

A Discussion of P/C Loss and Loss Adjustment Expense Reserve Studies

Initiated by Demotech, Inc.

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Insurance literature is replete with articles, analyses, studies and discussion documents related to industry loss and loss adjustment expense (L&LAE) reserves, the impact of L&LAE reserve adequacy on insurance pricing cycles as well as the correlation between inadequate L&LAE reserves and the failure rates of carriers. However, we found negligible justification for the terminology or analysis of “industry L&LAE reserves” and no rigorous discussion of the impact of underreserving L&LAE on the overstatement of reported income by solvent carriers.

In an effort to initiate thoughtful review and dialogue on these issues, Demotech undertook this study to investigate two questions:

- 1) Is the term “industry loss and loss adjustment expense reserves” a meaningful one?
- 2) Has the relationship between underreporting of L&LAE and the resulting overreporting of income been thoroughly discussed? If not, why not?

Some of the research on industry loss and loss adjustment expense reserves

A review of previous research and articles on this subject indicates the focus of researchers is either an industrywide analysis of the relative adequacy of L&LAE or the relationship of inadequate L&LAE reserves to the failure of carriers. (See related textbox, “Research Sources,” for exact citations.)

In Charles Bryan’s May 2014 review of Stan Khury’s paper “Testing the Reasonableness of Loss Reserves: Reserve Ratios,” Bryan reminded us that the actuary’s increased role in setting and evaluating loss reserves came about during the late 1980s after changes to the required components of actuarial opinions were instituted by the National Association of Insurance Commissioners (NAIC). The NAIC had revised these requirements following a report issued by the U.S. House of Representatives, which highlighted deficiencies in the evaluation of loss

reserves regarding the issue of solvency. Bryan noted an A.M. Best report that stated “Deficient loss reserves (intrinsically linked with inadequate product pricing) and rapid growth were the most dominant causes of insolvencies.” (Bryan)

In recent annual reports (2010, 2011, 2012 and 2013) entitled “U.S. P/C Industry Statutory Reserve Study”, Aon Benfield studied industrywide, rather than individual company, reserves by looking at an aggregation of NAIC Annual Statement data. In its June 3, 2014 report, Aon Benfield reported the overall industry redundancy of \$6.5 billion is equivalent to 1.1 percent of booked reserves. Further, they noted that the industrywide redundancy in personal lines of \$9.3 billion was less than the \$10.1 billion reported at year-end 2012. (Aon Benfield Analytics)

In its “GC Briefing, Industry Reserve Update—Which Way is the Cycle Turning?” issued in April 2014, Guy Carpenter focused on industrywide trends when it noted “Seventy percent of the improvement for accident year 2012 can be attributed to two lines: homeowners and private passenger auto.” (Guy Carpenter & Company)

In the May 31, 2012, issue of *PropertyCasualty360*, Meyer Shields, an analyst at Stifel Nicolaus, suggested that the (then) industry reserves of \$573.7 billion were but \$5 billion [less than 1 percent] above the minimum adequate level. (Ruquet)

In their report “What May Cause Insurance Companies to Fail—and How This Influences Our Criteria,” Brennan, Clark, and Vine discovered seven key factors that led to company failure. Two major factors were underpricing and underreserving.

They cited one example of California-based workers compensation insurance companies becoming insolvent following rate deregulation: “The underpricing and inadequate reserving that ensued came to light late in the decade and resulted in several companies that were heavily concentrated in the market becoming insolvent.” (Brennan)

They then went on to discuss global P/C companies that failed due to industry-wide underpricing and the resulting inadequate reserves.

Darrell Leadbetter and Suela Dibra referenced a study by the Financial Services Authority (FSA) in the United Kingdom in “Why Insurers Fail: The Dynamics of Property and Casualty Insurance Insolvency in Canada.” This FSA study analyzed failed insurers across life and non-life sectors within 15 countries of the European Union and concluded that over 60 percent of the

failed insurers “showed poor underwriting or reserving as a contributing factor” to their failure. (Leadbetter)

Further, in their investigation of the 35 P/C insurance companies who had become insolvent in the Canadian insurance market between 1960 and 2005, Leadbetter and Dibra determined that “inadequate pricing and deficient loss reserves are the leading cause of insurer insolvency.” (Leadbetter)

**Our Take: Concentration of L&LAE Reserves
Renders Industry Analysis *Interesting But Not Meaningful***

Our analysis of the L&LAE reported and recorded by property and casualty (P/C) insurers focused on the 2,137¹ insurers reporting financial information to the NAIC that reported that their loss and loss adjustment expenses reserves at year-end 2013 were greater than zero. We excluded 559 carriers with reported L&LAE of zero or less.

Our analysis considered L&LAE reserves on a net basis, by carrier. We did not review P/C L&LAE reserves by group, holding company, family of companies or other basis. Projections of L&LAE reserves, actuarial or otherwise, were outside the scope of the study. Had we reviewed loss and loss adjustment expense reserves on a net basis by group or family of insurers, the concentration of L&LAE reserves might have been interpreted differently. We choose a carrier level basis of review because we believe that each carrier exists within a group or family of carriers to play a unique role.²

Of the 2,137 active P/C insurers comprising the P/C industry, seven insurers recorded and reported 20 percent of industry L&LAE reserves. That is, seven companies reported \$119.2 billion of the \$596.7 billion that was described as “industry loss and loss adjustment expense reserves.”

