

PENNSYLVANIA COMPENSATION RATING BUREAU
F CLASS FILING

ANALYSIS OF EXPERIENCE

The following pages present an analysis of Pennsylvania “F” class experience. The analysis is based on data reported to the PCRB under the Unit Statistical Plan.

Reported Premium and Losses - Pages 1 and 2 present reported standard earned premiums and incurred losses by policy year, separately for indemnity (page 1) and medical (page 2). Losses are shown through 10th report, which is the latest report currently available under the Unit Statistical Plan.

Indicated Loss Development Factors - Page 3 (indemnity) and page 4 (medical) show age-to-age development factors based on reported losses. A seven-year average for indemnity and medical was calculated and formed the basis for the factors ultimately selected. The process for calculation of selected loss development factors and tail factors for indemnity and medical are shown on pages 5 and 6, respectively. Factors to ultimate are calculated by compounding the age-to-age and 10th-to-ultimate factors.

Selected Loss Development Factors - Page 5 (indemnity) and page 6 (medical) show the derivation of selected age-to-age and 10th-to-ultimate development factors. The residuals of the seven-year average indicated age-to-age development factors from pages 3 and 4 were fitted to a curve of the form $Y = 1 - \exp(-a * b^x)$ for indemnity and $Y = a + b * \ln(x) / x^2 + c / x^2$ for medical. A value of 1.0000 was selected from the 14th-to-15th development stage to ensure a more reasonable shape for the final fitted curve. The 10th-to-ultimate factor was then calculated by compounding the age-to-age factors for 10th-to-11th and all subsequent development stages through the 15th report. These factors became the “selected” values on pages 3 and 4.

Loss Ratios - Indemnity and medical ultimate loss ratios are calculated on page 7.

Graphs - Indemnity, medical and total ultimate loss ratio graphs for Policy Years 2005 through 2014 are shown on page 8.

Trend Summary - Ultimate loss ratios were then fitted to both a linear and experimental curve to project a loss ratio for the prospective rating period. A summary of these results are shown on page 9.

PENNSYLVANIA COMPENSATION RATING BUREAU

"F" CLASS UNIT STATISTICAL PLAN EXPERIENCE

REPORTED STANDARD EARNED PREMIUM AND INDEMNITY INCURRED LOSSES

Policy Year	Standard Earned Premium	Reported Indemnity Incurred Losses									
		Report Level									
		1	2	3	4	5	6	7	8	9	10
99	7,004,741	2,278,068	1,444,801	1,491,375	1,545,642	1,413,730	1,525,607	1,578,164	1,500,805	1,500,805	1,510,804
00	10,673,321	968,974	2,575,955	3,013,038	3,243,897	3,259,124	3,385,904	3,322,367	3,322,367	3,322,367	3,322,367
01	16,185,988	1,167,275	2,142,613	2,358,411	2,720,696	3,100,357	3,409,132	3,862,772	3,823,070	3,823,070	3,823,070
02	18,811,734	1,334,807	1,840,111	2,309,583	2,603,880	2,645,245	2,940,184	2,940,184	2,940,184	2,940,184	2,940,184
03	9,703,002	1,654,185	2,378,806	3,594,256	4,307,912	4,693,497	4,806,614	4,707,955	4,723,547	4,740,167	4,757,763
04	5,412,095	1,206,032	2,063,556	2,214,772	2,227,923	2,311,423	2,368,031	2,472,464	2,382,031	2,382,031	2,666,682
05	4,247,161	1,180,618	1,163,588	1,682,054	1,682,054	1,416,004	1,416,004	1,382,671	1,384,438	1,498,443	1,498,443
06	6,041,432	1,874,241	2,929,488	4,459,050	4,377,122	4,397,932	4,649,398	4,820,299	4,824,848	4,847,530	
07	4,712,048	718,534	1,126,675	1,376,732	1,358,792	1,335,668	1,386,903	1,408,228	1,514,100		
08	3,876,520	766,266	1,028,131	1,301,614	1,313,724	1,368,724	1,423,568	1,463,980			
09	4,063,288	249,857	369,448	449,042	449,042	550,496	550,496				
10	3,307,047	302,481	353,923	462,568	414,621	426,746					
11	4,288,780	362,749	526,310	563,100	695,505						
12	11,830,720	621,571	861,551	994,223							
13	13,758,691	497,960	643,427								
14	15,267,694	1,531,936									

