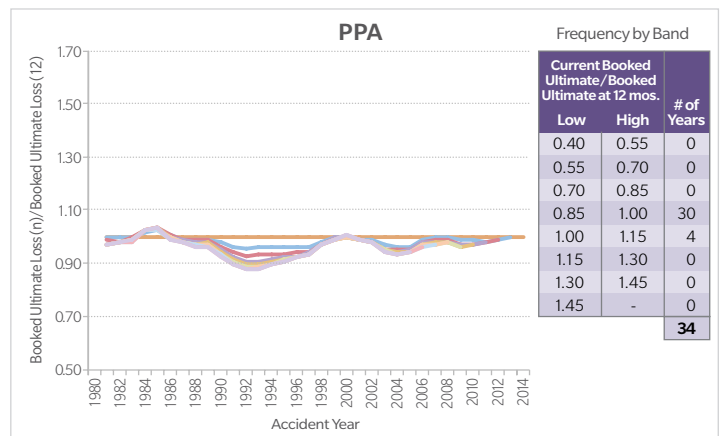
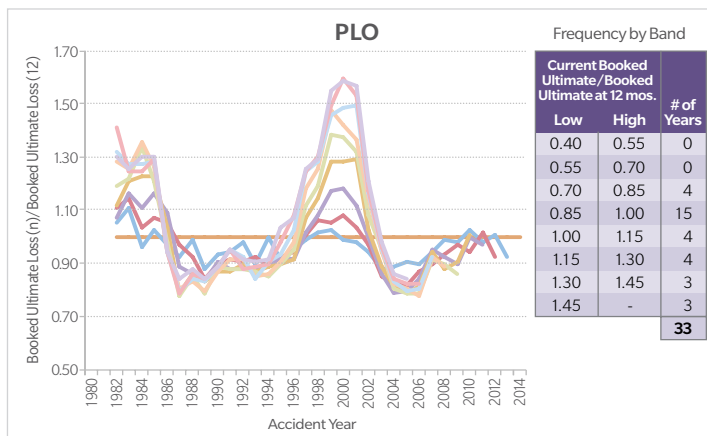
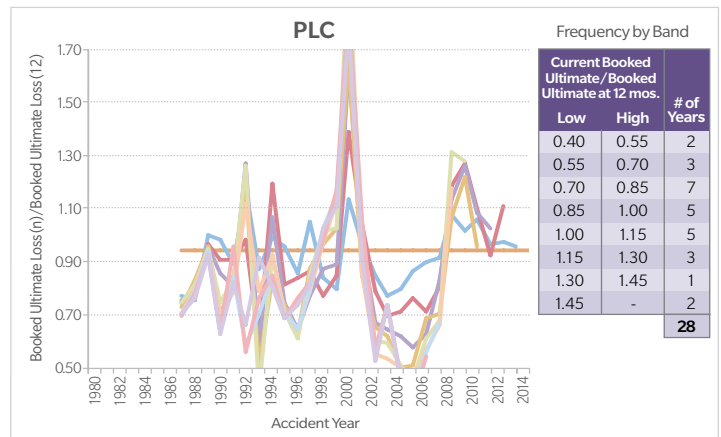
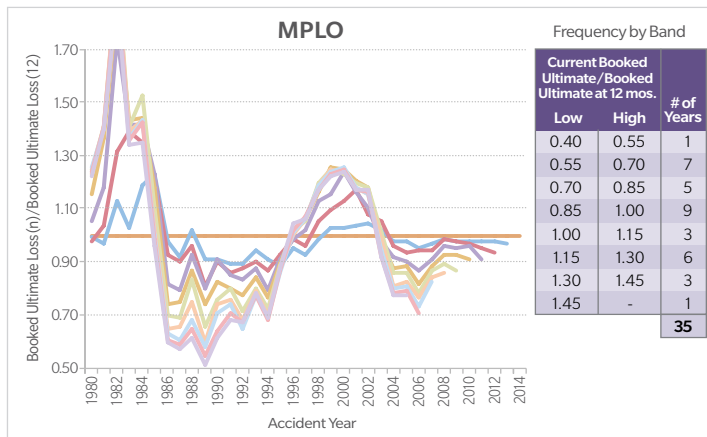
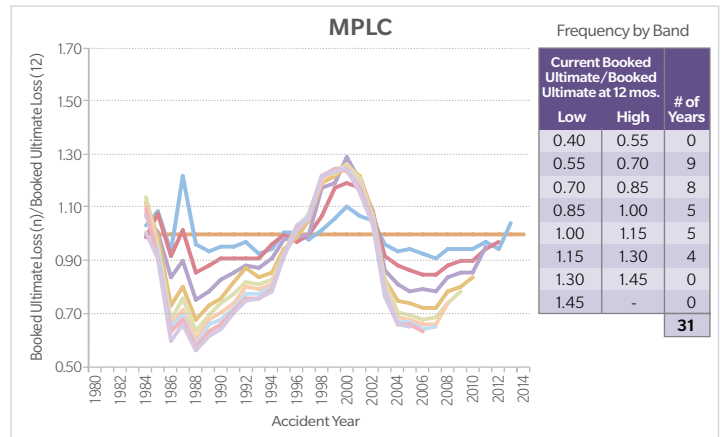
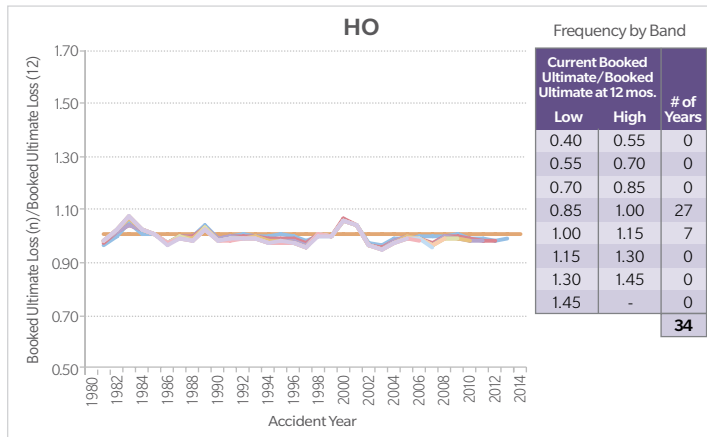
These exhibits provide a time-dependent illustration consistent with the volatility measures shown in column 2 of Tables 6 and 7. Whereas most lines of business exhibited very modest reserve releases in 2014, recent accident years for commercial auto liability experienced between 1 percent and 3 percent adverse development in 2014. This trend is still somewhat unique to commercial auto liability and is noteworthy given recent rate increases in the line and the expectations (based on Schedule P) that results are improving. Exhibit 2 depicts the conspicuous, emerging development in red.



Source: Guy Carpenter

E11 | RESERVE DEVELOPMENT CYCLE BY LINE OF BUSINESS (CONTINUED)

Index 1-2 1-3 1-4 1-5 1-6 1-7 1-8 1-9 1-10



3.4 RISK BY MARKET SEGMENT

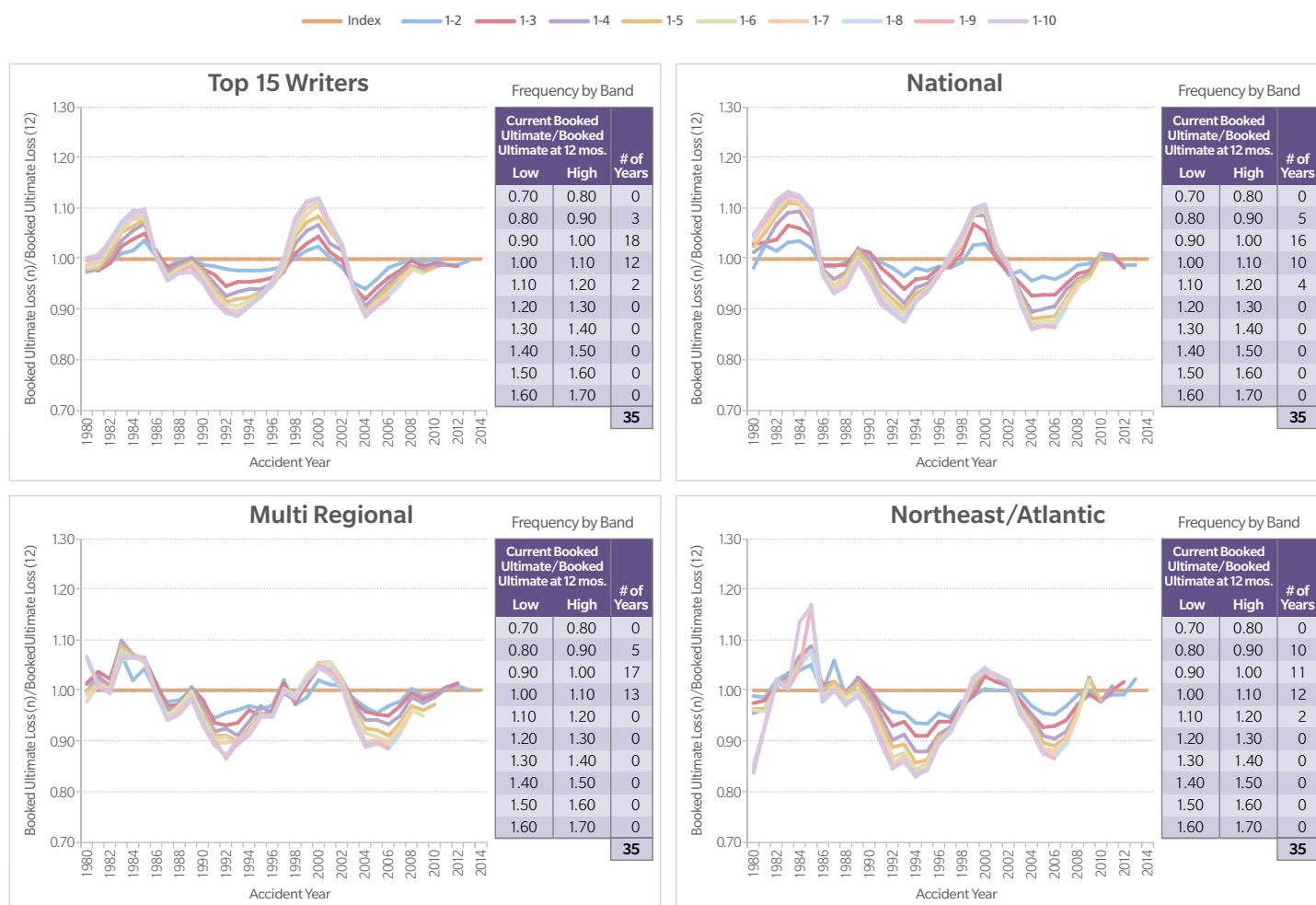
E12 | RESERVE DEVELOPMENT CYCLE BY MARKET SEGMENT By accident year, net of reinsurance

Exhibit 12: Explanation

Exhibit 12 illustrates the successive evaluation of ultimate losses at yearly intervals for each accident year since 1980, similar to that shown in Exhibit 10 but expanded by market segment detail.

Exhibit 12: Discussion

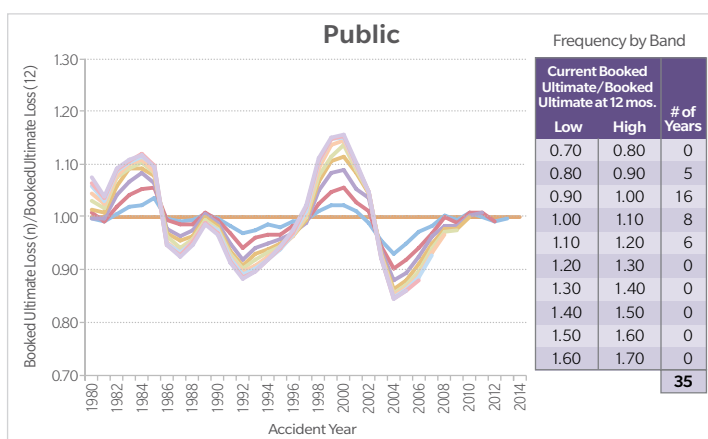
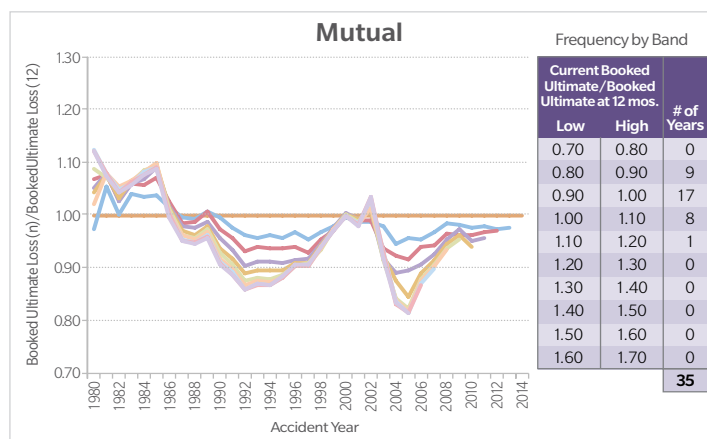
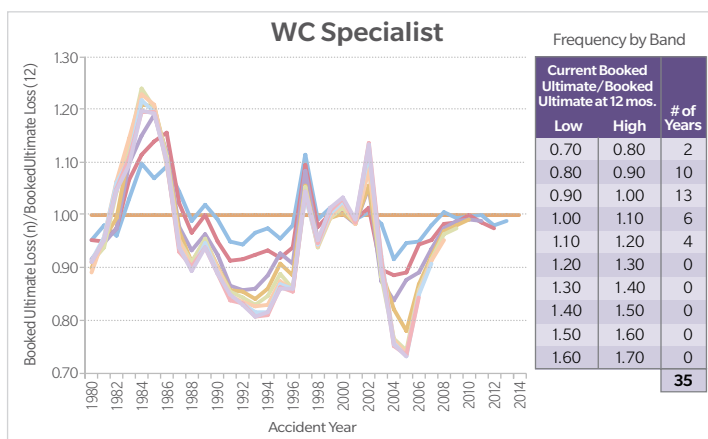
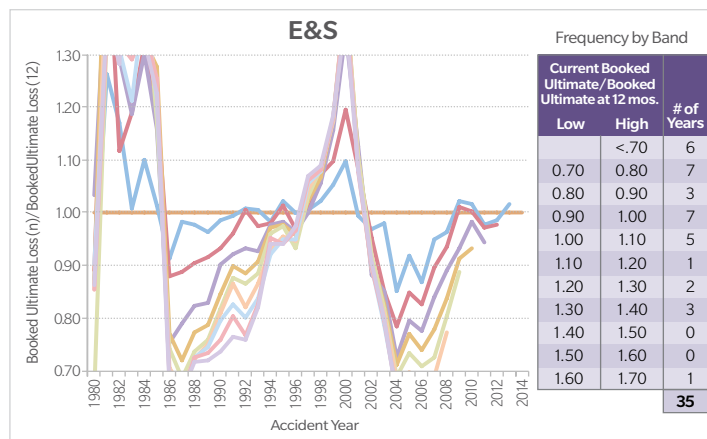
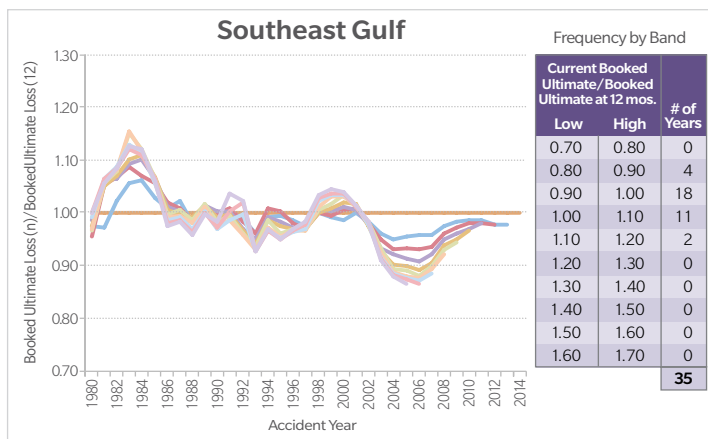
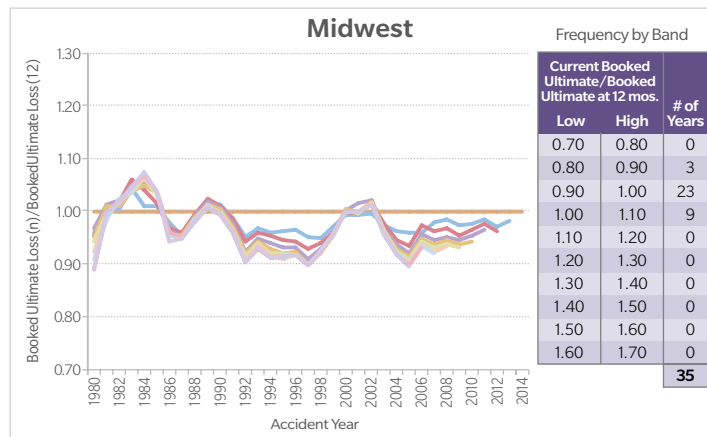
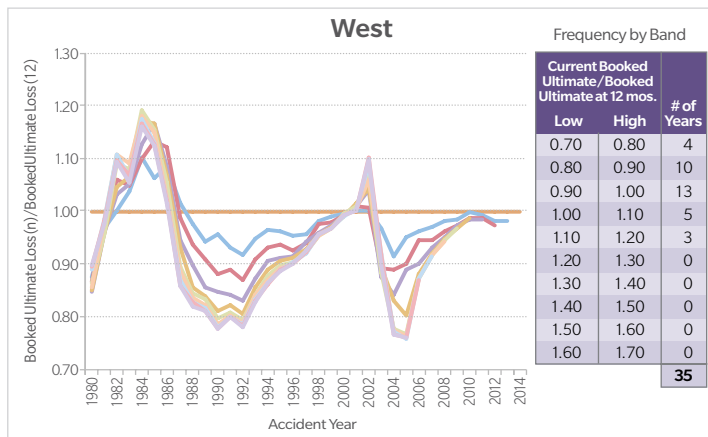
This exhibit presents an impressive contrast for reserve development experience between large and small carriers. Comparison of the charts for the Top 15 and National segments to those of the four regional market segments reveals that not only was the adverse development more severe for the former group between accident years 1999 and 2001, but the benign reserve releases were larger for the latter. The intense competition and growth appetite that led to increasing market inequality until 2008 (see Exhibit 7) was coupled with reluctance to recognize emerging claims trends during the first few years of the millennium for the large carriers. A similar contrast becomes evident when comparing the public segment to the mutual segment, where adverse reserve development has hardly been experienced at all (in aggregate) since the mid-1980s.



Source: Guy Carpenter

E12 | RESERVE DEVELOPMENT CYCLE BY MARKET SEGMENT (CONTINUED)

Index 1-2 1-3 1-4 1-5 1-6 1-7 1-8 1-9 1-10





IV. UNCERTAIN LIABILITY DURATION

4.1 INTRODUCTION

Every economic capital model requires treatment of the uncertain timing in claims payments. It is important to consider liability duration in the context of company liquidity and interest rate risk management. The industry fixed income asset duration exceeds the duration of even the longest tailed statutory casualty line, meaning most companies rely on cash flows from their current underwriting operations to finance all or a portion of the payment of losses. We also recognize (see Exhibit 13) that wrestling with a payment pattern often invites parameter risk for very long tailed lines of business, where incremental payment percentages need to be expressed as ratios to a projected rather than a final, irrefutable denominator.

4.2 MEAN PAYMENT PATTERN AND VOLATILITY

T8 | MEAN PAYMENT PATTERN AND DURATION Industry in aggregate, net of reinsurance

Table 8: Explanation

Table 8 calculates the percentage of the ultimate loss that is paid in each development period, for a single accident year. Table 8 also estimates the undiscounted Macaulay Duration for each line of business. Duration is calculated using projections of payment pattern consistent with the assumptions described in Section 1.2 (Payment Patterns Beyond Ten Years).

$$\text{Increment} = \frac{\text{Paid Loss in Twelve Month Period for an Accident Year}}{\text{Carried Ultimate Loss at 120 months for an Accident Year}}$$

$$\text{Duration} = \frac{\text{Sum Across Increments [Product of (Increment Maturity in Months - 6) and Increment]}}{12}$$

Table 8: Discussion

The duration and payment patterns shown here are consistent with last year's statistics. Overall duration is similar and duration for individual lines did not change significantly, with the exception of medical professional liability (occurrence). This line of business is the longest tailed in the set this year at 5.6 years duration.

While the industry fixed income asset duration has trended downward for more than a decade (see Exhibit 20), it is still currently longer than even medical professional liability (occurrence) at approximately 6.3 years. The longer duration of fixed income assets implies that an increase in interest rates could reduce asset values more than it would reduce the present value of claim liabilities.

The present data suggest (in comparison with last year) that the gap between claims made and occurrence claims triggers has shortened for general liability and products liability from approximately one year to a half year, whereas for medical professional liability it widened from approximately one year to one-and-a-half years.

Line of Business	Duration (in years)	Development Period (in months)										
		0-12	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120+
CAL	2.6	23%	24%	20%	14%	8%	5%	2%	1%	1%	0%	2%
CMP	2.4	37%	22%	11%	9%	6%	4%	3%	2%	1%	1%	3%
GLC	4.0	10%	17%	19%	16%	12%	7%	5%	4%	3%	2%	6%
GLO	4.4	11%	13%	15%	15%	11%	9%	6%	4%	3%	2%	12%
HO	1.0	70%	21%	4%	2%	1%	1%	0%	0%	0%	0%	0%
MPLC	4.0	4%	17%	23%	17%	12%	8%	5%	3%	2%	1%	6%
MPLO	5.6	1%	5%	12%	17%	16%	12%	9%	6%	4%	3%	15%
PPA	1.8	38%	31%	14%	8%	4%	2%	1%	0%	0%	0%	1%
PLC	4.8	5%	18%	18%	15%	11%	8%	5%	4%	3%	2%	12%
PLO	5.2	4%	6%	12%	15%	13%	11%	8%	7%	5%	4%	15%
WC	3.8	21%	25%	14%	10%	5%	4%	3%	2%	2%	1%	13%
Overall	2.4	35%	25%	13%	9%	5%	4%	2%	1%	1%	1%	4%

Source: Guy Carpenter

T9 | COEFFICIENT OF VARIATION OF PAYMENT PATTERN INCREMENTS

Industry in aggregate, net of reinsurance

Table 9: Explanation

Table 9 presents the coefficient of variation of incremental loss that is paid in each development period, for a single accident year:

$$\text{Incremental CV} = \frac{\text{Standard Deviation of Incremental Percentage for a Development Period}}{\text{Mean Incremental Percentage from Table 8}}$$

When interpreting Table 9, note that because each CV is a ratio to the mean for that increment, the value in dollars of the volatility changes across the payment pattern for an individual line of business.

Line of Business	Development Month										
	12	24	36	48	60	72	84	96	108	120	120+
CAL	14%	11%	6%	7%	14%	25%	23%	30%	36%	63%	65%
CMP	7%	12%	12%	9%	15%	18%	19%	61%	19%	22%	19%
GLC	64%	29%	26%	25%	28%	21%	28%	35%	40%	49%	40%
GLO	31%	24%	14%	10%	12%	34%	22%	28%	26%	38%	26%
HO	4%	10%	15%	17%	27%	31%	45%	40%	280%	109%	27%
MPLC	27%	22%	15%	16%	18%	18%	32%	42%	51%	47%	67%
MPLO	34%	23%	20%	13%	17%	19%	15%	20%	28%	33%	49%
PPA	7%	4%	6%	5%	7%	12%	18%	25%	26%	28%	35%
PLC	57%	43%	42%	32%	46%	49%	63%	85%	104%	92%	114%
PLO	38%	26%	16%	13%	9%	12%	18%	19%	26%	32%	21%
WC	8%	7%	8%	48%	13%	17%	23%	17%	21%	23%	27%
Overall	10%	7%	6%	24%	9%	24%	33%	32%	36%	39%	25%

Source: Guy Carpenter

E13 | PAYMENT PATTERN MEAN AND VOLATILITY ILLUSTRATIONS

Industry in aggregate, net of reinsurance

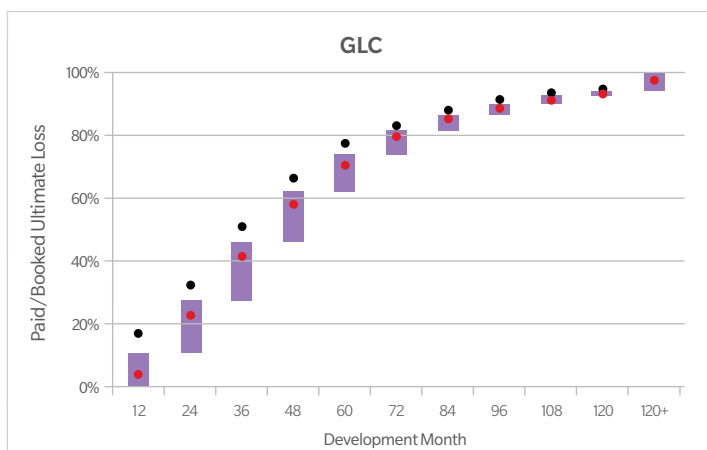
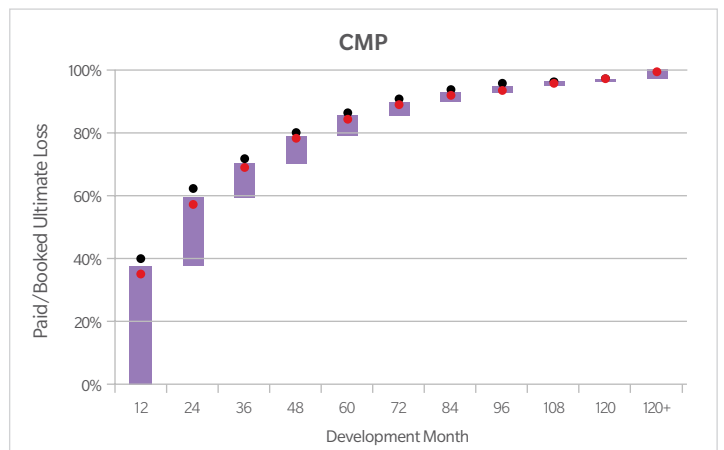
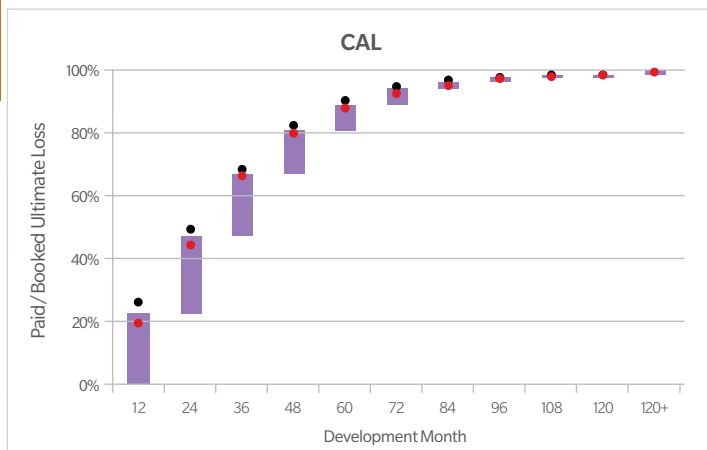
Exhibit 13: Explanation

Each chart in Exhibit 13 illustrates the combined statistics of Tables 8 and 9 for an individual line of business. The accumulation of mean payment pattern increments is depicted in bars and the marks above and below the top of each bar identify the distance spanned by one standard deviation on each side of the mean.

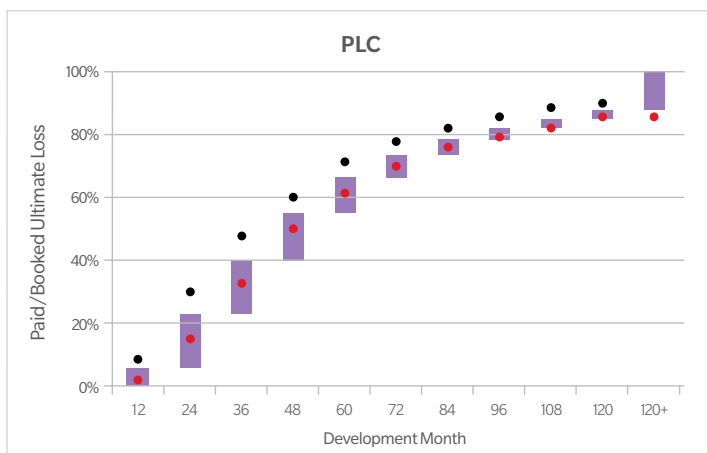
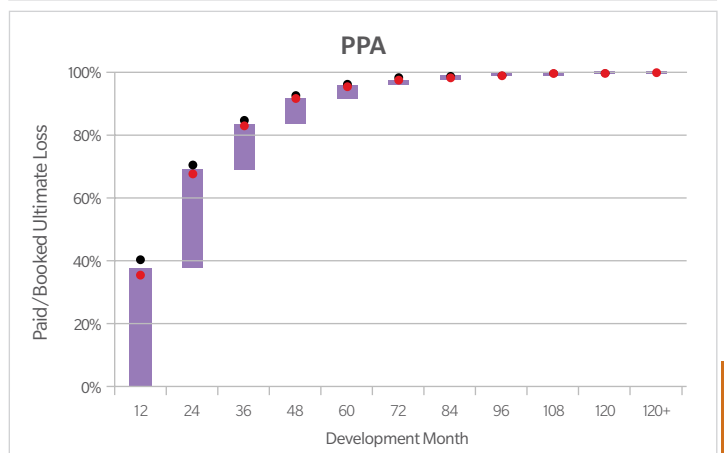
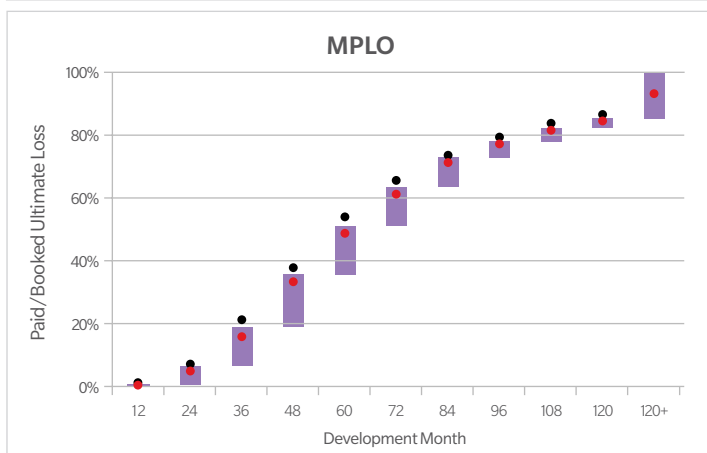
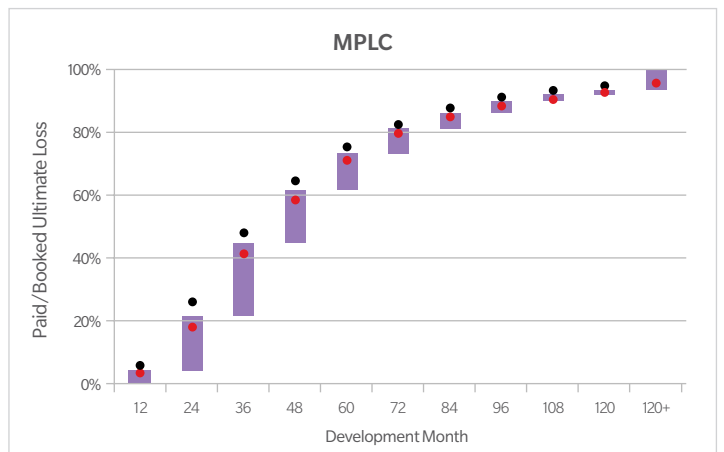
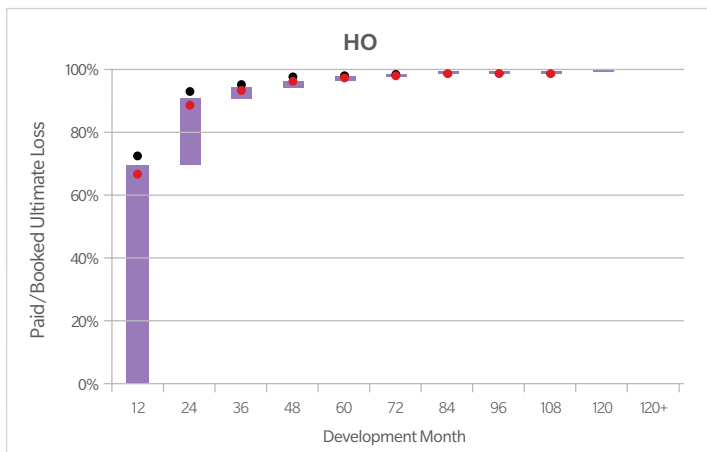
Exhibit 13: Discussion

These charts are a helpful visualization of the payment pattern benchmark statistics. The 120+ development month increment is most significant for products liability (occurrence), medical professional liability (occurrence), workers compensation and general liability (occurrence) in that order. Because we only observe booked ultimate loss at a maximum of 120 months for each accident year, significant amounts in the projected 120+ increment indicate important uncertainty regarding both the timing and amount of payments after 10 years. Of these four lines, workers compensation is weighed down by a larger denominator due to coverage for indemnity benefits, which are relatively short tailed and easy to estimate in comparison with medical benefits. Because most of the loss dollars after 10 years of maturity provide for medical goods and services, the timing and amount of risk after 10 years is more important for workers compensation than in any other line. In other words, if the payment pattern for workers compensation was based only on medical coverage, the 13 percent would be significantly higher and more than that of any other line.

Mean Payment Month +1 Standard Deviation -1 Standard Deviation



Source: Guy Carpenter



Uncertain
Liability Duration



V. CORRELATION CONCERNS

5.1 INTRODUCTION

This section seeks to explore correlation between products and across time in the P&C industry. It results from many common risk drivers between insurance policies, including (but not limited to) geographic concentration, exposure to medical inflation, existence of frequency contagion and vulnerability to competitive pricing pressure. Modeled economic capital requirements are very sensitive to assumptions regarding future correlation, and our Correlation Modeling Index is an extremely practical resource to vet and validate correlation design decisions in your own economic capital model.

5.2 CORRELATION IN ULTIMATE LOSS RATIO

T10 | CORRELATION IN THE ULTIMATE LOSS RATIO BETWEEN LINES OF BUSINESS US industry in aggregate, net of reinsurance, accident years 1987 to 2005 Correlations that are statistically significantly different from zero are shown in bold

Table 10: Explanation

Table 10 details the correlation in the Ultimate Loss Ratio between lines of business. Data considered for these calculations includes Accident Years 1987 to 2005. We cut the time series off at 2005 to avoid underestimating potential adverse development in recent, immature accident years. We also present two additional correlations: the correlation of each line of business with the industry in total and the auto-correlation for each line with itself over time. For example, for commercial auto liability and commercial multiple peril we calculate:

$$\text{[Correlation (CAL, CMP)]} = \frac{E[(LR^{CAL} - \text{Mean}(LR^{CAL})) * (LR^{CMP} - \text{Mean}(LR^{CMP}))]}{(\text{Standard Deviation of } LR^{CAL}) * (\text{Standard Deviation of } LR^{CMP})}$$

Where:

E is the expectation operator

LR^{CMP} is the Actual Ultimate Loss Ratio for CMP

The autocorrelation is a similar calculation except that we measure the loss ratio history for a single line with itself and a lag of one year:

$$\text{[Autocorrelation (CAL)]} = \frac{E[(LR^{CAL,t} - \text{Mean}(LR^{CAL})) * (LR^{CAL,t-1} - \text{Mean}(LR^{CAL}))]}{(\text{Standard Deviation of } LR^{CAL})^2}$$

If an accident year with a high loss ratio is followed by an accident year with another high loss ratio, then a high auto-correlation will be seen in Table 10.

We apply a statistical significance test to the line-by-line correlations to indicate the credibility of each correlation coefficient and show in bold black all correlations that are significant based on a “p” value of .25.

This matrix is positive definite, meaning it can be used in modeling applications using copulas without adjustment.

Table 10: Discussion

This table confirms much of our intuition regarding the insurance system and which risk profiles move in the same direction. Homeowners has exhibited very weak correlations with other lines, the sole exception being commercial multiple peril. Loss experience for both of these lines was affected by similar outbreaks of natural peril activity, most recently in 2011. Private passenger auto liability also correlates with very few lines except commercial auto liability. The longer tail lines exhibit the greatest correlation due to common exposure to medical cost inflation. All lines possess strong momentum in results, as measured by the autocorrelation, with the exception of homeowners. General liability (occurrence) exhibits the strongest correlation to the overall cycle, as measured by its correlation with all lines at 82 percent.

