

PENNSYLVANIA COMPENSATION RATING BUREAU

Retrospective Test of Trend Projections for Severity Ratios

Attached is a retrospective test of the predictive accuracy of various trend procedures. Please note that instead of using ultimate loss ratios, as in Exhibit 11a, Exhibit 11b uses ultimate severity ratios, i.e., ultimate loss ratios adjusted by dividing out the frequency component. Please note that our analysis is limited to Policy Years 1990 through 2001, the years for which frequency data is available.

Results for both indemnity and medical are shown using both linear and exponential fits. All possible combinations of from four to ten data points, which permitted a test of the projected severity ratio three years hence, were used. Our current review trends policy year 2001 3.25 years, policy year 2000 4.25 years, and policy year 1999 5.25 years. An average of those three values is then calculated.

Current estimates of policy year ultimate severity ratios are compared with predicted values based on trending through earlier years. The results are available for each of twenty-one loss development approaches - incurred and paid-to-2nd through paid-to-20th, as well as the average of the incurred and paid-to-20th methods, although only eleven approaches are shown.

As an illustration, the incurred loss development approach generated an indemnity severity ratio of 0.8586 for policy year 1998. Fitting the loss ratios for policy years 1992 to 1995 using a straight line and projecting that to 1998 yielded a loss ratio of 1.0203 which overstates our current estimate for 1998 by 0.1617 points.

Indemnity
Actual Ultimate Severity Ratios
Including Average of Paid and Incurred

INDEMNITY	Policy	Severity Ratio	Severity Ratio	Severity Ratio	Severity Ratio	Severity Ratio	Severity Ratio	Severity Ratio	Severity Ratio	Severity Ratio	Severity Ratio	Severity Ratio
	Year	(Avg Pd & Inc)	(Incur)	(Pd-2)	(Pd-3)	(Pd-4)	(Pd-5)	(Pd-6)	(Pd-8)	(Pd-12)	(Pd-16)	(Pd-20)
	1990	0.7459	0.7250	0.7250	0.7250	0.7250	0.7250	0.7250	0.7250	0.7250	0.7494	0.7667
	1991	0.7911	0.7686	0.7686	0.7686	0.7686	0.7686	0.7686	0.7686	0.7687	0.7951	0.8135
	1992	0.7794	0.7618	0.7618	0.7618	0.7618	0.7618	0.7618	0.7618	0.7531	0.7789	0.7969
	1993	0.8205	0.7969	0.7969	0.7969	0.7969	0.7969	0.7969	0.7969	0.7976	0.8250	0.8441
	1994	0.8884	0.8566	0.8566	0.8566	0.8566	0.8566	0.8566	0.8566	0.8694	0.8993	0.9202
	1995	0.9273	0.8863	0.8863	0.8863	0.8863	0.8863	0.8863	0.9079	0.9150	0.9462	0.9681
	1996	0.8152	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.8152	0.8213	0.8495	0.8692
	1997	0.9082	0.8312	0.8312	0.8312	0.8312	0.8312	0.8797	0.9241	0.9310	0.9630	0.9853
	1998	0.9344	0.8586	0.8586	0.8586	0.8586	0.8679	0.9021	0.9473	0.9546	0.9874	1.0103
	1999	1.0545	0.9605	0.9605	0.9605	0.9735	0.9864	1.0253	1.0769	1.0851	1.1223	1.1484
	2000	1.1764	1.0647	1.0647	1.0862	1.0918	1.1064	1.1502	1.2078	1.2171	1.2589	1.2882
	2001	1.1798	1.0815	1.0653	1.0777	1.0834	1.0979	1.1411	1.1986	1.2078	1.2492	1.2781