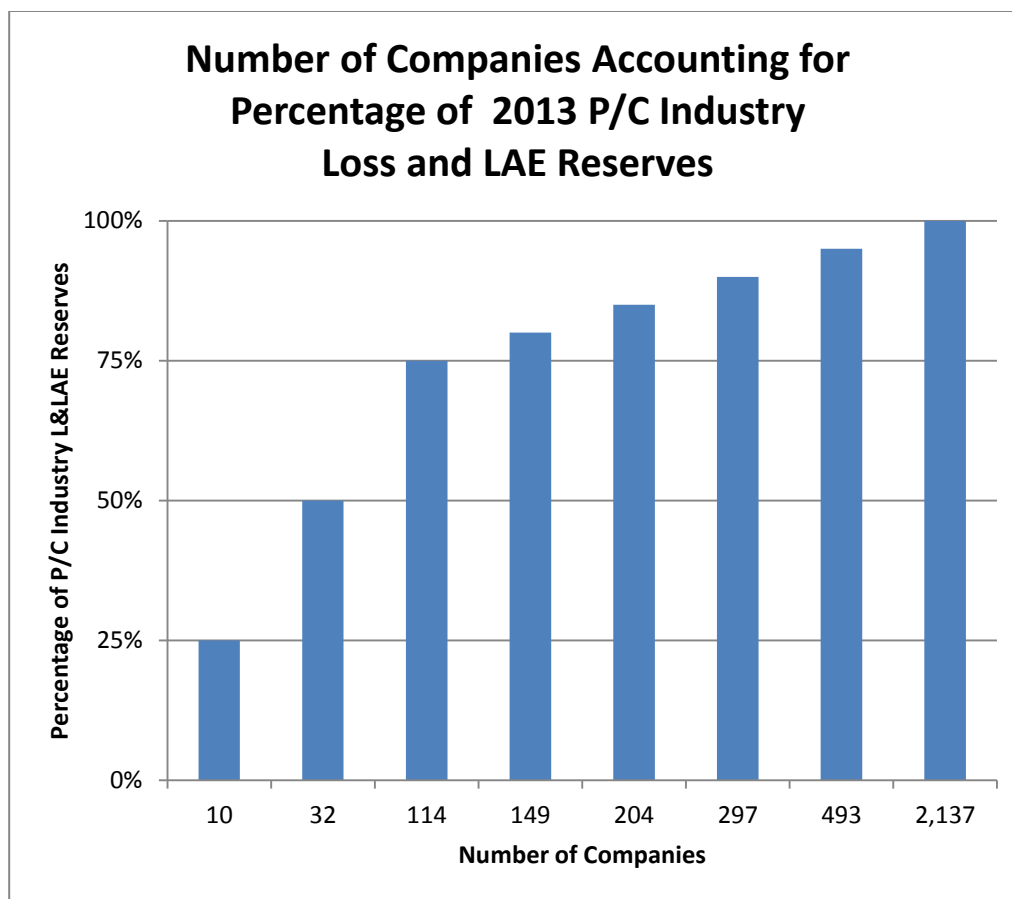
¹ Although 2,696 companies reported financial results at year-end 2013, 559 had net Loss and LAE reserves of zero or less. As such, the percentage of companies in this discussion is conservatively stated, i.e., 1 out of 2,137 is greater than 1 out of 2,696, with 2,137 equal to the 2,969 reporting carriers minus 559 carriers with L&LAE of zero or less.

² Although ratings assigned to groups of insurers may reflect overall group L&LAE inadequacy or redundancy as opposed to individual carrier positions, the carrier information reported to regulators and interested third parties was intentionally promulgated by management. We assume there was a reason for doing so.

Seven P/C Companies with Highest Reserve Totals		
Loss and Loss Expense Reserves as of Dec. 31, 2013		
Insurer	Reserves Reported \$ Millions	Percent of Industry Total
State Farm Mutual Automobile Insurance Company	26,433.9	4.4%
Continental Casualty Company	18,649.6	3.1%
Liberty Mutual Insurance Company	17,305.1	2.9%
National Indemnity Company	15,796.1	2.6%
Allstate Insurance Company	14,552.9	2.4%
Zurich American Insurance Company	13,894.1	2.3%
National Union Fire Insurance Company	12,608.5	2.1%
Total	119,240.2	20.0%
Source: Demotech Analysis		

Breaking down the numbers further, we find that:

- Ten carriers, the seven above plus three others, reported 25 percent of the industry's L&LAE reserves.
- Less than one half of one percent of the 2,137 carriers reporting net L&LAE reserves carried 25 percent of industry L&LAE reserves.
- Thirty-two carriers, 1.5 percent of the reporting entities, recorded 50 percent of industry L&LAE reserves.
- One hundred fourteen carriers, about 5 percent of the carriers, recorded 75 percent of industry L&LAE reserves.



Company by Company details are on the following page.

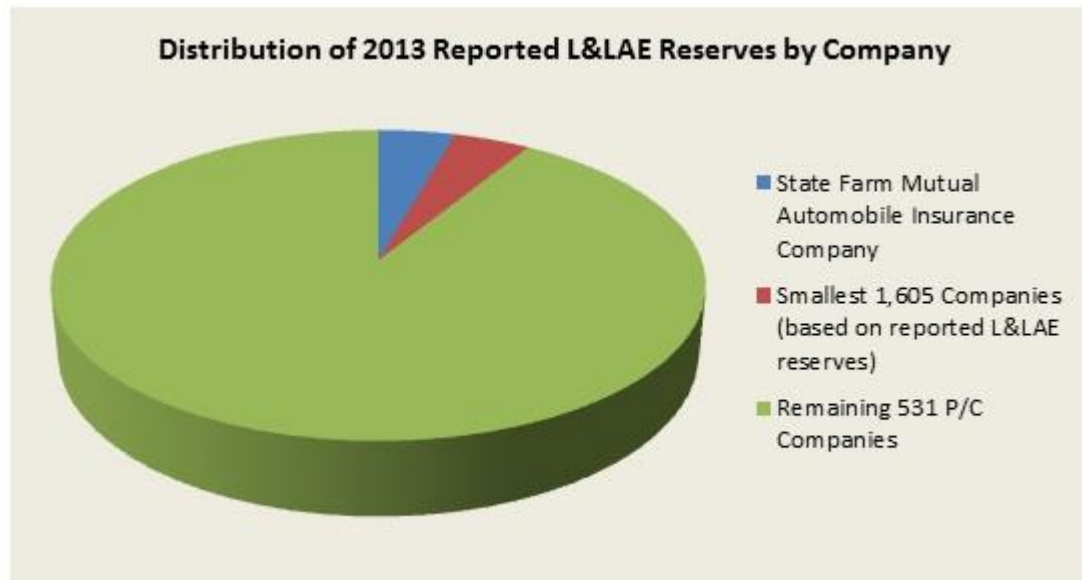
Industry Loss Reserve Concentration: Company by Company Analysis		
% of Industry Loss and LAE Reserves	Number of Companies	% of Companies Reviewed
4.4%	State Farm Mutual Automobile Insurance Company	0.05%
3.1%	Continental Casualty Company	0.05%
2.9%	Liberty Mutual Insurance Company	0.05%
2.6%	National Indemnity Company	0.05%
2.4%	Allstate Insurance Company	0.05%
2.3%	Zurich American Insurance Company	0.05%
2.1%	National Union Fire Insurance Company	0.05%
20%	7	0.33%
25%	10	0.47%
30%	12	0.56%
35%	16	0.75%
40%	20	0.94%
45%	25	1.17%
50%	32	1.50%
55%	42	1.97%
60%	53	2.48%
65%	68	3.18%
70%	87	4.07%
75%	114	5.33%
80%	149	6.97%
85%	204	9.55%
90%	297	13.90%
95%	493	23.07%
100%	2,137	100.00%
Source: Demotech		

This concentration indicates to Demotech that a relatively small percentage of P/C carriers contributed a significant component of “industry loss and loss adjustment expense reserves.” As shown in the table and pie chart below, the L&LAE reserves reported by the largest single carrier exceeded the aggregate L&LAE reserves reported by the 1,605 smallest carriers in terms of L&LAE reserves. These 1,605 carriers comprised 75 percent of the industry by count.