Line of Business	CAL	CMP	GLC	GLO	HO	MPLC	MPLO	PPA	PLC	PLO	WC	Auto-Correlation
CAL	100%											87%
CMP	76%	100%										73%
GLC	54%	56%	100%									82%
GLO	78%	78%	89%	100%								86%
HO	16%	58%	14%	17%	100%							21%
MPLC	74%	83%	76%	94%	21%	100%						90%
MPLO	66%	75%	67%	84%	20%	92%	100%					72%
PPA	42%	2%	15%	10%	15%	-8%	-16%	100%				86%
PLC	54%	55%	59%	71%	24%	61%	44%	30%	100%			26%
PLO	60%	69%	88%	86%	21%	87%	78%	6%	50%	100%		70%
WC	61%	15%	58%	52%	-8%	28%	24%	71%	38%	34%	100%	86%
All Lines	80%	74%	74%	82%	49%	70%	62%	50%	64%	69%	67%	69%

5.3 IMPORTANCE OF MARKET SHARE

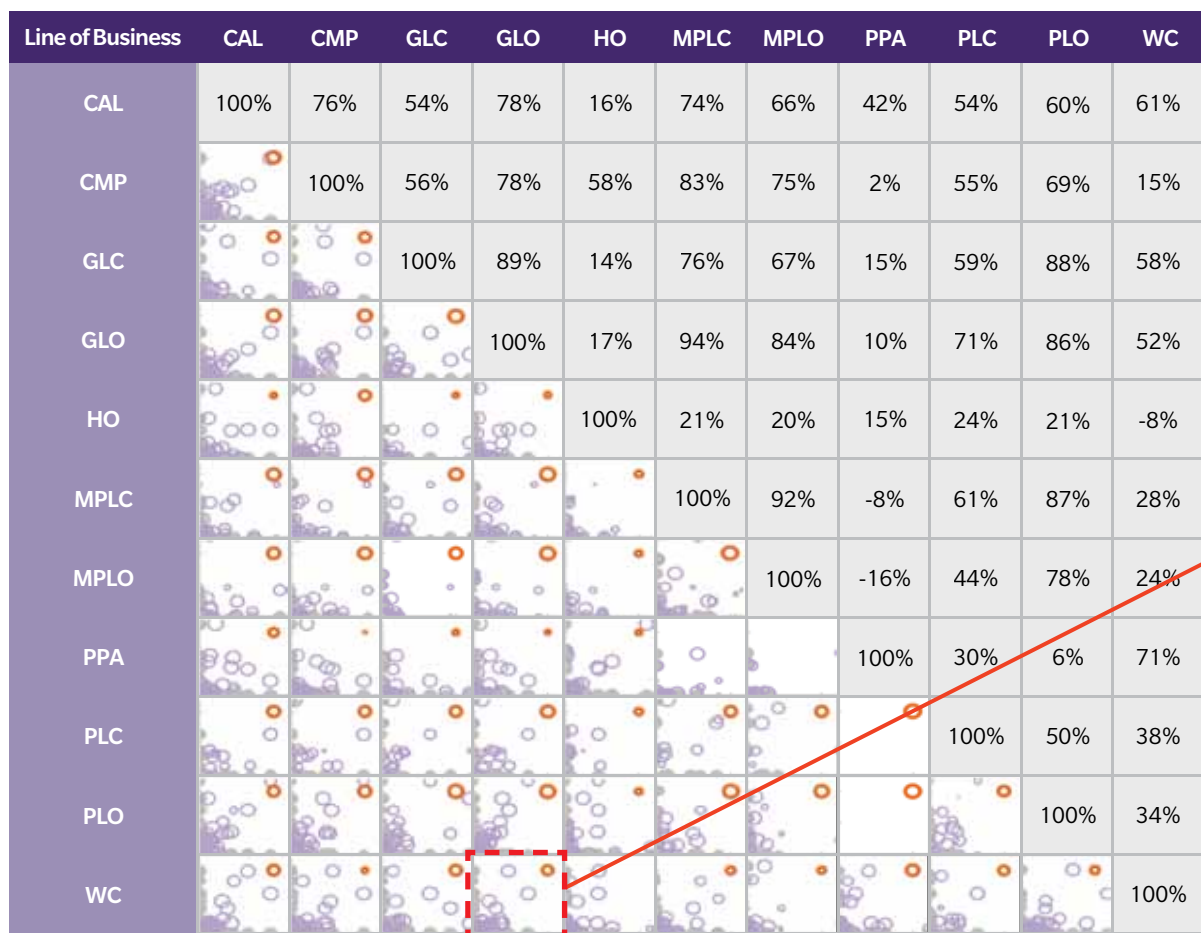
E14 | ILLUSTRATING INDIVIDUAL COMPANY CORRELATION EXPERIENCE

Exhibit 14: Explanation

Exhibit 14 (known last year as T6*) is an illustration highlighting the importance of market share in actual experienced correlation for an individual portfolio of product lines. It embellishes Table 10 to include an individual chart for each correlation coefficient. These mini-charts plot the unique correlations measured for the largest 50 companies writing each pair of business lines. The axes indicate market share, one in the direction of each line of business. Correlation metrics are indicated with a lavender bubble.

The correlation for the industry is shown as an orange bubble. Each bubble size represents the correlation value scaled to the industry orange bubble.

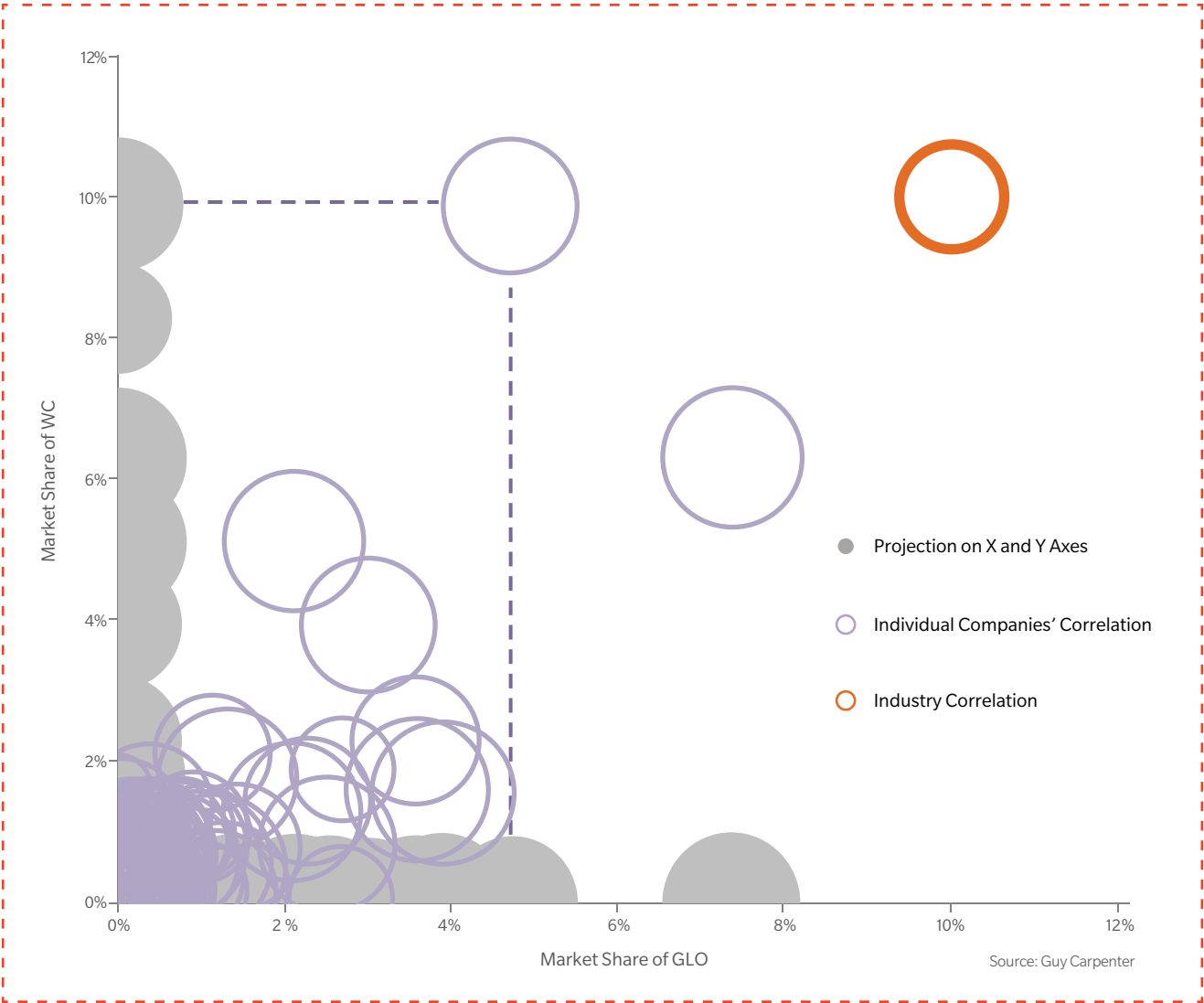
We observe that the correlation is strongest at the industry level and clearly a function of market share. In Exhibit 15 we provide practical empirical guidance on how to estimate a reasonable correlation given any company's total premium in two given lines.



Source: Guy Carpenter



As an example, the expanded graphic for the pairing of workers compensation and general liability (occurrence) zooms in on the mini graphic for that pair. The red bubble represents the correlation measured from aggregated industry data: 52 percent. Individual companies are shown in lavender. The size of each bubble indicates how close a company's experienced correlation is to that of the industry. As market share increases, variety in dot size decreases and the size itself increases to become close to that of the red bubble. A similar pattern is observed in the projection on each axis.



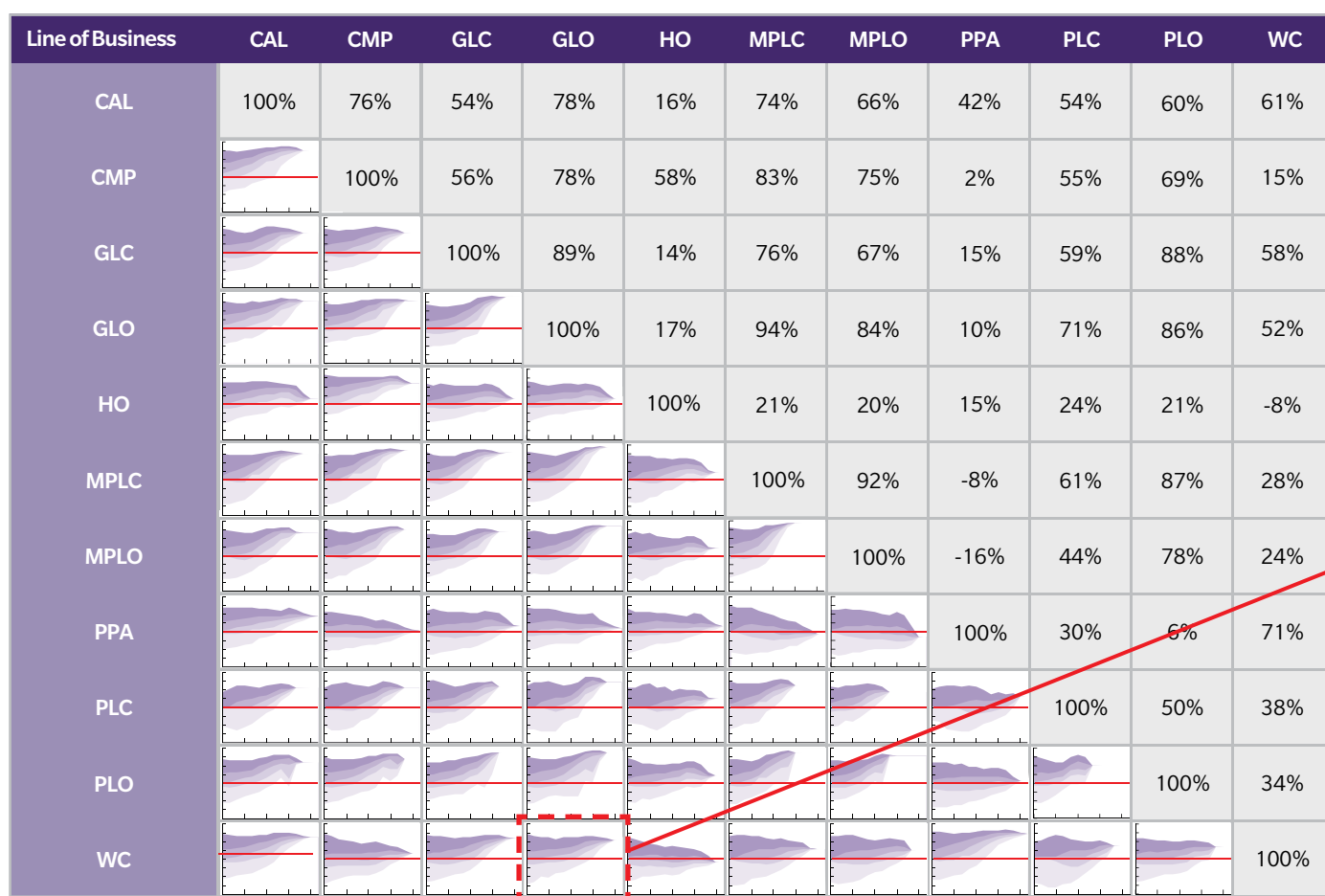
E15 | THE CORRELATION MODELING INDEX

Portfolio Guidance for Correlation Experience

Exhibit 15: Explanation

For individual companies, the correlation actually experienced between two lines is affected by both market signal and process noise. As we discussed in Section 5.2, market signal can stem from common exposure to medical cost inflation or natural perils, among other sources of contagion. When premiums grow and a portfolio of insurance risks become a larger subset of the industry the correlation it can expect to experience will increase and grow closer to that of the industry. The process noise surrounding the correlation will diminish. On the cover we plotted 30 random “industry construction” paths wherein we “built” the industry repeatedly by adding randomly selected companies to a cumulative group. At each accretion point, we calculate the experienced correlation for the cumulating industry subset. The paths illustrate the range of results a company may experience given a certain premium base and this chart tallies percentiles from the process.

For example, if a company writes USD 1 billion in combined premium between workers compensation and general liability (occurrence), according to the exploded exhibit, it can expect to experience somewhere between approximately -.50 and +.50 correlation. This may seem like a very wide range and indeed it is. Keep in mind that there is still plenty of process noise affecting this company’s results. A proper correlation model should reflect at least the expected correlation, which in this case is approximately 20 percent. This example involves a modest correlation pairing, but certain pairings, for example products liability (occurrence) and general liability (occurrence), imply quite strong expected correlations even at the USD 100 million level of combined premium.



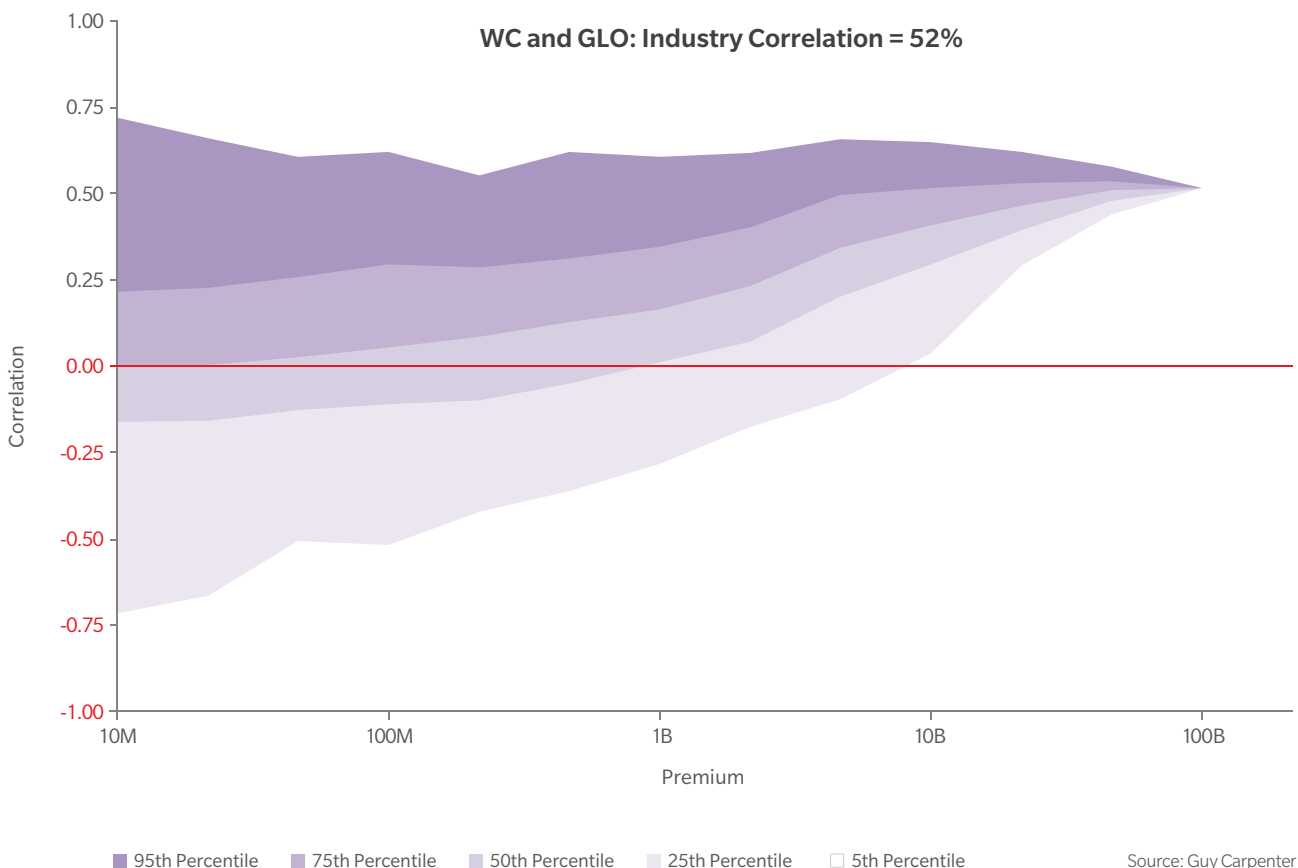
— Zero (0) Line

Source: Guy Carpenter

We note that this exhibit is only useful to the extent that historical correlation is a good indication for future correlation. There are other ways to model prospective correlation, such as modeling a common inflation shock to severity distributions in a collective risk model using structural economic scenarios. But historical statistics are quite popular in settling the question of how much correlation belongs in economic capital models, and this chart makes those statistics actionable for companies of all sizes.

In deciding whether the 25th, 50th or even 95th percentile from this chart makes sense for modeling your portfolio, consider your risks as being more or less correlated than the typical portfolio based on a number of factors, such as:

- **Policy limits profile:** Higher limits in casualty mean higher exposure to severity surprises.
- **Incurred But Not Reported Losses (IBNR):** The threat of true IBNR, due to coverage triggers or policy coverages, means exposure to correlation from frequency contagion.
- **Geographic concentration:** If high-frequency natural perils, such as tornado, hail and winter storm are not modeled explicitly in your capital model, geographic concentrations may contribute significantly to expected correlation.
- **Class strategy:** For example, pursuing high severity classes of business in workers compensation can mean more exposure to correlation.
- **Market pressures:** Competitive markets place pressure on loss ratios regardless of insured coverage. Remember that aggregate loss ratio modeling is sensitive to premium trends as well as loss trends



VI. EXPENSE BENCHMARKING



6.1 EXPENSE RATIOS BY LINE OF BUSINESS

T11 | DIRECT AND NET EXPENSES BY LINE OF BUSINESS

Table 11: Explanation

Table 11 presents expense ratios for the entire industry based on the 2014 Insurance Expense Exhibit (IEE). As discussed in Section 1.3, line of business definitions found in the IEE need to be mapped to Schedule P – based on definitions found in the ASR. This table presents expense categories as a ratio to earned premium on both a direct and a net basis.

Table Eleven: Discussion

Reviewing this table suggests grouping lines of business into categories based on expense profile. The long tail liability lines, products liability and medical professional liability, might be considered the “high maintenance lines,” in that they are both low in total acquisition expense (the sum of columns 5, 6 and 7) and very high in loss adjustment expense (the total of columns 3 and 4). Homeowners and commercial multiple peril might be considered the “expensive commodities,” in that they rank among the highest in acquisition expense but are also among the lowest in loss adjustment expense. Interestingly, and although it is not often grouped with these same two lines, fidelity and surety could be considered an “expensive commodity” based on its expense profile.

Among the large premium lines of business, private passenger auto (the total of private passenger auto liability and auto physical damage) stands out as extremely efficient both on a direct and net basis. Expense ratios can spell the difference between underwriting profit and loss in these lines (see Exhibit 5). They are also the lines of business where the effect of reinsurance is the lowest, measured by the difference between direct and net total expense ratio. Special property, special liability, and general liability (occurrence) expense ratios, in contrast, are affected the most by reinsurance.

Direct Expenses

Line of Business	Total Expense Ratio (including LAE)	Expense Ratio (excluding LAE)	Defense & Containment Costs	Claims Adjusting & Other	Commission & Brokerage	Taxes, Licenses & Fees	Other Acquisition Expense	General & Administrative
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
HO	36%	28%	1%	7%	13%	2%	8%	5%
PPA	38%	25%	4%	9%	8%	2%	9%	5%
CAL	42%	29%	7%	6%	14%	3%	5%	7%
WC	37%	23%	8%	6%	8%	3%	5%	6%
CMP	44%	33%	7%	5%	16%	2%	7%	7%
SL	34%	29%	2%	3%	13%	2%	7%	8%
GLO	42%	27%	9%	6%	13%	2%	6%	6%
GLC	44%	28%	12%	4%	14%	2%	6%	6%
SP	29%	25%	1%	3%	13%	2%	5%	6%
APD	35%	25%	0%	9%	9%	2%	8%	5%
FS	51%	47%	1%	3%	23%	3%	11%	11%
MPL	47%	21%	21%	5%	7%	2%	4%	8%
PL	58%	26%	25%	7%	13%	1%	6%	6%

Net Expenses

Line of Business	Total Expense Ratio (including LAE)	Expense Ratio (excluding LAE)	Defense & Containment Costs	Claims Adjusting & Other	Commission & Brokerage	Taxes, Licenses & Fees	Other Acquisition Expense	General & Administrative
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
HO	38%	29%	2%	7%	13%	3%	9%	5%
PPA	39%	25%	4%	10%	9%	2%	8%	5%
CAL	43%	30%	7%	6%	13%	3%	6%	8%
WC	39%	24%	8%	7%	7%	3%	7%	8%
CMP	49%	35%	8%	6%	16%	3%	8%	9%
SL	43%	35%	4%	5%	14%	2%	8%	10%
GLO	50%	31%	12%	7%	11%	3%	8%	10%
GLC	41%	29%	7%	5%	12%	2%	7%	7%
SP	35%	30%	1%	5%	10%	3%	7%	9%
APD	35%	25%	0%	10%	9%	2%	8%	6%
FS	54%	50%	1%	3%	23%	3%	12%	12%
MPL	52%	24%	22%	6%	6%	3%	5%	10%
PL	63%	27%	28%	8%	9%	2%	8%	9%

Source: Guy Carpenter

6.2 PREMIUM AND EXPENSE TRENDS

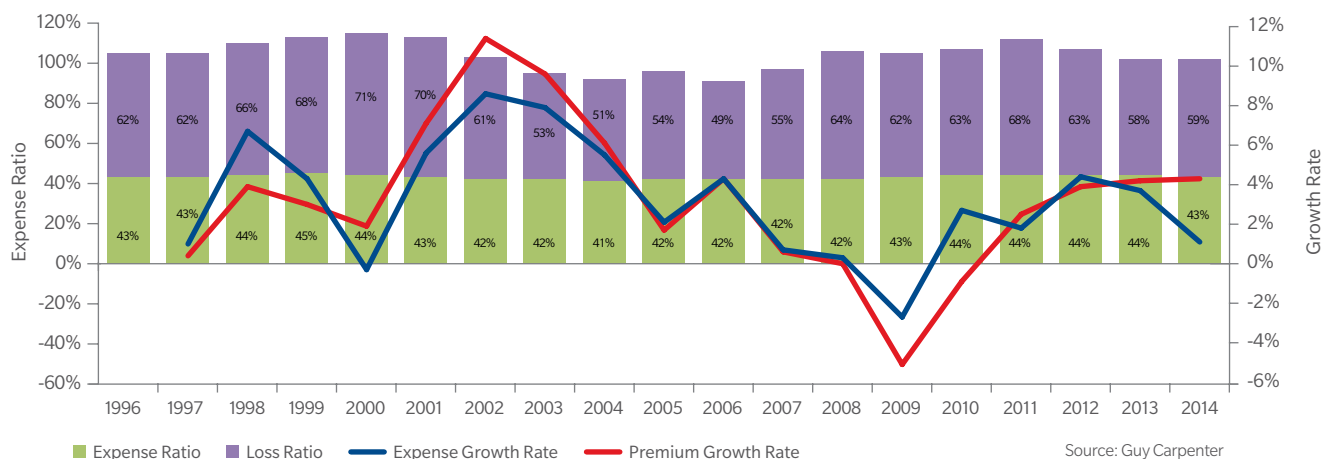
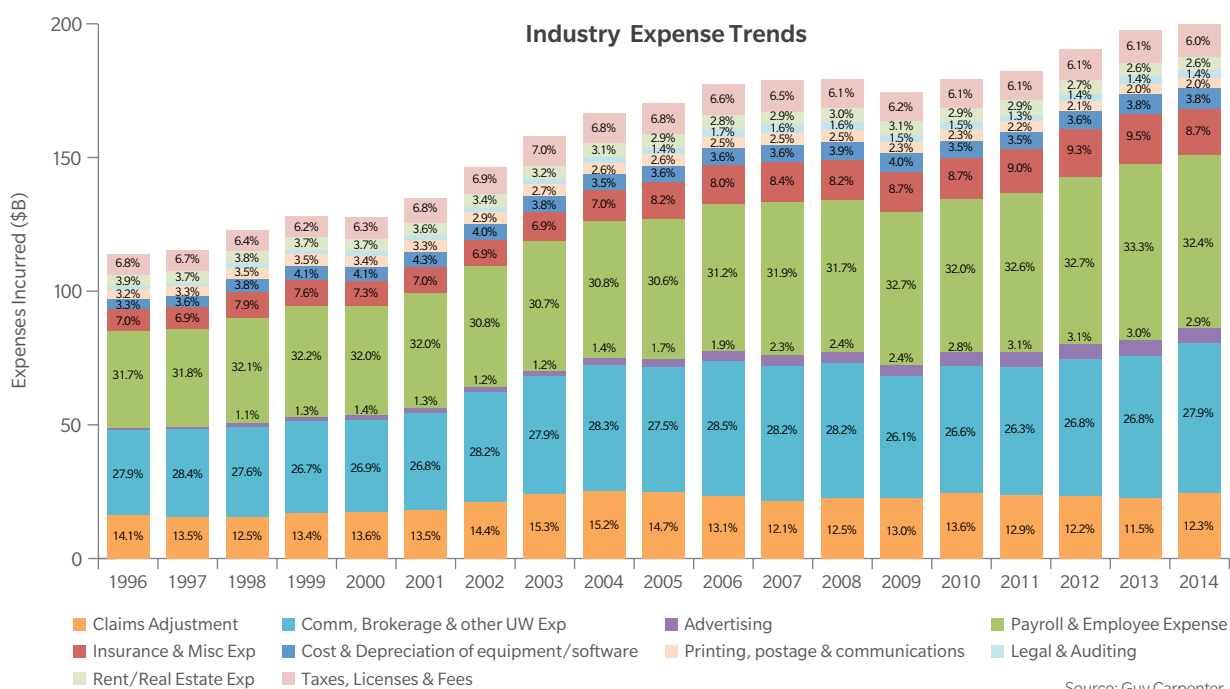
E16 | INDUSTRY PREMIUM AND EXPENSE TRENDS

Exhibit 16: Explanation

Exhibit 16 portrays growth trends in total premium and expense for the entire industry. Comparable market segment charts can be found in Exhibit 23 in the Appendix.

Exhibit 16: Discussion

The pattern for premium and expense growth is quite similar except that the latter has comparatively stronger inertia due to general expenses. When premium growth rates reached double digits in the early 2000s, expenses also grew, but by less. When premium contracted subsequent to the financial crisis in 2008, expenses also contracted, but by a smaller percentage. In the current economic environment premium grew by just over 4 percent in 2014, but expenses grew by less than 1 percent.

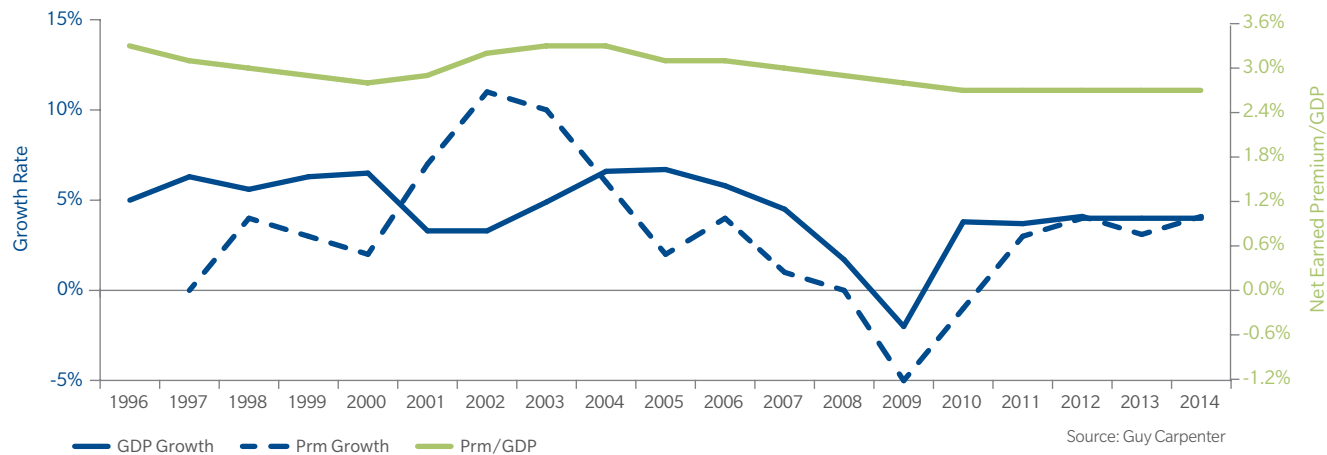
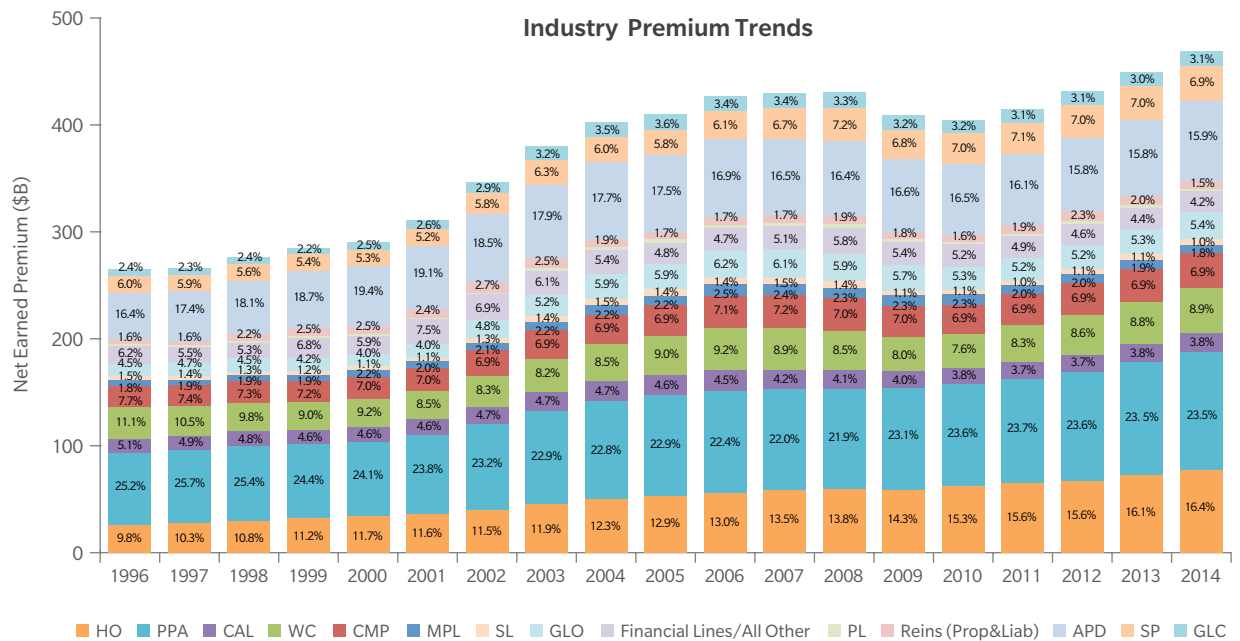




The premium-to-gross domestic product (GDP) ratio displays consistency over time. Changes to premium can often be understood from changes to GDP. In this light, the hardening of the insurance market in the early 2000s can be considered a true insurance phenomenon, as premium growth marched in the opposite direction of GDP growth for a limited time.

The industry's expense profile is quite stable but does demonstrate evolution. Advertising costs have tripled over this two-decade review period and claims adjustment expenses have been shaved by a few points. Breaking down the industry premium profile, the most striking trend is the increase of homeowners premium from 9.8 percent of the industry in 1995 to 16.4 percent in 2014. Understanding of property catastrophe exposure in this line has increased due to the advent and development of sophisticated modeling and challenging loss experience caused by various natural perils.

See E24 in appendix for premium and expense growth breakouts by Top 15 and industry Ex Top 15 carriers.





VII. FINANCIAL MANAGEMENT AND STRATEGY

7.1 INTRODUCTION

As shown throughout this report, understanding insurance risk requires careful review of many cyclical drivers, some of which affect costs and others revenue. To make things more interesting, the assets insurance companies hold against liabilities are clearly sensitive to their own cyclical drivers. What happens when a sine curve is added to a cosine curve? Does the noise cancel out? In this section we explore (for the first time in the ASR) the industry's historical balance sheet and capitalization since 1996.

7.2 INDUSTRY OPERATING PERFORMANCE

E17 | RECENT OPERATING PERFORMANCE IN THE P&C INDUSTRY

Exhibit 17: Explanation

Exhibit 17 depicts the industry's historical operating performance, highlighting underwriting performance and realized investment returns. Underwriting performance is measured as the calendar year underwriting gain/(loss) divided by net earned premium. Realized investment yield represents the net investment gain/(loss) divided by net earned premium, where net investment gain/(loss) is defined as net investment income earned plus realized capital gains/(losses) net of a capital gains tax. The two denominators are equivalent in each series to allow visual comparison.

Exhibit 17: Discussion

The industry's operating performance over this period contains two periods of consecutive underwriting gains: from 2004 to 2007 and from 2013 to 2014. The year 2005 witnessed record-setting hurricane events (notably Katrina, Rita and Wilma) but was still able to generate an underwriting profit (before considering policyholder dividends).

In the early part of the millennium, the P&C industry's underwriting results were trending downward. Adverse reserve development between 1999 and 2002 resulted from underpriced policies in a highly competitive market coupled with unexpected inflation in bodily injury costs. Ultimately, approximately 15 percent of statutory policyholder surplus was destroyed during this period. The events of September 11, 2001 further deepened a negative underwriting position, creating a rare occasion when investment income could not offset underwriting losses. The ensuing hard market improved underwriting results for several years, reaching peak performance in 2006.

In more recent years, underwriting results have improved since a recent low in 2011, when high-frequency natural peril activity, for example tornadoes, hail and winter storm, headlined the industry's concerns. Rate increases have boosted premium adequacy, particularly in commercial lines. Although these trends slowed in 2014, it was still a "great" year compared to historical results in which only five of the past 19 years did not involve either underwriting loss or effectively breaking even on the premiums collected.



7.3 INDUSTRY BALANCE SHEET

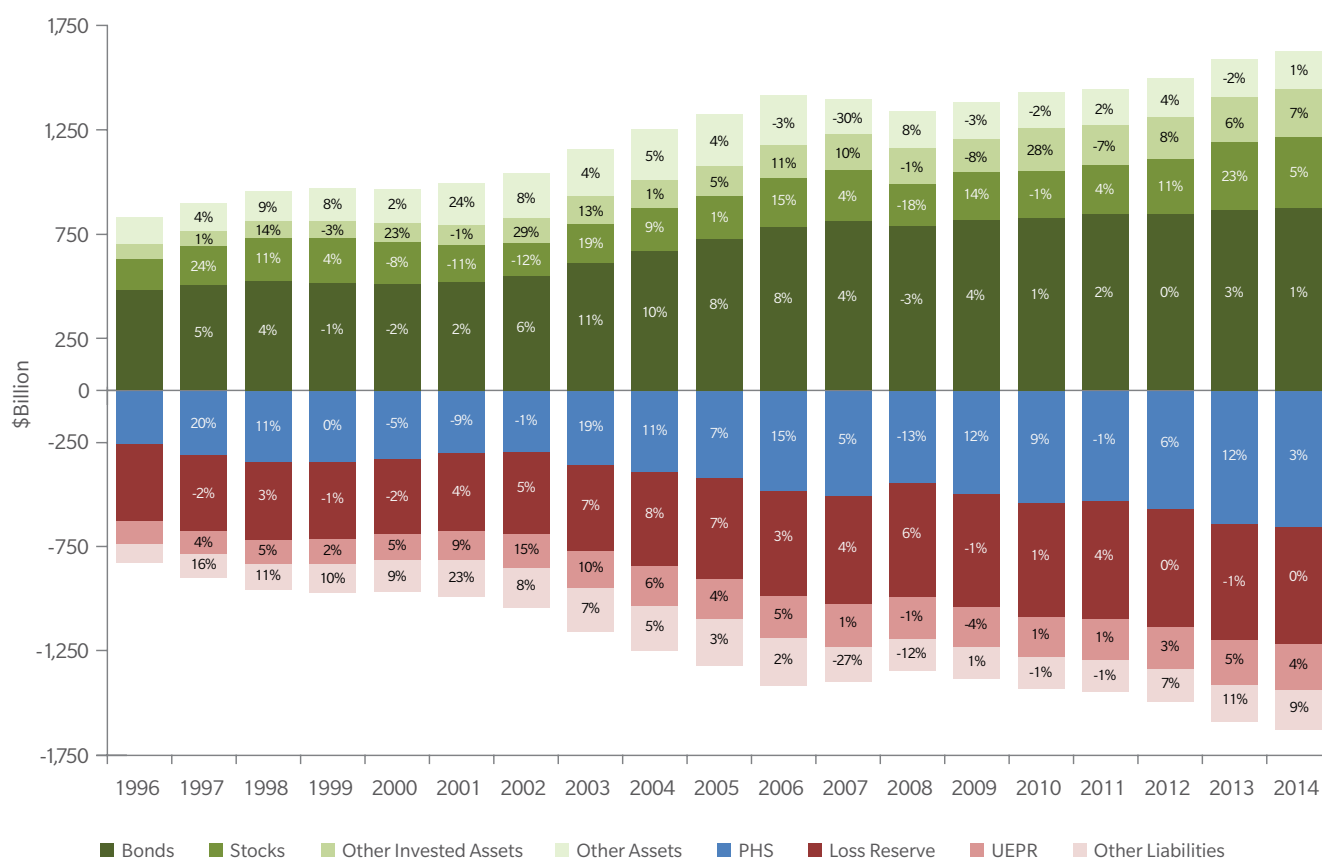
E18 | HISTORICAL BALANCE SHEET IN THE P&C INDUSTRY

Exhibit 18: Explanation

Exhibit 18 presents the industry's historical balance sheet since 1997 in graphical format with the yearly percentage change identified for each major component. Our definition of the industry on each valuation date includes all active P&C companies with either USD 1 million of net loss reserves or USD 1 million of net written premium. Total asset values (illustrated with positive amounts in the chart) are the mirror image of the total liabilities plus policyholder surplus (illustrated with negative amounts in the chart).