PENNSYLVANIA COMPENSATION RATING BUREAU

"F" CLASS UNIT STATISTICAL PLAN EXPERIENCE

REPORTED STANDARD EARNED PREMIUM AND MEDICAL INCURRED LOSSES

Policy Year	Standard Earned Premium	Reported Medical Incurred Losses									
		Report Level									
		1	2	3	4	5	6	7	8	9	10
99	7,004,741	1,102,392	277,212	281,541	260,139	256,350	260,301	265,301	265,601	259,001	259,001
00	10,673,321	577,870	751,041	975,821	1,166,316	1,259,843	1,333,519	1,330,827	1,300,737	1,337,427	1,307,688
01	16,185,988	599,903	1,077,410	1,140,050	1,167,045	1,307,657	1,235,261	1,358,737	1,362,556	1,362,647	1,362,647
02	18,811,734	688,788	764,960	902,425	876,765	907,488	1,199,647	1,202,876	1,203,277	1,203,277	1,203,277
03	9,703,002	1,186,330	1,360,549	1,431,650	1,482,740	1,470,197	1,468,379	1,442,222	1,442,441	1,438,324	1,433,599
04	5,412,095	793,110	984,276	1,070,624	1,126,241	1,110,882	1,126,617	1,111,232	1,118,431	1,118,832	1,118,949
05	4,247,161	619,947	499,031	552,839	552,839	523,427	523,427	523,427	509,182	519,100	512,210
06	6,041,432	1,132,127	1,641,357	1,793,848	1,896,328	2,177,628	2,362,481	2,602,541	2,592,541	2,626,691	
07	4,712,048	525,340	529,351	763,343	800,089	561,293	803,743	966,728	984,195		
08	3,876,520	470,052	474,481	449,476	417,262	455,206	460,706	471,706			
09	4,063,288	170,604	180,148	224,233	215,938	209,139	209,258				
10	3,307,047	291,669	307,898	320,260	319,573	320,598					
11	4,288,780	358,814	385,357	404,007	416,007						
12	11,830,720	331,696	406,260	457,170							
13	13,758,691	314,357	371,741								
14	15,267,694	5,468,927									

PENNSYLVANIA COMPENSATION RATING BUREAU

"F" CLASS UNIT STATISTICAL PLAN EXPERIENCE

INDEMNITY INCURRED LOSS DEVELOPMENT FACTORS

Age-to-Age Development Factors

Policy Year	Report									
	1 - 2	2 - 3	3 - 4	4 - 5	5 - 6	6 - 7	7 - 8	8 - 9	9 - 10	10 - ULT
99	****	1.0322	1.0364	0.9147	1.0791	1.0344	0.9510	1.0000	1.0067	
00	2.6584	****	1.0766	1.0047	1.0389	0.9812	1.0000	1.0000	1.0000	
01	****	1.1007	1.1536	1.1395	1.0996	1.1331	0.9897	1.0000	1.0000	
02	1.3786	****	1.1274	1.0159	1.1115	1.0000	1.0000	1.0000	1.0000	
03	1.4381	1.5109	1.1986	1.0895	1.0241	0.9795	1.0033	1.0035	1.0037	
04	1.7110	1.0733	1.0059	1.0375	1.0245	1.0441	0.9634	1.0000	1.1195	
05	0.9856	1.4456	1.0000	****	1.0000	****	1.0013	1.0823	1.0000	
06	****	1.5221	****	1.0048	1.0572	1.0368	1.0009	1.0047		
07	1.5680	1.2219	0.9870	0.9830	1.0384	1.0154	1.0752			
08	****	1.2660	1.0093	1.0419	1.0401	1.0284				
09	1.4786	****	1.0000	1.2259	1.0000					
10	1.1701	1.3070	0.8963	1.0292						
11	1.4509	1.0699	1.2351							
12	1.3861	1.1540								
13	1.2921									
3 Yr Avg (Latest 3)	1.3764	1.1770	1.0438	1.0990	1.0262	1.0269	1.0258	1.0290	1.0411	
5 Yr Avg	1.3556	1.2038	1.0255	1.0570	1.0271	1.0208	1.0088	1.0181	1.0246	
7 Yr Avg	1.3331	1.2838	1.0191	1.0588	1.0263	1.0339	1.0048	1.0129	1.0186	
Selected (Fitted)	1.3574	1.1993	1.1057	1.0546	1.0278	1.0141	1.0071	1.0036	1.0018	1.0018