We think this bears repeating: 1,605 of the 2,137 insurers reviewed held aggregate loss and loss adjustment expense reserves that were less than the dollar amount reported by State Farm Mutual Automobile Insurance Company.

Company	Reported L&LAE (\$M)
State Farm Mutual Automobile Insurance Company	26,433.9
Smallest 1,605 Companies (based on reported L&LAE reserves)	26,387.2
Remaining 531 P/C Companies	543,879.2

Source: Demotech



Source: Demotech

In an industry that has this distribution of L&LAE reserves does a high level analysis of “industry L&LAE reserves” create value? Or is the term “industry loss and loss adjustment expense reserves” a misnomer due to the concentration of L&LAE reserves in a relatively small number of insurers?

Demotech believes that the concentration of loss and loss adjustment expense reserves in a small number of companies reduces analyses and studies of industry L&LAE reserves to a level that is interesting but can hardly be considered informative or indicative of the situation of any specific individual carrier.

The Impact of Adverse L&LAE Reserve Development on Reported Income

Loss and LAE reserving and reported income are but two components of a thorough, all-encompassing rating agency analysis of an insurer. Today, more than ever before, there

appears to be a move toward qualitative areas of analysis, such as general financial and operational management with a focus on corporate governance and Enterprise Risk Management (ERM). The adequacy of capital, business profile, current or historical financial metrics are viewed as the output of a corporate governance process as much as they are the reported dollar amount in a statutory financial statement.

If this is the direction in which regulators, rating agencies, reinsurers, Wall Street analysts and other third parties are heading, the discussion of reported financial results is as much about how the results were achieved or calculated, i.e., “process” as it is about “what was recorded in the reported financial statements.” In this environment, governance, managerial processes and execution of the business model are now as important, perhaps even more important, than reported operating results.

This said, the influence of inadequate L&LAE reserves on the integrity of an insurer’s balance sheet has been discussed in numerous articles and research papers with a focus on the correlation between inadequate L&LAE reserves and the failure rate of insurers. However, it is Demotech’s observation that the impact of inadequate L&LAE reserves, overreporting of pretax profit or underreporting of a pretax loss, has not received the explicit discussion that it deserves as regards solvent carriers.

Every dollar of adverse one-year L&LAE reserve development reported in calendar year 2013 was a dollar of overstatement in pretax operating income in calendar year 2012. Similarly, a carrier that reported favorable L&LAE reserve development in the year subsequent had understated its pretax operating income in the prior calendar year. The integrity of earnings is higher when a carrier overestimates L&LAE and reports favorable reserve development.

To initiate a preliminary discussion, Demotech reviewed the statutory financial statements of thousands of insurers to identify those that had:

1. Received an unqualified statement of actuarial opinion as regards its year-end L&LAE reserves for five consecutive years.
2. Received an unqualified year-end audit from its auditors for five consecutive years.
3. Self-reported at least five consecutive years of adverse L&LAE reserve development.

Our thought process is this: If reported L&LAE reserves are adequate, the integrity of earnings is high. If adequately reserved carriers are assigned ratings at an “A” level or above, then reported operating results, in and of themselves, may be sufficient to address the requirements of rating services.

Conversely, if the reported results associated with L&LAE reserves do not appear to favorably impact the ratings assigned by rating services, then it seems reasonable to believe that operational, managerial or governance related procedures and processes are more important, or more heavily weighted, than one of the most fundamental objectives of an insurance enterprise—estimating its L&LAE reserves adequately.

We identified 28 insurers with ratings at an “A” level or above (by one or more rating agencies) that self-reported at least five consecutive years of adverse one year L&LAE development at year-end 2013. As such, each prior period’s pretax operating income may have been overstated by the subsequently reported amount of adverse reserve development.

For this group of 28, the average annual reduction in the group’s reported pretax operating income would have been more than \$2.7 billion. Annual figures for the group are summarized in the table below.

Impact of Unfavorable Reserve Development for P/C Carriers Rated 'A' or Better					
Aggregate of 28 P/C Insurers (Statutory Results \$000)					
	2008	2009	2010	2011	2012
Pretax Operating Income Gain/(Loss) as Reported	4,258,862	2,410,817	(2,113,852)	343,251	762,734
Self-Reported Adverse One-Year Loss & LAE Development in following year	2,829,115	5,844,506	1,229,668	2,577,244	1,296,955
Prior Year Pretax Operating Income/(Loss) Adjusted for Self-Reported Adverse One-Year Development	1,429,747	(3,433,689)	(3,343,520)	(2,233,993)	(534,221)
Source: Demotech					

Refer to Appendices 1, 2 and 3 for details by company of each of the 28 companies in each of the five years studied.

Demotech then reviewed the same database of statutory financial statements to identify insurers that had:

1. Received an unqualified statement of actuarial opinion as regards its year-end L&LAE reserves for five consecutive years
2. Received an unqualified year-end audit from its auditors for five consecutive years
3. Self-reported at least five consecutive years of favorable L&LAE reserve development.

We identified 49 carriers that were assigned ratings below an “A” level despite self-reported favorable L&LAE reserve development in each of the latest five calendar year reporting periods. As such, the integrity of their pretax operating income was fully intact. Refer to Appendices 4, 5 and 6 for individual company details.

Impact of Favorable Reserve Development for P/C Carriers Not Receiving an 'A' Level Rating
Aggregate of 49 P/C Insurers (Statutory Results \$000)

	2008	2009	2010	2011	2012
Pretax Operating Income Gain/(Loss) as Reported	609,595	485,026	355,270	150,038	98,841
Self-Reported Favorable One-Year Loss & LAE Development in following year	(89,676)	(201,414)	(142,455)	(90,503)	(81,816)
Prior Year Pretax Operating Income/(Loss) Adjusted for Self-Reported Favorable One-Year Development	699,271	686,440	497,725	240,543	180,657

Source: Demotech

Although Demotech did not prepare a statistical analysis of the two groups, a scan of the names of the companies in each group indicates that the first group—those self-reporting adverse reserve development and therefore having reported pretax operating income with less integrity—tended to be larger, publicly traded stock companies. Among them are eight members of American International Group, six members of QBE Group, Fireman’s Fund, which is affiliated with Allianz, and Continental Insurance Company in CNA Group. The only large company on this list that is not affiliated with a publicly traded company is Auto Owners, a

mutual.