Exhibit 18: Discussion

Operating performance (see Section 7.2) is clearly an important driver on the surplus position of the industry, but unrealized capital gains/(losses) can also have a very large impact. From 1996 to 2014, the industry's surplus grew by over 150 percent. Whereas operating losses have been far more common than operating gains over this time period, in only five of the 19 years did surplus itself actually decrease. Reductions to surplus have typically resulted from a combination of catastrophe events and stock market losses. To refresh recent memory on a few of the more painful years in the industry:



Source: Guy Carpenter



- **2000:** While operating income was positive, the stock market saw its first annual decline in a decade. Unrealized capital losses and dividends more than offset a modest operating profit in 2000.
- **2001:** The terror events on September 11 perhaps instigated the end to a very soft market but underwriting losses driven by adverse reserve development coinciding with a sagging stock market evaporated 9 percent of industry surplus, the second largest decline across this history.
- **2002:** The effect of a third consecutive year of negative annual stock returns was ameliorated by rate increases and re-underwriting, resulting in a slight 1 percent loss to surplus.
- **2008:** Devastating losses in the stock market due to the credit crisis generated the worst annual return since 1931. Approximately 20 percent of the industry's invested asset portfolio was allocated to equities before the crisis (see Exhibit 20). These asset losses conflated with above average property catastrophe losses to deplete surplus by 13 percent, the largest amount across this history. In 2008, six named hurricanes made landfall in the United States and tornado activity was also high.
- **2011:** Catastrophes wreaked havoc in 2011 across multiple geographic regions. Tornadoes ripped across the country, wildfires devastated the Southwest and winter storms plagued the Midwest. Hurricanes added to the losses with Hurricane Irene making landfall in North Carolina and later in New Jersey.

The 2000s produced the second-worst return on the stock market since the 1900s. Four of 10 years saw surplus losses in the P&C industry and the underwriting position was down approximately 2 percent for the decade.

In 2013, the industry enjoyed both strong underwriting and investment results, producing a return on surplus among the best in two decades. The strong underwriting results carried into 2014 but growth in surplus slowed due to lower stock returns.

7.4 CHARTING POLICYHOLDER SURPLUS

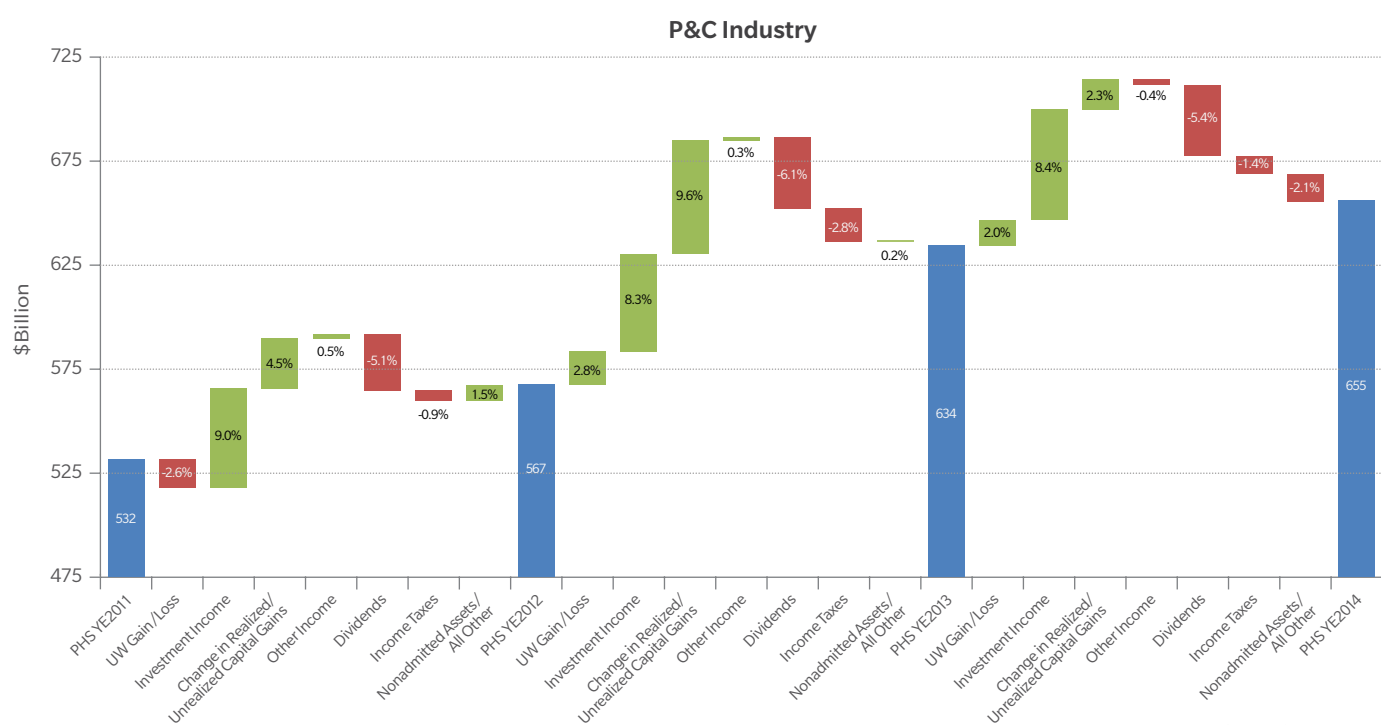
E19 | CHARTING THE CHANGE IN POLICYHOLDER SURPLUS: PUBLIC VS MUTUAL

Exhibit 19: Explanation

This waterfall chart shows how capital has flowed in and out of the P&C industry over the last three calendar years. Capital accretions are colored in green while depletions of capital are red. The primary contributors to changes in policyholder surplus have been identified as underwriting gain/(loss), investment income, realized and unrealized capital gains (net of income taxes), other income, dividends, income taxes (excluding taxes on capital gains/(losses)), and non-admitted assets and all other changes. We also present similar waterfalls for the Public Market and Mutual Market segments (see Section 1.4).

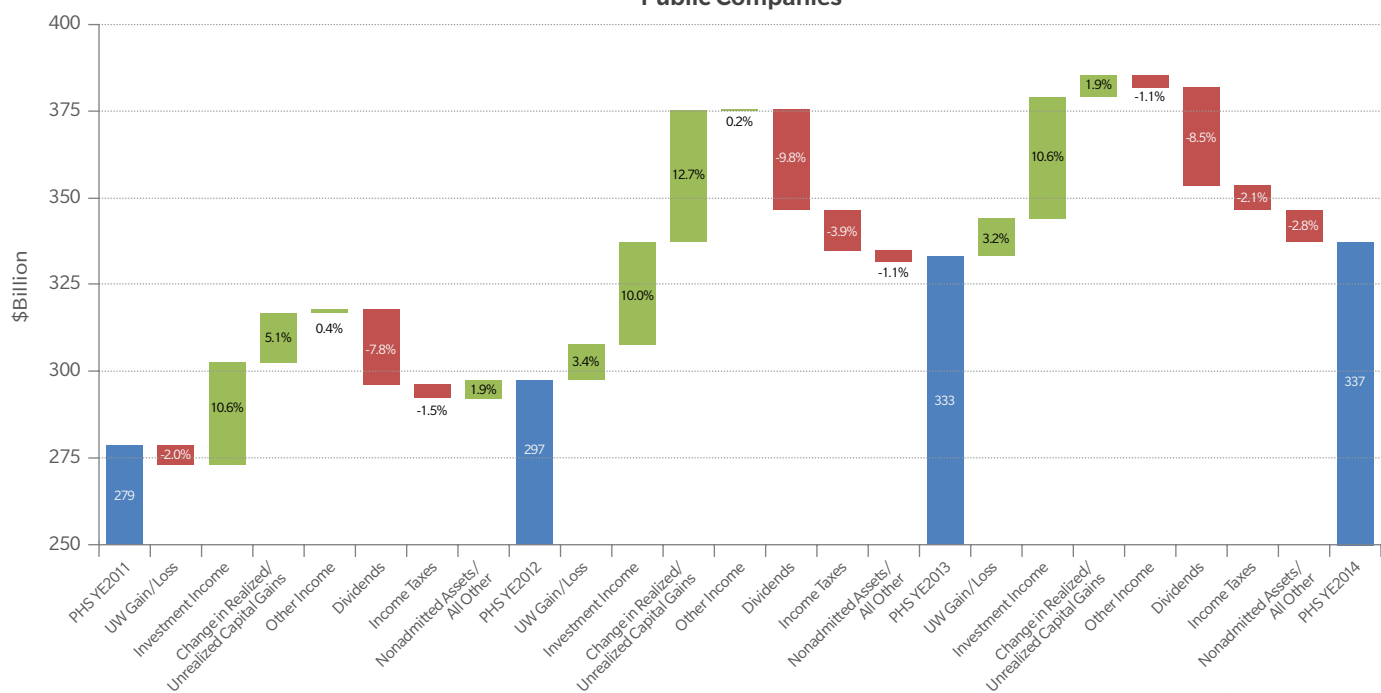
Exhibit 19: Discussion

2014 marked a second consecutive year of underwriting gains for the P&C industry. Public and mutual companies alike shared in these profitable underwriting results. In the 18 years prior to 2014 there was only one other string of consecutive underwriting gains, from 2004 to 2007 (see Sections 7.2 and 7.3). While both public and mutual companies have grown their surplus over the past three years, the mutual companies have lagged the public companies in underwriting and investment returns. However, because they have returned lower dividends to policyholders than the public companies have returned to shareholders, surplus for the mutual market segment grew by more (5 percent) than that for the public segment (1 percent).



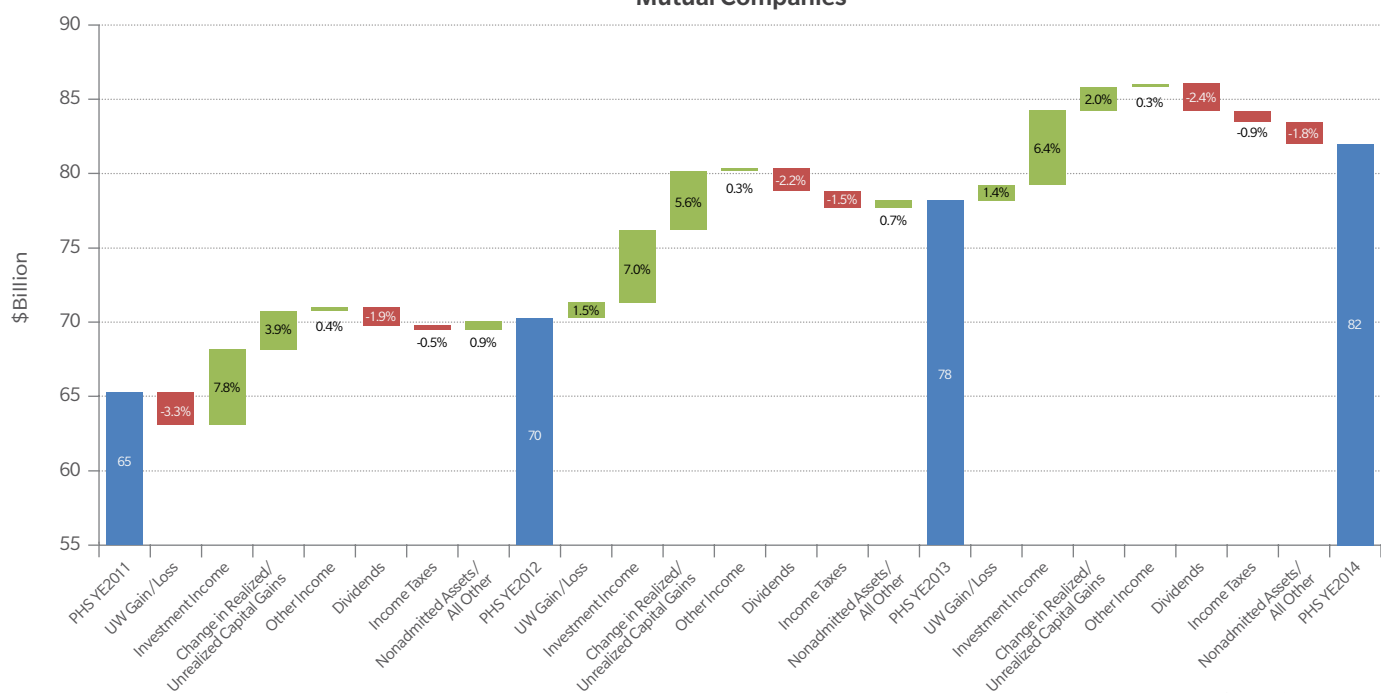


Public Companies



Source: Guy Carpenter

Mutual Companies



Source: Guy Carpenter

7.5 INDUSTRY ASSET PROFILE

E20 | ASSET PROFILE IN THE P&C INDUSTRY

Exhibit 20: Explanation

Exhibit 20 portrays the historical asset profile of the P&C industry, highlighting how the growing capital base and impact of the investment markets have altered asset allocation strategies. The various components of invested assets are shown with a corresponding percentage that represents its ratio to total invested assets. A line on the chart represents total invested assets divided by policyholder surplus.

Exhibit 20: Discussion

Invested asset holdings in the industry have remained fairly consistent over time. Since 2010 the industry's allocation to equities has increased 18 percent to 23 percent. This trend began with the downgrade of the U.S. government's credit rating in August 2011. The prolonged low interest rate environment gave insurers a reason to invest more of their invested asset portfolios in the equity market and this practice continued organically, as returns on the market from 2012 to 2014 were excellent. Another reason companies have increased their allocation to equities is that industry premium leverage has decreased in recent years, allowing companies to allocate investments to riskier and potentially higher returning assets.

A second trending asset allocation over recent years has been that of corporate bonds, which have grown from 20 percent as late as 2007 to 26 percent in 2014. Insurers have turned to corporate bonds in pursuit of more yield over this period.

When analyzing percentages of a total asset base, growth in some categories must imply shrinkage in others. For the industry's asset profile, it is the municipal and special revenue bonds, mainstays in the P&C insurer portfolio, that have become a smaller piece of the pie.

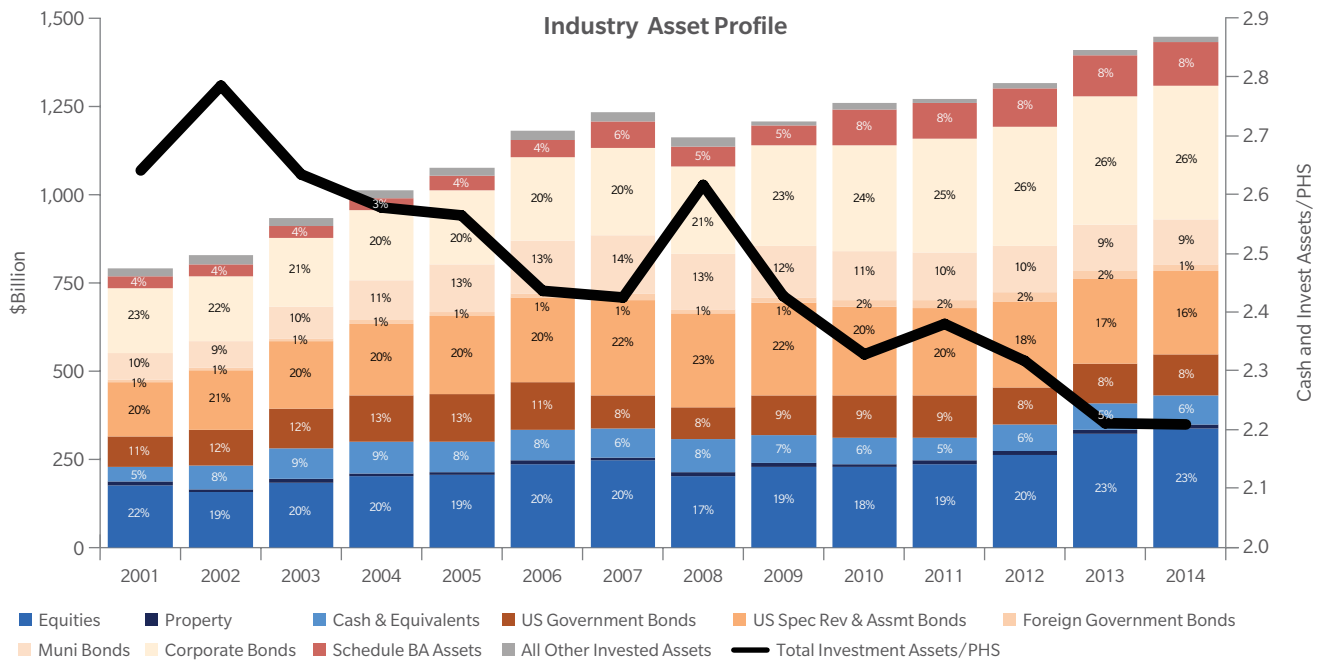
Schedule BA assets have grown in dollar value over time, but the number of companies holding such assets has not changed drastically since 2001. Based on 2014 figures, the 10 companies with largest Schedule BA asset holdings account for 80 percent of the total investments. These companies are all part of the Top 15 market segment in the ASR.

Schedule BA Assets	2001	2005	2010	2014
Total Amount \$B	34	39	101	122
# of Companies with BA Assets	341	310	319	350

Source: Guy Carpenter

In general, asset leverage has declined consistently since 2001. A noteworthy reversal to this trend occurred in 2008, which was the only year when invested asset holdings declined overall. Losses in the stock market coupled with underwriting losses from natural catastrophes (see Section 7.2) depleted both assets and surplus, and the asset leverage spiked in the aftermath.

In the second graph in exhibit 20, industry average fixed income duration is graphed against average credit quality. Over the past 15 years there is a clear trend of decreasing asset duration and credit quality, as companies have reallocated fixed income assets from longer duration municipal and US government bonds into shorter duration corporate and asset backed securities.



7.6 BCAR TRENDS

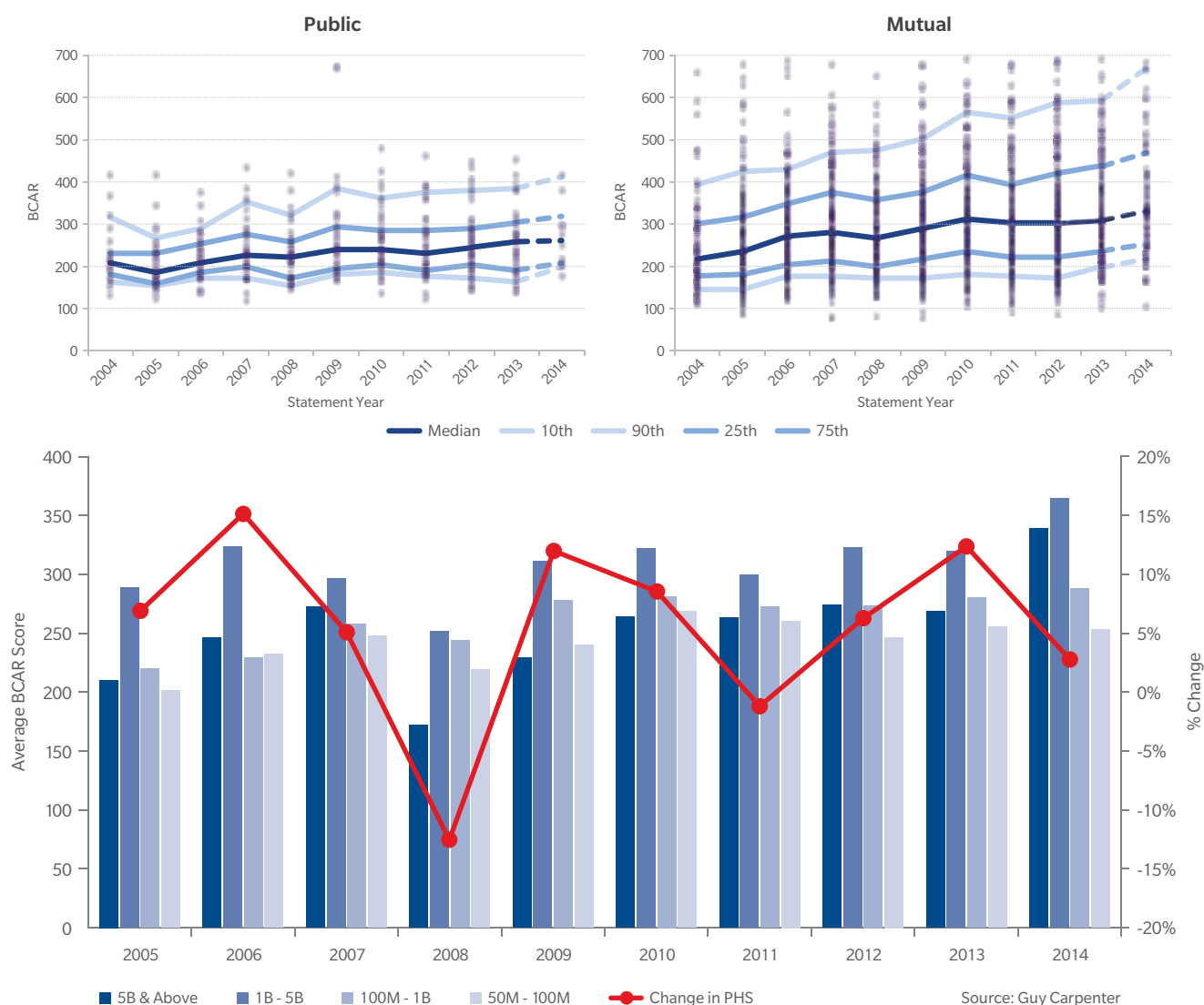
E21 | TRENDS IN BEST'S CAPITAL ADEQUACY RATIO (BCAR): PUBLIC VS MUTUAL

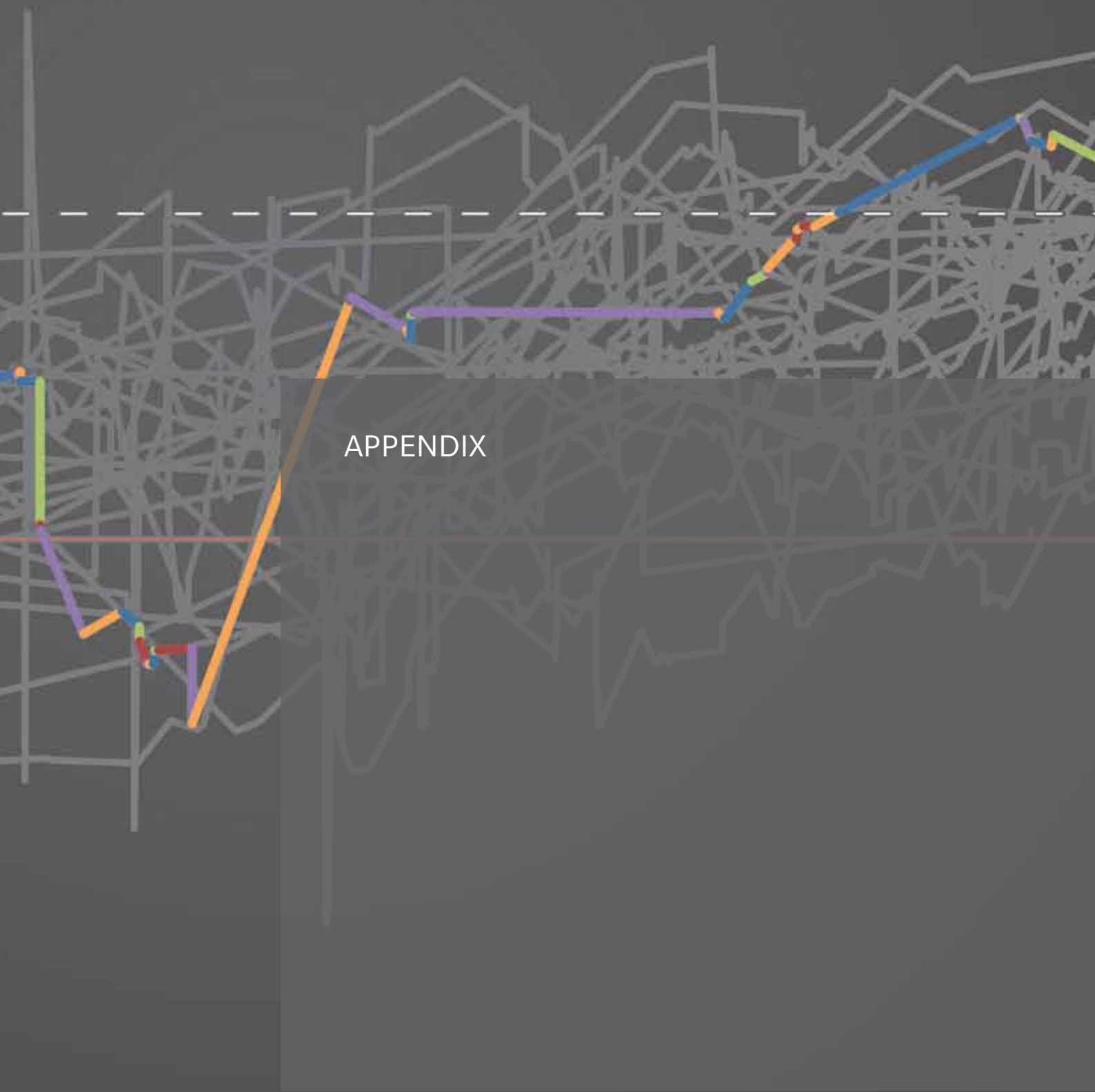
Exhibit 21: Explanation

A.M. Best's Capital Adequacy Ratio (BCAR) is a key surplus adequacy metric in the P&C insurance industry. In Exhibit 21 we chart the historical BCAR scores of the Mutual market segment and the Public market segment. The solid lines illustrate the 10th, 25th, 50th, 75th and 90th percentiles of individual company performance in each year. Note that the median loss ratio line is dashed subsequent to 2013, illustrating that the data is incomplete for the most recent year.

Exhibit 21: Discussion

BCAR is the cornerstone of A.M. Best's financial strength ratings and is an important metric for both mutual and public companies. Exhibit 21 highlights the difference in the organizational structure of the two types of companies. Mutual companies strive for capital strength given their more limited opportunities to bring on additional capital while public companies are more focused on providing a return to shareholders. This general characterization of each segment is reflected in the growth in BCAR scores from 2004 to 2014. The median score for the Mutual market segment grew by just over 50 percent from 2004 to 2014 while the Public market segment's median BCAR score grew by 25 percent. As mentioned in Section 7.4, the public companies have paid out more dividends to their shareholders while the mutual companies have held on to their capital accretions in order to increase their financial strength.





APPENDIX

\$1B

\$1B

A.1 MARKET SEGMENTATION DETAIL

T12 | LIST OF COMPANIES BY MARKET SEGMENT

The following tables detail the composition of each market segment discussed in the 2015 ASR:

Top 15 Writers

Company	2014 Total DWP (\$000s)	Company	2014 Total DWP (\$000s)
State Farm Mutual Automobile Insurance Company	58,508,587	Farmers Insurance Group	18,611,695
Liberty Mutual Insurance Company	29,364,559	United Services Automobile Association	15,678,176
Allstate Insurance Group	28,665,625	Zurich American Insurance Company	11,293,393
National Indemnity Company and its Affiliated Insurers	26,395,906	Hartford Fire Insurance Company	10,864,926
Travelers Companies, Inc.	22,790,776	Federal Insurance Company	10,194,172
Nationwide Mutual Insurance Company	18,935,862	ACE American Insurance Company	9,979,585
Progressive Insurance Group	18,914,866	Continental Casualty Company	8,775,189
American International Group, Inc.	18,653,981		

National

Company	2014 Total DWP (\$000s)	Company	2014 Total DWP (\$000s)
American Family Mutual Insurance Company	6,493,966	Federated Mutual Group	1,288,039
Assurant Group	5,228,944	OneBeacon Insurance Group	1,256,715
American Financial Group, Inc.	5,207,587	American National Property & Casualty Company	1,223,474
W. R. Berkley Corporation	5,073,431	HCC Insurance Holdings Group	1,171,875
Cincinnati Insurance Group	4,312,256	State National Insurance Company, Inc.	1,048,151
Technology Insurance Company, Inc.	3,986,535	Argo Group US, Inc.	1,035,884
Hanover Insurance Company	3,948,543	Mortgage Guaranty Insurance Corporation	1,024,389
Metropolitan Property and Casualty Insurance Company	3,537,249	IDS Property Casualty Insurance Company	1,018,156
Old Republic General Insurance Group - U.S.	3,460,038	Radian Guaranty Inc.	995,369
Factory Mutual Insurance Company	3,441,729	Ironshore Specialty Insurance Company	901,226
Philadelphia Indemnity Insurance Company	2,900,304	Catlin Insurance Company, Inc.	873,608
Assctd Int Markel Ins Cos	2,432,273	Navigators Insurance Company	828,867
Selective Insurance Company of America	2,228,270	RLI Insurance Company Group	787,267
Fireman's Fund Insurance Cos Property-Liability Insurers	2,137,498	GuideOne Mutual & GuideOne Specialty Mutual	752,161
Rural Community Insurance Company	2,024,662	Aspen American Insurance Co. & Aspen Specialty Insurance Co.	690,026
Starr Indemnity & Liability Company	1,954,253	New York Marine and General	646,959
Sentry Insurance a Mutual Company	1,913,781	Church Mutual Insurance Company	638,971
Amica Mutual Insurance Company	1,873,670	Genworth Mortgage Insurance Corporation	638,633
Crum & Forster Insurance Companies	1,671,921	Horace Mann Insurance Company	599,039
Allianz Global Risks US Insurance Company	1,617,858	Safety National Casualty Corporation	593,170
Integon National Insurance Company	1,518,966		
Alleghany Group	1,499,880		

Multi Regional

Company	2014 Total DWP (\$000s)	Company	2014 Total DWP (\$000s)
Auto-Owners Insurance Company	5,796,075	Doctors Company, An Interinsurance Exchange	694,532
COUNTRY Mutual Insurance Company	2,353,308	Employers Holdings Inc.	686,763
State Auto Group	2,061,734	Virginia Surety Company, Inc.	672,873
Ohio Farmers Insurance Co.	1,778,180	Occidental Fire & Casualty Co. of NC & Wilshire Ins Co.	623,277
Trinity Universal Insurance Company	1,278,962	Wright National Flood Insurance Company	616,433
NGM Insurance Company	951,385	Motors Insurance Corporation	594,682
Accident Fund Insurance Company of America	946,574	Producers Agriculture Insurance Company	546,605
United Fire & Casualty Company	838,583	ProAssurance Group of Companies	531,873
Utica Mutual Insurance Company	805,859		
Amerisure Mutual Insurance Company	742,535		

Source: Guy Carpenter

Northeast/Atlantic

Company	2014 Total DWP (\$000s)	Company	2014 Total DWP (\$000s)
Erie Insurance Exchange Group	5,513,962	Associated Industries of Massachusetts Mutual Ins. Co.	163,667
State Insurance Fund Workers' Compensation Fund	2,374,259	American Transit Insurance Company	162,804
Commerce Insurance Company	2,123,162	MMG Insurance Company	160,332
New Jersey Manufacturers Group	1,825,687	United Educators Insurance, A Reciprocal Risk Retention Group	159,279
Arbella Insurance Group	808,742	Samsung Fire & Marine Insurance Co., Ltd. (U.S. Branch)	158,730
Safety Insurance Group	765,685	Union Mutual of Vermont Companies	157,678
Donegal Mutual Insurance Company	747,656	Franklin Mutual Group	152,741
Penn National Insurance	706,213	Philadelphia Contributionship	138,471
Palisades Safety and Insurance Association	699,550	Country-Wide Insurance Company	136,961
Tower Insurance Company of New York	694,542	Brethren Mutual Insurance Company	136,346
Medical Liability Mutual Insurance Company	502,503	Cumberland Insurance Group	136,147
HDI-Gerling America Insurance Company	482,336	Medical Mutual Group	135,823
New York Central Mutual Fire Insurance Company	481,824	Utica First Insurance Company	133,930
Merrimack Mutual Fire Insurance Company	480,540	Goodville Mutual Casualty Co. & German Mutual Insurance Co.	133,899
Medical Professional Mutual Insurance Company	463,384	KnightBrook Insurance Company	133,244
Plymouth Rock Assurance Corporation	404,501	Beacon Mutual Insurance Company	124,954
Physicians' Reciprocal Insurers	383,990	Controlled Risk Insurance Company of Vermont, Inc. (A Risk Retention Group)	123,458
Vermont Mutual Insurance Group	380,123	Hereford Insurance Company	121,400
Attorneys' Liability Assurance Society, Inc., A Risk Retention Group	360,456	Public Service Insurance Company	115,633
Protective Insurance Company	355,973	Harford Mutual Insurance Company	112,742
Greater New York Mutual Insurance Company	315,355	American Steamship Owners Mutual Protection and Indemnity Association, Inc.	110,181
Transamerica Casualty Insurance Company	311,395	MBIA Insurance Corporation	109,555
Euler Hermes North America Insurance Company	303,643	Leading Insurance Group Insurance Company, Ltd. (U.S. Branch)	109,203
Electric Insurance Company	292,792	Bond Safeguard Ins Co., Lexon Ins Co.	
Preferred Mutual Insurance Company	289,801	& Peninsular Surety Co	106,981
BrickStreet Mutual Insurance Company	287,577	Coface North America Insurance Company	106,636
Quincy Mutual Group	270,174	Mutual Benefit Ins. Co. & Affiliate Select Risk Ins. Co.	106,117
Merchants Insurance Group	269,700	Aegis Security & American Sentinel Insurance Companies	104,377
Maine Employers' Mutual Insurance Group	265,692	Lackawanna Casualty Company	103,635
American Independent Companies, Inc.	264,679	New York Schools Insurance Reciprocal	91,430
Lancer Insurance Group	260,562	UPMC Health Benefits Inc.	90,400
Assured Guaranty Municipal Corp.	257,232	ICI Mutual Insurance Company, a Risk Retention Group	88,091
Highmark Casualty Insurance Co. & HM Casualty Insurance Co.	242,971	New London County Mutual Insurance Company	87,772
Narragansett Bay Insurance Company Group	240,276	Providence Group	81,707
Ironshore Indemnity Inc.	237,267	Fiduciary Insurance Company of America Inc.	79,845
Hospitals Insurance Company, Inc.	230,733	Maryland Automobile Insurance Fund	79,269
MCIC Vermont (A Reciprocal Risk Retention Group)	228,218	Interboro Insurance Group	77,288
State Workers' Insurance Fund	224,923	Kingstone Insurance Company	76,255
Chesapeake Employers' Insurance Company	221,399	Academic Health Professionals Insurance Association-A Reciprocal Insurer	73,045
Eastern Alliance Insurance Group	218,484	Agency Insurance Company of Maryland, Inc.	70,574
Beazley Insurance Company, Inc.	188,755	Ambac Assurance Corporation	69,613
AMEX Assurance Company	186,650	Co-operative Insurance Companies	65,907
Norfolk & Dedham Group	186,394	Florists' Mutual Insurance Company	65,662
Nuclear Electric Insurance Limited	184,374	Erie and Niagara Insurance Association	64,453
Concord General Mutual Insurance Company	174,775		
Queen City Assurance, Inc.	170,098		
Adirondack Insurance Exchange	168,703		

Source: Guy Carpenter

Continued Overleaf

Northeast/Atlantic (continued)

Company	2014 Total DWP (\$000s)	Company	2014 Total DWP (\$000s)
Agrinational Insurance Company	64,218	National Catholic Risk Retention Group, Inc.	24,567
American Country Insurance Company	63,329	Healthcare Professionals Insurance Company, Inc.	23,645
Atlantic Charter Insurance Company	62,203	Maya Assurance Company	23,224
Citizens United Reciprocal Exchange	61,480	Fire Districts NY Group	22,940
New Jersey Skylands Insurance Company	60,943	American Millennium Insurance Company	22,132
Millers Capital Insurance Company	59,919	Broadline Risk Retention Group, Inc.	21,440
Sterling Insurance Company	58,583	White Pine Insurance Company	20,939
ARI Mutual Insurance Company	57,578	Cassatt Risk Retention Group, Inc.	19,937
New York Municipal Insurance Reciprocal	57,304	Eastern Atlantic Insurance Company	19,832
Everett Cash Mutual Insurance Company	55,933	Conventus Inter-Insurance Exchange	19,775
Dryden Mutual Insurance Company	55,767	Syncora Guarantee Inc.	18,242
Housing Authority Property Insurance, A Mutual Company	53,847	Bedford Physicians Risk Retention Group, Inc.	17,404
Mountain Laurel Risk Retention Group, Inc.	52,265	Otsego Mutual Fire Insurance Company	17,372
Paramount Insurance Company	50,182	Financial Guaranty Insurance Company	17,330
MDAdvantage Insurance Company of New Jersey	49,850	Geisinger Insurance Corporation, Risk Retention Group	16,632
Community Hospital Alternative for Risk Transfer (A Reciprocal RRG)	48,737	State Insurance Fund Disability Benefits Fund	16,405
Tri-Century Insurance Company	47,755	Physicians Proactive Protection, Inc. Risk Retention Group	16,359
Applied Medico-Legal Solutions Risk Retention Group, Inc.	47,014	Farmers Fire Insurance Company	16,169
American European Insurance Group	45,232	Physicians Specialty Ltd. Risk Retention Group	16,071
Farmers Mutual Fire Insurance Company of Salem County	45,051	Adriatic Insurance Company	15,924
Franklin Casualty Insurance Company (A Risk Retention Group)	43,236	Hospitality Insurance Group	15,440
Firstline National Insurance Company	42,832	Kensington Insurance Company	15,374
Medical Mutual Insurance Company of Maine	42,531	Professional Casualty Association	15,324
Security Mutual Insurance Company	41,094	Westminster American Insurance Company	15,134
IFA Insurance Company	41,080	Wayne Cooperative Insurance Company	14,770
Global Liberty Insurance Company of New York	39,898	Alliance National Insurance Company	14,733
Connecticut Medical Group	38,927	Hyundai Marine & Fire Insurance Company, Ltd.	14,653
BAR Vermont Risk Retention Group, Inc.	37,140	Oriska Insurance Company	14,483
Alliance of Nonprofits for Insurance, Risk Retention Group, Inc.	36,257	Colonial Surety Company	14,389
Preferred Physicians Medical Risk Retention Group, Inc.	35,652	New Jersey Physicians United Reciprocal Exchange	14,253
Oceanus Insurance Company a Risk Retention Group	35,543	Allegany Co-op Insurance Company	14,204
Healthcare Providers Insurance Exchange	35,184	St. Luke's Health Network Insurance Company, a Reciprocal Risk Retention Group	14,090
Tri-State Consumer Insurance Company	34,147	Park Insurance Company	13,274
Tuscarora Wayne Insurance Company	32,089	Midstate Mutual Insurance Company	12,995
Farmers and Mechanics Mutual Group	31,806	Central Pennsylvania Physicians Risk Retention Group, Inc.	12,972
Housing Authority Risk Retention Group, Inc.	30,953	West Virginia National Auto Insurance Company	12,681
Windsor Mount Joy Mutual Insurance Company	30,311	Municipal Mutual Insurance Company of West Virginia	12,679
Farmers Insurance Company of Flemington	30,166	West Virginia Insurance Company	12,132
Millville Mutual Insurance Company	29,527	Lexington National Insurance Corporation	12,105
Rider Insurance Company	29,290	Farmers Mutual Fire Insurance Company of Marble, Pennsylvania	12,039
Capitol Insurance Company	28,897	Eastern Dentists Insurance Company RRG	11,963
Barnstable Group	28,458	Daily Underwriters of America	11,920
Frederick Mutual Insurance Company	28,115	Leatherstocking Cooperative Insurance Company	11,799
AmeriHealth Casualty Insurance Company	28,107	New York Healthcare Insurance Company, Inc., A Risk Retention Group	11,457
Housing and Redevelopment Insurance Exchange	26,853	1st Choice Auto Insurance Company, Inc.	11,443
West Virginia Mutual Insurance Company	25,644	Finger Lakes Fire and Casualty Company	11,039