Trend # Years = 3

**Indemnity
Linear Fit
Trended Severity Ratios**

Years Used (# Yrs)	3 Yr Trend To	Severity Ratio (Avg Pd & Inc)	Severity Ratio (Incur)	Severity Ratio (Pd-2)	Severity Ratio (Pd-3)	Severity Ratio (Pd-4)	Severity Ratio (Pd-5)	Severity Ratio (Pd-6)	Severity Ratio (Pd-8)	Severity Ratio (Pd-12)	Severity Ratio (Pd-16)	Severity Ratio (Pd-20)
90-93 (4)	1996	0.8797	0.8571	0.8571	0.8571	0.8571	0.8571	0.8571	0.8571	0.8521	0.8819	0.9023
91-94 (4)	1997	0.9697	0.9306	0.9306	0.9306	0.9306	0.9306	0.9306	0.9306	0.9532	0.9860	1.0090
92-95 (4)	1998	1.0841	1.0203	1.0203	1.0203	1.0203	1.0203	1.0203	1.0549	1.0847	1.1216	1.1477
93-96 (4)	1999	0.8732	0.7901	0.7901	0.7901	0.7901	0.7901	0.7901	0.8919	0.9033	0.9342	0.9558
94-97 (4)	2000	0.8611	0.7431	0.7431	0.7431	0.7431	0.7431	0.8207	0.9254	0.9252	0.9570	0.9791
95-98 (4)	2001	0.9477	0.8285	0.8285	0.8285	0.8285	0.8434	0.9320	1.0008	1.0083	1.0432	1.0674
90-94 (5)	1997	0.9623	0.9275	0.9275	0.9275	0.9275	0.9275	0.9275	0.9275	0.9416	0.9744	0.9971
91-95 (5)	1998	1.0320	0.9791	0.9791	0.9791	0.9791	0.9791	0.9791	1.0051	1.0252	1.0602	1.0848
92-96 (5)	1999	0.9354	0.8564	0.8564	0.8564	0.8564	0.8564	0.8564	0.9366	0.9582	0.9910	1.0140
93-97 (5)	2000	0.9230	0.8129	0.8129	0.8129	0.8129	0.8129	0.8711	0.9666	0.9762	1.0097	1.0331
94-98 (5)	2001	0.9312	0.8132	0.8132	0.8132	0.8132	0.8243	0.8993	0.9890	0.9915	1.0256	1.0493
90-95 (6)	1998	1.0203	0.9729	0.9729	0.9729	0.9729	0.9729	0.9729	0.9935	1.0086	1.0433	1.0675
91-96 (6)	1999	0.9363	0.8673	0.8673	0.8673	0.8673	0.8673	0.8673	0.9327	0.9498	0.9823	1.0051
92-97 (6)	2000	0.9613	0.8579	0.8579	0.8579	0.8579	0.8579	0.9041	0.9880	1.0060	1.0406	1.0647
93-98 (6)	2001	0.9635	0.8486	0.8486	0.8486	0.8486	0.8574	0.9210	1.0101	1.0192	1.0542	1.0786
90-96 (7)	1999	0.9503	0.8876	0.8876	0.8876	0.8876	0.8876	0.8876	0.9426	0.9567	0.9897	1.0127
91-97 (7)	2000	0.9607	0.8680	0.8680	0.8680	0.8680	0.8680	0.9061	0.9797	0.9953	1.0295	1.0533
92-98 (7)	2001	0.9892	0.8782	0.8782	0.8782	0.8782	0.8855	0.9401	1.0234	1.0395	1.0753	1.1002
90-97 (8)	2000	0.9713	0.8865	0.8865	0.8865	0.8865	0.8865	0.9189	0.9839	0.9977	1.0321	1.0561
91-98 (8)	2001	0.9873	0.8847	0.8847	0.8847	0.8847	0.8909	0.9385	1.0151	1.0299	1.0653	1.0900
90-98 (9)	2001	0.9954	0.8996	0.8996	0.8996	0.8996	0.9050	0.9471	1.0173	1.0309	1.0664	1.0912