In contrast, those that reported favorable L&LAE reserve development over the same five calendar years and thereby demonstrated greater integrity in their initial report of pretax operating income than their “below-A” ratings might suggest, tended to be smaller, mutual companies or risk retention groups.

That’s not to say that big companies are in trouble or small insurers are all overestimating reserves. For the “A”-rated companies that underreported reserves, the dollar amount of the adverse L&LAE reserve development, whether measured as a percentage of reported L&LAE, admitted assets, earned premium or surplus, did not appear to be material for the larger, publicly traded carriers. It impacted the integrity of reported income but in no way could be considered a threat to the solvency of the reporting entity.

In this type of environment, it seems reasonable to assume that rating agencies, regulators and Wall Street analysts have focused on governance, operational management and qualitative considerations including the implementation and execution of enterprise risk management procedures, to differentiate the stronger carriers.

However, Demotech is unwilling to concede bigger is always better. It appears to us that as the conversation of a regulatory focus or a rating agency review turns to capital adequacy, business model, execution, financial and managerial operations, including ERM, as opposed to balance sheet fundamentals, L&LAE reserve adequacy or integrity of reported earnings, some insurers will be downgraded due solely to the change in the rating agency review processes. This transition may disproportionately impact smaller, privately held or mutual insurers, which have consistently practiced conservative loss reserving but may not have the resources or the interest to garner the highest ERM and governance scores from rating agencies.

We are also concerned that users of ratings may believe that the ratings assigned by rating agencies are more focused on L&LAE reserve adequacy and other balance sheet fundamentals than may be the case. If, or maybe as, downgrades may be based on subjective qualitative criteria, users of ratings should be made aware of this.

Putting it All Together

We began our research with two questions:

- 1) Is the term “industry loss and loss adjustment expense reserves” a meaningful one?
- 2) Why hasn’t the relationship between underreporting of L&LAE and the concomitant overreporting of income been thoroughly discussed?

Our review of 2,137 companies found that the term “industry loss and loss adjustment expense reserves” is interesting yet meaningless because less than 10 percent of the insurers comprising the industry account for 85 percent of the industry’s L&LAE reserves. Given this level of concentration, “industry loss and loss adjustment expense reserves” would appear to be the L&LAE reserves of a small number of larger carriers.

As to underreporting of L&LAE reserves and the overreporting of pretax operating income, we believe three interesting observations emerged from our preliminary research:

- 1) Industry research and studies have focused on underreserving and its impact on carrier insolvency. Our analysis of this research shows that explicit acknowledgements of underreserving as an overstatement of income were negligible. This phenomenon is not restricted to insolvent carriers.
- 2) Chronic underreserving at a level that overstates reported pretax operating income does not appear to adversely impact the ability of larger, publicly traded stock insurers to be assigned “A” level ratings or above. Concurrently, a conscious effort to report adequate L&LAE reserves appeared insufficient to enhance the ratings assigned to smaller, privately held carriers, smaller mutual insurers or risk retention groups.
- 3) Rating agency review and analysis techniques and procedures appear to heavily consider criteria other than L&LAE reserve adequacy, such as capital adequacy, business model, financial and operational management and corporate governance.

Initiating a Dialogue

Demotech undertook this research to initiate a dialogue between insurers, regulators and other informed third parties about the utility of L&LAE reserves on an industry basis and the relationship between the relative level of L&LAE reserves carried by an insurer and the concomitant impact on its reported pretax income.

Some of the questions that we suggest are:

- Should L&LAE reserve adequacy and its concomitant impact on the integrity of earnings be more heavily weighted in the rating assignment process?
- Are the observations, summarized in Appendices 1 through 6, sufficient to conclude that L&LAE reserve development is not the singularly critical criterion in the assignment of ratings?
- Were you aware that larger, well-known, respected carriers could sustain high ratings despite self-reporting of L&LAE reserve inadequacy?
- Were you aware that carriers with a long history of L&LAE reserve adequacy could be assigned ratings below an “A” level?

Your thoughts, comments, perspectives and opinions are both welcomed and encouraged.

Disclaimers

This study is not intended to be, and should not be construed to be, a statement of actuarial opinion regarding loss and loss adjustment expense reserves or any other type of statement of actuarial opinion.

This study was compiled from sources that Demotech, Inc. believes to be reliable. However, Demotech, Inc. makes no representations or warranties as to the accuracy, reliability or completeness of such information, and the information should not be relied upon in making business, investment or similar decisions. Demotech did not independently verify the accuracy or reliability of the information.

This analysis was based upon financial statements promulgated using statutory insurance

accounting principles as prescribed or permitted by the National Association of Insurance Commissioners. An analysis of financial statement based upon generally accepted accounting principles may have other implications.

The statutory insurance accounting information underlying our analysis was created, compiled and self-reported by the carriers.

As part of this analysis, Demotech did not review or seek to draw conclusions about the sizes or ownership structures of:

- Companies with ratings of “A” or above that self-reported favorable L&LAE reserve development in each of the latest five calendar year reporting periods
- Companies with ratings below “A” that self-reported adverse reserve development in each of the latest five calendar year reporting periods.

ABOUT THE AUTHOR

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Demotech is a financial analysis firm specializing in evaluating the financial stability of regional and specialty insurers. Since 1985, Demotech has served the insurance industry by assigning accurate, reliable and proven Financial Stability Ratings® (FSRs) for property/casualty insurers and title underwriters. FSRs are a leading indicator of financial stability, providing an objective baseline of the future solvency of an insurer. Visit www.demotech.com for more information.