Development Factors to Ultimate

	1-ULT	2-ULT	3-ULT	4-ULT	5-ULT	6-ULT	7-ULT	8-ULT	9-ULT	10-ULT *
3 Yr Avg (Latest 3)										
5 Yr Avg										
7 Yr Avg	2.0351	1.5266	1.1891	1.1668	1.1020	1.0738	1.0386	1.0336	1.0204	1.0018
Selected	2.0071	1.4786	1.2329	1.1150	1.0573	1.0287	1.0144	1.0072	1.0036	1.0018

* Based on selected value

**** Loss development factor not used

PENNSYLVANIA COMPENSATION RATING BUREAU

"F" CLASS UNIT STATISTICAL PLAN EXPERIENCE

MEDICAL INCURRED LOSS DEVELOPMENT FACTORS

Age-to-Age Development Factors

Policy Year	Report									
	1 - 2	2 - 3	3 - 4	4 - 5	5 - 6	6 - 7	7 - 8	8 - 9	9 - 10	10 - ULT
99	****	1.0156	0.9240	0.9854	1.0154	1.0192	1.0011	****	1.0000	
00	1.2997	****	1.1952	1.0802	1.0585	0.9980	****	1.0282	0.9778	
01	****	1.0581	****	1.1205	0.9446	****	1.0028	1.0001	1.0000	
02	1.1106	****	0.9716	1.0350	1.3219	1.0027	1.0003	1.0000	1.0000	
03	1.1469	1.0523	1.0357	0.9915	0.9988	0.9822	1.0002	0.9971	0.9967	
04	1.2410	1.0877	1.0519	0.9864	1.0142	0.9863	1.0065	1.0004	1.0001	
05	0.8050	1.1078	1.0000	****	1.0000	1.0000	0.9728	1.0195	0.9867	
06	1.4498	1.0929	****	1.1483	1.0849	1.1016	0.9962	1.0132		
07	1.0076	1.4420	1.0481	0.7015	1.4319	1.2028	1.0181			
08	****	0.9473	0.9283	1.0909	1.0121	1.0239				
09	1.0559	****	0.9630	0.9685	1.0006					
10	1.0556	1.0401	0.9979	1.0032						
11	1.0740	1.0484	1.0297							
12	1.2248	1.1253								
13	1.1825									
3 Yr Avg (Latest 3)	1.1604	1.0713	0.9969	1.0209	1.1482	1.1094	0.9957	1.0110	0.9945	
5 Yr Avg	1.1186	1.1206	0.9934	0.9825	1.1059	1.0629	0.9988	1.0060	0.9967	
7 Yr Avg	1.1500	1.1148	1.0027	0.9843	1.0775	1.0428	0.9996	1.0084	0.9945	
Selected (Fitted)	1.1523	1.0848	1.0483	1.0305	1.0205	1.0144	1.0104	1.0075	1.0055	1.0098