**Indemnity
Linear Fit
Differences: (Actual - Trended)**

Years Used (# Yrs)	3 Yr Trend To	Severity Ratio (Avg Pd & Inc)	Severity Ratio (Incur)	Severity Ratio (Pd-2)	Severity Ratio (Pd-3)	Severity Ratio (Pd-4)	Severity Ratio (Pd-5)	Severity Ratio (Pd-6)	Severity Ratio (Pd-8)	Severity Ratio (Pd-12)	Severity Ratio (Pd-16)	Severity Ratio (Pd-20)
90-93 (4)	1996	-0.0645	-0.0961	-0.0961	-0.0961	-0.0961	-0.0961	-0.0961	-0.0419	-0.0308	-0.0324	-0.0331
91-94 (4)	1997	-0.0615	-0.0994	-0.0994	-0.0994	-0.0994	-0.0994	-0.0509	-0.0065	-0.0222	-0.0230	-0.0237
92-95 (4)	1998	-0.1497	-0.1617	-0.1617	-0.1617	-0.1617	-0.1524	-0.1182	-0.1076	-0.1301	-0.1342	-0.1374
93-96 (4)	1999	0.1813	0.1704	0.1704	0.1704	0.1834	0.1963	0.2352	0.1850	0.1818	0.1881	0.1926
94-97 (4)	2000	0.3153	0.3216	0.3216	0.3431	0.3487	0.3633	0.3295	0.2824	0.2919	0.3019	0.3091
95-98 (4)	2001	0.2321	0.2530	0.2368	0.2492	0.2549	0.2546	0.2091	0.1978	0.1995	0.2060	0.2107
90-94 (5)	1997	-0.0541	-0.0963	-0.0963	-0.0963	-0.0963	-0.0963	-0.0478	-0.0034	-0.0106	-0.0114	-0.0118
91-95 (5)	1998	-0.0976	-0.1205	-0.1205	-0.1205	-0.1205	-0.1112	-0.0770	-0.0578	-0.0706	-0.0728	-0.0745
92-96 (5)	1999	0.1191	0.1041	0.1041	0.1041	0.1171	0.1300	0.1689	0.1403	0.1269	0.1313	0.1344
93-97 (5)	2000	0.2534	0.2518	0.2518	0.2733	0.2789	0.2935	0.2791	0.2412	0.2409	0.2492	0.2551
94-98 (5)	2001	0.2487	0.2683	0.2521	0.2645	0.2702	0.2736	0.2418	0.2096	0.2163	0.2236	0.2288
90-95 (6)	1998	-0.0859	-0.1143	-0.1143	-0.1143	-0.1143	-0.1050	-0.0708	-0.0462	-0.0540	-0.0559	-0.0572
91-96 (6)	1999	0.1182	0.0932	0.0932	0.0932	0.1062	0.1191	0.1580	0.1442	0.1353	0.1400	0.1433
92-97 (6)	2000	0.2151	0.2068	0.2068	0.2283	0.2339	0.2485	0.2461	0.2198	0.2111	0.2183	0.2235
93-98 (6)	2001	0.2163	0.2329	0.2167	0.2291	0.2348	0.2405	0.2201	0.1885	0.1886	0.1950	0.1995
90-96 (7)	1999	0.1043	0.0729	0.0729	0.0729	0.0859	0.0988	0.1377	0.1343	0.1284	0.1326	0.1357
91-97 (7)	2000	0.2157	0.1967	0.1967	0.2182	0.2238	0.2384	0.2441	0.2281	0.2218	0.2295	0.2349
92-98 (7)	2001	0.1906	0.2033	0.1871	0.1995	0.2052	0.2124	0.2010	0.1752	0.1683	0.1739	0.1779
90-97 (8)	2000	0.2051	0.1782	0.1782	0.1997	0.2053	0.2199	0.2313	0.2239	0.2194	0.2268	0.2321
91-98 (8)	2001	0.1925	0.1968	0.1806	0.1930	0.1987	0.2070	0.2026	0.1835	0.1779	0.1839	0.1881
90-98 (9)	2001	0.1844	0.1819	0.1657	0.1781	0.1838	0.1929	0.1940	0.1813	0.1769	0.1828	0.1869