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**Companies with Five Consecutive Years of Self-Reported Adverse One Year Development Securing Ratings at an A Level or Above
Statutory Pre-Tax Operating Income Gain/(Loss) as Reported**

Appendix 1

Company	Group	Statutory Pre-Tax Operating Income Gain/(Loss) as Reported				
		2008	2009	2010	2011	2012
AIG Property Casualty Company	American Intl Group	164,617	(31,339)	(107,991)	42,367	16,655
American Home Assurance Company	American Intl Group	1,267,677	34,428	(1,213,377)	223,480	198,003
Auto-Owners Insurance Company	Auto Owners Group	295,288	281,383	208,253	(118,736)	290,836
Cherokee Insurance Company		32,819	9,399	8,430	7,444	11,168
Coast National Insurance Company	Farmers Ins Group	20,422	15,473	13,766	13,442	12,058
Commerce and Industry Insurance Company	American Intl Group	219,926	174,790	(325,149)	87,260	81,962
Continental Insurance Company	CNA Ins Group	111,328	47,826	(368,915)	40,793	30,470
Daily Underwriters of America		5,383	3,787	388	2,332	29
Everest National Insurance Company	Everest Reins Holdings Group	3,595	(3,182)	(5,939)	(9,482)	(140)
Everest Reinsurance Company	Everest Reins Holdings Group	292,077	485,021	202,126	(294,436)	382,999
Fireman's Fund Insurance Company	Allianz Ins Group	198,751	897,273	188,664	(243,935)	(838,436)
General Casualty Company of Wisconsin	QBE Ins Group	221,702	93,617	28,660	(36,449)	(8,257)
General Casualty Insurance Company	QBE Ins Group	18,011	1,275	893	(4,660)	(1,404)
Generali - U.S. Branch		(1,773)	(1,741)	(1,354)	474	66
Hoosier Insurance Company	QBE Ins Group	10,133	640	512	(4,173)	(1,354)
Insurance Company of the State of Pennsylvania	American Intl Group	206,630	(23,872)	(56,710)	29,144	(5,266)
National Farmers Union Property and Casualty Company	QBE Ins Group	12,124	3,322	1,600	(10,931)	(3,065)
National Union Fire Insurance Company of Pittsburgh, PA.	American Intl Group	1,275,750	111,797	(697,595)	430,583	1,027,171
New Hampshire Insurance Company	American Intl Group	111,394	103,426	(117,148)	29,929	(7,848)
Nuclear Electric Insurance Limited		(323,704)	80,057	11,170	100,497	(351,080)
QBE Insurance Corporation	QBE Ins Group	(12,905)	(55,076)	(44,929)	(45,196)	(30,399)
QBE Reinsurance Corporation	QBE Ins Group	(64,112)	84,255	29,079	10,823	(10,804)
QBE Specialty Insurance Company	QBE Ins Group	(2,129)	3,963	17,154	28,648	(12,151)
Regent Insurance Company	QBE Ins Group	23,063	1,871	1,466	(6,360)	(1,911)
Safety National Casualty Corporation	Millea Holdings Inc Group	75,622	81,228	106,930	101,893	(10,033)
Southern Guaranty Insurance Company	QBE Ins Group	25,313	2,010	1,261	(6,064)	(1,690)
Unigard Indemnity Company	QBE Ins Group	7,803	640	218	(3,468)	(1,170)
Unigard Insurance Company	QBE Ins Group	64,058	8,545	4,687	(21,966)	(3,676)
Total for Companies Above		4,258,862	2,410,817	(2,113,852)	343,251	762,734

Note: All figures in thousands

P/C Loss and Loss Adjustment Expense Reserve Studies: Demotech Analysis

**Companies with Five Consecutive Years of Self-Reported Adverse One Year Development Securing Ratings at an A Level or Above
Statutory Self-Reported Adverse One Year Loss & LAE Development**

Appendix 2

Company	Group	Statutory Self-Reported Adverse One Year Loss & LAE Development				
		2009	2010	2011	2012	2013
AIG Property Casualty Company	American Intl Group	114,335	261,368	31,477	47,650	32,302
American Home Assurance Company	American Intl Group	906,629	1,904,075	216,863	340,959	231,983
Auto-Owners Insurance Company	Auto Owners Group	62,573	21,347	21,974	51,408	75,531
Cherokee Insurance Company		4,833	2,124	1,400	6,436	5,298
Coast National Insurance Company	Farmers Ins Group	158	780	263	26	168
Commerce and Industry Insurance Company	American Intl Group	251,540	575,008	69,249	104,831	71,065
Continental Insurance Company	CNA Ins Group	6,971	32,044	100,869	24,333	179,434
Daily Underwriters of America		639	1,037	1,041	2,609	1,823
Everest National Insurance Company	Everest Reins Holdings Group	4,393	3,792	11,354	7,109	17,658
Everest Reinsurance Company	Everest Reins Holdings Group	84,617	77,874	55,604	61,832	91,398
Fireman's Fund Insurance Company	Allianz Ins Group	146,452	209,411	248,067	538,436	5,104
General Casualty Company of Wisconsin	QBE Ins Group	7,189	337	8,939	21,730	19,866
General Casualty Insurance Company	QBE Ins Group	1,232	81	1,109	2,943	2,337
Generali - U.S. Branch		135	578	1,209	2,417	3,798
Hoosier Insurance Company	QBE Ins Group	822	49	947	2,490	1,948
Insurance Company of the State of Pennsylvania	American Intl Group	114,335	261,368	31,477	47,650	32,302
National Farmers Union Property and Casualty Company	QBE Ins Group	2,465	160	2,425	6,111	5,064
National Union Fire Insurance Company of Pittsburgh, PA.	American Intl Group	868,958	1,986,392	239,225	362,145	245,493
New Hampshire Insurance Company	American Intl Group	114,335	261,368	31,477	47,650	32,302
Nuclear Electric Insurance Limited		73,076	157,974	34,796	521,121	29,122
QBE Insurance Corporation	QBE Ins Group	19,861	20,973	19,088	53,645	48,107
QBE Reinsurance Corporation	QBE Ins Group	11,342	6,186	7,926	23,540	15,581
QBE Specialty Insurance Company	QBE Ins Group	3,951	1,651	9,755	21,956	18,892
Regent Insurance Company	QBE Ins Group	1,849	110	1,501	4,074	3,116
Safety National Casualty Corporation	Millea Holdings Inc Group	19,442	57,964	74,288	256,940	111,293
Southern Guaranty Insurance Company	QBE Ins Group	1,438	111	1,455	3,848	3,116
Unigard Indemnity Company	QBE Ins Group	616	37	716	1,811	1,558
Unigard Insurance Company	QBE Ins Group	4,929	307	5,174	11,544	11,296
Total for Companies Above		2,829,115	5,844,506	1,229,668	2,577,244	1,296,955

Note: All figures in thousands

Appendix 2

P/C Loss and Loss Adjustment Expense Reserve Studies: Demotech Analysis

**Companies with Five Consecutive Years of Self-Reported Adverse One Year Development Securing Ratings at an A Level or Above
Statutory Prior Year Pre-Tax Operating Income Gain/(Loss) Adjusted For Self-Reported Adverse One Year Development**