Source: Guy Carpenter

Northeast/Atlantic (continued)

Company	2014 Total DWP (\$000s)	Company	2014 Total DWP (\$000s)
First Medical Insurance Company (A Risk Retention Group)	10,391	Physicians' Insurance Program Exchange	5,022
Positive Physicians Insurance Exchange	10,191	Genesee Patrons Cooperative Insurance Company	4,887
CIFG Assurance North America, Inc.	10,073	Midrox Insurance Company	4,762
Lebanon Valley Insurance Company	10,058	Ontario Insurance Company	4,659
LVHN Reciprocal Risk Retention Group	9,625	Freedom Advantage Insurance Company	4,630
Synergy Comp Insurance Company	9,567	J.M. Woodworth Risk Retention Group, Inc.	4,604
Chautauqua Patrons Insurance Company	9,412	Pinelands Insurance Company Risk Retention Group, Inc.	4,472
Syncora Capital Assurance Inc.	9,337	Briar Creek Mutual Insurance Company	4,462
Reamstown Mutual Insurance Company	9,180	US Coastal Insurance Company	4,408
Mid-Hudson Co-Operative Insurance Company	9,124	North Shore - LIJ Physicians Insurance Company Risk Retention Group	4,287
CARE Risk Retention Group, Inc.	8,966	Madison Mutual Insurance Company	4,269
Associated Mutual Insurance Cooperative	8,640	United Central PA. Reciprocal Risk Retention Group	4,207
Keystone National Insurance Company	8,609	Pennsylvania Professional Liability Joint Underwriting Association	3,999
North Country Insurance Company	8,309	Coverys RRG, Inc.	3,999
Nazareth Mutual Insurance Company	8,110	Hanover Fire and Casualty Insurance Company	3,889
Insurance Placement Facility of Pennsylvania	8,063	United Frontier Mutual Insurance Company	3,824
Crystal Run Reciprocal Risk Retention Group	7,869	Wilmington Insurance Company	3,402
Great Falls Insurance Company	7,849	Service Insurance Company, Inc.	3,388
OrthoForum Insurance Company (A Risk Retention Group)	7,788	American Property Insurance Company	3,315
WellSpan Reciprocal Risk Retention Group	7,697	Friends Cove Mutual Insurance Company	3,289
Broome Co-operative Insurance Company	7,610	Safe Insurance Company	3,283
Guthrie Risk Retention Group, Inc.	7,442	Peace Church Risk Retention Group (a Reciprocal)	3,268
SCRUBS Mutual Assurance Company Risk Retention Group	7,369	Pan Handle Farmers Mutual Insurance Company of West Virginia	3,054
Oswego County Mutual Insurance Company	7,131	Farmers' and Mechanics' Mutual Insurance Company	2,921
National Independent Truckers Insurance Company, A RRG	7,100	PELICAN Insurance (A Reciprocal Risk Retention Group)	2,812
Constitution Insurance Company	6,934	Centre County Mutual Fire Insurance Company	2,764
First Indemnity of America Insurance Company	6,836	Conemaugh Valley Mutual Insurance Company	2,762
PACE Risk Retention Group, Inc.	6,702	Washington County Co-op Insurance Company	2,731
Fulmont Mutual Insurance Company	6,301	Medical Malpractice Joint Underwriting Association of Rhode Island	2,717
Central Co-operative Insurance Company	6,292	Sigma Risk Retention Group, Inc.	2,697
Callicoon Co-operative Insurance Company	6,288	United Casualty and Surety Insurance Company	2,642
CBIA Comp. Services, Inc.	6,246	Excela Reciprocal RRG	2,505
Elite Transportation Risk Retention Group, Inc.	6,112	Millbrook NMF Risk Retention Group, Inc.	2,430
American Safety Insurance Company	6,023	Pennsylvania Physicians' Reciprocal Insurers	2,362
Livingston Mutual Insurance Company	6,013	Bondex Insurance Company	2,319
Farmers Mutual Insurance Company	6,008	CareConcepts Insurance, Inc., A Risk Retention Group	2,250
Paramount Insurance Company	5,966	Mutual Insurance Company of Lehigh County	2,241
Amalgamated Casualty Insurance Company	5,954	Western Select Insurance Company	2,197
Bedford Grange Mutual Insurance Company	5,943	Good Shepherd Reciprocal Risk Retention Group, Inc.	2,189
Arrow Mutual Liability Insurance Company	5,841	Ironshore Risk Retention Group (D.C.), Inc.	2,127
Mountaineer Freedom Risk Retention Group, Inc.	5,751	Claverack Cooperative Insurance Company	2,016
Farmers Mutual Fire Insurance Company of McCandless Township	5,683	Hannahstown Mutual Insurance Company	2,000
Laundry Owners Mutual Liability Insurance Association	5,573	Physicians' Insurance Exchange Resource, A Risk Retention Group	1,785
Doctors & Surgeons National Risk Retention Group, Inc.	5,392	Franklin Homeowners	1,724
Juniata Mutual Insurance Company	5,379	Continental Mutual Insurance Company	1,660
Architects and Engineers Insurance Company RRG	5,373		
Pinnacle Consortium of Higher Education, A Vermont Reciprocal RRG	5,174		

Source: Guy Carpenter

Continued Overleaf

Northeast/Atlantic (continued)

Company	2014 Total DWP (\$000s)
Graco Risk Retention Group, Inc.	1,654
AEGIS Healthcare Risk Retention Group, Inc.	1,629
Otsego County Patrons Co-Operative Fire Relief Association	1,618
UPMC Work Alliance, Inc.	1,584
Wall Rose Mutual Insurance Company	1,509
Public Utility Mutual Insurance Company (A Risk Retention Group)	1,503
COMCARE PRO Insurance (A Reciprocal Risk Retention Group)	1,481
Faith Affiliated Risk Retention Group, Inc.	1,387
First Surety Corporation	1,353

Company	2014 Total DWP (\$000s)
Broadway Insurance and Surety Company, Inc.	1,326
Clearfield County Grange Mutual Fire Insurance Company	1,279
Grange Mutual Fire Insurance Company	1,222
Farmers & Mechanics Mutual Insurance Association of Cecil County, Inc.	1,211
Atlantic Bonding Company, Inc.	1,192
DuBois Medical Risk Retention Group	1,070
Equitable Liability Insurance Company	1,040
Allied Services Risk Retention Group	1,015

Southeast/Gulf

Company	2014 Total DWP (\$000s)
Citizens Property Insurance Corporation	2,083,870
Shelter Mutual Insurance Company	1,414,983
Southern Farm Bureau Casualty Consolidated	1,182,387
Tennessee Farmers Mutual Insurance Company	1,161,723
ARX Holding Corp.	1,141,994
Texas Mutual Insurance Company	1,140,962
Alfa Mutual Insurance Company	1,119,489
North Carolina Farm Bureau Insurance Group	939,086
Universal Property & Casualty Insurance Company	780,896
Republic Companies, Inc.	711,210
FCCI Insurance Group	669,941
Home State County Mutual Insurance Company	640,636
Central Mutual of Ohio Group	580,532
Loya Insurance Company	526,391
Texas Windstorm Insurance Association	494,036
Texas Farm Bureau Mutual Insurance Company	472,656
Germania Mutual Group	458,100
Georgia Farm Bureau Mutual Insurance Company	446,578
Direct General Group	424,757
United Property & Casualty Insurance Company	422,842
Old Amer County Mutl Fire Ins Co. & Old Amer Indemnity Co.	418,292
CUMIS Insurance Society, Inc.	397,009
Houston International Insurance Group	395,096
Federated National Insurance Company	385,768
AMERISAFE Combined Group	384,633
Jefferson Insurance Company	378,279
Brotherhood Mutual Insurance Company	362,803
Western Surety Company	362,393
Permanent General Assurance Corporation	357,240
PURE Group of Insurance Companies	351,356
BCS Insurance Company	350,906
ACCC Insurance Company	347,472
Homeowners Choice Property & Casualty Insurance Company, Inc.	345,421
Sussex Insurance Company	338,796
Safeway Insurance Company	335,638

Company	2014 Total DWP (\$000s)
Affirmative Insurance Company	331,179
Western World Insurance Company	329,487
Universal Insurance Holdings of North America	324,755
Courtesy Insurance Company	322,144
American Hallmark Ins Co of TX	320,976
Sompo Japan Insurance Company of America	311,327
American Coastal Insurance Company	310,291
Florida Peninsula Insurance Company	307,290
CompSource Mutual Insurance Company	306,439
Texas Farm Bureau Underwriters - A Reciprocal	290,316
Heritage Property & Casualty Insurance Company	287,108
PMI Mortgage Insurance Co.	286,341
St. Johns Insurance Company, Inc.	283,792
Virginia Farm Bureau Mutual Insurance Company	278,382
Essent Guaranty, Inc. & Essent Guaranty of PA, Inc.	276,778
Geovera Holdings, Inc. Group	268,687
People's Trust Insurance Company	264,800
Lyndon Southern Insurance Company	263,699
Consolidated Lloyds	261,826
Bankers Insurance Company	250,264
Oklahoma Farm Bureau Insurance Group	248,713
Security First Insurance Company	247,917
Guarantee Insurance Company	247,656
Texas Farm Bureau Casualty Insurance Company	245,198
Farm Bureau Mutual Insurance Company of Arkansas, Inc.	244,979
MAG Mutual Group	244,812
American Integrity Insurance Company of Florida	239,930
Tower Hill Prime Insurance Company	236,681
United Automobile Insurance Company	232,096
Builders Mutual Insurance Company	232,057
Global Indemnity Group	229,978
Republic Mortgage Insurance Company	226,931
Pennsylvania Lumbermens Group	219,397
First Financial Insurance Company	202,738
MGA Insurance Company, Inc.	201,903

Source: Guy Carpenter

Southeast/Gulf (continued)

Company	2014 Total DWP (\$000s)	Company	2014 Total DWP (\$000s)
First Acceptance Insurance Company, Inc.	200,936	Lumbermen's Underwriting Alliance	96,576
Louisiana Workers' Compensation Corporation	199,493	Cypress Property & Casualty Insurance Company	93,391
Cherokee Insurance Company	195,342	National Group	91,921
Windhaven Insurance Company	193,314	Generali - U.S. Branch	84,964
South Carolina Farm Bureau Mutual Insurance Company	190,213	Insurance Company of the South	82,409
Canal Insurance Company	187,373	National Unity Insurance Company	80,294
Builders Insurance (A Mutual Captive Company)	187,358	LUBA Casualty Insurance Company	79,761
Hochheim Prairie Insurance Group	180,922	Farm Bureau County Mutual Insurance Company of Texas	79,589
Tower Hill Preferred Insurance Company	171,486	Armed Forces Insurance Exchange	79,274
Louisiana Citizens Property Insurance Corporation	168,068	CEM Insurance Company	78,863
American Mercury Insurance Co.	167,888	Gray Insurance Company	77,154
Tower Hill Signature Insurance Company	165,734	Triton Insurance Company	76,922
Jewelers Mutual Insurance Company	161,750	Merchants Bonding Company (Mutual)	76,090
Southern Fidelity Insurance Company, Inc.	160,813	Heritage Indemnity Company	75,109
Securian Casualty Company	155,383	Centauri Specialty Insurance Company	74,510
Federated Rural Electric Insurance Exchange	154,793	Capitol Preferred Insurance Company, Inc.	73,737
Ocean Harbor Casualty Insurance Company	152,415	Homeowners of America Insurance Company	73,620
Hallmark County Mutual Insurance Company	152,256	Auto Club South Insurance Company	71,675
Maxum Specialty Insurance Group	151,822	Health Care Indemnity, Inc.	71,505
Louisiana Farm Bureau Mutual Insurance Company	149,043	Canopus US Insurance, Inc.	69,981
National Lloyds Insurance Company	147,935	T.H.E. Insurance Company	69,821
Dealers Assurance Company	146,660	Lighthouse Property Insurance Corporation	69,717
State Volunteer Mutual Insurance Company	142,757	AssuranceAmerica Insurance Company	69,668
National American Insurance Company	140,142	Torus Specialty Insurance Company	68,559
Ohio Indemnity Company	135,769	RVOS Farm Mutual Insurance Company	67,665
Texas FAIR Plan Association	133,206	Omega Insurance Company	67,337
Gulfstream Property and Casualty Insurance Company	131,435	Lititz Mutual Insurance Company	66,762
Olympus Insurance Company	131,193	SureTec Insurance Company	66,305
Tower Hill Select Insurance Company	130,237	Stonetrust Commercial Insurance Company	64,367
Accident Insurance Company, Inc.	129,533	Equity Insurance Company	63,287
Acceptance Indemnity Ins Co. & Acceptance Casualty Ins Co.	128,190	Independence American Insurance Company	62,758
Florida Family Insurance Company	126,824	Safe Harbor Insurance Company	62,392
International Fidelity Insurance Company	124,083	GoAuto Insurance Company	62,018
Harco National Insurance Company	123,962	American Contractors Insurance Group	62,008
Ark Royal Insurance Company	122,341	National Security Fire & Casualty Company	58,926
First Protective Insurance Company	118,714	Peachtree Casualty Insurance Company	56,776
RetailFirst Insurance Group	115,750	Ascendant Commercial Insurance, Inc.	55,575
American Farmers & Ranchers Mutual Insurance Company	114,807	Service Insurance Company	54,769
Atain Insurance Companies	112,368	CorePointe Insurance Company	54,302
FFVA Mutual Insurance Co.	110,430	Prepared Insurance Company	53,385
Fidelity Fire & Casualty Company	110,102	Northern Neck Insurance Company	52,951
Weston Insurance Company	103,862	Sentruity Casualty Company	51,885
Southern Oak Insurance Company	103,379	OIDA Risk Retention Group, Inc.	51,247
Service Lloyds Insurance Company	101,696	LAMMICO	50,421
Ranchers & Farmers Mutual Insurance Company	100,532	Yosemite Insurance Company	50,299
Atlantic Casualty Insurance Company	100,358	American Traditions Insurance Company	48,265
Elephant Insurance Company	99,998	Traders Insurance Company	48,143
Southern Fidelity Property & Casualty, Inc.	97,285	Guarantee Company of North America USA	47,506
Medical Mutual Insurance Company of North Carolina	96,958	Spirit Commercial Auto Risk Retention Group, Inc.	47,069

Source: Guy Carpenter

Continued Overleaf

Southeast/Gulf (continued)

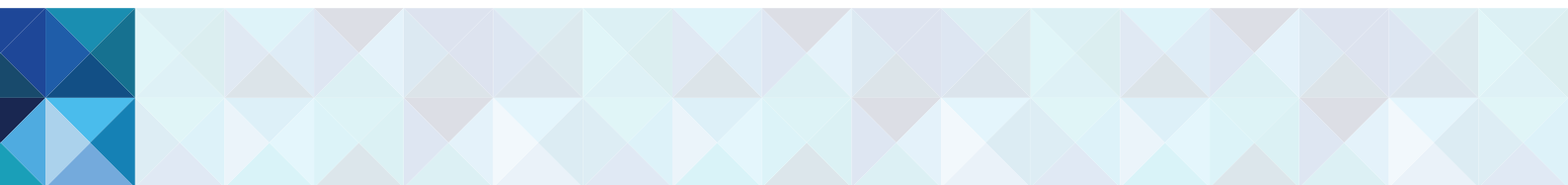
Company	2014 Total DWP (\$000s)	Company	2014 Total DWP (\$000s)
Sawgrass Mutual Insurance Company	46,591	Zale Indemnity Company	22,759
Wellington Insurance Company	44,930	Star & Shield Insurance Exchange	22,564
Loudoun Mutual Insurance Company	44,679	Normandy Insurance Company, Inc.	22,062
Rockingham Insurance Company	44,559	Texas Lawyers' Insurance Exchange	21,755
Ophthalmic Mutual Insurance Company (A Risk Retention Group)	44,140	Forestry Mutual Insurance Company	21,679
Safepoint Insurance Company	43,974	Southern Mutual Insurance Company	20,388
United Home Insurance Company	43,827	Southern States Insurance Exchange	20,336
Cypress Texas Lloyds	43,114	CastlePoint Florida Insurance Company	20,310
Pre-Paid Legal Casualty, Inc.	42,722	N.C. Grange Mutual Insurance Company	20,295
Prime Holdings Insurance Group	41,780	US Lloyds Insurance Company	19,827
American Service Insurance Company, Inc.	41,534	Members Insurance Company	19,557
Healthcare Underwriting Company, A Risk Retention Group	41,520	Family Security Insurance Company, Inc.	18,915
Modern USA Insurance Company	39,743	First Benefits Insurance Mutual, Inc.	18,870
Alabama Municipal Insurance Corporation	39,508	Seven Seas Insurance Company, Inc.	18,730
Access Home Insurance Company	39,254	American Federated Insurance Company	18,710
Plateau Casualty Insurance Company	38,953	Southern Pioneer Property and Casualty Insurance Company	18,702
AmFed National Insurance Company	38,012	Worth Casualty Company	18,092
Southern Vanguard Insurance Company	37,606	Harbor Insurance Company	18,000
Southern Mutual Church Insurance Company	37,557	TIG Insurance Company	17,932
MDOW Insurance Company	36,780	Centennial Casualty Company	17,691
Aetna Insurance Company of Connecticut	36,684	Lawyers Mutual Liability Insurance Company of North Carolina	17,665
Americas Insurance Company	36,269	Star Casualty Insurance Company	17,615
Repwest Insurance Company	35,724	Lion Insurance Company	17,465
FHM Insurance Company	34,170	Leon Hix Group	15,917
Discovery Insurance Company	33,825	Premier Group Insurance Company	15,730
Alinsco Insurance Company	33,271	Capson Physicians Insurance Company	15,305
Florida Workers' Compensation Joint Underwriting Association, Inc.	32,924	MedMal Direct Insurance Company	14,327
Universal Insurance Company	32,772	Capacity Insurance Company	14,187
Maison Insurance Company	32,663	Florida Lawyers Mutual Insurance Company	14,088
Agricultural Workers Mutual Auto Insurance Company	32,068	Georgia Farm Bureau Casualty Insurance Company	13,849
American Southern Insurance Company	31,985	Building Industry Insurance Association, Inc.	13,726
Southern Trust Insurance Company	30,911	Work First Casualty Company	13,635
PLICO, Inc.	30,485	Standard Casualty Company	13,357
Redpoint County Mutual Insurance Company	30,189	Casualty Corporation of America, Inc.	13,123
American Risk Insurance Company, Inc.	29,969	Lancet Indemnity Risk Retention Group, Inc.	12,516
Synergy Insurance Company	29,353	USPlate Glass Insurance Company	11,477
FD Insurance Company	27,674	Farmers Mutual Fire Insurance Company	11,424
Responsive Auto Insurance Company	27,510	American Resources Insurance Company, Inc.	11,413
Carolina Mutual Insurance, Inc.	27,492	Farmers Mutual of Tennessee	11,369
Granada Insurance Company	27,074	Union Mutual Insurance Company	11,047
SUNZ Insurance Company	26,816	USA Insurance Company	10,869
Titan Insurance Company, Inc. A Risk Retention Group	26,186	New Home Warranty Insurance Company, A Risk Retention Group	10,790
Columbia Lloyds Insurance Company	26,065	ARCOA Risk Retention Group, Inc.	10,688
Avatar Property & Casualty Insurance Company	24,216	States Self-Insurers Risk Retention Group, Inc.	10,630
Frank Winston Crum Insurance Company	23,621	Healthcare Providers Insurance Company (Risk Retention Group)	10,497
Elements Property Insurance Company	23,498	Oklahoma Attorneys Mutual Insurance Company	10,472
Retailers Casualty Insurance Company	23,316	Priority One Insurance Company	9,938
AF&L Insurance Company	23,047		

Source: Guy Carpenter

Southeast/Gulf (continued)

Company	2014 Total DWP (\$000s)	Company	2014 Total DWP (\$000s)
Mental Health Risk Retention Group, Inc.	9,822	Farmers Union Mutual Insurance Company	4,292
Anchor Specialty Insurance Company	9,490	Golden Insurance Company, A Risk Retention Group	4,237
Old Glory Insurance Company	8,880	Safety First Insurance Company	3,907
Texas Hospital Insurance Exchange	8,786	Carolina Farmers Mutual Insurance Company	3,835
American Platinum Property and Casualty Insurance Company	8,681	National Medical Professional Risk Retention Group, Inc.	3,781
Samaritan Risk Retention Group, Inc.	8,662	Attorneys Insurance Mutual of the South, Inc., Risk Retention Group	3,592
Halifax Mutual Insurance Company	8,628	Arkansas Mutual Insurance Company	3,509
Delta Lloyds Insurance Company of Houston Texas	8,556	Tank Owner Members Insurance Company	3,357
Health Care Casualty Risk Retention Group, Inc.	8,537	Great Central Fire Insurance Company	3,330
Preferred Auto Insurance Co., Inc.	8,384	British American Insurance Company	3,186
American Colonial Insurance Company	8,181	Gables Risk Retention Group, Inc.	3,129
Spartan Property Insurance Company	8,170	Alamance Farmers' Mutual Insurance Company	3,075
Versant Casualty Insurance Company	7,993	Spartan Insurance Company	3,038
Merchants National Bonding Inc.	7,956	Roche Surety and Casualty Company, Inc.	2,993
Coastal Insurance Company, Inc.	7,638	Century Mutual Insurance Company	2,802
Insurors Indemnity Lloyds	7,542	Rural Trust Insurance Company	2,793
Agents Mutual Insurance Company	7,498	Heartland Healthcare Reciprocal Risk Retention Group	2,566
Georgia Dealers Insurance Company	7,433	Piedmont Mutual Insurance Company	2,546
VFH Captive Insurance Company	7,295	Physicians Indemnity Risk Retention Group, Inc.	2,474
Circle Star Insurance Company, A Risk Retention Group	7,187	Novant Health Risk Retention Group, Inc.	2,462
German American Farm Mutual	7,171	Warranty Underwriters Insurance Company	2,310
Centurion Medical Liability Protective Risk Retention Group, Inc.	6,884	Fredericksburg Professional Risk Exchange (A RRG)	2,156
Colonial Lloyds	6,501	MidSouth Mutual Insurance Company	2,049
Coastal American Insurance Company	6,412	Cruden Bay Risk Retention Group, Inc.	2,000
Baldwin Mutual Insurance Company, Inc.	6,277	National Assisted Living Risk Retention Group	1,916
First Mutual Insurance Company	6,272	MAKE Transportation Insurance, Inc., A Risk Retention Group	1,915
Security Plan Fire Insurance Company	6,092	Delta Fire & Casualty Insurance Company	1,876
Dealers Choice Mutual Insurance, Incorporated	6,068	Red Clay Risk Retention Group, Inc.	1,823
Petroleum Casualty Company	5,996	Emergency Medicine Risk Retention Group, Inc.	1,628
Med Mal Risk Retention Group, Inc.	5,858	AGIC, Inc.	1,531
Physicians Casualty Risk Retention Group, Inc.	5,837	Medical Providers Mutual Insurance Company, A Risk Retention Group	1,450
Caregivers United Liability Insurance Company, A RRG	5,829	St. Charles Insurance Company Risk Retention Group	1,438
SteadPoint Insurance Company	5,778	Texas Medical Liability Insurance Underwriting Association	1,242
Physicians Insurance Company	5,600	Yel Co. Insurance	1,198
Healthcare Underwriters Group of Florida Inc.	5,576	Virginia Physicians Risk Retention Group, Inc.	1,194
Texas Medical Insurance Company	5,486	Slavonic Mutual Fire Insurance Association	1,109
Health Care Mutual Captive Insurance Company	5,325		
United Business Insurance Company (A Mutual Captive)	5,182		
Sunland Risk Retention Group, Inc.	5,119		
Physicians Professional Liability Risk Retention Group, Inc.	5,015		
AmFed Casualty Insurance Company	4,719		
New Century Insurance Company	4,702		
Insurors Indemnity Company	4,688		
Southwest Physicians Risk Retention Group, Inc.	4,481		
Palmetto Surety Corporation	4,431		
Ethio-American Insurance Company, Inc.	4,384		
National Fire and Indemnity Exchange	4,367		

Source: Guy Carpenter



Midwest

Company	2014 Total DWP (\$000s)	Company	2014 Total DWP (\$000s)
Auto Club Insurance Association	2,104,950	NCMIC Insurance Company	106,948
Farm Bureau Property & Casualty Insurance Company	1,375,533	Michigan Millers Mutual Insurance Company	102,606
Grange Mutual Cas Co	1,264,324	Badger Mutual Insurance Company	100,736
ACUITY, A Mutual Insurance Company	1,242,975	TransGuard Insurance Company of America, Inc.	83,918
West Bend Mutual Insurance Company	985,283	Atradius Trade Credit Insurance, Inc.	75,067
Kentucky Farm Bureau Mutual Insurance Company	898,563	Wisconsin Mutual Insurance Company	71,627
Motorists Insurance Group	743,407	Unique Insurance Company	68,465
Farm Bureau Mutual Insurance Company of Michigan	685,550	Underwriters at Lloyd's, London (IL)	65,871
Frankenmuth Insurance	612,287	Underwriters at Lloyd's, London (KY)	65,840
Farmers Automobile Ins Assn. & Farmers Automobile Mgmt Corp.	602,840	Dakota Group	64,160
United Farm Family Mutual Insurance Company	578,974	Buckeye Insurance Group	60,183
Farmers Mutual Hail Insurance Company of Iowa	560,548	Cameron Insurance Companies	58,305
SECURA Insurance Companies	508,109	Farmers Union Mutual Insurance	57,323
Western National Insurance Company	451,280	Triangle Insurance Company, Inc.	50,128
FMH Ag Risk Insurance Company	425,623	Conifer Insurance Company	49,176
CGB Insurance Company	420,429	Standard Mutual Insurance Company	48,923
ADM Insurance Company	415,393	Rockford Mutual Insurance Company	48,598
Hastings Mutual Insurance Company	412,922	Germantown Mutual Insurance Company	48,396
Grinnell Mutual Group	410,924	RAM Mutual Insurance Company	48,155
North Star Companies Group	359,668	Wolverine Mutual Insurance Company	47,023
Caterpillar Insurance Company	349,759	Illinois Casualty Company (A Mutual Insurance Company)	46,340
Farmers Mutual Insurance Company of Nebraska	313,206	De Smet Farm Mutual Insurance Co. of South Dakota	43,686
Safe Auto Insurance Company	308,776	Health Care Industry Liability Reciprocal Insurance Company, a RRG	42,316
American Road Insurance Company	291,089	First Chicago Insurance Company	39,470
Columbia Mutual Insurance Company	263,762	Madison Mutual Insurance Company	37,253
First Colonial Insurance Company	226,464	Michigan Commercial Insurance Mutual	36,972
ISMIE Insurance Group	224,120	Cornerstone National Insurance Company	36,682
Ohio Mutual Insurance Group	208,096	Minnesota Lawyers Mutual Insurance Company	36,042
American Access Casualty Company	204,634	Michigan Automobile Insurance Placement Facility	34,197
Western Reserve Mutual Casualty Company	203,675	National Mortgage Insurance Holdings Group	34,029
Pioneer State Mutual Insurance Company	200,686	American Inter-Fidelity Exchange	33,565
IMT Mutual Holding Company	199,218	Center Mutual Insurance Company	33,283
Indiana Farmers Mutual Insurance Company	192,940	Evergreen National Indemnity Company	32,858
Farm Bureau Town & Country Insurance Company of Missouri	191,189	Wayne Mutual Insurance Company	30,484
Society Insurance, A Mutual Company	188,321	Bremen Farmers Mutual Insurance Company	29,670
Missouri Employers Mutual Insurance Company	186,835	Kentucky National Insurance Company	28,840
Rural Mutual Insurance Company	174,244	R.V.I. America Insurance Company	28,260
MMIC Insurance, Inc.	165,228	Missouri Hospital Plan	27,053
Old United Casualty Company	159,609	Midwest Insurance Company	26,846
Farmers Alliance Mutual Insurance Company	159,529	Housing Enterprise Insurance Company, Inc.	26,398
Kentucky Employers' Mutual Insurance Authority	158,146	Marysville Mutual Insurance Company	26,142
SFM Mutual Insurance Company	146,312	Granite Re, Inc.	25,671
Nodak Mutual Insurance Company	131,329	Ohio FAIR Plan Underwriting Association	24,811
Midwest Family Mutual Insurance Company	120,426	League of Wisconsin Municipalities Mutual Insurance	24,738
Celina Mutual Group	118,476	Wisconsin County Mutual Group	24,599
Lyndon Property Insurance Company	114,047	American Excess Insurance Exchange, Risk Retention Group	24,539
Pharmacists Mutual Insurance Company	112,903	Michigan Basic Property Insurance Association	24,136
Arch Mortgage Insurance Company	111,667	1st Auto & Casualty Insurance Company	23,693

Source: Guy Carpenter

Midwest (continued)

Company	2014 Total DWP (\$000s)	Company	2014 Total DWP (\$000s)
ReliaMax Surety Company	23,507	Ohio Bar Liability Insurance Company	7,407
Caring Communities, a Reciprocal Risk Retention Group	23,292	Retailers Insurance Company	7,282
Kentucky Growers Insurance Company, Inc.	22,910	Specialty Risk of America	7,240
Kansas Medical Mutual Insurance Company	22,829	InsureMax Insurance Company	6,900
Midwest Builders' Casualty Mutual Company	22,193	Health Care Insurance Reciprocal	6,843
Mt. Morris Mutual Insurance Company	21,286	Hartland Mutual Insurance Company	6,501
IU Health Risk Retention Group, Inc.	20,454	National Public Finance Guarantee Corporation	6,476
Diamond Insurance Company	20,285	Districts Mutual Insurance	6,402
Direct Auto Insurance Company	20,000	Maple Valley Mutual Insurance Company	6,308
Upland Mutual Insurance, Inc.	19,767	ReliaMax Insurance Company	5,908
MutualAid eXchange	19,630	Healthcare Underwriters Group Inc.	5,756
Illinois State Bar Association Mutual Insurance Company	18,880	Emergency Physicians Insurance Exchange RRG	5,755
Northern Mutual Insurance Company	18,771	Indiana Healthcare Reciprocal Risk Retention Group	5,557
Manufacturing Technology Mutual Insurance Company	18,699	Great Plains Casualty, Inc.	5,213
Bar Plan Group	18,689	Wisconsin Municipal Mutual Insurance Company	5,163
First Guard Insurance Company	18,343	Wisconsin Lawyers Mutual Insurance Company	5,044
Fairmont Farmers Mutual Insurance Company	17,600	Farm Bureau New Horizons Insurance Company of Missouri	5,001
Battle Creek Mutual Insurance Company	15,970	Kentucky Hospital Insurance Company, A Risk Retention Group	4,863
Transit General Insurance Company	15,810	Mound Prairie Mutual Insurance Company	4,791
NHRMA Mutual Insurance Company	15,761	Mount Carroll Mutual Insurance Company	4,626
Northwest G.F. Mutual Insurance Company	15,512	Doctors Direct Insurance, Inc.	4,583
Lighthouse Casualty Company	15,226	Great Lakes Mutual Insurance Company	4,465
Missouri Professionals Mutual	14,432	Farmers and Merchants Mutual Fire Insurance Company	4,333
American Alliance Casualty Company	14,398	Heartland Mutual Insurance Company	4,278
Mennonite Mutual Insurance Company	14,285	Little Black Mutual Insurance Company	4,087
SU Insurance Company	14,100	Missouri Valley Mutual Insurance Company	4,059
United Equitable Insurance Company	14,049	U.S. Insurance Company of America	3,999
Governmental Interinsurance Exchange	13,682	National Insurance Company of Wisconsin	3,950
Stonegate Insurance Company	13,527	Bloomfield Mutual Insurance Company	3,913
WEA Property & Casualty Insurance Company	13,153	Hay Creek Mutual Insurance Company	3,907
Cities and Villages Mutual Insurance Company	13,044	Missouri Doctors Mutual Insurance Company	3,732
Michigan Professional Insurance Exchange	12,982	Ellington Mutual Insurance Company	3,668
Great Northwest Insurance Company	12,741	Petroleum Marketers Management Insurance Company	3,493
National Guardian Risk Retention Group, Inc.	12,723	Vasa-Spring Garden Mutual Insurance Company	3,456
Medical Alliance Insurance Company	12,360	Farmers Mutual Insurance Company	3,384
Medical Liability Alliance	11,935	Healthcare Underwriters Group Insurance Company of Kentucky Inc.	3,339
Mutual of Wausau Insurance Corporation	11,670	Emergency Capital Management, LLC, A Risk Retention Group	3,286
Falcon Insurance Company	11,038	Western Mutual Fire Insurance Company	3,122
Echelon Property and Casualty Insurance Company	10,516	Whitecap Surety Company	3,093
American Heartland Insurance Company	10,285	Transit Mutual Insurance Corporation of Wisconsin	2,889
NAMIC Insurance Company, Inc.	10,205	Geneva Insurance Company	2,889
Kansas Mutual Insurance Company	9,971	National Heritage Insurance Company	2,857
McMillan Warner Mutual Insurance Company	9,742	Censtat Casualty Company	2,806
SFM Select Insurance Company	9,513	National Fire & Casualty Company	2,766
Affinity Mutual Insurance Company	9,283	Indemnity National Insurance Company	2,683
Galen Insurance Company	8,016	Integra Insurance Inc.	2,554
American West Insurance Company	7,935	Saint Lukes Health System Risk Retention Group	2,313
Universal Surety Company & Inland Insurance Company	7,789		
Lawyers Mutual Insurance Company of Kentucky	7,443		

Source: Guy Carpenter

Continued Overleaf

Midwest (continued)

Company	2014 Total DWP (\$000s)
Midwest Insurance Group, Inc., a Risk Retention Group	2,313
Suburban Health Organization Risk Retention Group, LLC	2,233
Mower County Farmers Mutual Insurance Company	2,099
PrimeOne Insurance Company	2,094
Keystone Mutual Insurance Company	1,745
Wisconsin Health Care Liability Insurance Plan	1,736
Indiana Old National Insurance Company	1,605
Farmington Mutual Insurance Company	1,601

Company	2014 Total DWP (\$000s)
Benefit Security Insurance Company	1,576
Farmers Mutual Fire Insurance Company of Branch County	1,540
Trinity Risk Solutions Reciprocal Insurance Company, A Risk Retention Group	1,511
Kentuckiana Medical Reciprocal Risk Retention Group	1,497
MFS Mutual Insurance Company	1,431
Innovative Physician Solutions, a R.R.G.	1,417

West

Company	2014 Total DWP (\$000s)
Auto Club Enterprises Insurance Group	3,223,689
CSAA Insurance Exchange	3,081,430
Mercury Casualty Company	2,639,528
State Compensation Insurance Fund	1,529,579
Infinity Property & Casualty Insurance Group	1,360,807
Insurance Company of the West	774,582
Zenith Insurance Company	722,544
California Earthquake Authority	606,977
Pinnacol Assurance	571,694
SAIF Corporation	452,442
Star Insurance Company	439,702
Tokio Marine Holdings, Inc.	438,035
California Capital Insurance Company	422,903
Mitsui Sumitomo Insurance Company of America	379,988
PEMCO Mutual Insurance Company	378,258
Enumclaw Insurance Group	377,229
Wawanesa General Insurance Company	344,605
California Casualty Indemnity Exchange	336,735
Alliance United Insurance Company	334,913
James River Insurance Group	310,161
NORCAL Mutual Insurance Company	293,225
Alaska National Insurance Company	240,898
CopperPoint Mutual Insurance Company	223,334
First Insurance Company of Hawaii, Ltd.	213,625
Idaho State Insurance Fund	211,093
Access Insurance Company	210,916
Workers Compensation Fund	210,423
Pacific Specialty Insurance Company	209,619
Stillwater Insurance Co. and Stillwater P&C Insurance Co.	188,130
Mountain West Farm Bureau Mutual Insurance Company	180,433
Century-National Insurance Company	178,853
Montana State Fund	172,254
Farm Bureau Mutual Insurance Company of Idaho	170,954
Torus National Insurance Company	168,563
Kinsale Insurance Company	158,477
Hiscox Insurance Company Inc.	158,447