**Indemnity
Exponential Fit
Trended Loss Ratios**

Years Used (# Yrs)	3 Yr Trend To	Severity Ratio (Incur)	Severity Ratio (Incur)	Severity Ratio (Pd-2)	Severity Ratio (Pd-3)	Severity Ratio (Pd-4)	Severity Ratio (Pd-5)	Severity Ratio (Pd-6)	Severity Ratio (Pd-8)	Severity Ratio (Pd-12)	Severity Ratio (Pd-16)	Severity Ratio (Pd-20)
90-93 (4)	1996	0.8854	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8573	0.8873	0.9079
91-94 (4)	1997	0.9800	0.9393	0.9393	0.9393	0.9393	0.9393	0.9393	0.9393	0.9645	0.9977	1.0210
92-95 (4)	1998	1.1164	1.0442	1.0442	1.0442	1.0442	1.0442	1.0442	1.0852	1.1242	1.1625	1.1895
93-96 (4)	1999	0.8707	0.7860	0.7860	0.7860	0.7860	0.7860	0.7860	0.8924	0.9045	0.9353	0.9570
94-97 (4)	2000	0.8591	0.7463	0.7463	0.7463	0.7463	0.7463	0.8172	0.9234	0.9227	0.9544	0.9764
95-98 (4)	2001	0.9493	0.8303	0.8303	0.8303	0.8303	0.8448	0.9350	1.0053	1.0128	1.0479	1.0722
90-94 (5)	1997	0.9748	0.9391	0.9391	0.9391	0.9391	0.9391	0.9391	0.9391	0.9543	0.9876	1.0107
91-95 (5)	1998	1.0505	0.9936	0.9936	0.9936	0.9936	0.9936	0.9936	1.0227	1.0468	1.0825	1.1076
92-96 (5)	1999	0.9390	0.8543	0.8543	0.8543	0.8543	0.8543	0.8543	0.9436	0.9688	1.0019	1.0252
93-97 (5)	2000	0.9232	0.8113	0.8113	0.8113	0.8113	0.8113	0.8684	0.9714	0.9817	1.0154	1.0389
94-98 (5)	2001	0.9302	0.8131	0.8131	0.8131	0.8131	0.8236	0.8977	0.9918	0.9935	1.0276	1.0514
90-95 (6)	1998	1.0398	0.9895	0.9895	0.9895	0.9895	0.9895	0.9895	1.0125	1.0298	1.0654	1.0902
91-96 (6)	1999	0.9399	0.8663	0.8663	0.8663	0.8663	0.8663	0.8663	0.9392	0.9585	0.9913	1.0143
92-97 (6)	2000	0.9675	0.8579	0.8579	0.8579	0.8579	0.8579	0.9055	0.9993	1.0209	1.0559	1.0804
93-98 (6)	2001	0.9662	0.8479	0.8479	0.8479	0.8479	0.8566	0.9215	1.0189	1.0286	1.0639	1.0886
90-96 (7)	1999	0.9580	0.8906	0.8906	0.8906	0.8906	0.8906	0.8906	0.9531	0.9690	1.0025	1.0258
91-97 (7)	2000	0.9668	0.8685	0.8685	0.8685	0.8685	0.8685	0.9081	0.9902	1.0083	1.0429	1.0671
92-98 (7)	2001	0.9975	0.8796	0.8796	0.8796	0.8796	0.8871	0.9446	1.0383	1.0576	1.0940	1.1194
90-97 (8)	2000	0.9813	0.8903	0.8903	0.8903	0.8903	0.8903	0.9246	0.9982	1.0141	1.0492	1.0735
91-98 (8)	2001	0.9957	0.8866	0.8866	0.8866	0.8866	0.8930	0.9433	1.0293	1.0466	1.0826	1.1077
90-98 (9)	2001	1.0075	0.9045	0.9045	0.9045	0.9045	0.9101	0.9554	1.0351	1.0509	1.0873	1.1125

Indemnity
Exponential Fit
Differences: (Actual - Trended)