Development Factors to Ultimate

	1-ULT	2-ULT	3-ULT	4-ULT	5-ULT	6-ULT	7-ULT	8-ULT	9-ULT	10-ULT *
3 Yr Avg (Latest 3)										
5 Yr Avg										
7 Yr Avg	1.4390	1.2513	1.1224	1.1194	1.1373	1.0555	1.0122	1.0126	1.0042	1.0098
Selected	1.4448	1.2539	1.1558	1.1025	1.0699	1.0484	1.0335	1.0229	1.0153	1.0098

* Based on selected value

**** Loss development factor not used

PENNSYLVANIA COMPENSATION RATING BUREAU

"F" CLASS UNIT STATISTICAL PLAN EXPERIENCE

FITTED DEVELOPMENT FACTORS

INDEMNITY INCURRED LOSSES

$Y = 1 - \exp(-a \cdot b^x)$

a 0.879702
 b 0.502637

R ^ 2 = 0.8814

<u>Incurred Development (a)</u>	<u>7 Year Average</u>	<u>7 Year Average - 1</u>	<u>Fitted Value</u>	<u>Fitted Value + 1</u>
1 1st to 2nd	1.3331	0.3331	0.3574	1.3574
2 2nd to 3rd	1.2838	0.2838	0.1993	1.1993
3 3rd to 4th	1.0191	0.0191	0.1057	1.1057
4 4th to 5th	1.0588	0.0588	0.0546	1.0546
5 5th to 6th	1.0263	0.0263	0.0278	1.0278
6 6th to 7th	1.0339	0.0339	0.0141	1.0141
7 7th to 8th	1.0048	0.0048	0.0071	1.0071
8 8th to 9th	1.0129	0.0129	0.0036	1.0036
9 9th to 10th	1.0186	0.0186	0.0018	1.0018
10 10th to 11th			0.0009	1.0009
11 11th to 12th			0.0005	1.0005
12 12th to 13th			0.0002	1.0002
13 13th to 14th			0.0001	1.0001
14 14th to 15th	1.0000	0	0.0001	1.0001
10th to Ultimate				1.0018

(a) 14th to 15th age-to-age factor set at 1.0000 to ensure proper tendency for the fitted curve.

PENNSYLVANIA COMPENSATION RATING BUREAU

"F" CLASS UNIT STATISTICAL PLAN EXPERIENCE

FITTED DEVELOPMENT FACTORS

MEDICAL INCURRED LOSSES

$$Y = a + b \ln(x) / x^2 + c / x^2$$

a	(0.004292)
b	0.288486
c	0.156551
$R^2 =$	0.6848

<u>Incurred Development</u>	<u>7 Year Average</u>	<u>7 Year Average - 1</u>	<u>Fitted Value</u>	<u>Fitted Value + 1</u>
1 1st to 2nd	1.1500	0.1500	0.1523	1.1523
2 2nd to 3rd	1.1148	0.1148	0.0848	1.0848
3 3rd to 4th	1.0027	0.0027	0.0483	1.0483
4 4th to 5th	0.9843	(0.0157)	0.0305	1.0305
5 5th to 6th	1.0775	0.0775	0.0205	1.0205
6 6th to 7th	1.0428	0.0428	0.0144	1.0144
7 7th to 8th	0.9996	(0.0004)	0.0104	1.0104
8 8th to 9th	1.0084	0.0084	0.0075	1.0075
9 9th to 10th	0.9945	(0.0055)	0.0055	1.0055
10 10th to 11th			0.0039	1.0039
11 11th to 12th			0.0027	1.0027
12 12th to 13th			0.0018	1.0018
13 13th to 14th			0.0010	1.0010
14 14th to 15th	1.0000	0	0.0004	1.0004
10th to Ultimate				1.0098

(a) 14th to 15th age-to-age factor set at 1.0000 to ensure proper tendency for the fitted curve.