Company	2014 Total DWP (\$000s)
Consolidated Civil Svc Employees & CSE Safeguard	153,954
Oregon Mutual Insurance Company	153,565
Grange Insurance Association	147,217
Dongbu Insurance Co., Ltd. (US Branch)	146,233
Island Insurance Companies	119,761
Mutual Insurance Company of Arizona	115,119
Bear River Mutual Insurance Company	111,061
Anchor General Insurance Company	108,020
New Mexico Mutual Group	106,311
Benchmark Insurance Company	104,000
Mendota Insurance Company	93,860
Topa Insurance Company	92,497
Physicians Insurance A Mutual Group	92,351
COPIC Insurance Company	86,929
American Pet Insurance Company	86,820
Toyota Motor Insurance Company	82,096
Western Mutual Insurance Group	73,987
First American Specialty Insurance Company	69,310
DTRIC Insurance Company, Limited	68,468
Zephyr Insurance Company, Inc.	67,353
Hawaii Employers' Mutual Insurance Company, Inc.	65,967
Colorado Farm Bureau Mutual Insurance Company	65,373
First American Property & Casualty Insurance Company	63,520
Dentists Insurance Company	62,980
Medical Insurance Exchange of California	61,230
ARAG Insurance Company	60,699
Western General Insurance Company	59,594
Golden Bear Insurance Company	52,320
Allegheny Casualty Company	46,000
ALPS Property & Casualty Insurance Company	43,214
Lawyers' Mutual Insurance Company	39,649
Mountain States Insurance Group	39,412
Key Insurance Company	39,318
SPARTA Insurance Company	37,771
CAMICO Mutual Insurance Company	35,747
Care West Insurance Company	33,090

Source: Guy Carpenter

West (continued)

Company	2014 Total DWP (\$000s)	Company	2014 Total DWP (\$000s)
Crusader Insurance Company	32,810	ARECA Insurance Exchange	7,991
United Heritage Property and Casualty Company	31,015	Health Providers Insurance Reciprocal, A Risk Retention Group	7,914
Preferred Contractors Insurance Company Risk Retention Group, LLC	30,944	Bell United Insurance Company	7,845
United Insurance Company	28,324	ATX Premier Insurance Company	7,452
Idaho Counties Risk Management Program	28,278	Northwest Dentists Insurance Company	7,439
Mountain States Healthcare Reciprocal Risk Retention Group	28,205	Contractors Insurance Company of North America, Inc. A Risk Retention Group	7,426
Sublimity Insurance Company	27,903	Business Alliance Insurance Company	7,038
Mutual Risk Retention Group, Inc.	27,382	Alaska Timber Insurance Exchange	6,850
Workmen's Auto Insurance Company	27,344	Utah Business Insurance Company, Inc.	6,818
Springfield Insurance Company	25,405	Pacific Pioneer Insurance Company	6,423
Sutter Insurance Company	24,898	Emergency Medicine Professional Assurance Company RRG	6,361
California Healthcare Insurance Company, Inc., A Risk Retention Group	24,723	Yellowstone Insurance Exchange (A Risk Retention Group)	6,303
American Summit Insurance Company	24,529	Sunderland Marine Insurance Company Limited	5,956
Global Hawk Insurance Company Risk Retention Group	23,487	Financial American Property and Casualty Insurance Company	5,654
Allied Professionals Insurance Company, a Risk Retention Group, Inc.	22,549	PIH Health Insurance Company, A Reciprocal Risk Retention Group	5,406
Farmers Union Mutual Insurance Company	20,935	Premier Physicians Insurance Company, A Risk Retention Group	5,204
Advantage Workers Compensation Insurance Company	19,305	Continuing Care Risk Retention Group, Inc.	5,059
Gateway Insurance Company	17,476	Attorneys Insurance Mutual Risk Retention Group, Inc.	5,043
Farm Credit System Association Captive Insurance Company	17,467	Dentists Benefits Insurance Company	4,975
Sterling Casualty Insurance Company	17,243	Trans City Casualty Insurance Company	4,791
Hawaiian Insurance and Guaranty Company, Limited	16,829	MD Risk Retention Group, Inc.	4,782
Red Shield Insurance Company	16,582	Sentinel Assurance Risk Retention Group, Inc.	4,552
Nations Insurance Company	16,206	Merced Property & Casualty Company	4,478
Financial Casualty & Surety, Inc.	16,125	National Direct Insurance Company	4,369
Commonwealth Casualty Company	15,766	Pacific Star Insurance Company	4,368
Build America Mutual Assurance Company	15,434	Gem State Insurance Company	4,365
Restoration Risk Retention Group, Inc.	13,532	California Mutual Insurance Company	4,320
Associated Loggers Exchange	13,443	California Medical Group Insurance Company, R.R.G.	3,727
Onyx Insurance Company, Inc. A Risk Retention Group	13,279	360 Insurance Company	3,507
Fairway Physicians Insurance Company, A Risk Retention Group	12,644	Western Catholic Insurance Company, RRG, Inc.	3,483
Allegiant Insurance Company, Inc., A Risk Retention Group	12,586	Professional Exchange Assurance Company (A Risk Retention Group)	3,444
American Liberty Insurance Company	12,054	Sun Surety Insurance Company	3,264
Palomar Specialty Insurance Company	11,161	Professionals Risk Retention Group, Inc.	3,200
Victory Insurance Company, Inc.	11,044	Physicians Reimbursement Fund, Inc., A Risk Retention Group	2,769
Nevada Mut & First Choice Cas Grp	10,986	Greenpath Insurance Company	2,726
American Trucking and Transportation Insurance Company, A Risk Retention Group	10,853	Workers Compensation Exchange	2,609
Terra Insurance Company (A Risk Retention Group)	10,313	Casualty Underwriters Insurance Company	2,373
Landcar Casualty Company	9,931	American Forest Casualty Company Risk Retention Group	2,230
Primero Insurance Company	9,649	College Liability Insurance Company, A Reciprocal Risk Retention Group	2,208
Accredited Surety and Casualty Company, Inc.	9,523	Professional Insurance Exchange Mutual, Inc.	1,594
Seaview Insurance Company	9,239	Select MD Risk Retention Group, Inc.	1,594
American Surety Company	8,870	Ecole Insurance Company	1,496
Response Indemnity Company of California	8,309		
CPA Mutual Insurance Company of America Risk Retention Group	8,235		

Source: Guy Carpenter

E&S Market Segment

Company	2014 Total DWP (\$000s)
Ironshore Specialty Insurance Company	901,226
AXIS Surplus Insurance Company	591,636
Westchester Surplus Lines Insurance Company	577,207
National Fire & Marine Insurance Company	541,421
Landmark American Insurance Company	532,764
Chubb Custom Insurance Company	527,531
Colony Insurance Company	522,709
Essex Insurance Company	472,404
Aspen Specialty Insurance Company	426,378
Houston Casualty Company	421,771
Starr Surplus Lines Insurance Company	400,388
Allied World Assurance Company (U.S.) Inc.	377,420
Mt. Hawley Insurance Company	264,520
Hudson Specialty Insurance Company	253,240
James River Insurance Company	246,736
Allied World Surplus Lines Insurance Company	241,982
Everest Indemnity Insurance Company	232,057
First Specialty Insurance Corporation	226,216
Western World Insurance Company	214,759
Burlington Insurance Company	187,960
General Security Indemnity Company of Arizona	185,132
Cincinnati Specialty Underwriters Insurance Company	162,412
Covington Specialty Insurance Company	161,540
Kinsale Insurance Company	158,477
General Star Indemnity Company	156,426
Maxum Indemnity Company	151,737
American Empire Surplus Lines Insurance Company	149,529

Company	2014 Total DWP (\$000s)
Mount Vernon Fire Insurance Company	146,341
Associated Industries Insurance Company, Inc.	145,510
GeoVera Specialty Insurance Company	141,132
Houston Specialty Insurance Company	128,221
Acceptance Indemnity Insurance Company	115,878
Atain Specialty Insurance Company	105,192
Atlantic Casualty Insurance Company	100,358
Penn-America Insurance Company	73,909
Canopus US Insurance, Inc.	69,981
Torus Specialty Insurance Company	68,559
Tudor Insurance Company	62,313
Oklahoma Specialty Insurance Company	61,176
United National Insurance Company	58,573
Penn-Star Insurance Company	44,717
Associated International Insurance Company	41,411
Prime Insurance Company	33,046
U.S. Underwriters Insurance Company	29,865
Noetic Specialty Insurance Company	17,823
Adriatic Insurance Company	15,924
First Financial Insurance Company	12,368
Acceptance Casualty Insurance Company	12,312
American Safety Indemnity Company	9,493
Prime Property and Casualty Insurance Inc.	8,734
Guilford Insurance Company	2,410
Penn-Patriot Insurance Company	1,985
Alamance Insurance Company	-

Mutual Market Segment

Company	2014 Total DWP (\$000s)
State Auto Group	2,061,734
Sentry Insurance a Mutual Company	1,913,781
Amica Mutual Insurance Company	1,873,670
Ohio Farmers Insurance Co.	1,778,180
State Compensation Insurance Fund	1,529,579
Alleghany Group	1,499,880
Shelter Mutual Insurance Company	1,414,983
Federated Mutual Group	1,288,039
Grange Mutual Cas Co	1,264,324
ACUITY, A Mutual Insurance Company	1,242,975
Tennessee Farmers Mutual Insurance Company	1,161,723
Texas Mutual Insurance Company	1,140,962
Alfa Mutual Insurance Company	1,119,489
West Bend Mutual Insurance Company	985,283
North Carolina Farm Bureau Insurance Group	939,086
Kentucky Farm Bureau Mutual Insurance Company	898,563
Arbella Insurance Group	808,742
Utica Mutual Insurance Company	805,859

Company	2014 Total DWP (\$000s)
GuideOne Mutual & GuideOne Specialty Mutual	752,161
Donegal Mutual Insurance Company	747,656
Motorists Insurance Group	743,407
Amerisure Mutual Insurance Company	742,535
Penn National Insurance	706,213
Farm Bureau Mutual Insurance Company of Michigan	685,550
Church Mutual Insurance Company	638,971
Frankenmuth Insurance	612,287
Central Mutual of Ohio Group	580,532
United Farm Family Mutual Insurance Company	578,974
Pinnacol Assurance	571,694
Farmers Mutual Hail Insurance Company of Iowa	560,548
SECURA Insurance Companies	508,109
Medical Liability Mutual Insurance Company	502,503
New York Central Mutual Fire Insurance Company	481,824
Merrimack Mutual Fire Insurance Company	480,540
Germania Mutual Group	458,100
SAIF Corporation	452,442

Source: Guy Carpenter

Mutual Market Segment (continued)

Company	2014 Total DWP (\$000s)	Company	2014 Total DWP (\$000s)
Western National Insurance Company	451,280	Kentucky Employers' Mutual Insurance Authority	158,146
Georgia Farm Bureau Mutual Insurance Company	446,578	Union Mutual of Vermont Companies	157,678
Hastings Mutual Insurance Company	412,922	Oregon Mutual Insurance Company	153,565
Grinnell Mutual Group	410,924	Franklin Mutual Group	152,741
Vermont Mutual Insurance Group	380,123	Louisiana Farm Bureau Mutual Insurance Company	149,043
PEMCO Mutual Insurance Company	378,258	Grange Insurance Association	147,217
Enumclaw Insurance Group	377,229	SFM Mutual Insurance Company	146,312
Brotherhood Mutual Insurance Company	362,803	State Volunteer Mutual Insurance Company	142,757
North Star Companies Group	359,668	Brethren Mutual Insurance Company	136,346
Greater New York Mutual Insurance Company	315,355	Cumberland Insurance Group	136,147
Farmers Mutual Insurance Company of Nebraska	313,206	Medical Mutual Group	135,823
CompSource Mutual Insurance Company	306,439	Utica First Insurance Company	133,930
NORCAL Mutual Insurance Company	293,225	Goodville Mutual Casualty Co. & German Mutual Insurance Co.	133,899
Preferred Mutual Insurance Company	289,801	Texas FAIR Plan Association	133,206
BrickStreet Mutual Insurance Company	287,577	Nodak Mutual Insurance Company	131,329
Virginia Farm Bureau Mutual Insurance Company	278,382	Beacon Mutual Insurance Company	124,954
Quincy Mutual Group	270,174	Midwest Family Mutual Insurance Company	120,426
Merchants Insurance Group	269,700	Celina Mutual Group	118,476
Maine Employers' Mutual Insurance Group	265,692	RetailFirst Insurance Group	115,750
Columbia Mutual Insurance Company	263,762	Mutual Insurance Company of Arizona	115,119
Oklahoma Farm Bureau Insurance Group	248,713	American Farmers & Ranchers Mutual Insurance Company	114,807
Farm Bureau Mutual Insurance Company of Arkansas, Inc.	244,979	Pharmacists Mutual Insurance Company	112,903
MAG Mutual Group	244,812	Harford Mutual Insurance Company	112,742
Builders Mutual Insurance Company	232,057	Bear River Mutual Insurance Company	111,061
State Workers' Insurance Fund	224,923	FFVA Mutual Insurance Co.	110,430
ISMIE Insurance Group	224,120	American Steamship Owners Mutual Protection and Indemnity Association, Inc.	110,181
CopperPoint Mutual Insurance Company	223,334	New Mexico Mutual Group	106,311
Pennsylvania Lumbermens Group	219,397	Mutual Benefit Ins. Co. & Affiliate Select Risk Ins. Co.	106,117
Idaho State Insurance Fund	211,093	Michigan Millers Mutual Insurance Company	102,606
Workers Compensation Fund	210,423	Badger Mutual Insurance Company	100,736
Ohio Mutual Insurance Group	208,096	Ranchers & Farmers Mutual Insurance Company	100,532
Western Reserve Mutual Casualty Company	203,675	Elephant Insurance Company	99,998
Pioneer State Mutual Insurance Company	200,686	Physicians Insurance A Mutual Group	92,351
Louisiana Workers' Compensation Corporation	199,493	ICI Mutual Insurance Company, a Risk Retention Group	88,091
Indiana Farmers Mutual Insurance Company	192,940	New London County Mutual Insurance Company	87,772
South Carolina Farm Bureau Mutual Insurance Company	190,213	Providence Group	81,707
Society Insurance, A Mutual Company	188,321	Merchants Bonding Company (Mutual)	76,090
Missouri Employers Mutual Insurance Company	186,835	Western Mutual Insurance Group	73,987
Norfolk & Dedham Group	186,394	Wisconsin Mutual Insurance Company	71,627
Nuclear Electric Insurance Limited	184,374	RVOS Farm Mutual Insurance Company	67,665
Hochheim Prairie Insurance Group	180,922	Lititz Mutual Insurance Company	66,762
Mountain West Farm Bureau Mutual Insurance Company	180,433	Hawaii Employers' Mutual Insurance Company, Inc.	65,967
Concord General Mutual Insurance Company	174,775	Co-operative Insurance Companies	65,907
Rural Mutual Insurance Company	174,244	Colorado Farm Bureau Mutual Insurance Company	65,373
Montana State Fund	172,254	Erie and Niagara Insurance Association	64,453
Farm Bureau Mutual Insurance Company of Idaho	170,954	Buckeye Insurance Group	60,183
Associated Industries of Massachusetts Mutual Ins. Co.	163,667	Sterling Insurance Company	58,583
Jewelers Mutual Insurance Company	161,750	ARI Mutual Insurance Company	57,578
Farmers Alliance Mutual Insurance Company	159,529		

Source: Guy Carpenter
Continued Overleaf

Mutual Market Segment (continued)

Company	2014 Total DWP (\$000s)	Company	2014 Total DWP (\$000s)
Farmers Union Mutual Insurance	57,323	Kansas Medical Mutual Insurance Company	22,829
Dryden Mutual Insurance Company	55,767	Midwest Builders' Casualty Mutual Company	22,193
Northern Neck Insurance Company	52,951	Forestry Mutual Insurance Company	21,679
OOIDA Risk Retention Group, Inc.	51,247	Mt. Morris Mutual Insurance Company	21,286
LAMMICO	50,421	Farmers Union Mutual Insurance Company	20,935
Standard Mutual Insurance Company	48,923	N.C. Grange Mutual Insurance Company	20,295
Rockford Mutual Insurance Company	48,598	Upland Mutual Insurance, Inc.	19,767
Germantown Mutual Insurance Company	48,396	Illinois State Bar Association Mutual Insurance Company	18,880
RAM Mutual Insurance Company	48,155	Northern Mutual Insurance Company	18,771
Wolverine Mutual Insurance Company	47,023	Manufacturing Technology Mutual Insurance Company	18,699
Sawgrass Mutual Insurance Company	46,591	Bar Plan Group	18,689
Illinois Casualty Company (A Mutual Insurance Company)	46,340	Lawyers Mutual Liability Insurance Company of North Carolina	17,665
Farmers Mutual Fire Insurance Company of Salem County	45,051	Fairmont Farmers Mutual Insurance Company	17,600
Loudoun Mutual Insurance Company	44,679	Otsego Mutual Fire Insurance Company	17,372
Rockingham Insurance Company	44,559	Physicians Specialty Ltd. Risk Retention Group	16,071
Ophthalmic Mutual Insurance Company (A Risk Retention Group)	44,140	NHRMA Mutual Insurance Company	15,761
Medical Mutual Insurance Company of Maine	42,531	Northwest G.F. Mutual Insurance Company	15,512
Security Mutual Insurance Company	41,094	Build America Mutual Assurance Company	15,434
Lawyers' Mutual Insurance Company	39,649	Wayne Cooperative Insurance Company	14,770
Alabama Municipal Insurance Corporation	39,508	Missouri Professionals Mutual	14,432
Mountain States Insurance Group	39,412	Mennonite Mutual Insurance Company	14,285
Connecticut Medical Group	38,927	Florida Lawyers Mutual Insurance Company	14,088
Southern Mutual Church Insurance Company	37,557	Cities and Villages Mutual Insurance Company	13,044
Madison Mutual Insurance Company	37,253	Midstate Mutual Insurance Company	12,995
BAR Vermont Risk Retention Group, Inc.	37,140	Municipal Mutual Insurance Company of West Virginia	12,679
Michigan Commercial Insurance Mutual	36,972	West Virginia Insurance Company	12,132
Minnesota Lawyers Mutual Insurance Company	36,042	Farmers Mutual Fire Insurance Company of Marble, Pennsylvania	12,039
CAMICO Mutual Insurance Company	35,747	Eastern Dentists Insurance Company RRG	11,963
FHM Insurance Company	34,170	Leatherstocking Cooperative Insurance Company	11,799
Center Mutual Insurance Company	33,283	Mutual of Wausau Insurance Corporation	11,670
Agricultural Workers Mutual Auto Insurance Company	32,068	Farmers Mutual Fire Insurance Company	11,424
Farmers and Mechanics Mutual Group	31,806	Farmers Mutual of Tennessee	11,369
Wayne Mutual Insurance Company	30,484	Union Mutual Insurance Company	11,047
Windsor Mount Joy Mutual Insurance Company	30,311	Finger Lakes Fire and Casualty Company	11,039
Farmers Insurance Company of Flemington	30,166	Nevada Mut & First Choice Cas Grp	10,986
Bremen Farmers Mutual Insurance Company	29,670	Oklahoma Attorneys Mutual Insurance Company	10,472
Millville Mutual Insurance Company	29,527	Kansas Mutual Insurance Company	9,971
Barnstable Group	28,458	Mental Health Risk Retention Group, Inc.	9,822
Frederick Mutual Insurance Company	28,115	McMillan Warner Mutual Insurance Company	9,742
Carolina Mutual Insurance, Inc.	27,492	Chautauqua Patrons Insurance Company	9,412
Mutual Risk Retention Group, Inc.	27,382	Affinity Mutual Insurance Company	9,283
Marysville Mutual Insurance Company	26,142	Reamstown Mutual Insurance Company	9,180
West Virginia Mutual Insurance Company	25,644	Samaritan Risk Retention Group, Inc.	8,662
League of Wisconsin Municipalities Mutual Insurance	24,738	Associated Mutual Insurance Cooperative	8,640
Wisconsin County Mutual Group	24,599	Halifax Mutual Insurance Company	8,628
National Catholic Risk Retention Group, Inc.	24,567	North Country Insurance Company	8,309
Fire Districts NY Group	22,940	CPA Mutual Insurance Company of America Risk Retention Group	8,235
Kentucky Growers Insurance Company, Inc.	22,910		

Source: Guy Carpenter

Mutual Market Segment (continued)

Company	2014 Total DWP (\$000s)	Company	2014 Total DWP (\$000s)
Nazareth Mutual Insurance Company	8,110	Missouri Valley Mutual Insurance Company	4,059
Insurance Placement Facility of Pennsylvania	8,063	Pennsylvania Professional Liability Joint Underwriting Association	3,999
Agents Mutual Insurance Company	7,498	Hay Creek Mutual Insurance Company	3,907
Lawyers Mutual Insurance Company of Kentucky	7,443	Carolina Farmers Mutual Insurance Company	3,835
Retailers Insurance Company	7,282	United Frontier Mutual Insurance Company	3,824
German American Farm Mutual	7,171	Missouri Doctors Mutual Insurance Company	3,732
Oswego County Mutual Insurance Company	7,131	Ellington Mutual Insurance Company	3,668
Hartland Mutual Insurance Company	6,501	Attorneys Insurance Mutual of the South, Inc., Risk Retention Group	3,592
Districts Mutual Insurance	6,402	Arkansas Mutual Insurance Company	3,509
Maple Valley Mutual Insurance Company	6,308	Western Catholic Insurance Company, RRG, Inc.	3,483
Fulmont Mutual Insurance Company	6,301	Vasa-Spring Garden Mutual Insurance Company	3,456
Central Co-operative Insurance Company	6,292	Farmers Mutual Insurance Company	3,384
Callicoon Co-operative Insurance Company	6,288	Friends Cove Mutual Insurance Company	3,289
Baldwin Mutual Insurance Company, Inc.	6,277	Safe Insurance Company	3,283
First Mutual Insurance Company	6,272	Western Mutual Fire Insurance Company	3,122
CBIA Comp. Services, Inc.	6,246	Alamance Farmers' Mutual Insurance Company	3,075
Dealers Choice Mutual Insurance, Incorporated	6,068	Pan Handle Farmers Mutual Insurance Company of West Virginia	3,054
Farmers Mutual Insurance Company	6,008	Transit Mutual Insurance Corporation of Wisconsin	2,889
Sunderland Marine Insurance Company Limited	5,956	Century Mutual Insurance Company	2,802
Amalgamated Casualty Insurance Company	5,954	Centre County Mutual Fire Insurance Company	2,764
Bedford Grange Mutual Insurance Company	5,943	Washington County Co-op Insurance Company	2,731
Arrow Mutual Liability Insurance Company	5,841	Piedmont Mutual Insurance Company	2,546
Healthcare Underwriters Group Inc.	5,756	Mutual Insurance Company of Lehigh County	2,241
Farmers Mutual Fire Insurance Company of McCandless Township	5,683	College Liability Insurance Company, A Reciprocal Risk Retention Group	2,208
Laundry Owners Mutual Liability Insurance Association	5,573	Mower County Farmers Mutual Insurance Company	2,099
Juniata Mutual Insurance Company	5,379	MidSouth Mutual Insurance Company	2,049
Health Care Mutual Captive Insurance Company	5,325	Hannahstown Mutual Insurance Company	2,000
United Business Insurance Company (A Mutual Captive)	5,182	Keystone Mutual Insurance Company	1,745
Wisconsin Municipal Mutual Insurance Company	5,163	Continental Mutual Insurance Company	1,660
Sunland Risk Retention Group, Inc.	5,119	Otsego County Patrons Co-Operative Fire Relief Association	1,618
Wisconsin Lawyers Mutual Insurance Company	5,044	Farmington Mutual Insurance Company	1,601
Attorneys Insurance Mutual Risk Retention Group, Inc.	5,043	Farmers Mutual Fire Insurance Company of Branch County	1,540
Mound Prairie Mutual Insurance Company	4,791	Wall Rose Mutual Insurance Company	1,509
Midrox Insurance Company	4,762	Medical Providers Mutual Insurance Company, A Risk Retention Group	1,450
Ontario Insurance Company	4,659	MFS Mutual Insurance Company	1,431
Mount Carroll Mutual Insurance Company	4,626	Clearfield County Grange Mutual Fire Insurance Company	1,279
Great Lakes Mutual Insurance Company	4,465	Texas Medical Liability Insurance Underwriting Association	1,242
Briar Creek Mutual Insurance Company	4,462	Grange Mutual Fire Insurance Company	1,222
Gem State Insurance Company	4,365	Farmers & Mechanics Mutual Insurance Association of Cecil County, Inc.	1,211
Farmers and Merchants Mutual Fire Insurance Company	4,333	Slavonic Mutual Fire Insurance Association	1,109
California Mutual Insurance Company	4,320		
Farmers Union Mutual Insurance Company	4,292		
Heartland Mutual Insurance Company	4,278		
Madison Mutual Insurance Company	4,269		
Little Black Mutual Insurance Company	4,087		

Source: Guy Carpenter

Public Market Segment

Company	2014 Total DWP (\$000s)
Allstate Insurance Group	28,665,625
National Indemnity Company and its Affiliated Insurers	26,395,906
Travelers Companies, Inc.	22,790,776
Progressive Insurance Group	18,914,866
American International Group, Inc.	18,653,981
Farmers Insurance Group	18,611,695
Zurich American Insurance Company	11,293,393
Hartford Fire Insurance Company	10,864,926
Federal Insurance Company	10,194,172
ACE American Insurance Company	9,979,585
Continental Casualty Company	8,775,189
Erie Insurance Exchange Group	5,513,962
Assurant Group	5,228,944
American Financial Group, Inc.	5,207,587
W. R. Berkley Corporation	5,073,431
QBE North America	4,857,089
Cincinnati Insurance Group	4,312,256
Technology Insurance Company, Inc.	3,986,535
Hanover Insurance Company	3,948,543
Metropolitan Property and Casualty Insurance Company	3,537,249
Old Republic General Insurance Group - U.S.	3,460,038
XL Reinsurance America Inc.	3,133,734
Philadelphia Indemnity Insurance Company	2,900,304
Mercury Casualty Company	2,639,528
Assctd Int Markel Ins Cos	2,432,273
Arch Capital Group (U.S.) Inc.	2,312,418
Selective Insurance Company of America	2,228,270
Fireman's Fund Insurance Cos Property-Liability Insurers	2,137,498
Commerce Insurance Company	2,123,162
State Auto Group	2,061,734
Crum & Forster Insurance Companies	1,671,921
Allianz Global Risks US Insurance Company	1,617,858
Integon National Insurance Company	1,518,966
EMC Insurance Companies	1,517,278
Alleghany Group	1,499,880
Swiss Reinsurance America Corporation	1,499,248
Endurance Group	1,407,610
AXIS Specialty Insurance Company	1,367,406
Infinity Property & Casualty Insurance Group	1,360,807
Allied World Assurance Holdings Group	1,312,673
Trinity Universal Insurance Company	1,278,962
OneBeacon Insurance Group	1,256,715
American National Property & Casualty Company	1,223,474
Everest Reinsurance Company	1,199,400
HCC Insurance Holdings Group	1,171,875
State National Insurance Company, Inc.	1,048,151
Argo Group US, Inc.	1,035,884

Company	2014 Total DWP (\$000s)
IDS Property Casualty Insurance Company	1,018,156
Radian Guaranty Inc.	995,369
Ironshore Specialty Insurance Company	901,226
Catlin Insurance Company, Inc.	873,608
United Fire & Casualty Company	838,583
Navigators Insurance Company	828,867
RLI Insurance Company Group	787,267
Safety Insurance Group	765,685
Tower Insurance Company of New York	694,542
Aspen American Insurance Co. & Aspen Specialty Insurance Co.	690,026
Employers Holdings Inc.	686,763
Genworth Mortgage Insurance Corporation	638,633
Horace Mann Insurance Company	599,039
ProAssurance Group of Companies	531,873
Tokio Marine Holdings, Inc.	438,035
United Property & Casualty Insurance Company	422,842
ADM Insurance Company	415,393
Plymouth Rock Assurance Corporation	404,501
AMERISAFE Combined Group	384,633
Mitsui Sumitomo Insurance Company of America	379,988
Caterpillar Insurance Company	349,759
Affirmative Insurance Company	331,179
Western World Insurance Company	329,487
Universal Insurance Holdings of North America	324,755
James River Insurance Group	310,161
Euler Hermes North America Insurance Company	303,643
Heritage Property & Casualty Insurance Company	287,108
PMI Mortgage Insurance Co.	286,341
MAPFRE PRAICO Corporation	264,445
Assured Guaranty Municipal Corp.	257,232
Ironshore Indemnity Inc.	237,267
Global Indemnity Group	229,978
Pacific Specialty Insurance Company	209,619
Coliseum Reinsurance Company	177,562
Samsung Fire & Marine Insurance Co., Ltd. (U.S. Branch)	158,730
Hiscox Insurance Company Inc.	158,447
MBIA Insurance Corporation	109,555
Mendota Insurance Company	93,860
Partner Reinsurance Co of the U.S.	76,019
Ambac Assurance Corporation	69,613
National Security Fire & Casualty Company	58,926
Maiden Reinsurance North America, Inc.	35,979
National Mortgage Insurance Holdings Group	34,029
First State Insurance Group	-
Transport and Goldstreet Insurance Companies	-

Source: Guy Carpenter

WC Specialist Segment

Company	2014 Total DWP (\$000s)	Company	2014 Total DWP (\$000s)
Technology Insurance Company, Inc.	3,986,535	LUBA Casualty Insurance Company	79,761
Old Republic General Insurance Group - U.S.	3,460,038	Lackawanna American Insurance Company	68,560
State Compensation Insurance Fund	1,529,579	Hawaii Employers' Mutual Insurance Company, Inc.	65,967
Texas Mutual Insurance Company	1,140,962	Stonetrust Commercial Insurance Company	64,367
Accident Fund Insurance Company of America	946,574	Dakota Group	64,160
Insurance Company of the West	774,582	Atlantic Charter Insurance Company	62,203
Amerisure Mutual Insurance Company	742,535	AmFed National Insurance Company	38,012
Zenith Insurance Company	722,544	Michigan Commercial Insurance Mutual	36,972
Employers Holdings Inc.	686,763	FHM Insurance Company	34,170
Pinnacol Assurance	571,694	Care West Insurance Company	33,090
SAIF Corporation	452,442	Synergy Insurance Company	29,353
Star Insurance Company	439,702	Lackawanna Casualty Company	29,201
AMERISAFE Combined Group	384,633	AmeriHealth Casualty Insurance Company	28,107
Protective Insurance Company	355,973	Carolina Mutual Insurance, Inc.	27,492
Sussex Insurance Company	338,796	Housing and Redevelopment Insurance Exchange	26,853
BrickStreet Mutual Insurance Company	287,577	Midwest Insurance Company	26,846
Maine Employers' Mutual Insurance Group	265,692	SUNZ Insurance Company	26,816
Guarantee Insurance Company	247,656	Springfield Insurance Company	25,405
Highmark Casualty Insurance Co. & HM Casualty Insurance Co.	242,971	League of Wisconsin Municipalities Mutual Insurance	24,738
Alaska National Insurance Company	240,898	Wisconsin County Mutual Group	24,599
Builders Mutual Insurance Company	232,057	Frank Winston Crum Insurance Company	23,621
State Workers' Insurance Fund	224,923	Retailers Casualty Insurance Company	23,316
CopperPoint Mutual Insurance Company	223,334	Fire Districts NY Group	22,940
Chesapeake Employers' Insurance Company	221,399	Midwest Builders' Casualty Mutual Company	22,193
Eastern Alliance Insurance Group	218,484	Normandy Insurance Company, Inc.	22,062
Workers Compensation Fund	210,423	Forestry Mutual Insurance Company	21,679
Louisiana Workers' Compensation Corporation	199,493	CastlePoint Florida Insurance Company	20,310
Society Insurance, A Mutual Company	188,321	Diamond Insurance Company	20,285
Builders Insurance (A Mutual Captive Company)	187,358	Companion Commercial Insurance Company	20,165
Missouri Employers Mutual Insurance Company	186,835	Advantage Workers Compensation Insurance Company	19,305
Associated Industries of Massachusetts Mutual Ins. Co.	163,667	First Benefits Insurance Mutual, Inc.	18,870
Kentucky Employers' Mutual Insurance Authority	158,146	Manufacturing Technology Mutual Insurance Company	18,699
SFM Mutual Insurance Company	146,312	Lion Insurance Company	17,465
Accident Insurance Company, Inc.	129,533	NHRMA Mutual Insurance Company	15,761
Beacon Mutual Insurance Company	124,954	Premier Group Insurance Company	15,730
RetailFirst Insurance Group	115,750	Alliance National Insurance Company	14,733
FFVA Mutual Insurance Co.	110,430	Oriska Insurance Company	14,483
New Mexico Mutual Group	106,311	Building Industry Insurance Association, Inc.	13,726
Benchmark Insurance Company	104,000	Work First Casualty Company	13,635
Service Lloyds Insurance Company	101,696	Associated Loggers Exchange	13,443
Lumbermen's Underwriting Alliance	96,576	American Liberty Insurance Company	12,054
UPMC Health Benefits Inc.	90,400	Victory Insurance Company, Inc.	11,044

Source: Guy Carpenter

A.2 UNDERWRITING PERFORMANCE AND VOLATILITY: ADDITIONAL DETAIL

T13 | ULTIMATE LOSS RATIO PERFORMANCE AND VOLATILITY BY MARKET SEGMENT Net of reinsurance, accident years 1980 to 2014 where available

Line of Business	Segment	Mean (1)	StDev (2)	Minimum (3)	Maximum (4)	AY 2014 Current Booked (5)	Median of St Dev (6)
CAL	Top 15 Writers	82%	15%	55%	115%	65%	19%
	National	80%	15%	50%	117%	61%	18%
	Multi Regional	76%	12%	58%	103%	62%	16%
	Southeast/Gulf	83%	12%	63%	108%	73%	17%
	Midwest	71%	11%	50%	94%	62%	17%
	Northeast/Atlantic	74%	13%	50%	106%	55%	16%
	West	71%	11%	53%	100%	66%	20%
	E&S	70%	12%	52%	93%	75%	18%
	WC Specialist	83%	21%	60%	139%	72%	21%
	Mutual	74%	11%	52%	98%	65%	17%
	Public	80%	14%	52%	112%	63%	18%
CMP	Top 15 Writers	72%	13%	49%	95%	57%	17%
	National	68%	15%	45%	97%	53%	16%
	Multi Regional	65%	12%	45%	84%	62%	13%
	Southeast/Gulf	71%	15%	43%	97%	54%	20%
	Midwest	59%	10%	43%	77%	62%	16%
	Northeast/Atlantic	58%	12%	43%	85%	59%	13%
	West	66%	12%	46%	87%	60%	17%
	E&S	63%	15%	42%	97%	66%	26%
	WC Specialist	67%	13%	43%	93%	62%	18%
	Mutual	60%	9%	47%	78%	60%	14%
	Public	70%	14%	48%	96%	54%	18%
GLC	Top 15 Writers	68%	28%	38%	124%	64%	26%
	National	57%	14%	40%	86%	57%	23%
	Multi Regional	67%	20%	35%	130%	70%	24%
	Southeast/Gulf	66%	13%	42%	89%	56%	24%
	Midwest	75%	13%	57%	106%	93%	17%
	Northeast/Atlantic	79%	22%	36%	124%	81%	28%
	West	71%	11%	46%	98%	63%	18%
	E&S	49%	15%	24%	77%	63%	22%
	WC Specialist	64%	38%	15%	165%	59%	48%
	Mutual	84%	46%	45%	230%	66%	23%
	Public	72%	39%	35%	205%	62%	26%
GLO	Top 15 Writers	87%	23%	55%	138%	64%	31%
	National	73%	26%	44%	141%	57%	22%
	Multi Regional	76%	13%	53%	123%	55%	20%
	Southeast/Gulf	86%	28%	42%	152%	57%	23%
	Midwest	65%	32%	38%	183%	53%	17%
	Northeast/Atlantic	62%	13%	41%	85%	50%	22%
	West	71%	29%	44%	148%	48%	21%
	E&S	61%	16%	43%	101%	63%	23%
	WC Specialist	70%	27%	40%	137%	60%	24%
	Mutual	60%	16%	42%	107%	58%	18%
	Public	82%	23%	51%	129%	61%	25%
HO	Top 15 Writers	73%	14%	57%	130%	54%	12%
	National	68%	8%	55%	84%	55%	13%
	Multi Regional	72%	8%	56%	87%	64%	15%
	Southeast/Gulf	74%	7%	61%	86%	52%	22%
	Midwest	72%	9%	52%	89%	67%	14%
	Northeast/Atlantic	64%	10%	49%	95%	56%	15%
	West	68%	14%	46%	122%	62%	15%
	E&S	69%	23%	45%	143%	49%	46%
	WC Specialist	73%	17%	47%	135%	30%	26%
	Mutual	69%	7%	57%	88%	60%	14%
	Public	70%	11%	56%	107%	53%	15%

Source: Guy Carpenter

T13 | ULTIMATE LOSS RATIO PERFORMANCE AND VOLATILITY BY MARKET SEGMENT (CONTINUED)