Years Used (# Yrs)	3 Yr Trend To	Severity Ratio (Avg Pd & Inc)	Severity Ratio (Incur)	Severity Ratio (Pd-2)	Severity Ratio (Pd-3)	Severity Ratio (Pd-4)	Severity Ratio (Pd-5)	Severity Ratio (Pd-6)	Severity Ratio (Pd-8)	Severity Ratio (Pd-12)	Severity Ratio (Pd-16)	Severity Ratio (Pd-20)
90-93 (4)	1996	-0.0702	-0.1020	-0.1020	-0.1020	-0.1020	-0.1020	-0.1020	-0.0478	-0.0360	-0.0378	-0.0387
91-94 (4)	1997	-0.0718	-0.1081	-0.1081	-0.1081	-0.1081	-0.1081	-0.0596	-0.0152	-0.0335	-0.0347	-0.0357
92-95 (4)	1998	-0.1820	-0.1856	-0.1856	-0.1856	-0.1856	-0.1763	-0.1421	-0.1379	-0.1696	-0.1751	-0.1792
93-96 (4)	1999	0.1838	0.1745	0.1745	0.1745	0.1875	0.2004	0.2393	0.1845	0.1806	0.1870	0.1914
94-97 (4)	2000	0.3173	0.3184	0.3184	0.3399	0.3455	0.3601	0.3330	0.2844	0.2944	0.3045	0.3118
95-98 (4)	2001	0.2305	0.2512	0.2350	0.2474	0.2531	0.2531	0.2061	0.1933	0.1950	0.2013	0.2059
90-94 (5)	1997	-0.0666	-0.1079	-0.1079	-0.1079	-0.1079	-0.1079	-0.0594	-0.0150	-0.0233	-0.0246	-0.0254
91-95 (5)	1998	-0.1161	-0.1350	-0.1350	-0.1350	-0.1350	-0.1257	-0.0915	-0.0754	-0.0922	-0.0951	-0.0973
92-96 (5)	1999	0.1155	0.1062	0.1062	0.1062	0.1192	0.1321	0.1710	0.1333	0.1163	0.1204	0.1232
93-97 (5)	2000	0.2532	0.2534	0.2534	0.2749	0.2805	0.2951	0.2818	0.2364	0.2354	0.2435	0.2493
94-98 (5)	2001	0.2496	0.2684	0.2522	0.2646	0.2703	0.2743	0.2434	0.2068	0.2143	0.2216	0.2267
90-95 (6)	1998	-0.1054	-0.1309	-0.1309	-0.1309	-0.1309	-0.1216	-0.0874	-0.0652	-0.0752	-0.0780	-0.0799
91-96 (6)	1999	0.1146	0.0942	0.0942	0.0942	0.1072	0.1201	0.1590	0.1377	0.1266	0.1310	0.1341
92-97 (6)	2000	0.2089	0.2068	0.2068	0.2283	0.2339	0.2485	0.2447	0.2085	0.1962	0.2030	0.2078
93-98 (6)	2001	0.2136	0.2336	0.2174	0.2298	0.2355	0.2413	0.2196	0.1797	0.1792	0.1853	0.1895
90-96 (7)	1999	0.0965	0.0699	0.0699	0.0699	0.0829	0.0958	0.1347	0.1238	0.1161	0.1198	0.1226
91-97 (7)	2000	0.2096	0.1962	0.1962	0.2177	0.2233	0.2379	0.2421	0.2176	0.2088	0.2160	0.2211
92-98 (7)	2001	0.1823	0.2019	0.1857	0.1981	0.2038	0.2108	0.1965	0.1603	0.1502	0.1552	0.1587
90-97 (8)	2000	0.1951	0.1744	0.1744	0.1959	0.2015	0.2161	0.2256	0.2096	0.2030	0.2097	0.2147
91-98 (8)	2001	0.1841	0.1949	0.1787	0.1911	0.1968	0.2049	0.1978	0.1693	0.1612	0.1666	0.1704
90-98 (9)	2001	0.1723	0.1770	0.1608	0.1732	0.1789	0.1878	0.1857	0.1635	0.1569	0.1619	0.1656