Appendix 3

Company	Group	Statutory Prior Year Pre-Tax Operating Income Gain/(Loss) Adjusted For Self-Reported Adverse One Year Development				
		2008	2009	2010	2011	2012
AIG Property Casualty Company	American Intl Group	50,282	(292,707)	(139,468)	(5,283)	(15,647)
American Home Assurance Company	American Intl Group	361,048	(1,869,647)	(1,430,240)	(117,479)	(33,980)
Auto-Owners Insurance Company	Auto Owners Group	232,715	260,036	186,279	(170,144)	215,305
Cherokee Insurance Company		27,986	7,275	7,030	1,008	5,870
Coast National Insurance Company	Farmers Ins Group	20,264	14,693	13,503	13,416	11,890
Commerce and Industry Insurance Company	American Intl Group	(31,614)	(400,218)	(394,398)	(17,571)	10,897
Continental Insurance Company	CNA Ins Group	104,357	15,782	(469,784)	16,460	(148,964)
Daily Underwriters of America		4,744	2,750	(653)	(277)	(1,794)
Everest National Insurance Company	Everest Reins Holdings Group	(798)	(6,974)	(17,293)	(16,591)	(17,798)
Everest Reinsurance Company	Everest Reins Holdings Group	207,460	407,147	146,522	(356,268)	291,601
Fireman's Fund Insurance Company	Allianz Ins Group	52,299	687,862	(59,403)	(782,371)	(843,540)
General Casualty Company of Wisconsin	QBE Ins Group	214,513	93,280	19,721	(58,179)	(28,123)
General Casualty Insurance Company	QBE Ins Group	16,779	1,194	(216)	(7,603)	(3,741)
Generali - U.S. Branch		(1,908)	(2,319)	(2,563)	(1,943)	(3,732)
Hoosier Insurance Company	QBE Ins Group	9,311	591	(435)	(6,663)	(3,302)
Insurance Company of the State of Pennsylvania	American Intl Group	92,295	(285,240)	(88,187)	(18,506)	(37,568)
National Farmers Union Property and Casualty Company	QBE Ins Group	9,659	3,162	(825)	(17,042)	(8,129)
National Union Fire Insurance Company of Pittsburgh, PA.	American Intl Group	406,792	(1,874,595)	(936,820)	68,438	781,678
New Hampshire Insurance Company	American Intl Group	(2,941)	(157,942)	(148,625)	(17,721)	(40,150)
Nuclear Electric Insurance Limited		(396,780)	(77,917)	(23,626)	(420,624)	(380,202)
QBE Insurance Corporation	QBE Ins Group	(32,766)	(76,049)	(64,017)	(98,841)	(78,506)
QBE Reinsurance Corporation	QBE Ins Group	(75,454)	78,069	21,153	(12,717)	(26,385)
QBE Specialty Insurance Company	QBE Ins Group	(6,080)	2,312	7,399	6,692	(31,043)
Regent Insurance Company	QBE Ins Group	21,214	1,761	(35)	(10,434)	(5,027)
Safety National Casualty Corporation	Millea Holdings Inc Group	56,180	23,264	32,642	(155,047)	(121,326)
Southern Guaranty Insurance Company	QBE Ins Group	23,875	1,899	(194)	(9,912)	(4,806)
Unigard Indemnity Company	QBE Ins Group	7,187	603	(498)	(5,279)	(2,728)
Unigard Insurance Company	QBE Ins Group	59,129	8,238	(487)	(33,510)	(14,972)
Total for Companies Above		1,429,747	(3,433,689)	(3,343,520)	(2,233,993)	(534,221)

Note: All figures in thousands

P/C Loss and Loss Adjustment Expense Reserve Studies: Demotech Analysis

**Companies with Five Consecutive Years of Self-Reported Favorable One Year Development Assigned Ratings Below an A level
Statutory Pre-Tax Operating Income Gain/(Loss) as Reported**

Appendix 4

Company	Group	Statutory Pre-Tax Operating Income Gain/(Loss) as Reported				
		2008	2009	2010	2011	2012
AgSecurity Insurance Company	Oklahoma Farm Bureau Group	(834)	(1,398)	991	925	33
American Healthcare Indemnity Company	Doctors Co Group	4,718	6,994	27,748	23,328	1,355
Anchor General Insurance Company	Anchor Ins Holdings Group	2,880	(260)	(1,171)	604	(901)
Armed Forces Insurance Exchange		2,418	3,933	(400)	(12,339)	(6,038)
Bondex Insurance Company		202	333	176	(26)	152
Buckeye State Mutual Insurance Company	Buckeye Ins Group	(6,328)	321	(1,643)	(1,925)	(2,246)
Bunker Hill Insurance Company	Plymouth Rock Ins Group	2,516	2,951	4,414	(13,343)	2,754
BusinessFirst Insurance Company	RetailFirst Group	2,344	1,999	(2,039)	268	39
Cameron Mutual Insurance Company	Cameron Mut Group	(13,414)	(5,589)	(610)	(6,429)	3,115
Celina Mutual Insurance Company	Celina Group	1,839	687	(360)	(2,035)	211
Century Casualty Company		307	167	(383)	289	267
Club Insurance Company		1,313	1,106	890	662	586
Colorado Farm Bureau Mutual Insurance Company		2,536	(5,414)	(118)	(703)	(3,327)
Community Hospital Alternative for Risk Transfer (A Reciprocal RRG)		5,354	6,107	6,384	8,164	10,337
Conifer Insurance Company	Conifer Holdings Group	611	362	87	(3,107)	(1,415)
Eastern Dentists Insurance Company RRG		1,705	1,580	3,346	4,362	1,994
Ever-Greene Mutual Insurance Company	Everett Mut Group	385	192	343	324	319
Forestry Mutual Insurance Company		2,265	1,796	693	545	(2,301)
Frank Winston Crum Insurance Company		(1,542)	1,208	413	(1,892)	586
Galen Insurance Company		733	634	530	1,435	(153)
Great Plains Casualty, Inc.		519	808	1,218	1,140	1,398
Housing and Redevelopment Insurance Exchange		1,114	732	1,601	(128)	(811)
Illinois Casualty Company (A Mutual Insurance Company)		(230)	2,755	(181)	(1,906)	12
Juniata Mutual Insurance Company		23	598	283	(381)	292
Lawyers Mutual Insurance Company of Kentucky		578	195	200	54	152
Members Insurance Company	Carolina Motor Club Group	(325)	(451)	(260)	87	(253)
Miami Mutual Insurance Company	Celina Group	955	619	(382)	(1,789)	3
Michigan Professional Insurance Exchange		4,166	7,308	5,315	7,213	9,740
Midrox Insurance Company		203	(189)	100	(50)	408
Motors Insurance Corporation	GMAC Ins Holding Group	535,557	393,377	255,492	118,042	30,639
Mt. Morris Mutual Insurance Company		38	894	(954)	491	751
MutualAid eXchange		(3,885)	(2,142)	(413)	(835)	(687)
National Mutual Insurance Company	Celina Group	1,815	672	(357)	(1,947)	250
National Security Fire & Casualty Company	National Security Group	(7,512)	5,235	5,721	(4,047)	(726)
National Unity Insurance Company		3,605	5,299	3,183	2,711	3,066
Northwest Dentists Insurance Company	Oregon Dental Group	854	(193)	(606)	1,022	297
Northwest G.F. Mutual Insurance Company		(579)	(555)	(1,614)	(1,098)	502
Ocean Harbor Casualty Insurance Company	Ocean Harbor Group	3,122	1,808	1,272	(2,624)	6,117
Physicians' Insurance Program Exchange		(510)	1,907	66	1,216	1,178
Safeway Property Insurance Company	Safeway Ins Group	6,872	3,620	3,031	2,056	3,085
Standard Mutual Insurance Company		(886)	(112)	(1,575)	582	(3,194)
Waco Fire & Casualty Insurance Company		1,578	94	1,210	(71)	(203)
Wayne Cooperative Insurance Company		403	545	1,871	415	650
Wayne Mutual Insurance Company	Wayne & Washington Mut Group	(983)	325	(1,075)	2,430	2,751
Wisconsin County Mutual Insurance Corporation	Wisconsin Cnty Mut Group	3,753	6,252	3,220	622	1,492
Wisconsin Reinsurance Corporation	Wisconsin Re Group	(3,737)	1,128	(515)	(6,092)	2,516
Wolverine Mutual Insurance Company		(1,560)	(243)	(675)	(1,570)	698
Yosemite Insurance Company	Fortress Group	51,772	33,766	36,042	27,815	25,439
Zale Indemnity Company	Zale Corp Group	2,865	3,264	4,759	7,576	7,911
Total for Companies Above		609,595	485,026	355,270	150,038	98,841