Line of Business	Segment	Mean (1)	StDev (2)	Minimum (3)	Maximum (4)	AY 2014 Current Booked (5)	Median of St Dev (6)
MPLC	Top 15 Writers	98%	51%	35%	220%	78%	47%
	National	65%	28%	26%	125%	61%	21%
	Multi Regional	76%	20%	36%	99%	75%	22%
	Southeast/Gulf	76%	17%	50%	100%	84%	24%
	Midwest	93%	37%	22%	159%	71%	25%
	Northeast/Atlantic	104%	16%	78%	135%	86%	26%
	West	74%	19%	43%	108%	81%	24%
	E&S	48%	35%	6%	107%	71%	16%
	WC Specialist	130%	255%	22%	1209%	62%	24%
	Mutual	87%	23%	53%	122%	84%	23%
	Public	93%	46%	36%	210%	73%	42%
MPLO	Top 15 Writers	135%	59%	46%	250%	76%	79%
	National	71%	28%	24%	161%	30%	18%
	Multi Regional	104%	42%	19%	168%	99%	64%
	Southeast/Gulf	93%	23%	53%	136%	94%	34%
	Midwest	88%	75%	18%	331%	102%	28%
	Northeast/Atlantic	135%	25%	89%	187%	91%	34%
	West	129%	26%	76%	154%	113%	63%
	E&S	70%	33%	11%	156%	72%	29%
	WC Specialist	46%	49%	2%	167%	92%	28%
	Mutual	113%	29%	65%	173%	110%	36%
	Public	122%	52%	43%	225%	74%	84%
PPA	Top 15 Writers	76%	7%	63%	87%	69%	9%
	National	75%	9%	55%	93%	69%	10%
	Multi Regional	78%	9%	66%	95%	68%	11%
	Southeast/Gulf	75%	6%	57%	83%	71%	11%
	Midwest	76%	8%	61%	89%	67%	10%
	Northeast/Atlantic	76%	7%	58%	89%	67%	13%
	West	71%	9%	60%	91%	70%	11%
	E&S	66%	8%	51%	84%	76%	11%
	WC Specialist	75%	19%	42%	123%	73%	27%
	Mutual	73%	10%	42%	89%	70%	11%
	Public	75%	7%	61%	86%	67%	12%
PLC	Top 15 Writers	57%	35%	23%	158%	78%	40%
	National	44%	18%	18%	82%	51%	17%
	Multi Regional	103%	93%	37%	287%	47%	40%
	Southeast/Gulf						
	Midwest						
	Northeast/Atlantic						
	West						
	E&S						
	WC Specialist						
	Mutual						
	Public	51%	31%	9%	134%	68%	39%
PLO	Top 15 Writers	100%	34%	51%	176%	63%	37%
	National	67%	30%	37%	133%	54%	26%
	Multi Regional	69%	38%	24%	172%	58%	38%
	Southeast/Gulf	93%	45%	19%	199%	58%	34%
	Midwest	49%	20%	19%	87%	51%	13%
	Northeast/Atlantic	65%	26%	24%	118%	80%	34%
	West	68%	51%	25%	204%	49%	41%
	E&S	58%	42%	22%	185%	59%	25%
	WC Specialist	62%	40%	17%	161%	59%	42%
	Mutual	70%	25%	45%	139%	51%	22%
	Public	92%	34%	47%	156%	59%	36%

Source: Guy Carpenter

T13 | ULTIMATE LOSS RATIO PERFORMANCE AND VOLATILITY BY MARKET SEGMENT (CONTINUED)

Line of Business	Segment	Mean (1)	StDev (2)	Minimum (3)	Maximum (4)	AY 2014 Current Booked (5)	Median of St Dev (6)
WC	Top 15 Writers	83%	15%	56%	106%	68%	17%
	National	77%	14%	48%	102%	61%	16%
	Multi Regional	74%	15%	54%	102%	65%	16%
	Southeast/Gulf	70%	12%	51%	96%	64%	19%
	Midwest	65%	11%	44%	81%	67%	15%
	Northeast/Atlantic	74%	13%	48%	92%	73%	18%
	West	76%	15%	46%	101%	73%	19%
	E&S	61%	11%	38%	78%	63%	22%
	WC Specialist	75%	14%	51%	97%	69%	15%
	Mutual	75%	16%	52%	108%	71%	16%
	Public	80%	14%	53%	102%	65%	18%
APD	Top 15 Writers	62%	5%	54%	70%	69%	7%
	National	59%	5%	51%	67%	58%	11%
	Multi Regional	62%	5%	51%	69%	67%	8%
	Southeast/Gulf	64%	5%	56%	71%	64%	11%
	Midwest	64%	6%	54%	75%	67%	10%
	Northeast/Atlantic	60%	5%	51%	66%	66%	11%
	West	60%	4%	55%	68%	63%	10%
	E&S	58%	8%	44%	71%	56%	17%
	WC Specialist	63%	6%	51%	72%	66%	16%
	Mutual	63%	6%	53%	70%	66%	9%
	Public	59%	5%	51%	66%	65%	10%
FS	Top 15 Writers	47%	16%	30%	85%	33%	16%
	National	39%	19%	24%	95%	30%	19%
	Multi Regional	27%	10%	16%	55%	28%	16%
	Southeast/Gulf	30%	6%	20%	44%	29%	17%
	Midwest	24%	7%	16%	47%	29%	14%
	Northeast/Atlantic	33%	15%	9%	65%	16%	13%
	West	26%	35%	6%	158%	365%	10%
	E&S	52%	23%	25%	107%	42%	NA
	WC Specialist	25%	12%	12%	49%	34%	59%
	Mutual	30%	9%	17%	47%	30%	20%
	Public	45%	15%	32%	84%	34%	20%
SL	Top 15 Writers	61%	12%	39%	77%	53%	21%
	National	62%	11%	41%	81%	56%	19%
	Multi Regional	40%	12%	28%	75%	48%	43%
	Southeast/Gulf	82%	27%	53%	156%	61%	19%
	Midwest	73%	33%	33%	159%	42%	47%
	Northeast/Atlantic	75%	17%	49%	121%	80%	26%
	West	61%	16%	40%	103%	53%	17%
	E&S	63%	19%	31%	92%	57%	40%
	WC Specialist	85%	50%	38%	204%	73%	58%
	Mutual	71%	15%	41%	94%	66%	26%
	Public	64%	11%	43%	79%	57%	24%
SP	Top 15 Writers	60%	12%	44%	83%	54%	12%
	National	58%	15%	40%	93%	53%	16%
	Multi Regional	55%	8%	44%	73%	47%	16%
	Southeast/Gulf	57%	7%	47%	73%	47%	20%
	Midwest	58%	10%	46%	75%	66%	14%
	Northeast/Atlantic	48%	8%	30%	62%	55%	12%
	West	45%	8%	36%	63%	46%	14%
	E&S	53%	20%	30%	89%	39%	28%
	WC Specialist	53%	14%	36%	81%	56%	19%
	Mutual	56%	9%	45%	77%	55%	13%
	Public	61%	13%	44%	83%	56%	16%

Source: Guy Carpenter

A.3 RESERVE DEVELOPMENT RISK: ADDITIONAL DETAIL

T14 | ONE-YEAR RESERVE DEVELOPMENT BY MARKET SEGMENT For groups of ten accident years, net of reinsurance

Line of Business	Segment	Mean	StDev	Minimum	Maximum
		(1)	(2)	(3)	(4)
CAL	Top 15 Writers	0%	3%	-4%	7%
	National	-1%	4%	-6%	9%
	Multi Regional	1%	6%	-11%	16%
	Southeast/Gulf	3%	4%	-2%	17%
	Midwest	-2%	5%	-9%	9%
	Northeast/Atlantic	2%	5%	-7%	11%
	West	-3%	4%	-10%	6%
	E&S	-1%	6%	-16%	8%
	WC Specialist	-6%	4%	-13%	1%
	Mutual	-3%	4%	-10%	7%
	Public	0%	3%	-4%	7%
CMP	Top 15 Writers	-1%	3%	-7%	4%
	National	-1%	3%	-6%	9%
	Multi Regional	-1%	5%	-9%	10%
	Southeast/Gulf	1%	9%	-9%	29%
	Midwest	-6%	6%	-13%	9%
	Northeast/Atlantic	1%	5%	-6%	16%
	West	0%	7%	-10%	15%
	E&S	-3%	8%	-17%	23%
	WC Specialist	1%	4%	-3%	13%
	Mutual	-1%	4%	-6%	8%
	Public	-1%	3%	-7%	5%
GLC	Top 15 Writers	-2%	7%	-10%	16%
	National	-3%	5%	-13%	7%
	Multi Regional	-3%	6%	-15%	9%
	Southeast/Gulf	-3%	8%	-17%	16%
	Midwest	-4%	13%	-27%	38%
	Northeast/Atlantic	-4%	7%	-22%	12%
	West	-9%	6%	-16%	10%
	E&S	-5%	7%	-19%	5%
	WC Specialist	4%	30%	-24%	126%
	Mutual	-6%	5%	-15%	2%
	Public	-2%	6%	-11%	15%
GLO	Top 15 Writers	-1%	3%	-5%	8%
	National	-2%	2%	-5%	2%
	Multi Regional	-3%	6%	-11%	13%
	Southeast/Gulf	-1%	8%	-18%	14%
	Midwest	-7%	5%	-17%	3%
	Northeast/Atlantic	-2%	4%	-10%	9%
	West	-4%	4%	-10%	2%
	E&S	-4%	5%	-13%	9%
	WC Specialist	-3%	4%	-9%	8%
	Mutual	-5%	2%	-9%	-1%
	Public	-1%	3%	-5%	8%
HO	Top 15 Writers	-3%	7%	-11%	16%
	National	-4%	4%	-10%	9%
	Multi Regional	-8%	4%	-13%	3%
	Southeast/Gulf	-9%	18%	-92%	4%
	Midwest	-7%	3%	-11%	-1%
	Northeast/Atlantic	-6%	3%	-14%	0%
	West	-8%	7%	-18%	17%
	E&S	-7%	20%	-39%	39%
	WC Specialist	-6%	23%	-52%	70%
	Mutual	-8%	3%	-14%	0%
	Public	-4%	8%	-13%	22%

Source: Guy Carpenter

Continued Overleaf

T14 | ONE-YEAR RESERVE DEVELOPMENT BY MARKET SEGMENT (CONTINUED)

Line of Business	Segment	Mean	StDev	Minimum	Maximum
		(1)	(2)	(3)	(4)
MPLC	Top 15 Writers	-1%	13%	-14%	43%
	National	-1%	13%	-19%	33%
	Multi Regional	-7%	5%	-17%	4%
	Southeast/Gulf	-7%	6%	-15%	4%
	Midwest	-6%	11%	-53%	8%
	Northeast/Atlantic	-3%	8%	-11%	29%
	West	-10%	4%	-20%	0%
	E&S	-10%	26%	-34%	96%
	WC Specialist	-2%	26%	-42%	49%
	Mutual	-6%	4%	-12%	1%
	Public	-2%	11%	-13%	33%
MPLO	Top 15 Writers	2%	11%	-10%	30%
	National	-5%	10%	-32%	13%
	Multi Regional	3%	9%	-15%	23%
	Southeast/Gulf	-5%	6%	-16%	7%
	Midwest	-8%	16%	-31%	56%
	Northeast/Atlantic	-4%	10%	-38%	8%
	West	-4%	7%	-24%	7%
	E&S	-5%	10%	-31%	17%
	WC Specialist	-3%	21%	-41%	45%
	Mutual	-3%	6%	-13%	11%
	Public	0%	8%	-10%	20%
PPA	Top 15 Writers	-4%	3%	-9%	0%
	National	-4%	3%	-8%	1%
	Multi Regional	-3%	4%	-9%	3%
	Southeast/Gulf	-3%	3%	-8%	1%
	Midwest	-3%	3%	-8%	4%
	Northeast/Atlantic	-4%	3%	-8%	2%
	West	-6%	5%	-17%	2%
	E&S	-4%	12%	-32%	17%
	WC Specialist	2%	10%	-20%	27%
	Mutual	-5%	3%	-9%	0%
	Public	-3%	2%	-7%	1%
PLC	Top 15 Writers	-4%	12%	-34%	16%
	National	-11%	13%	-47%	13%
	Multi Regional	-4%	16%	-41%	28%
	Southeast/Gulf				
	Midwest				
	Northeast/Atlantic				
	West				
	E&S				
	WC Specialist				
	Mutual				
	Public	-6%	11%	-30%	13%
PLO	Top 15 Writers	1%	5%	-9%	10%
	National	-4%	6%	-18%	6%
	Multi Regional	2%	18%	-36%	56%
	Southeast/Gulf	-1%	13%	-33%	31%
	Midwest	1%	10%	-16%	29%
	Northeast/Atlantic	0%	10%	-15%	28%
	West	-7%	10%	-27%	11%
	E&S	-5%	11%	-17%	29%
	WC Specialist	-1%	18%	-57%	24%
	Mutual	-5%	5%	-14%	2%
	Public	1%	6%	-7%	12%
WC	Top 15 Writers	0%	4%	-7%	6%
	National	0%	4%	-7%	8%
	Multi Regional	0%	9%	-9%	34%
	Southeast/Gulf	-2%	4%	-7%	6%
	Midwest	-2%	6%	-12%	9%
	Northeast/Atlantic	-1%	4%	-7%	8%
	West	-4%	4%	-13%	2%
	E&S	-1%	5%	-11%	9%
	WC Specialist	-3%	3%	-9%	3%
	Mutual	-4%	3%	-9%	1%
	Public	0%	3%	-5%	5%

Source: Guy Carpenter

A.3 RESERVE DEVELOPMENT RISK: ADDITIONAL DETAIL (CONTINUED)

T15 | ULTIMATE DEVELOPMENT BY MARKET SEGMENT For groups of ten accident years, net of reinsurance

Line of Business	Segment	Mean	StDev	Minimum	Maximum
		(1)	(2)	(3)	(4)
CAL	Top 15 Writers	99%	10%	0.86	1.18
	National	95%	8%	0.84	1.14
	Multi Regional	99%	8%	0.81	1.18
	Southeast/Gulf	113%	13%	0.94	1.30
	Midwest	97%	9%	0.85	1.19
	Northeast/Atlantic	111%	13%	0.95	1.32
	West	87%	7%	0.79	1.02
	E&S	81%	13%	0.57	1.09
	WC Specialist	80%	6%	0.68	0.95
	Mutual	91%	6%	0.79	1.06
	Public	99%	9%	0.87	1.16
CMP	Top 15 Writers	102%	9%	0.89	1.19
	National	102%	11%	0.89	1.25
	Multi Regional	104%	15%	0.88	1.33
	Southeast/Gulf	133%	30%	0.90	1.60
	Midwest	90%	8%	0.79	1.02
	Northeast/Atlantic	95%	6%	0.83	1.05
	West	117%	18%	0.85	1.38
	E&S	113%	32%	0.81	1.46
	WC Specialist	112%	14%	0.94	1.34
	Mutual	99%	6%	0.91	1.12
	Public	104%	11%	0.90	1.24
GLC	Top 15 Writers	121%	48%	0.66	1.75
	National	91%	16%	0.65	1.21
	Multi Regional	98%	16%	0.71	1.20
	Southeast/Gulf	104%	16%	0.75	1.26
	Midwest	100%	20%	0.80	1.28
	Northeast/Atlantic	75%	6%	0.64	0.80
	West	70%	6%	0.60	0.81
	E&S	68%	10%	0.48	0.88
	WC Specialist	98%	46%	0.39	1.97
	Mutual	77%	11%	0.60	1.12
	Public	97%	37%	0.61	1.70
GLO	Top 15 Writers	99%	16%	0.84	1.29
	National	95%	12%	0.80	1.18
	Multi Regional	94%	9%	0.84	1.20
	Southeast/Gulf	118%	15%	0.92	1.47
	Midwest	85%	7%	0.73	1.04
	Northeast/Atlantic	95%	10%	0.79	1.11
	West	83%	7%	0.71	1.03
	E&S	100%	14%	0.82	1.20
	WC Specialist	90%	9%	0.76	1.07
	Mutual	89%	7%	0.79	1.01
	Public	98%	16%	0.83	1.31
HO	Top 15 Writers	92%	10%	0.73	1.18
	National	93%	5%	0.85	1.05
	Multi Regional	85%	5%	0.79	0.98
	Southeast/Gulf	96%	27%	0.79	2.01
	Midwest	87%	3%	0.81	0.94
	Northeast/Atlantic	87%	5%	0.77	0.97
	West	85%	8%	0.74	1.15
	E&S	88%	35%	0.32	1.38
	WC Specialist	108%	23%	0.83	1.60
	Mutual	84%	4%	0.79	0.94
	Public	92%	11%	0.75	1.22

Source: Guy Carpenter

Continued Overleaf

T15 | ULTIMATE DEVELOPMENT BY MARKET SEGMENT (CONTINUED)

Line of Business	Segment	Mean	StDev	Minimum	Maximum
		(1)	(2)	(3)	(4)
MPLC	Top 15 Writers	115%	37%	0.71	1.75
	National	96%	29%	0.64	1.44
	Multi Regional	82%	12%	0.61	1.03
	Southeast/Gulf	81%	7%	0.65	0.94
	Midwest	97%	9%	0.81	1.13
	Northeast/Atlantic	86%	9%	0.67	0.96
	West	70%	7%	0.55	0.90
	E&S	61%	16%	0.23	0.92
	WC Specialist	105%	34%	0.40	1.86
	Mutual	74%	12%	0.47	0.97
	Public	97%	31%	0.53	1.57
MPLO	Top 15 Writers	117%	42%	0.72	1.68
	National	75%	8%	0.57	0.91
	Multi Regional	94%	12%	0.80	1.11
	Southeast/Gulf	80%	7%	0.64	0.95
	Midwest	71%	12%	0.48	0.98
	Northeast/Atlantic	107%	8%	0.97	1.15
	West	78%	9%	0.62	0.90
	E&S	72%	13%	0.30	0.89
	WC Specialist	105%	53%	0.38	2.31
	Mutual	86%	19%	0.57	1.18
	Public	108%	30%	0.73	1.50
PPA	Top 15 Writers	90%	7%	0.78	1.00
	National	90%	5%	0.82	1.00
	Multi Regional	90%	6%	0.79	1.02
	Southeast/Gulf	92%	5%	0.85	1.00
	Midwest	91%	4%	0.84	1.00
	Northeast/Atlantic	89%	6%	0.81	1.00
	West	85%	10%	0.64	1.00
	E&S	76%	9%	0.61	0.99
	WC Specialist	100%	13%	0.80	1.31
	Mutual	86%	4%	0.80	0.94
	Public	91%	6%	0.82	1.01
PLC	Top 15 Writers	107%	36%	0.67	1.62
	National	61%	10%	0.40	0.92
	Multi Regional	95%	28%	0.54	1.36
	Southeast/Gulf				
	Midwest				
	Northeast/Atlantic				
	West				
	E&S				
	WC Specialist				
	Mutual				
	Public	75%	26%	0.30	1.48
PLO	Top 15 Writers	128%	27%	1.07	1.66
	National	96%	27%	0.63	1.42
	Multi Regional	120%	25%	0.91	1.68
	Southeast/Gulf	143%	35%	1.05	1.80
	Midwest	131%	40%	0.83	1.94
	Northeast/Atlantic	109%	27%	0.76	1.64
	West	78%	16%	0.57	1.11
	E&S	122%	58%	0.66	1.93
	WC Specialist	94%	59%	0.33	2.06
	Mutual	95%	15%	0.77	1.27
	Public	122%	29%	0.86	1.66
WC	Top 15 Writers	107%	19%	0.83	1.34
	National	100%	12%	0.83	1.19
	Multi Regional	95%	11%	0.80	1.20
	Southeast/Gulf	97%	12%	0.81	1.15
	Midwest	96%	13%	0.77	1.19
	Northeast/Atlantic	96%	11%	0.78	1.13
	West	87%	12%	0.70	1.17
	E&S	104%	10%	0.88	1.18
	WC Specialist	89%	8%	0.79	1.12
	Mutual	88%	9%	0.75	1.12
	Public	106%	16%	0.86	1.29

Source: Guy Carpenter

A.4 UNCERTAIN LIABILITY DURATION: ADDITIONAL DETAIL

T16 | MEAN PAYMENT PATTERN AND DURATION BY MARKET SEGMENT Industry in aggregate, net of reinsurance

Line of Business	Segment	Duration (in years)	Development Period (in months)										
			0-12	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120+
CAL	Top 15 Writers	2.6	22%	24%	20%	14%	8%	5%	2%	1%	1%	0%	2%
	National	2.6	22%	26%	20%	14%	8%	4%	2%	1%	0%	0%	1%
	Multi Regional	2.4	24%	26%	19%	13%	8%	4%	2%	1%	1%	0%	1%
	Southeast/Gulf	2.4	26%	27%	19%	12%	7%	4%	2%	2%	1%	1%	1%
	Midwest	2.5	29%	24%	18%	13%	8%	4%	2%	1%	0%	0%	1%
	Northeast/Atlantic	2.6	20%	23%	18%	15%	11%	6%	3%	2%	1%	1%	1%
	West	2.5	24%	29%	21%	12%	6%	7%	1%	0%	1%	0%	1%
	E&S	2.8	23%	29%	21%	14%	7%	3%	2%	1%	1%	0%	1%
	WC Specialist	2.5	23%	29%	21%	13%	7%	3%	1%	1%	0%	0%	1%
	Mutual	2.5	25%	25%	19%	14%	8%	5%	2%	1%	1%	0%	1%
	Public	2.7	21%	25%	20%	14%	8%	5%	2%	1%	1%	0%	2%
CMP	Top 15 Writers	2.4	38%	22%	10%	9%	6%	4%	3%	2%	1%	1%	3%
	National	2.4	35%	22%	11%	10%	7%	5%	3%	2%	1%	1%	3%
	Multi Regional	2.4	41%	21%	10%	8%	6%	4%	3%	2%	1%	1%	3%
	Southeast/Gulf	2.1	38%	21%	11%	9%	6%	5%	3%	3%	2%	1%	2%
	Midwest	1.8	49%	23%	9%	7%	5%	3%	2%	1%	1%	1%	1%
	Northeast/Atlantic	2.4	34%	21%	11%	10%	8%	5%	3%	2%	1%	1%	2%
	West	2.4	30%	21%	16%	10%	6%	5%	4%	2%	2%	1%	3%
	E&S	2.7	29%	22%	14%	11%	8%	4%	3%	2%	2%	1%	5%
	WC Specialist	3.1	25%	18%	14%	12%	9%	6%	4%	2%	2%	2%	5%
	Mutual	2.1	43%	22%	9%	8%	6%	4%	2%	1%	1%	1%	2%
	Public	2.5	34%	23%	11%	9%	7%	5%	3%	2%	1%	1%	4%
GLC	Top 15 Writers	4.2	5%	16%	19%	17%	13%	8%	6%	4%	3%	2%	7%
	National	4.1	7%	22%	20%	16%	10%	7%	5%	3%	3%	2%	7%
	Multi Regional	3.7	8%	23%	22%	16%	12%	7%	5%	2%	2%	1%	3%
	Southeast/Gulf	2.9	32%	16%	16%	10%	7%	5%	4%	2%	2%	1%	5%
	Midwest	2.0	65%	10%	5%	6%	4%	2%	3%	2%	1%	1%	2%
	Northeast/Atlantic	4.5	6%	20%	23%	19%	14%	7%	5%	3%	2%	3%	5%
	West	2.9	10%	33%	25%	14%	24%	4%	2%	2%	1%	0%	1%
	E&S	4.4	7%	23%	25%	19%	9%	6%	4%	3%	1%	1%	5%
	WC Specialist	4.6	6%	18%	18%	16%	14%	7%	5%	7%	3%	3%	11%
	Mutual	4.0	10%	28%	23%	14%	9%	5%	3%	2%	1%	1%	4%
	Public	4.2	5%	16%	19%	17%	12%	8%	6%	4%	3%	2%	8%
GLO	Top 15 Writers	4.6	8%	13%	16%	15%	12%	9%	6%	4%	3%	2%	12%
	National	4.8	6%	12%	16%	15%	12%	9%	6%	4%	3%	2%	14%
	Multi Regional	2.0	50%	13%	8%	8%	6%	4%	2%	2%	1%	1%	4%
	Southeast/Gulf	3.8	14%	14%	16%	14%	11%	7%	6%	4%	4%	3%	10%
	Midwest	3.1	24%	19%	16%	12%	9%	7%	4%	3%	2%	2%	6%
	Northeast/Atlantic	4.2	10%	13%	15%	16%	14%	9%	6%	5%	4%	3%	7%
	West	3.8	20%	16%	14%	12%	9%	6%	4%	4%	2%	2%	13%
	E&S	5.0	4%	12%	18%	18%	12%	9%	6%	4%	3%	3%	12%
	WC Specialist	4.5	11%	14%	16%	16%	12%	8%	5%	3%	2%	2%	13%
	Mutual	4.1	13%	16%	17%	15%	12%	7%	5%	3%	3%	2%	8%
	Public	4.7	8%	13%	16%	15%	12%	9%	6%	4%	3%	2%	13%
HO	Top 15 Writers	1.0	70%	21%	4%	2%	1%	1%	0%	0%	0%	0%	0%
	National	1.0	69%	22%	4%	2%	1%	1%	0%	0%	0%	0%	0%
	Multi Regional	1.0	72%	21%	3%	2%	1%	1%	0%	0%	0%	0%	0%
	Southeast/Gulf	0.9	77%	17%	2%	1%	1%	0%	0%	0%	9%	0%	0%
	Midwest	0.9	75%	19%	3%	2%	1%	0%	0%	0%	0%	0%	0%
	Northeast/Atlantic	1.1	68%	22%	4%	3%	2%	1%	1%	0%	0%	0%	0%
	West	1.1	61%	26%	6%	3%	2%	1%	0%	0%	0%	0%	0%
	E&S	1.2	62%	30%	6%	3%	2%	1%	0%	0%	0%	0%	0%
	WC Specialist	1.1	65%	25%	5%	2%	1%	1%	0%	0%	0%	0%	0%
	Mutual	0.9	73%	19%	3%	2%	1%	1%	0%	0%	2%	0%	0%
	Public	1.0	92%	23%	4%	2%	1%	1%	0%	0%	0%	0%	0%

Source: Guy Carpenter

Continued Overleaf

T16 | MEAN PAYMENT PATTERN AND DURATION BY MARKET SEGMENT (CONTINUED)

Line of Business	Segment	Duration (in years)	Development Period (in months)										
			0-12	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120+
MPLC	Top 15 Writers	4.0	8%	15%	22%	16%	12%	8%	6%	3%	3%	2%	10%
	National	4.1	6%	21%	30%	19%	10%	5%	3%	2%	1%	1%	2%
	Multi Regional	3.8	5%	23%	27%	18%	11%	7%	3%	2%	1%	1%	2%
	Southeast/Gulf	3.8	5%	21%	26%	20%	10%	6%	5%	2%	2%	1%	6%
	Midwest	4.0	5%	20%	20%	20%	18%	10%	8%	2%	2%	2%	2%
	Northeast/Atlantic	4.5	2%	10%	16%	18%	15%	11%	8%	5%	4%	2%	7%
	West	3.4	5%	25%	29%	18%	9%	5%	2%	2%	1%	1%	3%
	E&S	4.3	19%	32%	55%	15%	15%	5%	5%	13%	3%	1%	4%
	WC Specialist	2.5	8%	28%	40%	21%	4%	4%	1%	2%	0%	0%	0%
MPLO	Mutual	4.1	3%	17%	23%	19%	12%	8%	5%	3%	2%	2%	6%
	Public	4.1	7%	16%	22%	16%	11%	8%	5%	3%	3%	1%	10%
	Top 15 Writers	5.5	1%	6%	15%	19%	16%	11%	8%	5%	3%	2%	14%
	National	4.7	2%	9%	19%	23%	16%	11%	7%	4%	2%	2%	8%
	Multi Regional	5.6	1%	6%	14%	18%	17%	13%	9%	7%	5%	3%	11%
	Southeast/Gulf	4.8	1%	8%	17%	21%	17%	12%	8%	5%	3%	3%	7%
	Midwest	5.1	1%	6%	11%	19%	18%	13%	12%	10%	7%	4%	10%
	Northeast/Atlantic	6.3	0%	1%	5%	11%	16%	16%	13%	9%	7%	5%	16%
	West	5.0	2%	8%	16%	17%	20%	15%	9%	6%	3%	2%	5%
PPA	E&S	5.2	2%	11%	20%	21%	17%	8%	7%	3%	3%	2%	8%
	WC Specialist	4.4	10%	29%	25%	43%	18%	17%	8%	41%	43%	30%	21%
	Mutual	6.1	1%	3%	9%	13%	15%	14%	11%	8%	6%	4%	18%
	Public	5.4	1%	6%	15%	19%	15%	11%	8%	5%	3%	2%	14%
	Top 15 Writers	1.8	38%	31%	14%	8%	4%	2%	1%	0%	0%	0%	1%
	National	1.9	35%	31%	16%	9%	5%	2%	1%	0%	0%	0%	0%
	Multi Regional	1.8	37%	32%	15%	8%	4%	2%	1%	0%	0%	0%	1%
	Southeast/Gulf	1.4	48%	31%	11%	5%	2%	1%	1%	0%	0%	0%	0%
	Midwest	1.9	36%	29%	16%	9%	5%	2%	1%	0%	0%	0%	1%
PLC	Northeast/Atlantic	2.0	31%	30%	16%	10%	6%	3%	1%	1%	0%	0%	1%
	West	1.6	36%	37%	16%	7%	3%	1%	0%	0%	0%	0%	0%
	E&S	1.6	43%	37%	13%	5%	2%	1%	0%	0%	0%	0%	0%
	WC Specialist	1.6	38%	37%	16%	7%	3%	1%	1%	0%	0%	0%	1%
	Mutual	1.7	40%	31%	14%	8%	4%	2%	1%	0%	0%	0%	0%
	Public	1.8	67%	32%	15%	8%	4%	2%	1%	0%	0%	0%	1%
	Top 15 Writers	4.8	9%	19%	21%	15%	10%	11%	5%	5%	3%	3%	8%
	National	4.3	4%	23%	25%	18%	12%	7%	4%	1%	2%	1%	4%
	Multi Regional	5.7	3%	13%	19%	21%	10%	7%	4%	3%	2%	3%	27%
PLO	Southeast/Gulf												
	Midwest												
	Northeast/Atlantic												
	West												
	E&S												
	WC Specialist												
	Mutual												
	Public	4.7	7%	17%	20%	17%	12%	10%	6%	4%	3%	2%	7%
	Top 15 Writers	5.3	4%	6%	11%	14%	13%	11%	9%	7%	5%	4%	16%
WC	National	5.4	5%	7%	13%	16%	14%	10%	7%	5%	4%	3%	16%
	Multi Regional	4.6	7%	11%	16%	17%	14%	11%	8%	5%	4%	3%	12%
	Southeast/Gulf	5.1	3%	8%	12%	21%	11%	12%	9%	8%	8%	7%	12%
	Midwest	4.4	9%	13%	14%	16%	15%	9%	7%	5%	4%	3%	6%
	Northeast/Atlantic	3.5	11%	15%	16%	15%	13%	8%	6%	5%	4%	3%	8%
	West	6.3	3%	9%	14%	14%	16%	11%	8%	7%	5%	4%	23%
	E&S	6.1	2%	6%	14%	20%	13%	11%	7%	6%	4%	5%	16%
	WC Specialist	5.3	4%	9%	15%	23%	13%	15%	13%	6%	4%	3%	17%
	Mutual	4.8	8%	10%	15%	16%	14%	10%	7%	4%	3%	3%	10%
WC	Public	5.4	4%	6%	11%	14%	13%	11%	9%	7%	5%	4%	17%
	Top 15 Writers	3.9	21%	24%	14%	9%	5%	4%	3%	2%	2%	1%	14%
	National	3.6	22%	26%	15%	9%	6%	4%	3%	2%	2%	1%	12%
	Multi Regional	3.3	21%	26%	15%	9%	5%	3%	3%	2%	1%	1%	12%
	Southeast/Gulf	3.1	25%	30%	16%	9%	5%	3%	2%	2%	1%	1%	7%
	Midwest	2.7	30%	30%	15%	8%	4%	3%	2%	1%	1%	1%	5%
	Northeast/Atlantic	3.8	22%	23%	13%	9%	6%	4%	3%	2%	1%	1%	14%
	West	4.4	20%	24%	14%	21%	5%	4%	3%	2%	1%	1%	17%
	E&S	3.8	21%	25%	16%	10%	7%	5%	4%	4%	2%	2%	15%
WC	WC Specialist	4.0	22%	26%	14%	8%	5%	3%	2%	2%	1%	1%	16%
	Mutual	4.0	23%	25%	13%	8%	5%	4%	3%	2%	2%	1%	15%
	Public	3.9	20%	25%	14%	9%	6%	4%	3%	2%	2%	1%	14%

Source: Guy Carpenter

A.4 UNCERTAIN LIABILITY DURATION: ADDITIONAL DETAIL (CONTINUED)

T17 | COEFFICIENT OF VARIATION OF PAYMENT PATTERN INCREMENTS BY MARKET SEGMENT
Industry in aggregate, net of reinsurance

Line of Business	Segment	Development Month										
		12	24	36	48	60	72	84	96	108	120	120+
CAL	Top 15 Writers	21%	18%	8%	8%	22%	38%	29%	31%	36%	35%	75%
	National	7%	4%	7%	7%	7%	20%	19%	36%	52%	55%	29%
	Multi Regional	9%	8%	11%	14%	21%	44%	75%	133%	171%	58%	49%
	Southeast/Gulf	15%	13%	15%	21%	21%	51%	88%	185%	209%	293%	63%
	Midwest	11%	5%	13%	12%	15%	26%	29%	53%	66%	97%	68%
	Northeast/Atlantic	11%	8%	10%	10%	11%	15%	29%	28%	41%	61%	110%
	West	19%	10%	17%	22%	27%	280%	50%	61%	216%	137%	95%
	E&S	36%	28%	29%	26%	38%	51%	75%	89%	152%	177%	75%
	WC Specialist	15%	10%	9%	17%	21%	31%	49%	73%	75%	86%	82%
	Mutual	5%	5%	8%	10%	17%	33%	50%	91%	147%	87%	42%
	Public	10%	4%	7%	7%	21%	34%	23%	33%	36%	35%	77%
CMP	Top 15 Writers	8%	17%	15%	11%	20%	17%	25%	88%	24%	30%	19%
	National	9%	7%	13%	15%	14%	30%	24%	25%	20%	27%	22%
	Multi Regional	9%	10%	17%	10%	20%	21%	24%	29%	51%	38%	40%
	Southeast/Gulf	15%	9%	13%	12%	26%	53%	63%	103%	81%	110%	52%
	Midwest	9%	12%	13%	14%	17%	28%	53%	69%	69%	94%	79%
	Northeast/Atlantic	16%	16%	18%	22%	31%	20%	31%	40%	70%	140%	63%
	West	20%	27%	28%	26%	28%	52%	48%	62%	98%	88%	49%
	E&S	22%	17%	20%	21%	36%	35%	46%	85%	176%	142%	87%
	WC Specialist	15%	28%	44%	25%	30%	35%	39%	36%	46%	60%	66%
	Mutual	7%	10%	15%	11%	22%	21%	21%	27%	52%	76%	38%
	Public	8%	11%	12%	9%	19%	21%	22%	75%	19%	20%	22%
GLC	Top 15 Writers	35%	20%	14%	14%	18%	17%	28%	31%	39%	48%	47%
	National	29%	23%	17%	20%	27%	45%	59%	65%	92%	57%	69%
	Multi Regional	22%	15%	22%	16%	30%	42%	50%	65%	79%	126%	71%
	Southeast/Gulf	23%	29%	18%	23%	38%	36%	55%	63%	68%	115%	75%
	Midwest	23%	34%	53%	73%	60%	104%	138%	109%	140%	195%	71%
	Northeast/Atlantic	42%	25%	26%	22%	70%	44%	71%	157%	97%	254%	141%
	West	22%	19%	15%	20%	302%	54%	68%	91%	92%	98%	80%
	E&S	34%	22%	18%	30%	28%	49%	66%	98%	52%	139%	70%
	WC Specialist	90%	67%	56%	54%	85%	85%	113%	95%	111%	158%	167%
	Mutual	32%	25%	18%	14%	38%	50%	49%	68%	91%	55%	105%
	Public	38%	21%	12%	14%	21%	16%	25%	32%	43%	102%	61%
GLO	Top 15 Writers	40%	21%	18%	15%	14%	39%	25%	30%	31%	44%	30%
	National	26%	21%	17%	11%	11%	26%	26%	32%	32%	34%	23%
	Multi Regional	45%	11%	55%	54%	73%	79%	66%	105%	92%	92%	92%
	Southeast/Gulf	24%	19%	26%	32%	45%	45%	63%	64%	113%	108%	46%
	Midwest	42%	26%	29%	36%	41%	81%	72%	86%	97%	126%	122%
	Northeast/Atlantic	28%	14%	18%	18%	18%	22%	40%	42%	73%	74%	30%
	West	54%	22%	20%	30%	39%	53%	60%	103%	74%	79%	80%
	E&S	32%	29%	19%	15%	15%	30%	31%	32%	32%	34%	36%
	WC Specialist	52%	31%	28%	26%	31%	37%	36%	71%	63%	160%	53%
	Mutual	18%	14%	18%	23%	15%	20%	26%	42%	46%	57%	33%
	Public	25%	19%	16%	13%	14%	25%	24%	28%	29%	39%	24%
HO	Top 15 Writers	5%	11%	20%	20%	33%	34%	49%	42%	45%	128%	31%
	National	4%	11%	13%	18%	31%	38%	46%	33%	48%	70%	33%
	Multi Regional	4%	10%	34%	22%	21%	30%	39%	66%	75%	86%	61%
	Southeast/Gulf	4%	13%	28%	26%	29%	78%	74%	183%	449%	184%	96%
	Midwest	3%	10%	16%	18%	18%	41%	46%	54%	108%	99%	38%
	Northeast/Atlantic	12%	13%	13%	16%	17%	19%	26%	37%	60%	49%	66%
	West	8%	12%	56%	44%	36%	49%	76%	92%	85%	124%	59%
	E&S	17%	25%	72%	111%	110%	101%	108%	151%	128%	210%	200%
	WC Specialist	11%	19%	47%	55%	58%	111%	110%	138%	247%	269%	141%
	Mutual	3%	10%	19%	25%	13%	26%	32%	31%	476%	68%	43%
	Public	6%	9%	18%	19%	30%	34%	47%	40%	48%	155%	27%

Source: Guy Carpenter

Continued Overleaf

T17 | COEFFICIENT OF VARIATION OF PAYMENT PATTERN INCREMENTS BY MARKET SEGMENT (CONTINUED)