Medical
Actual Ultimate Severity Ratios
Including Average of Paid and Incurred

MEDICAL	Policy	Severity Ratio	Severity Ratio	Severity Ratio	Severity Ratio	Severity Ratio	Severity Ratio	Severity Ratio	Severity Ratio	Severity Ratio	Severity Ratio	Severity Ratio
	Year	(Avg Pd & Inc)	(Incur)	(Pd-2)	(Pd-3)	(Pd-4)	(Pd-5)	(Pd-6)	(Pd-8)	(Pd-12)	(Pd-16)	(Pd-20)
	1990	0.4761	0.4641	0.4641	0.4641	0.4641	0.4641	0.4641	0.4641	0.4641	0.4869	0.4881
	1991	0.5407	0.5319	0.5319	0.5319	0.5319	0.5319	0.5319	0.5319	0.5278	0.5482	0.5495
	1992	0.5697	0.5638	0.5638	0.5638	0.5638	0.5638	0.5638	0.5638	0.5532	0.5745	0.5758
	1993	0.5969	0.5844	0.5844	0.5844	0.5844	0.5844	0.5844	0.5844	0.5854	0.6079	0.6093
	1994	0.6470	0.6355	0.6355	0.6355	0.6355	0.6355	0.6355	0.6355	0.6327	0.6570	0.6585
	1995	0.7320	0.7271	0.7271	0.7271	0.7271	0.7271	0.7271	0.7125	0.7079	0.7352	0.7369
	1996	0.7401	0.7387	0.7387	0.7387	0.7387	0.7387	0.7387	0.7169	0.7122	0.7398	0.7415
	1997	0.8455	0.8441	0.8441	0.8441	0.8441	0.8441	0.8393	0.8189	0.8137	0.8450	0.8470
	1998	0.9015	0.9145	0.9145	0.9145	0.9145	0.8896	0.8803	0.8590	0.8535	0.8863	0.8884
	1999	0.9668	0.9730	0.9730	0.9730	0.9762	0.9618	0.9517	0.9287	0.9227	0.9582	0.9605
	2000	1.0598	1.0716	1.0716	1.0753	1.0651	1.0496	1.0387	1.0133	1.0069	1.0456	1.0480
	2001	1.0722	1.0653	1.1007	1.1071	1.0967	1.0805	1.0694	1.0432	1.0366	1.0765	1.0791

Trend # Years = 3

**Medical
Linear Fit
Trended Severity Ratios**

Years Used (# Yrs)	3 Yr Trend To	Severity Ratio (Avg Pd & Inc)	Severity Ratio (Incur)	Severity Ratio (Pd-2)	Severity Ratio (Pd-3)	Severity Ratio (Pd-4)	Severity Ratio (Pd-5)	Severity Ratio (Pd-6)	Severity Ratio (Pd-8)	Severity Ratio (Pd-12)	Severity Ratio (Pd-16)	Severity Ratio (Pd-20)
90-93 (4)	1996	0.7220	0.7128	0.7128	0.7128	0.7128	0.7128	0.7128	0.7128	0.7078	0.7296	0.7311
91-94 (4)	1997	0.7443	0.7280	0.7280	0.7280	0.7280	0.7280	0.7280	0.7280	0.7309	0.7588	0.7605
92-95 (4)	1998	0.8781	0.8711	0.8711	0.8711	0.8711	0.8711	0.8711	0.8478	0.8499	0.8827	0.8848
93-96 (4)	1999	0.9106	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.8759	0.8646	0.8982	0.9003
94-97 (4)	2000	1.0128	1.0232	1.0232	1.0232	1.0232	1.0232	1.0155	0.9705	0.9629	1.0001	1.0025
95-98 (4)	2001	1.0810	1.1065	1.1065	1.1065	1.1065	1.0667	1.0484	1.0205	1.0141	1.0529	1.0555
90-94 (5)	1997	0.7651	0.7536	0.7536	0.7536	0.7536	0.7536	0.7536	0.7536	0.7500	0.7749	0.7765
91-95 (5)	1998	0.8472	0.8396	0.8396	0.8396	0.8396	0.8396	0.8396	0.8221	0.8213	0.8528	0.8548
92-96 (5)	1999	0.8951	0.8961	0.8961	0.8961	0.8961	0.8961	0.8961	0.8598	0.8585	0.8918	0.8939
93-97 (5)	2000	1.0075	1.0173	1.0173	1.0173	1.0173	1.0173	1.0115	0.9688	0.9584	0.9955	0.9978
94-98 (5)	2001	1.0845	1.1095	1.1095	1.1095	1.1095	1.0796	1.0651	1.0253	1.0177	1.0569	1.0594
90-95 (6)	1998	0.8492	0.8432	0.8432	0.8432	0.8432	0.8432	0.8432	0.8293	0.8246	0.8532	0.8552
91-96 (6)	1999	0.8788	0.8777	0.8777	0.8777	0.8777	0.8777	0.8777	0.8477	0.8451	0.8778	0.8798
92-97 (6)	2000	0.9861	0.9896	0.9896	0.9896	0.9896	0.9896	0.9851	0.9470	0.9438	0.9802	0.9826
93-98 (6)	2001	1.0780	1.1002	1.1002	1.1002	1.1002	1.0765	1.0646	1.0241	1.0142	1.0533	1.0558
90-96 (7)	1999	0.8829	0.8821	0.8821	0.8821	0.8821	0.8821	0.8821	0.8566	0.8513	0.8818	0.8837
91-97 (7)	2000	0.9653	0.9670	0.9670	0.9670	0.9670	0.9670	0.9633	0.9296	0.9257	0.9614	0.9637
92-98 (7)	2001	1.0588	1.0743	1.0743	1.0743	1.0743	1.0547	1.0447	1.0064	1.0020	1.0406	1.0431
90-97 (8)	2000	0.9623	0.9639	0.9639	0.9639	0.9639	0.9639	0.9607	0.9307	0.9249	0.9585	0.9607
91-98 (8)	2001	1.0386	1.0511	1.0511	1.0511	1.0511	1.0345	1.0258	0.9905	0.9858	1.0237	1.0261
90-98 (9)	2001	1.0329	1.0440	1.0440	1.0440	1.0440	1.0297	1.0221	0.9895	0.9832	1.0193	1.0217