PENNSYLVANIA COMPENSATION RATING BUREAU

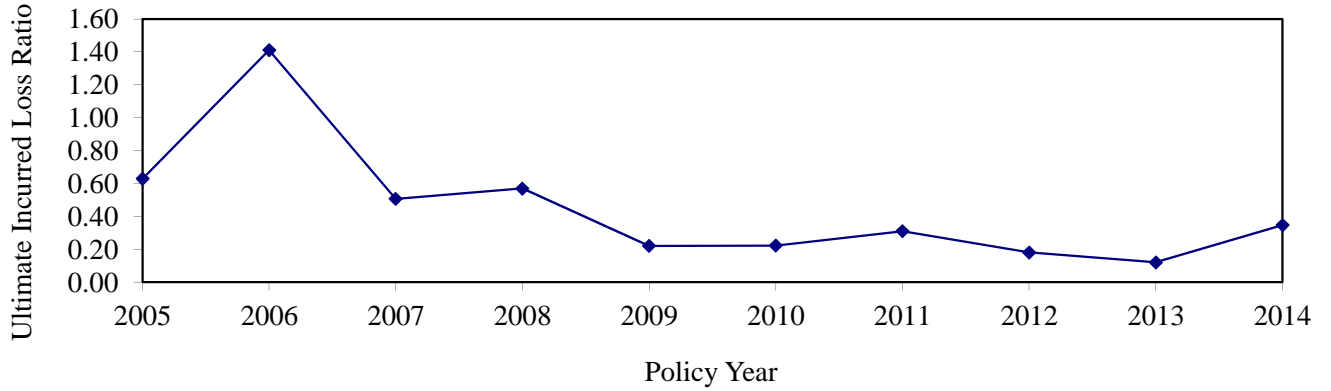
"F" CLASS UNIT STATISTICAL PLAN EXPERIENCE