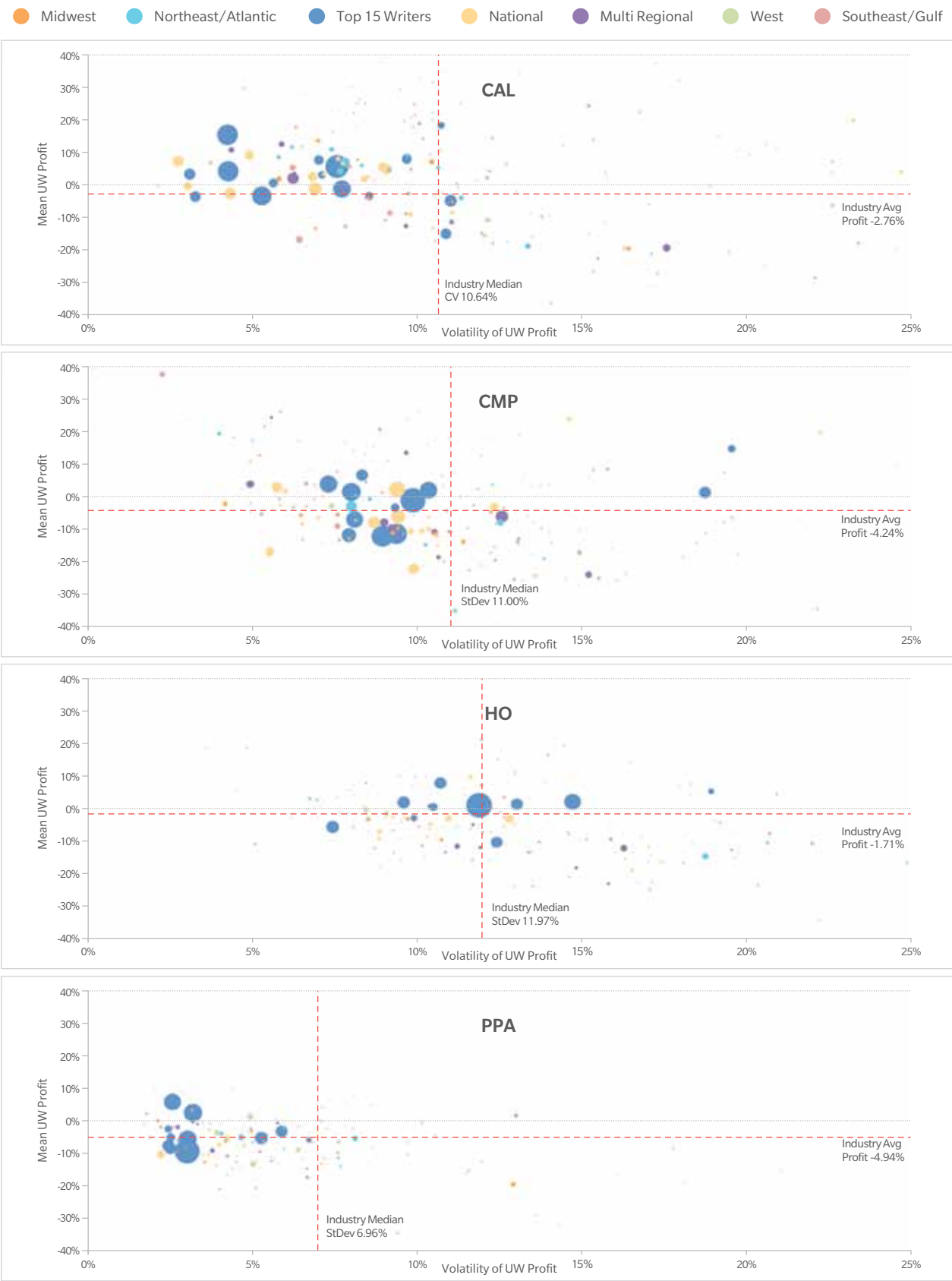
Line of Business	Segment	Development Month										
		12	24	36	48	60	72	84	96	108	120	120+
MPLC	Top 15 Writers	166%	44%	32%	33%	22%	32%	45%	45%	114%	57%	86%
	National	53%	29%	31%	40%	32%	46%	71%	101%	127%	161%	106%
	Multi Regional	24%	16%	16%	14%	22%	43%	57%	94%	85%	112%	61%
	Southeast/Gulf	34%	23%	15%	25%	33%	37%	65%	34%	73%	53%	72%
	Midwest	57%	48%	39%	45%	60%	54%	204%	76%	66%	82%	50%
	Northeast/Atlantic	43%	33%	30%	24%	16%	19%	33%	42%	50%	60%	72%
	West	28%	23%	11%	15%	35%	56%	64%	152%	65%	154%	111%
	E&S	166%	80%	151%	60%	117%	85%	218%	297%	224%	118%	98%
	WC Specialist	80%	37%	41%	70%	95%	147%	134%	178%	98%	90%	104%
MPLO	Mutual	29%	20%	13%	24%	35%	24%	57%	41%	45%	54%	85%
	Public	123%	39%	24%	30%	29%	27%	40%	34%	123%	49%	87%
	Top 15 Writers	76%	50%	40%	29%	25%	22%	25%	34%	42%	44%	73%
	National	111%	46%	21%	24%	30%	60%	40%	52%	83%	81%	108%
	Multi Regional	86%	40%	25%	37%	19%	36%	56%	60%	70%	71%	37%
	Southeast/Gulf	45%	31%	25%	17%	22%	45%	47%	45%	94%	87%	50%
	Midwest	85%	103%	67%	46%	63%	104%	149%	194%	132%	114%	99%
	Northeast/Atlantic	107%	42%	30%	27%	28%	24%	20%	19%	36%	37%	44%
	West	80%	88%	41%	18%	22%	25%	41%	47%	64%	67%	47%
PPA	E&S	109%	56%	42%	34%	30%	57%	86%	89%	125%	178%	124%
	WC Specialist	191%	130%	117%	126%	63%	119%	126%	119%	192%	161%	143%
	Mutual	82%	61%	45%	25%	35%	27%	35%	32%	45%	55%	53%
	Public	68%	44%	34%	26%	29%	20%	23%	30%	36%	45%	69%
	Top 15 Writers	7%	5%	6%	5%	7%	14%	20%	28%	26%	28%	34%
	National	8%	5%	8%	8%	10%	14%	20%	24%	36%	51%	45%
	Multi Regional	7%	5%	8%	10%	11%	15%	21%	60%	68%	69%	41%
	Southeast/Gulf	8%	6%	13%	15%	14%	29%	29%	45%	56%	155%	93%
	Midwest	9%	3%	5%	12%	21%	26%	44%	43%	34%	63%	46%
PLC	Northeast/Atlantic	7%	4%	8%	8%	10%	9%	9%	23%	32%	49%	102%
	West	9%	7%	8%	16%	26%	32%	44%	46%	297%	111%	90%
	E&S	23%	21%	48%	54%	136%	78%	76%	118%	198%	85%	98%
	WC Specialist	35%	18%	34%	64%	74%	81%	94%	133%	116%	82%	91%
	Mutual	6%	5%	9%	11%	12%	17%	24%	29%	110%	66%	41%
	Public	8%	5%	6%	6%	7%	11%	22%	22%	28%	31%	47%
	Top 15 Writers	144%	82%	43%	38%	59%	66%	81%	78%	125%	97%	89%
	National	54%	41%	34%	41%	66%	87%	77%	84%	113%	95%	96%
	Multi Regional	81%	68%	61%	98%	72%	60%	82%	130%	108%	52%	113%
PLO	Southeast/Gulf											
	Midwest											
	Northeast/Atlantic											
	West											
	E&S											
	WC Specialist											
	Mutual											
	Public	129%	69%	44%	31%	55%	46%	112%	81%	101%	107%	82%
	Top 15 Writers	52%	29%	21%	17%	13%	15%	20%	26%	31%	32%	21%
WC	National	40%	21%	21%	16%	17%	25%	41%	35%	34%	46%	31%
	Multi Regional	50%	34%	40%	26%	39%	47%	89%	79%	75%	70%	54%
	Southeast/Gulf	64%	51%	48%	181%	51%	55%	89%	167%	137%	212%	65%
	Midwest	41%	45%	44%	35%	43%	45%	62%	71%	89%	78%	80%
	Northeast/Atlantic	71%	50%	40%	36%	55%	41%	68%	103%	107%	121%	72%
	West	83%	79%	71%	90%	71%	68%	97%	99%	205%	123%	43%
	E&S	87%	62%	37%	31%	35%	29%	47%	53%	46%	98%	40%
	WC Specialist	95%	65%	84%	61%	68%	112%	139%	108%	83%	91%	111%
	Mutual	30%	16%	28%	23%	23%	38%	46%	47%	42%	64%	47%
WC	Public	56%	26%	22%	19%	14%	13%	22%	24%	27%	33%	23%
	Top 15 Writers	9%	9%	10%	12%	15%	18%	41%	23%	24%	27%	35%
	National	12%	9%	10%	19%	16%	50%	19%	20%	23%	30%	20%
	Multi Regional	12%	15%	12%	32%	16%	29%	69%	28%	29%	34%	24%
	Southeast/Gulf	14%	6%	12%	22%	19%	18%	21%	22%	44%	46%	46%
	Midwest	13%	7%	7%	12%	18%	26%	27%	31%	33%	31%	35%
	Northeast/Atlantic	9%	8%	8%	7%	10%	10%	12%	14%	15%	15%	17%
	West	14%	14%	19%	306%	22%	28%	28%	32%	53%	55%	22%
	E&S	21%	18%	26%	20%	27%	27%	78%	139%	53%	62%	62%
WC	WC Specialist	12%	10%	10%	13%	14%	20%	24%	32%	38%	35%	17%
	Mutual	13%	12%	8%	9%	13%	77%	35%	27%	33%	74%	22%
	Public	9%	10%	10%	13%	18%	18%	58%	18%	19%	23%	35%

Source: Guy Carpenter

A.5 CORRELATION CONCERNS: ADDITIONAL DETAIL

E22 | UNDERWRITING RETURN, VOLATILITY, AND PREMIUM SIZE SCATTERPLOT BY LINE OF BUSINESS FOR INDIVIDUAL COMPANIES

Lines with Low Volatility

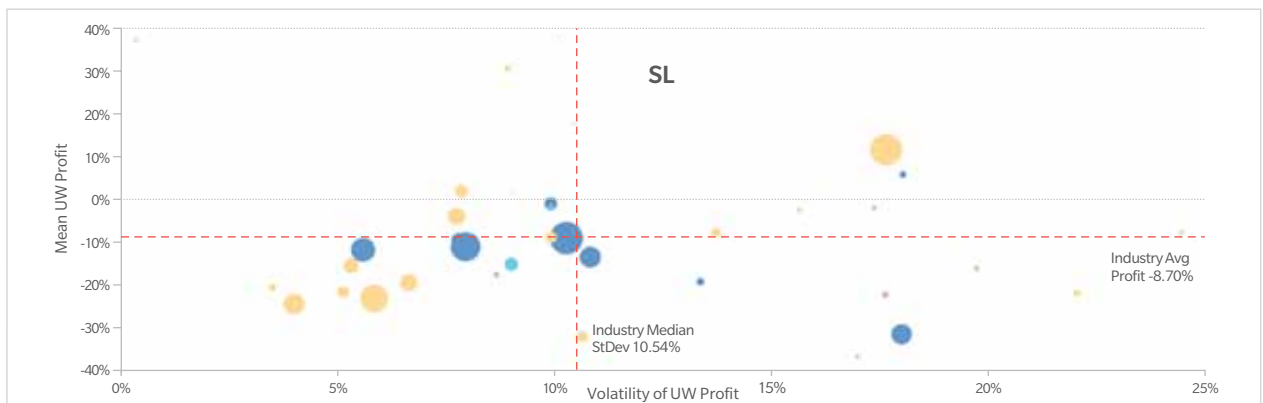
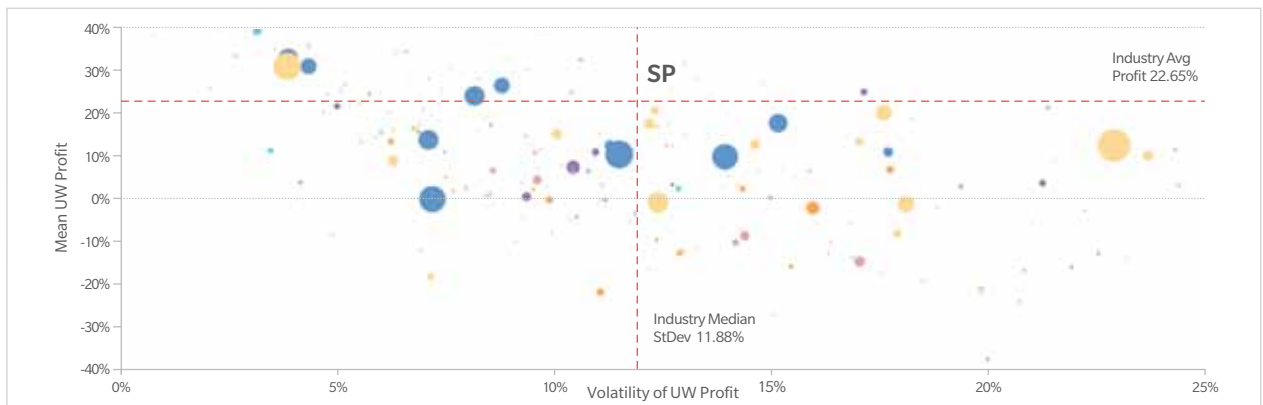
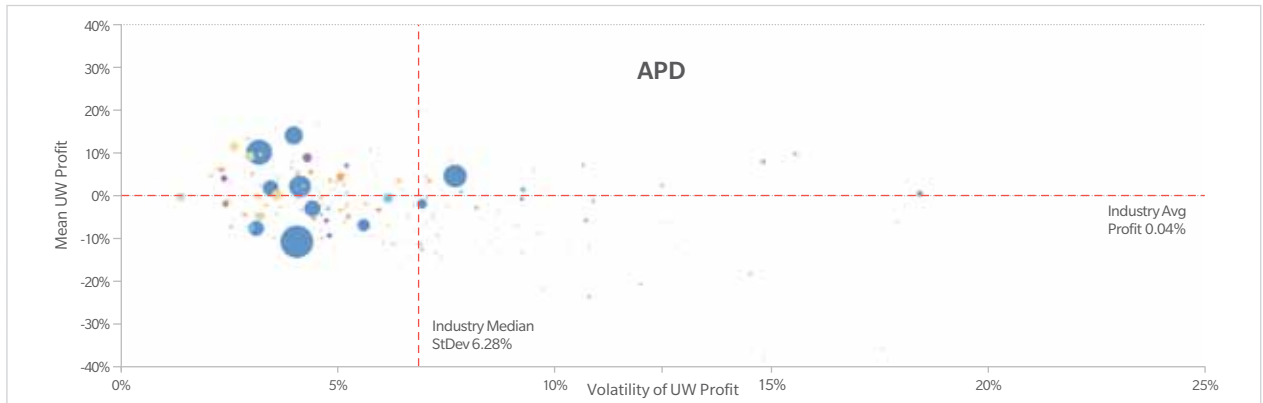
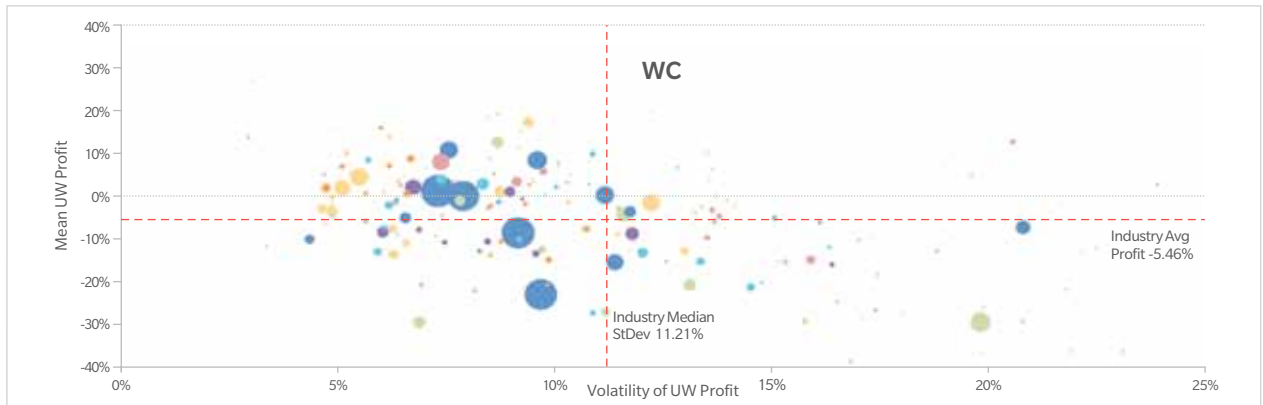


Source: Guy Carpenter

Continued Overleaf

Lines with Low Volatility (Continued)

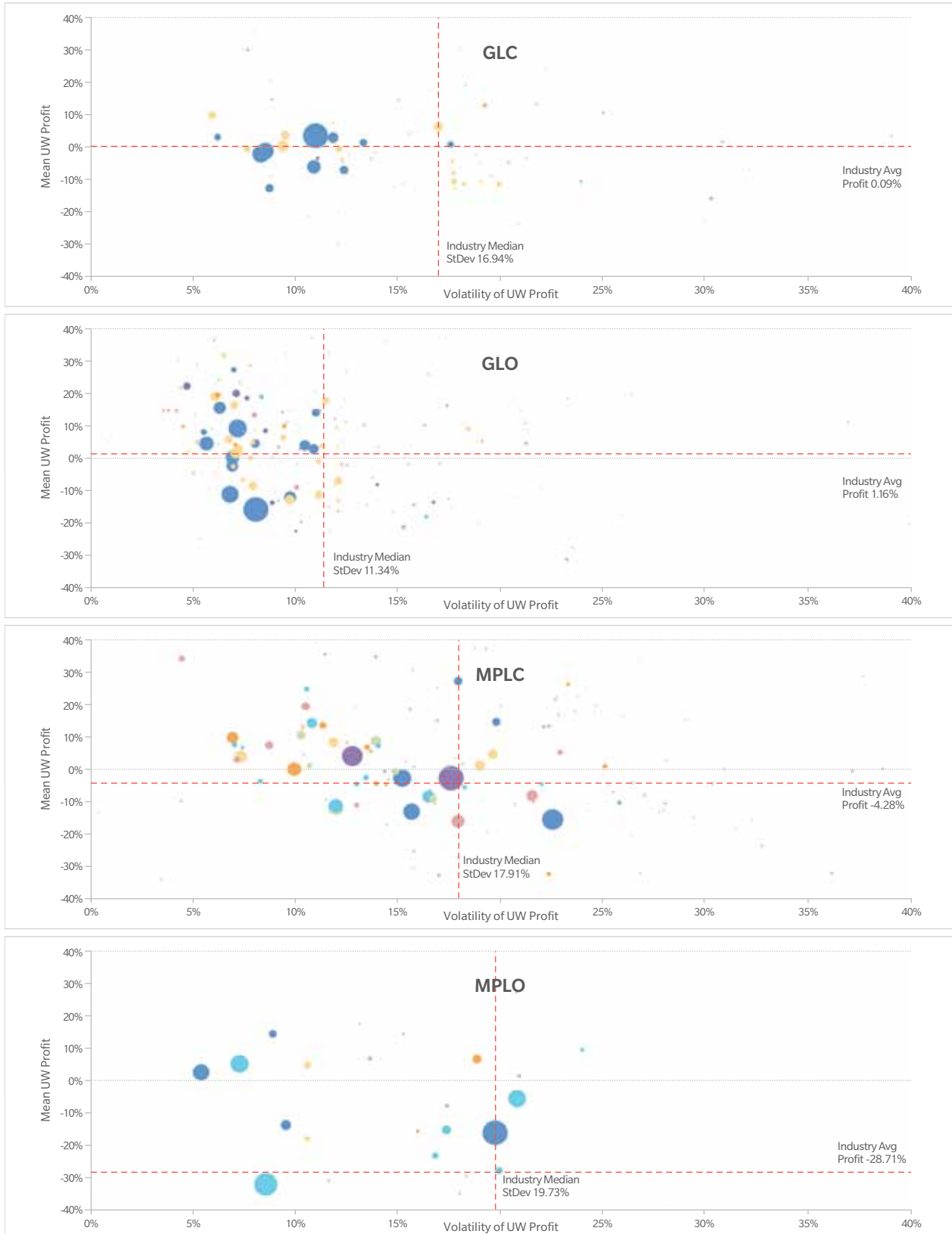
● Midwest
 ● Northeast/Atlantic
 ● Top 15 Writers
 ● National
 ● Multi Regional
 ● West
 ● Southeast/Gulf



Source: Guy Carpenter

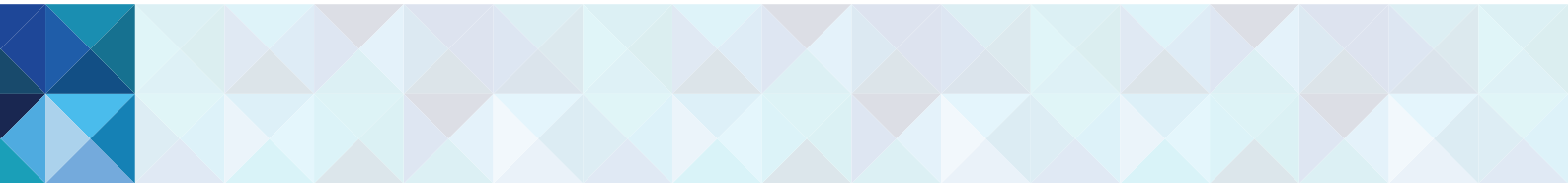
Lines with High Volatility

● Midwest
 ● Northeast/Atlantic
 ● Top 15 Writers
 ● National
 ● Multi Regional
 ● West
 ● Southeast/Gulf

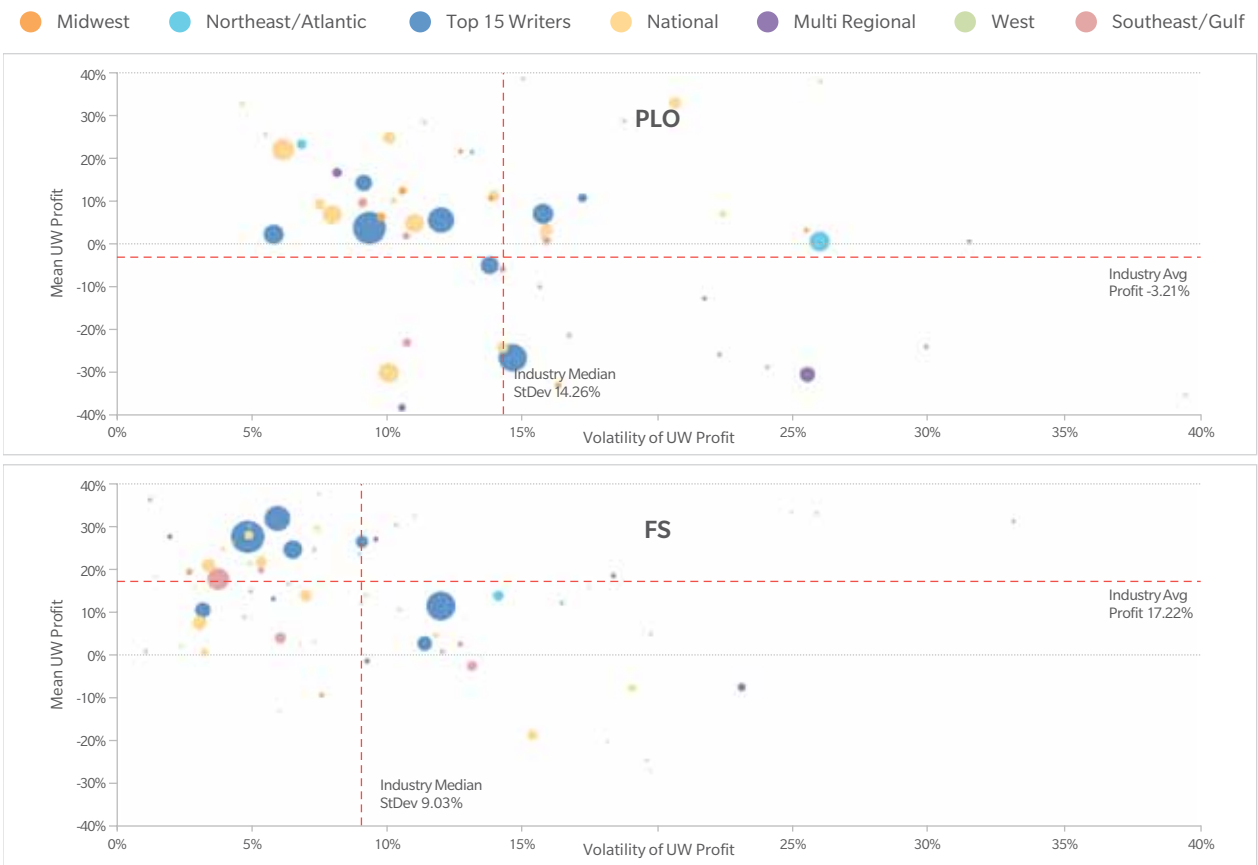


Source: Guy Carpenter

Continued Overleaf



Lines with High Volatility (Continued)



Source: Guy Carpenter

A.5 CORRELATION CONCERNS: ADDITIONAL DETAIL

E23 | CORRELATION IN THE ULTIMATE LOSS RATIO BETWEEN LINES OF BUSINESS, BY MARKET SEGMENT

Top 15 Writers

Line of Business	CAL	CMP	GLC	GLO	HO	MPLC	MPLO	PPA	PLC	PLO	WC	All Lines Combined	Auto-Correlation
CAL	100%												88%
CMP	65%	100%											66%
GLC	49%	42%	100%										84%
GLO	80%	71%	83%	100%									87%
HO	-1%	58%	-1%	4%	100%								18%
MPLC	72%	68%	82%	95%	2%	100%							88%
MPLO	69%	72%	45%	78%	6%	79%	100%						84%
PPA	45%	10%	11%	11%	19%	0%	-11%	100%					85%
PLC	37%	40%	64%	60%	14%	62%	24%	20%	100%				24%
PLO	81%	76%	81%	93%	16%	89%	73%	19%	58%	100%			77%
WC	77%	24%	56%	64%	-11%	50%	24%	66%	43%	60%	100%		84%
All Lines	78%	70%	58%	72%	45%	61%	45%	70%	54%	75%	77%	100%	73%

National

Line of Business	CAL	CMP	GLC	GLO	HO	MPLC	MPLO	PPA	PLC	PLO	WC	All Lines Combined	Auto-Correlation
CAL	100%												84%
CMP	88%	100%											78%
GLC	69%	60%	100%										60%
GLO	90%	85%	72%	100%									72%
HO	28%	51%	35%	22%	100%								27%
MPLC	51%	49%	82%	66%	19%	100%							50%
MPLO	63%	40%	31%	42%	29%	-10%	100%						57%
PPA	26%	-7%	26%	22%	5%	16%	57%	100%					83%
PLC	34%	28%	11%	34%	18%	1%	36%	23%	100%				5%
PLO	47%	53%	23%	27%	32%	5%	40%	1%	18%	100%			5%
WC	57%	22%	54%	56%	-16%	35%	54%	63%	12%	15%	100%		84%
All Lines	89%	74%	77%	88%	38%	61%	64%	55%	30%	34%	73%	100%	79%

Multi Regional

Line of Business	CAL	CMP	GLC	GLO	HO	MPLC	MPLO	PPA	PLC	PLO	WC	All Lines Combined	Auto-Correlation
CAL	100%												78%
CMP	69%	100%											74%
GLC	28%	54%	100%										26%
GLO	-28%	17%	15%	100%									48%
HO	35%	75%	67%	1%	100%								14%
MPLC													
MPLO	-5%	-1%	-17%	5%	-4%		100%						4%
PPA	28%	-30%	2%	-69%	-16%		-24%	100%					80%
PLC													
PLO	3%	52%	12%	53%	41%		-4%	-44%		100%			79%
WC	33%	-6%	30%	-34%	-14%		-14%	69%		-20%	100%		81%
All Lines	75%	63%	67%	-25%	55%		-12%	43%		15%	67%	100%	71%

Southeast/Gulf

Line of Business	CAL	CMP	GLC	GLO	HO	MPLC	MPLO	PPA	PLC	PLO	WC	All Lines Combined	Auto-Correlation
CAL	100%												76%
CMP	58%	100%											49%
GLC	29%	20%	100%										-14%
GLO	70%	68%	18%	100%									71%
HO	-19%	39%	3%	-1%	100%								-18%
MPLC	73%	60%	23%	79%	-20%	100%							83%
MPLO	67%	51%	22%	68%	-28%	84%	100%						62%
PPA	-10%	1%	17%	31%	9%	-10%	-19%	100%					71%
PLC	57%	11%	36%	40%	-9%	31%	44%	12%	100%				4%
PLO	68%	45%	16%	56%	-14%	83%	70%	-23%	46%	100%			76%
WC	26%	-11%	17%	28%	-24%	-1%	20%	52%	20%	-15%	100%		84%
All Lines	71%	55%	28%	87%	4%	67%	67%	41%	45%	51%	61%	100%	71%

Midwest

Line of Business	CAL	CMP	GLC	GLO	HO	MPLC	MPLO	PPA	PLC	PLO	WC	All Lines Combined	Auto-Correlation
CAL	100%												81%
CMP	66%	100%											82%
GLC	-21%	33%	100%										61%
GLO	21%	67%	53%	100%									67%
HO	67%	85%	23%	66%	100%								48%
MPLC	36%	86%	58%	74%	65%	100%							85%
MPLO	68%	69%	0%	30%	58%	49%	100%						64%
PPA	39%	-16%	-48%	3%	15%	-40%	8%	100%					84%
PLC													
PLO	43%	67%	34%	36%	45%	68%	77%	-27%		100%			42%
WC	-5%	-24%	-37%	12%	-5%	-40%	6%	68%		-16%	100%		87%
All Lines	68%	67%	2%	67%	81%	44%	61%	56%		41%	43%	100%	72%

Continued Overleaf

E23 | CORRELATION IN THE ULTIMATE LOSS RATIO BETWEEN LINES OF BUSINESS, BY MARKET SEGMENT (CONTINUED)

Northeast/Atlantic

Line of Business	CAL	CMP	GLC	GLO	HO	MPLC	MPLO	PPA	PLC	PLO	WC	All Lines Combined	Auto-Correlation
CAL	100%												81%
CMP	54%	100%											40%
GLC	18%	31%	100%										31%
GLO	-7%	-50%	-53%	100%									-9%
HO	35%	57%	-11%	3%	100%								12%
MPLC	40%	61%	22%	-31%	19%	100%							79%
MPLO	1%	31%	27%	-33%	3%	82%	100%						40%
PPA	61%	2%	12%	-5%	4%	-22%	-34%	100%					87%
PLC	52%	50%	19%	-5%	10%	62%	31%	-15%	100%				31%
PLO	-5%	-51%	-41%	98%	5%	-33%	-34%	-6%	-3%	100%			-13%
WC	25%	-6%	38%	-16%	-47%	-16%	-27%	61%	-10%	-20%	100%		81%
All Lines	69%	82%	56%	-55%	32%	67%	43%	34%	44%	-55%	33%	100%	61%

West

Line of Business	CAL	CMP	GLC	GLO	HO	MPLC	MPLO	PPA	PLC	PLO	WC	All Lines Combined	Auto-Correlation
CAL	100%												79%
CMP	79%	100%											68%
GLC	58%	79%	100%										45%
GLO	46%	54%	46%	100%									6%
HO	44%	53%	29%	6%	100%								52%
MPLC	60%	78%	68%	45%	39%	100%							86%
MPLO	40%	49%	41%	14%	28%	81%	100%						68%
PPA	35%	-2%	-6%	17%	-2%	-22%	-49%	100%					77%
PLC	30%	50%	45%	50%	27%	47%	11%	9%	100%				40%
PLO	72%	78%	81%	29%	43%	74%	48%	2%	46%	100%			41%
WC	60%	33%	45%	29%	28%	29%	11%	47%	4%	39%	100%		65%
All Lines	79%	62%	59%	52%	48%	51%	20%	48%	31%	58%	90%	100%	70%

E&S

Line of Business	CAL	CMP	GLC	GLO	HO	MPLC	MPLO	PPA	PLC	PLO	WC	All Lines Combined	Auto-Correlation
CAL	100%												62%
CMP	61%	100%											66%
GLC	88%	59%	100%										78%
GLO	78%	50%	90%	100%									79%
HO	-20%	-6%	-28%	-42%	100%								43%
MPLC	46%	22%	68%	62%	-26%	100%							32%
MPLO	69%	58%	81%	75%	-47%	50%	100%						71%
PPA	-36%	-59%	-48%	-39%	-7%	-51%	-46%	100%					35%
PLC	69%	63%	64%	48%	-1%	46%	50%	-54%	100%				21%
PLO	72%	35%	86%	91%	-34%	72%	63%	-53%	44%	100%			55%
WC	-16%	-50%	-25%	-29%	-17%	-3%	-27%	36%	-47%	-15%	100%		55%
All Lines	87%	60%	95%	97%	-39%	64%	79%	-47%	58%	91%	-24%	100%	80%

Mutual

Line of Business	CAL	CMP	GLC	GLO	HO	MPLC	MPLO	PPA	PLC	PLO	WC	All Lines Combined	Auto-Correlation
CAL	100%												82%
CMP	58%	100%											58%
GLC	22%	-20%	100%										65%
GLO	70%	71%	-20%	100%									84%
HO	53%	68%	-3%	67%	100%								17%
MPLC	47%	71%	-29%	89%	50%	100%							83%
MPLO	8%	40%	-40%	57%	29%	80%	100%						42%
PPA	45%	-7%	82%	-15%	11%	-34%	-50%	100%					86%
PLC													
PLO	22%	47%	7%	7%	10%	15%	-15%	13%		100%			44%
WC	31%	3%	49%	-8%	-7%	-14%	-20%	71%		31%	100%		79%
All Lines	70%	60%	33%	55%	59%	48%	25%	56%		34%	68%	100%	68%

Public

Line of Business	CAL	CMP	GLC	GLO	HO	MPLC	MPLO	PPA	PLC	PLO	WC	All Lines Combined	Auto-Correlation
CAL	100%												85%
CMP	69%	100%											72%
GLC	45%	58%	100%										85%
GLO	72%	75%	90%	100%									81%
HO	15%	54%	4%	10%	100%								31%
MPLC	66%	83%	82%	93%	17%	100%							89%
MPLO	75%	82%	63%	81%	15%	91%	100%						87%
PPA	62%	19%	14%	24%	31%	10%	11%	100%					84%
PLC	44%	58%	75%	83%	17%	71%	48%	19%	100%				41%
PLO	45%	58%	90%	83%	3%	85%	73%	15%	60%	100%			64%
WC	74%	26%	49%	59%	3%	38%	35%	77%	41%	38%	100%		85%
All Lines	85%	77%	72%	85%	40%	77%	72%	66%	66%	68%	78%	100%	80%

A.6 EXPENSE BENCHMARKING: ADDITIONAL DETAIL

T18 | DIRECT AND NET EXPENSES BY MARKET SEGMENT AND LINE OF BUSINESS

Net Expenses by Segment

Line of Business	Segment	Total Expense (including LAE)	Defense & Containment Costs	Claims Adjusted & Other	Commission & Brokerage	Taxes, Licenses & Fees	Other Acquisition Expense	General & Administrative
HO	Top 15 Writers	37%	1%	8%	11%	3%	9%	4%
	National	37%	1%	7%	11%	3%	10%	6%
	Multi Regional	39%	1%	6%	16%	2%	9%	5%
	Northeast/Atlantic	44%	2%	7%	17%	3%	7%	8%
	West	41%	3%	8%	13%	3%	8%	6%
	Midwest	37%	2%	6%	15%	1%	7%	6%
	Southeast/Gulf	46%	2%	7%	17%	3%	6%	10%
	E&S	55%	3%	6%	12%	1%	20%	12%
	Mutual	39%	1%	7%	15%	2%	7%	7%
PPA	Public	40%	2%	7%	14%	3%	8%	6%
	Top 15 Writers	38%	4%	10%	8%	2%	8%	5%
	National	40%	3%	9%	8%	2%	10%	7%
	Multi Regional	38%	4%	7%	14%	3%	6%	4%
	Northeast/Atlantic	41%	4%	9%	12%	2%	7%	6%
	West	39%	4%	9%	11%	2%	7%	6%
	Midwest	39%	3%	7%	12%	2%	7%	8%
	Southeast/Gulf	41%	4%	9%	10%	2%	9%	7%
	E&S	71%	12%	5%	15%	3%	27%	9%
CAL	Mutual	38%	3%	8%	11%	2%	7%	6%
	Public	36%	4%	9%	9%	2%	7%	6%
	Top 15 Writers	41%	6%	7%	12%	3%	6%	8%
	National	43%	7%	6%	13%	3%	6%	9%
	Multi Regional	45%	7%	6%	17%	2%	7%	5%
	Northeast/Atlantic	45%	8%	8%	13%	4%	5%	7%
	West	48%	9%	8%	13%	3%	6%	9%
	Midwest	42%	5%	5%	15%	2%	8%	6%
	Southeast/Gulf	42%	10%	6%	10%	2%	6%	8%
WC	E&S	56%	11%	11%	14%	1%	7%	12%
	Mutual	44%	6%	15%	15%	2%	8%	8%
	Public	42%	6%	6%	12%	3%	7%	8%
	Top 15 Writers	38%	9%	7%	5%	3%	8%	6%
	National	40%	7%	7%	7%	4%	6%	9%
	Multi Regional	37%	7%	6%	8%	3%	6%	6%
	Northeast/Atlantic	35%	6%	7%	7%	3%	5%	7%
	West	47%	9%	12%	9%	3%	5%	9%
	Midwest	36%	4%	7%	9%	2%	7%	6%
CMP	Southeast/Gulf	42%	6%	5%	9%	4%	5%	13%
	Top 15 Writers	48%	7%	6%	15%	3%	8%	9%
	National	48%	8%	5%	15%	3%	8%	9%
	Multi Regional	48%	8%	4%	19%	2%	7%	6%
	Northeast/Atlantic	51%	8%	6%	15%	3%	9%	10%
	West	56%	12%	7%	18%	3%	7%	9%
	Midwest	48%	6%	6%	18%	2%	9%	6%
	Southeast/Gulf	50%	8%	6%	16%	3%	9%	9%
	E&S	49%	9%	6%	11%	1%	6%	17%
SL	Mutual	48%	7%	6%	17%	2%	8%	8%
	Public	48%	8%	6%	15%	3%	8%	9%
	Top 15 Writers	47%	3%	6%	17%	2%	9%	10%
	National	37%	4%	3%	11%	2%	5%	11%
	Multi Regional							
	Northeast/Atlantic	50%	5%	5%	7%	4%	17%	12%
	West	57%	3%	5%	9%	5%	16%	18%
	Midwest							
	Southeast/Gulf	52%	2%	12%	9%	6%	13%	9%
	E&S	35%	4%	1%	14%	0%	5%	10%
	Mutual	41%	2%	3%	21%	1%	9%	4%
	Public	45%	3%	4%	16%	2%	9%	9%