Medical
Linear Fit
Differences: (Actual - Trended)

Years Used (# Yrs)	3 Yr Trend To	Severity Ratio (Avg Pd & Inc)	Severity Ratio (Incur)	Severity Ratio (Pd-2)	Severity Ratio (Pd-3)	Severity Ratio (Pd-4)	Severity Ratio (Pd-5)	Severity Ratio (Pd-6)	Severity Ratio (Pd-8)	Severity Ratio (Pd-12)	Severity Ratio (Pd-16)	Severity Ratio (Pd-20)
90-93 (4)	1996	0.0181	0.0259	0.0259	0.0259	0.0259	0.0259	0.0259	0.0041	0.0044	0.0102	0.0104
91-94 (4)	1997	0.1012	0.1161	0.1161	0.1161	0.1161	0.1161	0.1113	0.0909	0.0828	0.0862	0.0865
92-95 (4)	1998	0.0234	0.0434	0.0434	0.0434	0.0434	0.0185	0.0092	0.0112	0.0036	0.0036	0.0036
93-96 (4)	1999	0.0562	0.0520	0.0520	0.0520	0.0552	0.0408	0.0307	0.0528	0.0581	0.0600	0.0602
94-97 (4)	2000	0.0470	0.0484	0.0484	0.0521	0.0419	0.0264	0.0232	0.0428	0.0440	0.0455	0.0455
95-98 (4)	2001	-0.0088	-0.0412	-0.0058	0.0006	-0.0098	0.0138	0.0210	0.0227	0.0225	0.0236	0.0237
90-94 (5)	1997	0.0804	0.0905	0.0905	0.0905	0.0905	0.0905	0.0857	0.0653	0.0637	0.0701	0.0705
91-95 (5)	1998	0.0543	0.0749	0.0749	0.0749	0.0749	0.0500	0.0407	0.0369	0.0322	0.0335	0.0337
92-96 (5)	1999	0.0717	0.0769	0.0769	0.0769	0.0801	0.0657	0.0556	0.0689	0.0642	0.0664	0.0666
93-97 (5)	2000	0.0524	0.0543	0.0543	0.0580	0.0478	0.0323	0.0272	0.0445	0.0485	0.0501	0.0502
94-98 (5)	2001	-0.0123	-0.0442	-0.0088	-0.0024	-0.0128	0.0009	0.0043	0.0179	0.0189	0.0196	0.0197
90-95 (6)	1998	0.0523	0.0713	0.0713	0.0713	0.0713	0.0464	0.0371	0.0297	0.0289	0.0331	0.0332
91-96 (6)	1999	0.0880	0.0953	0.0953	0.0953	0.0985	0.0841	0.0740	0.0810	0.0776	0.0804	0.0807
92-97 (6)	2000	0.0737	0.0820	0.0820	0.0857	0.0755	0.0600	0.0536	0.0663	0.0631	0.0654	0.0654
93-98 (6)	2001	-0.0058	-0.0349	0.0005	0.0069	-0.0035	0.0040	0.0048	0.0191	0.0224	0.0232	0.0233
90-96 (7)	1999	0.0839	0.0910	0.0910	0.0910	0.0942	0.0798	0.0697	0.0721	0.0714	0.0764	0.0768
91-97 (7)	2000	0.0945	0.1046	0.1046	0.1083	0.0981	0.0826	0.0754	0.0838	0.0812	0.0842	0.0843
92-98 (7)	2001	0.0135	-0.0090	0.0264	0.0328	0.0224	0.0258	0.0247	0.0368	0.0346	0.0359	0.0360
90-97 (8)	2000	0.0975	0.1077	0.1077	0.1114	0.1012	0.0857	0.0780	0.0826	0.0820	0.0871	0.0873
91-98 (8)	2001	0.0336	0.0142	0.0496	0.0560	0.0456	0.0460	0.0436	0.0527	0.0508	0.0528	0.0530
90-98 (9)	2001	0.0393	0.0213	0.0567	0.0631	0.0527	0.0508	0.0473	0.0537	0.0534	0.0572	0.0574