Note: All figures in thousands

Appendix 4

P/C Loss and Loss Adjustment Expense Reserve Studies: Demotech Analysis

**Companies with Five Consecutive Years of Self-Reported Favorable One Year Development Assigned Ratings Below an A Level
Statutory Self-Reported Favorable One Year Loss & LAE Development**

Appendix 5

Company	Group	Statutory Self-Reported Favorable One Year Loss & LAE Development				
		2009	2010	2011	2012	2013
AgSecurity Insurance Company	Oklahoma Farm Bureau Group	(642)	(1,482)	(2,723)	(3,308)	(2,052)
American Healthcare Indemnity Company	Doctors Co Group	(6,880)	(23,627)	(28,074)	(311)	(1,592)
Anchor General Insurance Company	Anchor Ins Holdings Group	(2,270)	(181)	(1,112)	(476)	(452)
Armed Forces Insurance Exchange		(5,181)	(1,239)	(2,671)	(4,150)	(3,955)
Bondex Insurance Company		(16)	(57)	(147)	(214)	(91)
Buckeye State Mutual Insurance Company	Buckeye Ins Group	(2,506)	(3,151)	(1,858)	(3,232)	(1,607)
Bunker Hill Insurance Company	Plymouth Rock Ins Group	(846)	(798)	(1,225)	(1,286)	(1,275)
BusinessFirst Insurance Company	RetailFirst Group	(2,297)	(814)	(639)	(570)	(25)
Cameron Mutual Insurance Company	Cameron Mut Group	(7)	(2,408)	(1,461)	(1,962)	(275)
Celina Mutual Insurance Company	Celina Group	(1,132)	(680)	(1,045)	(834)	(626)
Century Casualty Company		(4)	(131)	(750)	(353)	(502)
Club Insurance Company		(54)	(209)	(208)	(88)	(68)
Colorado Farm Bureau Mutual Insurance Company		(3,601)	(4,816)	(5,036)	(3,536)	(3,820)
Community Hospital Alternative for Risk Transfer (A Reciprocal RRG)		(1,901)	(5,330)	(8,363)	(8,560)	(6,498)
Conifer Insurance Company	Conifer Holdings Group	(38)	(192)	(138)	(904)	(1,309)
Eastern Dentists Insurance Company RRG		(1,838)	(3,388)	(3,877)	(3,071)	(2,989)
Ever-Greene Mutual Insurance Company	Everett Mut Group	(34)	(23)	(22)	(13)	(16)
Forestry Mutual Insurance Company		(3,854)	(2,863)	(2,187)	(1,011)	(1,666)
Frank Winston Crum Insurance Company		(2,537)	(1,007)	(1,300)	(465)	(626)
Galen Insurance Company		(371)	(631)	(1,054)	(1,025)	(167)
Great Plains Casualty, Inc.		(92)	(196)	(155)	(183)	(674)
Housing and Redevelopment Insurance Exchange		(4,002)	(3,287)	(3,295)	(3,043)	(2,721)
Illinois Casualty Company (A Mutual Insurance Company)		(3,270)	(2,954)	(2,508)	(2,437)	(2,567)
Juniata Mutual Insurance Company		(262)	(112)	(100)	(74)	(51)
Lawyers Mutual Insurance Company of Kentucky		(684)	(1,660)	(908)	(874)	(1,675)
Members Insurance Company	Carolina Motor Club Group	(44)	(199)	(128)	(196)	(76)
Miami Mutual Insurance Company	Celina Group	(943)	(566)	(871)	(695)	(521)
Michigan Professional Insurance Exchange		(3,553)	(3,153)	(4,608)	(7,663)	(4,522)
Midrox Insurance Company		(259)	(288)	(228)	(246)	(215)
Motors Insurance Corporation	GMAC Ins Holding Group	(4,587)	(101,422)	(38,745)	(13,963)	(17,475)
Mt. Morris Mutual Insurance Company		(169)	(240)	(1,632)	(547)	(598)
MutualAid eXchange		(847)	(463)	(650)	(355)	(460)
National Mutual Insurance Company	Celina Group	(1,069)	(642)	(987)	(787)	(591)
National Security Fire & Casualty Company	National Security Group	(2,488)	(2,451)	(1,191)	(225)	(259)
National Unity Insurance Company		(2,336)	(2,309)	(2,018)	(3,297)	(1,158)
Northwest Dentists Insurance Company	Oregon Dental Group	(2)	(178)	(591)	(1,708)	(1,364)
Northwest G.F. Mutual Insurance Company		(209)	(303)	(565)	(194)	(73)
Ocean Harbor Casualty Insurance Company	Ocean Harbor Group	(6,683)	(7,444)	(4,581)	(3,592)	(2,432)
Physicians' Insurance Program Exchange		(2,402)	(1,557)	(1,177)	(1,692)	(1,041)
Safeway Property Insurance Company	Safeway Ins Group	(165)	(309)	(45)	(277)	(24)
Standard Mutual Insurance Company		(1,009)	(970)	(1,982)	(1,537)	(2,973)
Waco Fire & Casualty Insurance Company		(6,298)	(7,043)	(1,510)	(3,907)	(2,527)
Wayne Cooperative Insurance Company		(310)	(753)	(109)	(831)	(1,070)
Wayne Mutual Insurance Company	Wayne & Washington Mut Group	(2,086)	(1,053)	(1,865)	(967)	(703)
Wisconsin County Mutual Insurance Corporation	Wisconsin Cnty Mut Group	(4,320)	(3,394)	(1,738)	(2,949)	(1,167)
Wisconsin Reinsurance Corporation	Wisconsin Re Group	(2,313)	(1,201)	(1,770)	(610)	(940)
Wolverine Mutual Insurance Company		(1,451)	(1,035)	(814)	(378)	(779)
Yosemite Insurance Company	Fortress Group	(1,800)	(2,662)	(3,292)	(880)	(2,785)
Zale Indemnity Company	Zale Corp Group	(14)	(543)	(502)	(1,029)	(764)
Total for Companies Above		(89,676)	(201,414)	(142,455)	(90,505)	(81,816)