ULTIMATE LOSS RATIOS

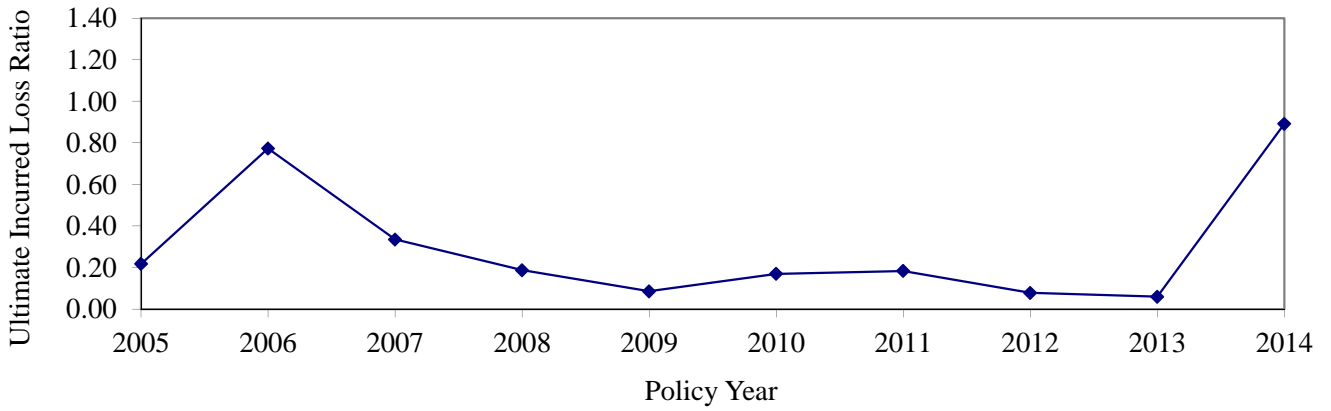
Policy Year	Standard Earned Premium (1)	Premium On-Level Factor (2)	Adjusted Premium (3)	Reported Incurred Loss (4)	Loss Level (5)	Loss Development Factor (6)	Ultimate Incurred Loss (7)=(4)*(6)	Loss Ratio (8)=(7)/(3)
Indemnity								
2005	4,247,161	0.5616	2,385,206	1,498,443	10	1.0018	1,501,140	0.6294
2006	6,041,432	0.5712	3,450,866	4,847,530	9	1.0036	4,864,981	1.4098
2007	4,712,048	0.6382	3,007,229	1,514,100	8	1.0072	1,525,002	0.5071
2008	3,876,520	0.6726	2,607,347	1,463,980	7	1.0144	1,485,061	0.5696
2009	4,063,288	0.6298	2,559,059	550,496	6	1.0287	566,295	0.2213
2010	3,307,047	0.6129	2,026,889	426,746	5	1.0573	451,199	0.2226
2011	4,288,780	0.5843	2,505,934	695,505	4	1.1150	775,488	0.3095
2012	11,830,720	0.5731	6,780,186	994,223	3	1.2329	1,225,778	0.1808
2013	13,758,691	0.5731	7,885,106	643,427	2	1.4786	951,371	0.1207
2014	15,267,694	0.5805	8,862,896	1,531,936	1	2.0071	3,074,749	0.3469
10 Year Total	71,393,381		42,070,718	14,166,386			16,421,064	0.3903
8 Year Average								0.3098
Medical								
2005	4,247,161	0.5616	2,385,206	512,210	10	1.0098	517,230	0.2168
2006	6,041,432	0.5712	3,450,866	2,626,691	9	1.0153	2,666,879	0.7728
2007	4,712,048	0.6382	3,007,229	984,195	8	1.0229	1,006,733	0.3348
2008	3,876,520	0.6726	2,607,347	471,706	7	1.0335	487,508	0.1870
2009	4,063,288	0.6298	2,559,059	209,258	6	1.0484	219,386	0.0857
2010	3,307,047	0.6129	2,026,889	320,598	5	1.0699	343,008	0.1692
2011	4,288,780	0.5843	2,505,934	416,007	4	1.1025	458,648	0.1830
2012	11,830,720	0.5731	6,780,186	457,170	3	1.1558	528,397	0.0779
2013	13,758,691	0.5731	7,885,106	371,741	2	1.2539	466,126	0.0591
2014	15,267,694	0.5805	8,862,896	5,468,927	1	1.4448	7,901,506	0.8915
10 Year Total	71,393,381		42,070,718	11,838,503			14,595,421	0.3469
8 Year Average								0.2485
Total								
2005	4,247,161	0.5616	2,385,206	2,010,653			2,018,370	0.8462
2006	6,041,432	0.5712	3,450,866	7,474,221			7,531,860	2.1826
2007	4,712,048	0.6382	3,007,229	2,498,295			2,531,735	0.8419
2008	3,876,520	0.6726	2,607,347	1,935,686			1,972,569	0.7565
2009	4,063,288	0.6298	2,559,059	759,754			785,681	0.3070
2010	3,307,047	0.6129	2,026,889	747,344			794,207	0.3918
2011	4,288,780	0.5843	2,505,934	1,111,512			1,234,136	0.4925
2012	11,830,720	0.5731	6,780,186	1,451,393			1,754,175	0.2587
2013	13,758,691	0.5731	7,885,106	1,015,168			1,417,497	0.1798
2014	15,267,694	0.5805	8,862,896	7,000,863			10,976,255	1.2385
10 Year Total	71,393,381		42,070,718	26,004,889			31,016,485	0.7372
8 Year Average								0.5583