Source: Guy Carpenter

Continued Overleaf

T18 | DIRECT AND NET EXPENSES BY MARKET SEGMENT AND LINE OF BUSINESS (CONTINUED)

Net Expenses by Segment (Continued)

Line of Business	Segment	Total Expense (including LAE)	Defense & Containment Costs	Claims Adjusted & Other	Commission & Brokerage	Taxes, Licenses & Fees	Other Acquisition Expense	General & Administrative
GLO	Top 15 Writers	54%	15%	10%	11%	2%	8%	8%
	National	46%	11%	4%	12%	2%	7%	10%
	Multi Regional	43%	9%	3%	15%	2%	8%	6%
	Northeast/Atlantic	46%	12%	6%	7%	4%	7%	11%
	West	46%	7%	8%	5%	3%	12%	10%
	Midwest	40%	8%	4%	10%	3%	8%	7%
	Southeast/Gulf	55%	8%	4%	11%	3%	6%	22%
	E&S	46%	10%	5%	6%	1%	12%	12%
	Mutual	49%	9%	5%	15%	2%	9%	9%
	Public	50%	13%	8%	10%	2%	9%	8%
GLC	Top 15 Writers	37%	4%	5%	12%	2%	8%	5%
	National	49%	13%	4%	14%	2%	6%	9%
	Multi Regional	56%	13%	8%	16%	3%	6%	10%
	Northeast/Atlantic	42%	10%	3%	1%	5%	7%	15%
	West	58%	21%	9%	5%	4%	6%	13%
	Midwest	61%	25%	6%	5%	2%	6%	17%
	Southeast/Gulf	47%	13%	5%	3%	3%	5%	17%
	E&S	55%	15%	6%	5%	1%	16%	12%
	Mutual	50%	12%	4%	18%	1%	6%	8%
	Public	40%	6%	5%	11%	2%	8%	7%
SP	Top 15 Writers	33%	1%	5%	8%	3%	8%	7%
	National	36%	1%	3%	10%	3%	6%	13%
	Multi Regional	42%	1%	8%	12%	4%	10%	7%
	Northeast/Atlantic	39%	1%	4%	17%	3%	6%	8%
	West	40%	1%	6%	9%	3%	8%	12%
	Midwest	33%	0%	5%	12%	1%	5%	8%
	Southeast/Gulf	39%	2%	5%	10%	5%	11%	7%
	E&S	35%	3%	4%	3%	1%	12%	13%
	Mutual	38%	1%	4%	16%	2%	8%	7%
	Public	35%	1%	4%	11%	3%	8%	8%
APD	Top 15 Writers	34%	0%	10%	8%	2%	9%	5%
	National	38%	1%	9%	10%	2%	9%	8%
	Multi Regional	37%	0%	8%	14%	2%	7%	6%
	Northeast/Atlantic	38%	1%	11%	13%	2%	6%	6%
	West	39%	1%	11%	11%	2%	8%	6%
	Midwest	36%	2%	7%	12%	2%	7%	7%
	Southeast/Gulf	36%	1%	8%	10%	2%	8%	7%
	E&S	46%	6%	7%	18%	1%	5%	10%
	Mutual	37%	1%	8%	12%	2%	8%	6%
	Public	34%	0%	9%	10%	2%	7%	6%
FS	Top 15 Writers	46%	-2%	3%	20%	3%	12%	9%
	National	63%	4%	3%	27%	3%	12%	13%
	Multi Regional	72%	4%	3%	34%	3%	13%	14%
	Northeast/Atlantic	74%	6%	1%	31%	5%	7%	23%
	West	86%	4%	3%	6%	17%	31%	25%
	Midwest	69%	1%	1%	32%	4%	7%	23%
	Southeast/Gulf	62%	3%	3%	25%	4%	12%	16%
	E&S	56%	4%	2%	21%	2%	17%	11%
	Mutual	60%	3%	3%	28%	2%	13%	11%
	Public	48%	-1%	4%	21%	3%	12%	9%
MPL	Top 15 Writers	49%	19%	4%	13%	2%	5%	6%
	National	49%	14%	5%	13%	1%	6%	9%
	Multi Regional	58%	24%	10%	6%	3%	4%	12%
	Northeast/Atlantic	47%	24%	4%	2%	3%	5%	9%
	West	58%	25%	9%	4%	2%	5%	11%
	Midwest	56%	24%	7%	4%	3%	5%	14%
	Southeast/Gulf	55%	24%	7%	3%	3%	5%	13%
	E&S	39%	8%	5%	0%	1%	17%	8%
	Mutual	52%	23%	8%	5%	3%	5%	9%
	Public	49%	18%	5%	11%	2%	6%	7%
PL	Top 15 Writers	74%	38%	10%	7%	2%	9%	9%
	National	52%	17%	6%	12%	2%	6%	9%
	Multi Regional	63%	17%	11%	16%	2%	9%	8%
	Northeast/Atlantic	45%	24%	7%	0%	5%	2%	7%
	West	50%	18%	9%	-15%	4%	20%	13%
	Midwest	65%	23%	7%	18%	2%	9%	6%
	Southeast/Gulf	50%	9%	5%	14%	2%	11%	8%
	E&S	35%	4%	3%	4%	1%	10%	12%
	Mutual	69%	26%	8%	14%	2%	10%	8%
	Public							

Source: Guy Carpenter

A.6 EXPENSE BENCHMARKING: ADDITIONAL DETAIL (CONTINUED)

T18 | DIRECT AND NET EXPENSES BY MARKET SEGMENT AND LINE OF BUSINESS (CONTINUED)

Direct Expenses by Segment

Line of Business	Segment	Total Expense (including LAE)	Defense & Containment Costs	Claims Adjusted & Other	Commission & Brokerage	Taxes, Licenses & Fees	Other Acquisition Expense	General & Administrative
HO	Top 15 Writers	36%	1%	7%	12%	2%	9%	4%
	National	35%	1%	6%	12%	2%	9%	5%
	Multi Regional	38%	1%	6%	17%	2%	8%	4%
	Northeast/Atlantic	40%	2%	6%	18%	2%	5%	7%
	West	39%	3%	7%	13%	2%	8%	6%
	Midwest	34%	1%	6%	14%	1%	6%	5%
	Southeast/Gulf	33%	2%	5%	15%	2%	4%	5%
	E&S	33%	2%	4%	18%	0%	5%	4%
	Mutual	35%	1%	6%	14%	2%	6%	6%
PPA	Public	38%	2%	6%	15%	2%	7%	6%
	Top 15 Writers	38%	4%	10%	7%	2%	9%	5%
	National	39%	3%	9%	9%	2%	9%	7%
	Multi Regional	37%	4%	7%	13%	2%	6%	5%
	Northeast/Atlantic	40%	4%	9%	12%	2%	6%	6%
	West	38%	4%	9%	11%	2%	7%	6%
	Midwest	35%	4%	6%	11%	1%	6%	7%
	Southeast/Gulf	37%	3%	7%	12%	2%	7%	6%
	E&S	66%	7%	4%	20%	2%	25%	8%
CAL	Mutual	38%	3%	8%	11%	2%	7%	6%
	Public	36%	4%	9%	8%	2%	8%	6%
	Top 15 Writers	41%	6%	6%	14%	3%	6%	7%
	National	41%	8%	5%	14%	2%	5%	7%
	Multi Regional	44%	7%	6%	17%	3%	7%	5%
	Northeast/Atlantic	43%	9%	6%	15%	3%	5%	6%
	West	46%	10%	7%	14%	2%	5%	7%
	Midwest	40%	5%	4%	15%	2%	7%	6%
	Southeast/Gulf	48%	9%	5%	15%	2%	5%	12%
WC	E&S	52%	14%	7%	19%	0%	4%	7%
	Mutual	41%	5%	7%	14%	2%	8%	7%
	Public	42%	7%	6%	14%	3%	5%	7%
	Top 15 Writers	35%	8%	5%	7%	3%	6%	5%
	National	36%	7%	5%	10%	3%	4%	7%
	Multi Regional	37%	7%	6%	8%	3%	6%	6%
	Northeast/Atlantic	33%	6%	6%	7%	3%	4%	6%
	West	46%	9%	12%	9%	3%	5%	8%
	Midwest	34%	4%	7%	9%	2%	7%	6%
CMP	Southeast/Gulf	37%	7%	5%	11%	3%	4%	8%
	E&S	31%	10%	1%	10%	3%	0%	7%
	WC Specialist	39%	8%	7%	10%	3%	4%	7%
	Mutual	40%	7%	9%	9%	3%	5%	8%
	Public	34%	8%	5%	9%	3%	5%	5%
	Top 15 Writers	45%	7%	5%	16%	2%	7%	8%
	National	45%	7%	5%	16%	2%	6%	7%
	Multi Regional	44%	7%	4%	18%	2%	7%	5%
	Northeast/Atlantic	43%	7%	5%	17%	2%	5%	6%
SL	West	50%	11%	6%	18%	2%	6%	7%
	Midwest	44%	6%	5%	18%	2%	8%	5%
	Southeast/Gulf	41%	6%	4%	16%	2%	6%	7%
	E&S	43%	9%	6%	18%	0%	4%	6%
	Mutual	42%	6%	5%	16%	2%	7%	6%
	Public	45%	7%	5%	16%	2%	6%	7%
	Top 15 Writers	34%	1%	3%	13%	2%	8%	7%
	National	34%	5%	3%	12%	2%	4%	9%
	Multi Regional	42%	0%	2%	19%	2%	9%	9%
	Northeast/Atlantic	31%	5%	3%	9%	1%	7%	5%
	West	33%	3%	4%	11%	2%	6%	6%
	Midwest	34%	2%	1%	18%	2%	6%	6%
	Southeast/Gulf	37%	3%	5%	13%	3%	8%	6%
	E&S	28%	5%	1%	14%	0%	3%	4%
	Mutual	33%	3%	3%	11%	1%	9%	5%
	Public	33%	2%	3%	14%	2%	7%	6%

Source: Guy Carpenter

Continued Overleaf

T18 | DIRECT AND NET EXPENSES BY MARKET SEGMENT AND LINE OF BUSINESS (CONTINUED)

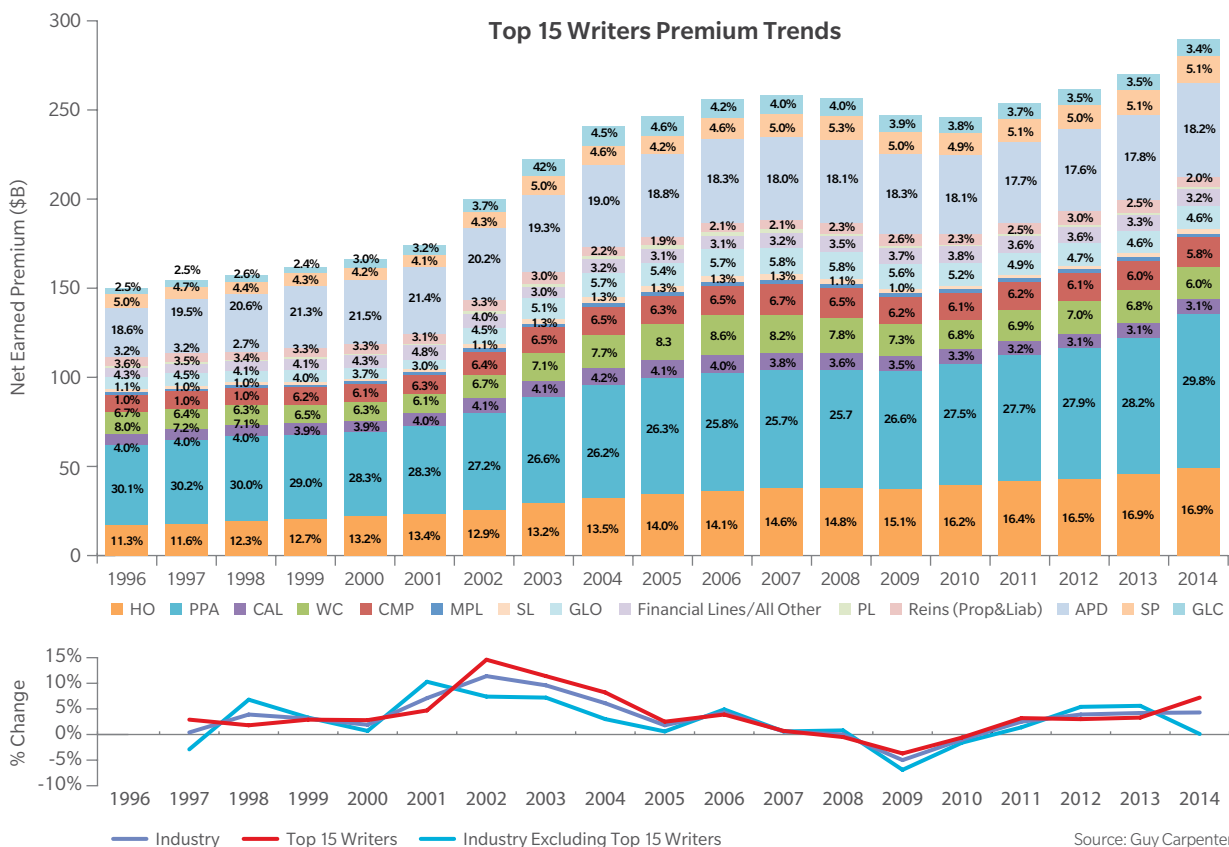
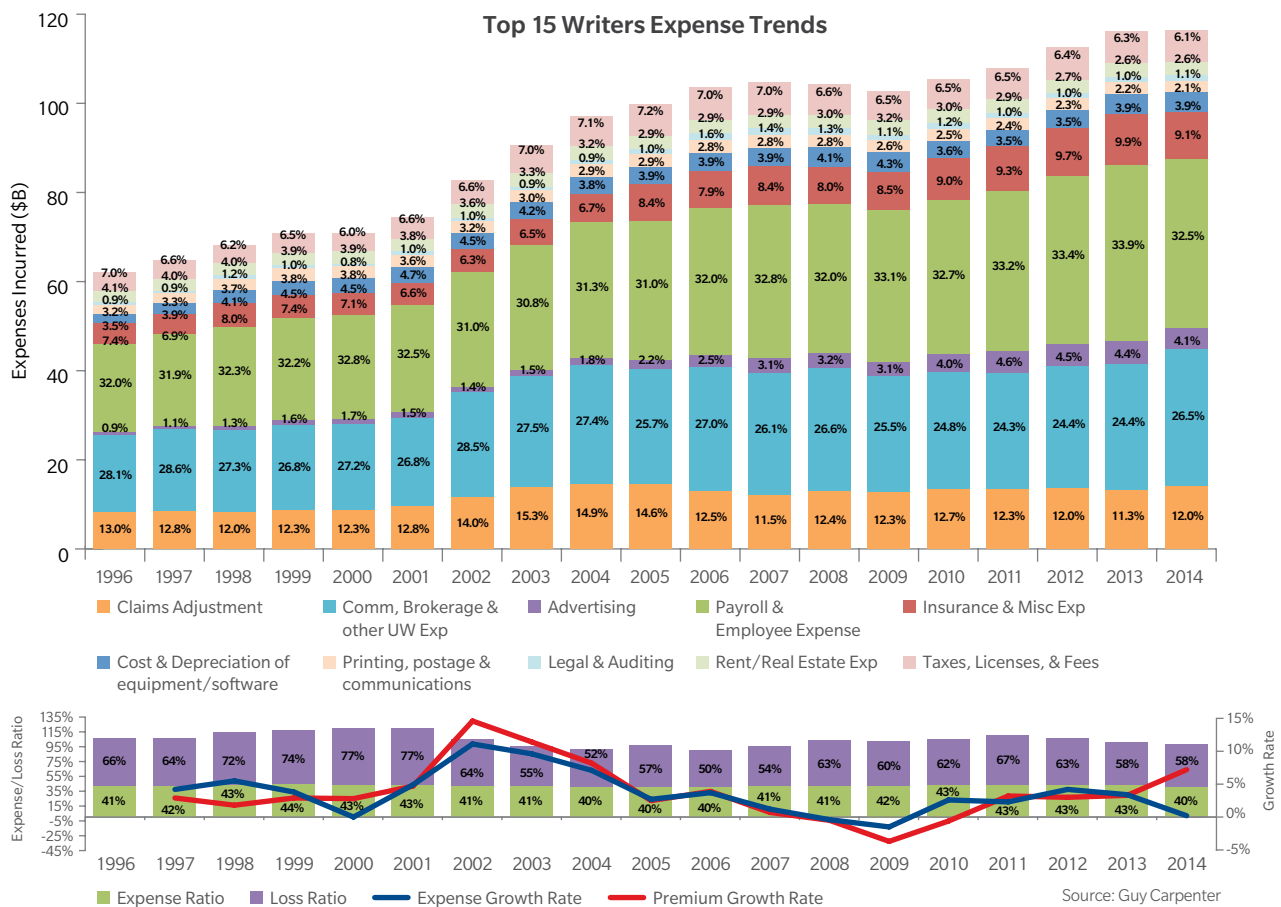
Direct Expenses by Segment (Continued)

Line of Business	Segment	Total Expense (including LAE)	Defense & Containment Costs	Claims Adjusted & Other	Commission & Brokerage	Taxes, Licenses & Fees	Other Acquisition Expense	General & Administrative
GLO	Top 15 Writers	44%	10%	8%	11%	2%	7%	6%
	National	41%	9%	3%	15%	2%	4%	7%
	Multi Regional	38%	9%	3%	12%	2%	6%	5%
	Northeast/Atlantic	39%	10%	4%	12%	2%	4%	6%
	West	42%	10%	4%	15%	2%	7%	5%
	Midwest	34%	6%	3%	12%	2%	6%	5%
	Southeast/Gulf	37%	5%	4%	14%	2%	5%	7%
	E&S	44%	10%	5%	17%	0%	6%	6%
	Mutual	45%	9%	4%	15%	2%	8%	7%
GLC	Public	42%	10%	6%	13%	2%	6%	6%
	Top 15 Writers	44%	12%	5%	14%	2%	7%	5%
	National	46%	12%	3%	18%	2%	4%	7%
	Multi Regional	50%	11%	7%	18%	2%	4%	8%
	Northeast/Atlantic	28%	9%	2%	5%	3%	3%	7%
	West	47%	16%	5%	13%	2%	3%	7%
	Midwest	51%	22%	4%	7%	2%	5%	12%
	Southeast/Gulf	44%	13%	4%	9%	2%	5%	11%
	E&S	44%	12%	4%	18%	0%	6%	4%
SP	Mutual	48%	17%	4%	11%	2%	5%	9%
	Public	43%	11%	4%	14%	2%	6%	5%
	Top 15 Writers	27%	1%	3%	12%	2%	5%	5%
	National	29%	1%	3%	11%	2%	4%	9%
	Multi Regional	29%	1%	3%	16%	2%	4%	3%
	Northeast/Atlantic	35%	2%	3%	17%	2%	5%	6%
	West	35%	1%	4%	13%	2%	6%	8%
	Midwest	22%	0%	3%	12%	1%	3%	4%
	Southeast/Gulf	36%	1%	3%	18%	2%	6%	6%
APD	E&S	30%	1%	2%	16%	0%	4%	5%
	Mutual	35%	1%	4%	17%	1%	6%	6%
	Public	28%	1%	3%	14%	2%	5%	5%
	Top 15 Writers	34%	0%	10%	8%	2%	9%	5%
	National	37%	1%	9%	11%	2%	8%	7%
	Multi Regional	36%	0%	8%	14%	2%	6%	5%
	Northeast/Atlantic	37%	1%	10%	13%	2%	5%	6%
	West	38%	1%	11%	11%	2%	7%	6%
	Midwest	35%	0%	8%	12%	1%	6%	6%
FS	Southeast/Gulf	34%	1%	7%	13%	2%	6%	5%
	E&S	41%	4%	5%	22%	1%	3%	7%
	Mutual	36%	1%	8%	12%	2%	7%	6%
	Public	33%	0%	9%	9%	2%	7%	6%
	Top 15 Writers	42%	-1%	3%	19%	2%	11%	8%
	National	61%	5%	3%	27%	3%	11%	12%
	Multi Regional	65%	3%	3%	31%	3%	12%	12%
	Northeast/Atlantic	60%	5%	1%	29%	4%	5%	15%
	West	78%	8%	3%	9%	14%	26%	19%
MPL	Midwest	60%	0%	1%	33%	3%	5%	17%
	Southeast/Gulf	62%	3%	3%	27%	4%	11%	15%
	E&S	47%	1%	2%	22%	1%	15%	7%
	Mutual	66%	4%	3%	30%	3%	15%	10%
	Public	45%	0%	3%	21%	3%	10%	7%
	Top 15 Writers	50%	19%	4%	14%	1%	5%	6%
	National	46%	15%	3%	15%	1%	4%	8%
	Multi Regional	56%	24%	9%	6%	2%	3%	11%
	Northeast/Atlantic	38%	20%	3%	3%	3%	3%	6%
PL	West	54%	24%	8%	6%	2%	5%	10%
	Midwest	49%	22%	6%	5%	2%	3%	11%
	Southeast/Gulf	48%	21%	6%	4%	2%	4%	10%
	E&S	45%	15%	4%	19%	0%	5%	2%
	Mutual	48%	22%	7%	5%	2%	4%	8%
	Public	49%	18%	5%	13%	1%	5%	7%
	Top 15 Writers	67%	35%	9%	9%	1%	8%	5%
	National	48%	16%	4%	16%	1%	4%	7%
	Multi Regional	60%	17%	10%	16%	2%	8%	7%
PL	Northeast/Atlantic	48%	24%	6%	8%	2%	2%	6%
	West	51%	19%	6%	14%	1%	7%	4%
	Midwest	62%	21%	7%	19%	2%	8%	6%
	Southeast/Gulf	56%	17%	7%	16%	2%	8%	6%
	E&S	42%	12%	4%	17%	0%	4%	5%
	Mutual	68%	28%	7%	14%	2%	9%	7%
	Public							

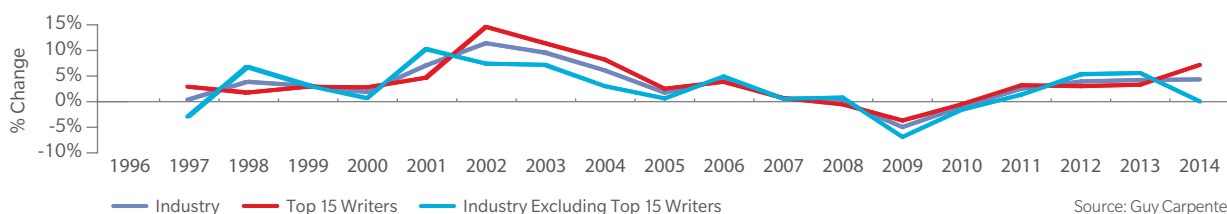
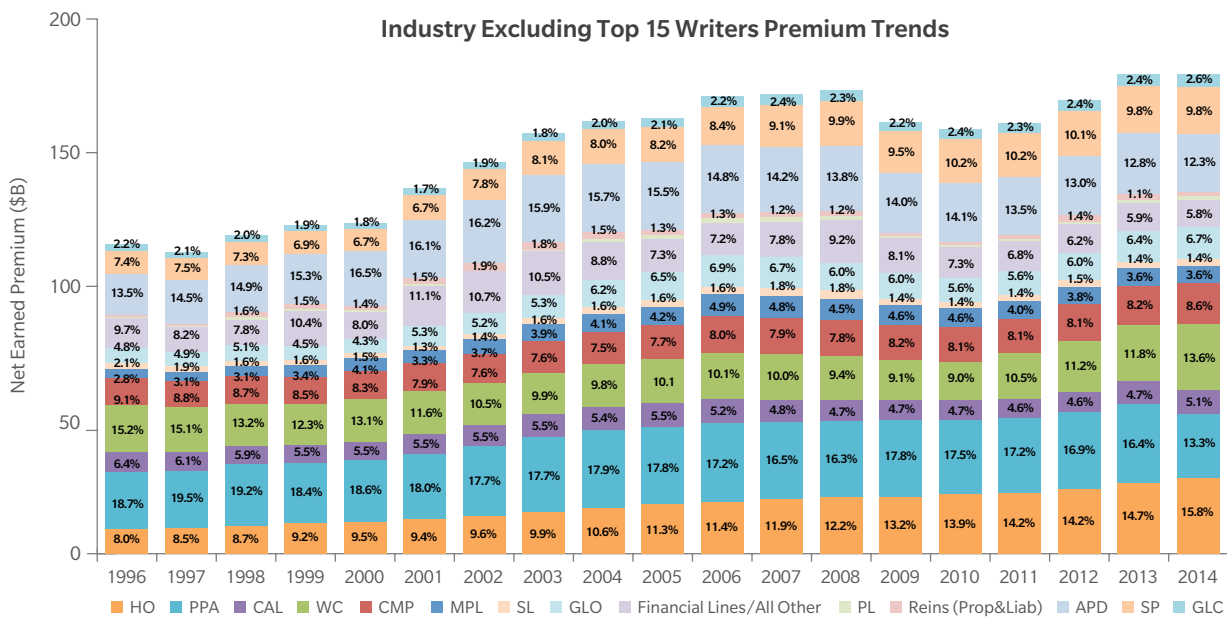
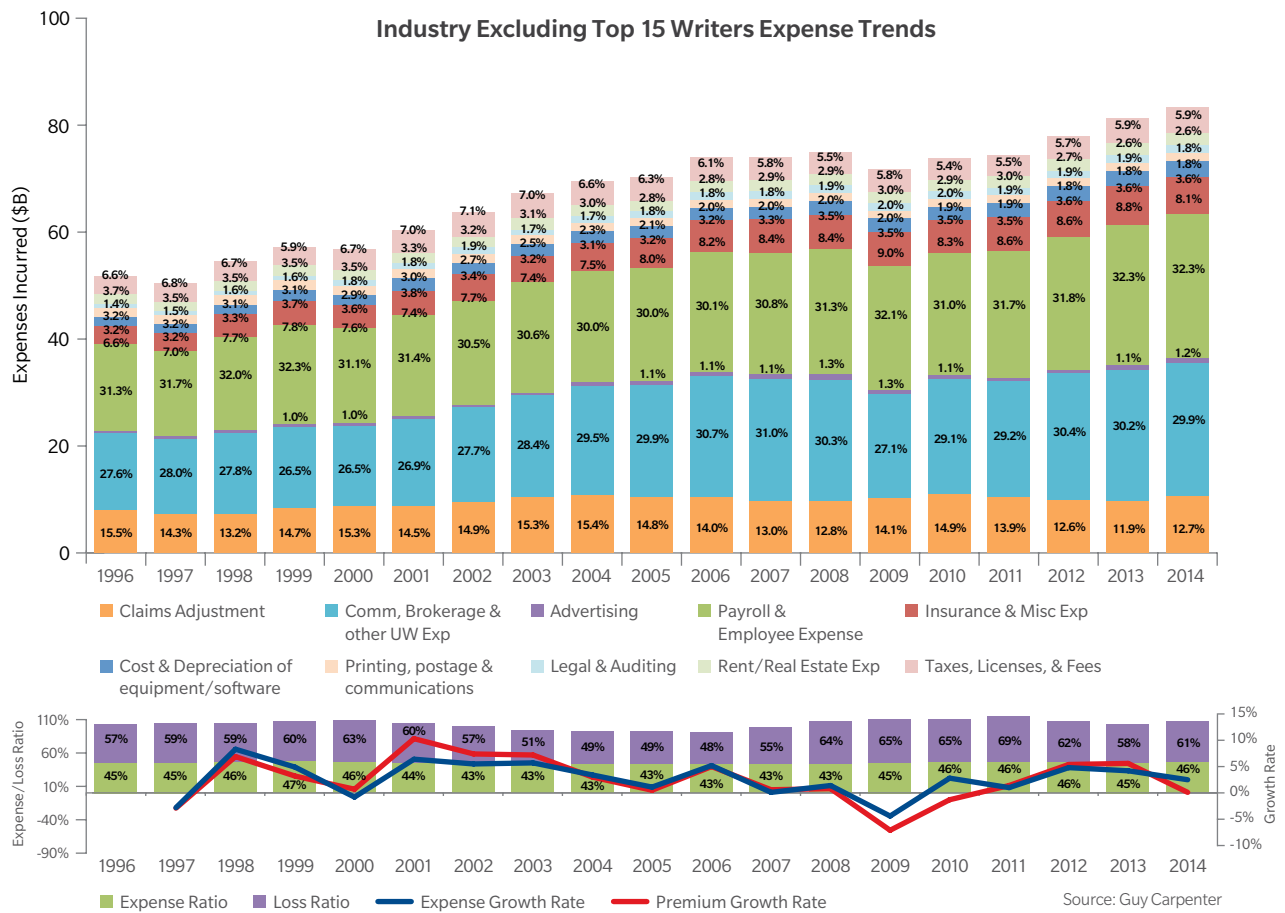
Source: Guy Carpenter

A.6 EXPENSE BENCHMARKING: ADDITIONAL DETAIL (CONTINUED)

E24 | EXPENSE TRENDS BY MARKET SEGMENT



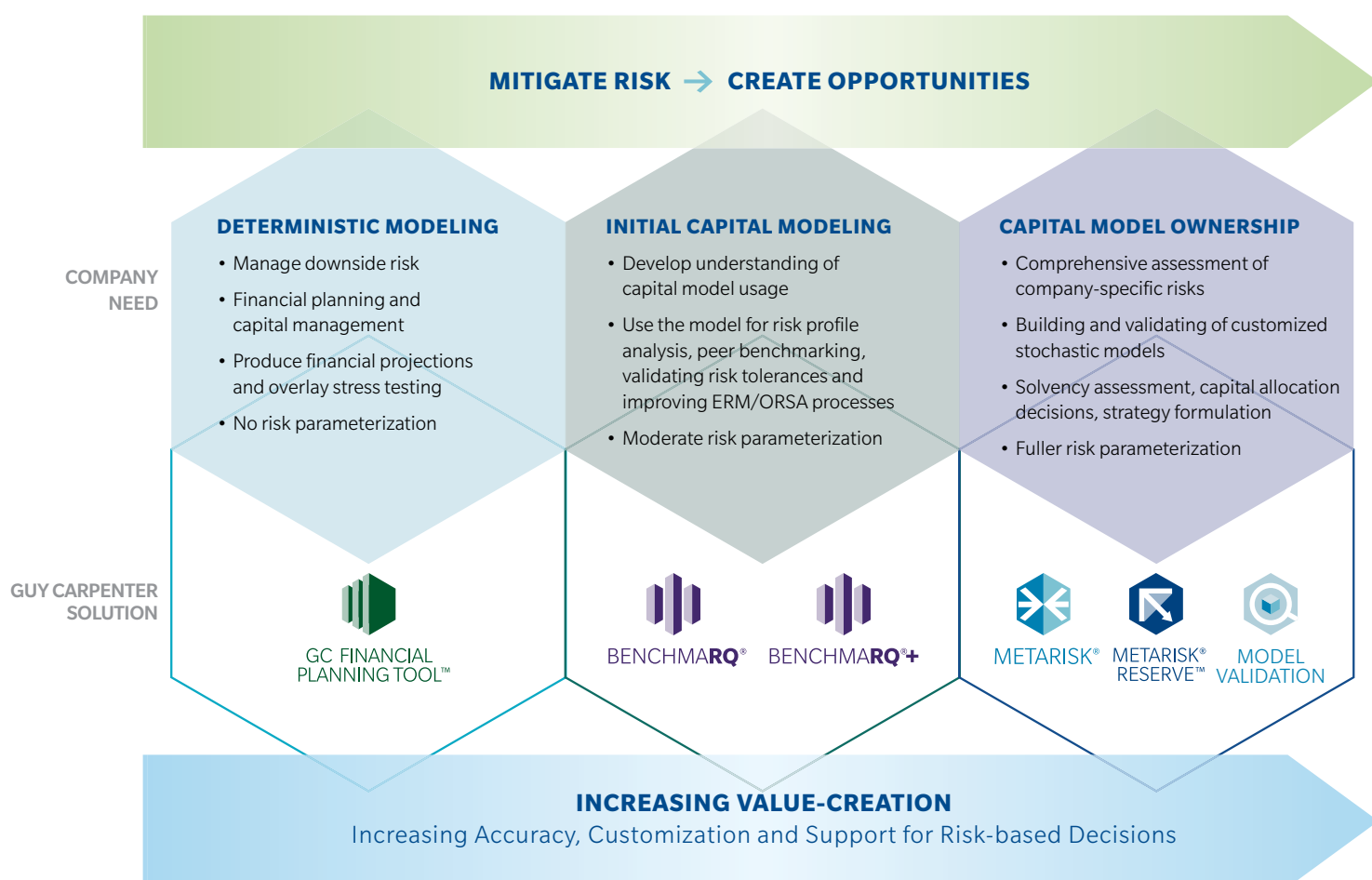
E24 | EXPENSE TRENDS BY MARKET SEGMENT (CONTINUED)



A.7 GUY CARPENTER'S CAPITAL MODELING SOLUTIONS SUITE







Effective capital modeling is critical for today's insurers to address the ever-increasing expectations of all stakeholders, from regulators and rating agencies to board members and policyholders. Guy Carpenter's full suite of solutions, in-depth industry knowledge, experience and unparalleled support as a trusted advisor can help your company further develop and customize your capital model to assist with important risk-based decisions.

Guy Carpenter's suite of capital modeling solutions is designed to meet the needs of a wide spectrum of insurers. Whether your firm's needs are less complex and you are new to the process or you represent a large company with a fully developed in-house model, Guy Carpenter can work with you to customize and implement the solution that best serves your unique needs.



A.7 GUY CARPENTER'S CAPITAL MODELING SOLUTIONS SUITE (CONTINUED)

A Complete Range of Solutions to Fit Your Needs

Solution	Key Benefit	User Profile	
 GC FINANCIAL PLANNING TOOL™	Deterministic multi-year model that projects financials and provides insights into key metrics to assist with business planning, stress testing and rating agency evaluations.	Traditional financial planning tool with stress testing overlay and direct links to BCAR results to enhance capital management and interactions with rating agencies.	Smaller regional insurers with less complex modeling needs seeking to manage their risk downside using deterministic assumptions and with limited resources to run the model.
 BENCHMARQ®	Standardized pre-built stochastic model using industry data and proprietary risk models. Simulates one year of company performance and provides financial statements associated with various outcomes.	Benchmarks risk profile relative to peers, features user-friendly reports and graphics and informs risk tolerance setting.	Mid-sized companies that desire substantial risk-based information and a better understanding of using stochastic capital models but do not have resources to build one at this time. Also, companies with internal models that want to compare modeling outcomes.
 BENCHMARQ®+	Customized version of BenchmarQ that includes company-specific enhancements.	Provides single or multi-year stochastic projections. Helps with underwriting planning, managing reserve risk and non-cat reinsurance purchasing.	Companies that need specific, customized enhancements in their modeling, yet are not prepared to own and maintain an in-house model.
 METARISK®	Customized single or multi-year stochastic model that assists clients in building a fully parameterized model that provides a comprehensive assessment of risks. Powerful software application for capital modeling, in addition to reinsurance evaluation, catastrophe management, assumed reinsurance pricing, capital allocation and curve-fitting.	The industry's leading timeline-based capital modeling software, fully customized with fuller risk parameterization. Full-time access to support from capital modeling experts.	Primarily large companies, but also smaller and medium-sized ones, that typically have internal modeling capabilities and seek comprehensive assessment of company-specific risks.
 METARISK® RESERVE™	Stochastic reserving software that enables companies to quantify reserves and measure reserve risk through generalized linear modeling. Integrates seamlessly with MetaRisk or can be used on a standalone basis.	Incorporates inflationary effects into reserve risk assessments. Outputs can be used with any capital model.	Companies seeking a clearer picture of their reserve risk and variability.
 MODEL VALIDATION	Independent evaluation of a company's existing capital model by comparing it to a parallel model developed by Guy Carpenter.	Parallel models developed by industry-leading developers and actuaries. Capital modeling experts provide evaluation and consultation.	Companies with fully developed internal models that require validation and consulting services.



A.8 WHAT'S NEXT

Excited about what we are learning in the Risk Benchmarks Research project? Throughout the year, we maintain an active dialogue with many ASR readers. In fact, many of this year's content expansions have resulted from those conversations. Coming soon, we will be launching a dedicated website with interactive exhibits and additional detail to support you in your own P&C insurance work. Please contact RiskBenchmarks@guycarp.com with feedback or ideas for next years topics we can study together.



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ABOUT GUY CARPENTER

Guy Carpenter & Company, LLC is a global leader in providing risk and reinsurance intermediary services. With over 50 offices worldwide, Guy Carpenter creates and executes reinsurance solutions and delivers capital market solutions* for clients across the globe. The firm's full breadth of services includes line-of-business expertise in agriculture; aviation; casualty clash; construction and engineering; cyber solutions; excess and umbrella; excess and surplus lines; healthcare & life; marine and energy; mutual insurance companies; political risk and trade credit; professional liability; property; public sector; retrocessional reinsurance; surety; terrorism and workers compensation. GC Fac® is Guy Carpenter's dedicated global facultative reinsurance unit that provides placement strategies, timely market access and centralized management of facultative reinsurance solutions. In addition, GC Analytics®** utilizes industry-leading quantitative skills and modelling tools that optimize the reinsurance decision-making process and help make the firm's clients more successful. For more information, visit www.guycarp.com and follow Guy Carpenter on Twitter @GuyCarpenter.

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Guy Carpenter Report

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