Note: All figures in thousands

Appendix 5

P/C Loss and Loss Adjustment Expense Reserve Studies: Demotech Analysis

**Companies with Five Consecutive Years of Self-Reported Favorable One Year Development Assigned Ratings Below an A level
Statutory Prior Year Pre-Tax Operating Income Gain/(Loss) Adjusted For Self-Reported Favorable One Year Development**

Appendix 6

Company	Group	Statutory Prior Year Pre-Tax Operating Income Gain/(Loss) Adjusted For Self-Reported Favorable One Year Development				
		2008	2009	2010	2011	2012
AgSecurity Insurance Company	Oklahoma Farm Bureau Group	(192)	84	3,714	4,233	2,085
American Healthcare Indemnity Company	Doctors Co Group	11,598	30,621	55,822	23,639	2,947
Anchor General Insurance Company	Anchor Ins Holdings Group	5,150	(79)	(59)	1,080	(449)
Armed Forces Insurance Exchange		7,599	5,172	2,271	(8,189)	(2,083)
Bondex Insurance Company		218	390	323	188	243
Buckeye State Mutual Insurance Company	Buckeye Ins Group	(3,822)	3,472	215	1,307	(639)
Bunker Hill Insurance Company	Plymouth Rock Ins Group	3,362	3,749	5,639	(12,057)	4,029
BusinessFirst Insurance Company	RetailFirst Group	4,641	2,813	(1,400)	838	64
Cameron Mutual Insurance Company	Cameron Mut Group	(13,407)	(3,181)	851	(4,467)	3,390
Celina Mutual Insurance Company	Celina Group	2,971	1,367	685	(1,201)	837
Century Casualty Company		311	298	367	642	769
Club Insurance Company		1,367	1,315	1,098	750	654
Colorado Farm Bureau Mutual Insurance Company		6,137	(598)	4,918	2,833	493
Community Hospital Alternative for Risk Transfer (A Reciprocal RRG)		7,255	11,437	14,747	16,724	16,835
Conifer Insurance Company	Conifer Holdings Group	649	554	225	(2,203)	(106)
Eastern Dentists Insurance Company RRG		3,543	4,968	7,223	7,433	4,983
Ever-Greene Mutual Insurance Company	Everett Mut Group	419	215	365	337	335
Forestry Mutual Insurance Company		6,119	4,659	2,880	1,556	(635)
Frank Winston Crum Insurance Company		995	2,215	1,713	(1,427)	1,212
Galen Insurance Company		1,104	1,265	1,584	2,460	14
Great Plains Casualty, Inc.		611	1,004	1,373	1,323	2,072
Housing and Redevelopment Insurance Exchange		5,116	4,019	4,896	2,915	1,910
Illinois Casualty Company (A Mutual Insurance Company)		3,040	5,709	2,327	531	2,579
Juniata Mutual Insurance Company		285	710	383	(307)	343
Lawyers Mutual Insurance Company of Kentucky		1,262	1,855	1,108	928	1,827
Members Insurance Company	Carolina Motor Club Group	(281)	(252)	(132)	283	(177)
Miami Mutual Insurance Company	Celina Group	1,898	1,185	489	(1,094)	524
Michigan Professional Insurance Exchange		7,719	10,461	9,923	14,876	14,262
Midrox Insurance Company		462	99	328	196	623
Motors Insurance Corporation	GMAC Ins Holding Group	540,144	494,799	294,237	132,005	48,114
Mt. Morris Mutual Insurance Company		207	1,134	678	1,038	1,349
MutualAid eXchange		(3,038)	(1,679)	237	(480)	(227)
National Mutual Insurance Company	Celina Group	2,884	1,314	630	(1,160)	841
National Security Fire & Casualty Company	National Security Group	(5,024)	7,686	6,912	(3,822)	(467)
National Unity Insurance Company		5,941	7,608	5,201	6,008	4,224
Northwest Dentists Insurance Company	Oregon Dental Group	856	(15)	(15)	2,730	1,661
Northwest G.F. Mutual Insurance Company		(370)	(252)	(1,049)	(904)	575
Ocean Harbor Casualty Insurance Company	Ocean Harbor Group	9,805	9,252	5,853	968	8,549
Physicians' Insurance Program Exchange		1,892	3,464	1,243	2,908	2,219
Safeway Property Insurance Company	Safeway Ins Group	7,037	3,929	3,076	2,333	3,109
Standard Mutual Insurance Company		123	858	407	2,119	(221)
Waco Fire & Casualty Insurance Company		7,876	7,137	2,720	3,836	2,324
Wayne Cooperative Insurance Company		713	1,298	1,980	1,246	1,720
Wayne Mutual Insurance Company	Wayne & Washington Mut Group	1,103	1,378	790	3,397	3,454
Wisconsin County Mutual Insurance Corporation	Wisconsin Cnty Mut Group	8,073	9,646	4,958	3,571	2,659
Wisconsin Reinsurance Corporation	Wisconsin Re Group	(1,424)	2,329	1,255	(5,482)	3,456
Wolverine Mutual Insurance Company		(109)	792	139	(1,192)	1,477
Yosemite Insurance Company	Fortress Group	53,572	36,428	39,334	28,695	28,224
Zale Indemnity Company	Zale Corp Group	2,879	3,807	5,261	8,605	8,675
Total for Companies Above		699,271	686,440	497,725	240,543	180,657

Note: All figures in thousands

Appendix 6