Pennsylvania "F" Class

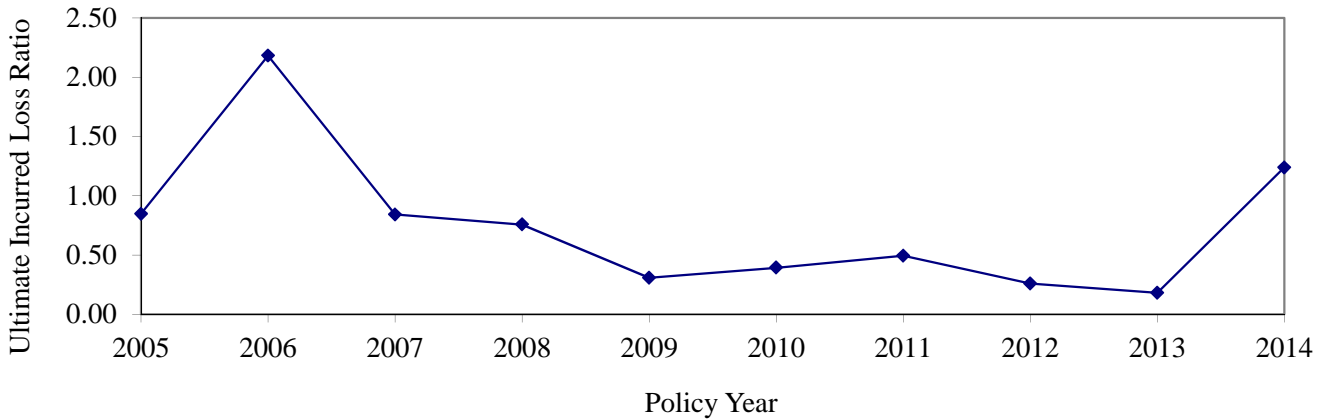
Indemnity Ultimate Incurred Loss Ratio



Medical Ultimate Incurred Loss Ratio



Total Ultimate Incurred Loss Ratio



		3 points	4 points	5 points	6 points	7 points	8 points	9 points	10 points
INDEMNITY									
LINEAR	Average Loss Ratio	0.2161	0.2395	0.2361	0.2336	0.2816	0.3098	0.4320	0.4518
	Trended Loss Ratio	0.5691	0.2642	0.2675	0.2654	0.0783	0.0366	(0.3051)	(0.2047)
	Trend Factor	2.6335	1.1031	1.1330	1.1361	0.2781	0.1181	(0.7063)	(0.4531)
	Annual. Trend Factor	1.1676	1.0136	1.0153	1.0139	0.8826	0.8271	#NUM!	#NUM!
EXPONENTIAL	R^2	0.5024	0.0040	0.0104	0.0156	0.2260	0.3919	0.4957	0.4602
	Trended Loss Ratio	0.7842	0.2136	0.2143	0.2161	0.1320	0.1167	0.0787	0.0880
	Trend Factor	3.6289	0.8919	0.9077	0.9251	0.4688	0.3767	0.1822	0.1948
	Annual. Trend Factor	1.2290	0.9843	0.9883	0.9916	0.9288	0.9169	0.8702	0.8839
	R^2	0.3741	0.0003	0.0004	0.0003	0.2022	0.3547	0.5483	0.5678
MEDICAL									
LINEAR	Average Loss Ratio	0.3428	0.3029	0.2761	0.2444	0.2362	0.2485	0.3068	0.2978
	Trended Loss Ratio	2.0717	1.3036	0.9695	0.8348	0.6757	0.5095	0.2496	0.2914
	Trend Factor	6.0435	4.3037	3.5114	3.4157	2.8607	2.0503	0.8136	0.9785
	Annual. Trend Factor	1.3335	1.2230	1.1644	1.1420	1.1080	1.0659	0.9833	0.9984
EXPONENTIAL	R^2	0.7327	0.4713	0.3595	0.3579	0.2672	0.1192	0.0048	0.0001
	Trended Loss Ratio	28.4385	1.3864	0.5259	0.5276	0.3119	0.1821	0.1017	0.1154
	Trend Factor	82.9595	4.5771	1.9047	2.1588	1.3205	0.7328	0.3315	0.3875
	Annual. Trend Factor	2.0278	1.2334	1.0812	1.0868	1.0275	0.9727	0.9138	0.9309
	R^2	0.6660	0.2237	0.1075	0.1750	0.0733	0.0009	0.0707	0.0579
TOTAL									
LINEAR	Average Loss Ratio	0.5589	0.5424	0.5122	0.4780	0.5178	0.5583	0.7388	0.7496
	Trended Loss Ratio	2.6408	1.5678	1.2370	1.1002	0.7540	0.5461	(0.0555)	0.0867
EXPONENTIAL	Trended Loss Ratio	29.2227	1.6000	0.7402	0.7437	0.4439	0.2988	0.1804	0.2034