Medical
Exponential Fit
Trended Loss Ratios

Years Used (# Yrs)	3 Yr Trend To	Severity Ratio (Avg Pd & Inc)	Severity Ratio (Incur)	Severity Ratio (Pd-2)	Severity Ratio (Pd-3)	Severity Ratio (Pd-4)	Severity Ratio (Pd-5)	Severity Ratio (Pd-6)	Severity Ratio (Pd-8)	Severity Ratio (Pd-12)	Severity Ratio (Pd-16)	Severity Ratio (Pd-20)
90-93 (4)	1996	0.7557	0.7483	0.7483	0.7483	0.7483	0.7483	0.7483	0.7483	0.7416	0.7615	0.7631
91-94 (4)	1997	0.7642	0.7465	0.7465	0.7465	0.7465	0.7465	0.7465	0.7465	0.7513	0.7800	0.7817
92-95 (4)	1998	0.9214	0.9144	0.9144	0.9144	0.9144	0.9144	0.9144	0.8852	0.8915	0.9259	0.9281
93-96 (4)	1999	0.9558	0.9742	0.9742	0.9742	0.9742	0.9742	0.9742	0.9155	0.9010	0.9361	0.9383
94-97 (4)	2000	1.0641	1.0825	1.0825	1.0825	1.0825	1.0825	1.0726	1.0139	1.0052	1.0441	1.0466
95-98 (4)	2001	1.1275	1.1612	1.1612	1.1612	1.1612	1.1111	1.0882	1.0580	1.0514	1.0916	1.0943
90-94 (5)	1997	0.8041	0.7936	0.7936	0.7936	0.7936	0.7936	0.7936	0.7936	0.7892	0.8128	0.8145
91-95 (5)	1998	0.8855	0.8779	0.8779	0.8779	0.8779	0.8779	0.8779	0.8568	0.8579	0.8909	0.8929
92-96 (5)	1999	0.9402	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.8979	0.8991	0.9340	0.9362
93-97 (5)	2000	1.0714	1.0905	1.0905	1.0905	1.0905	1.0905	1.0830	1.0255	1.0117	1.0509	1.0534
94-98 (5)	2001	1.1501	1.1875	1.1875	1.1875	1.1875	1.1488	1.1299	1.0785	1.0699	1.1111	1.1138
90-95 (6)	1998	0.9043	0.9007	0.9007	0.9007	0.9007	0.9007	0.9007	0.8835	0.8780	0.9060	0.9080
91-96 (6)	1999	0.9236	0.9247	0.9247	0.9247	0.9247	0.9247	0.9247	0.8872	0.8861	0.9203	0.9224
92-97 (6)	2000	1.0497	1.0579	1.0579	1.0579	1.0579	1.0579	1.0522	1.0017	1.0006	1.0392	1.0417
93-98 (6)	2001	1.1570	1.1928	1.1928	1.1928	1.1928	1.1619	1.1461	1.0914	1.0783	1.1199	1.1226
90-96 (7)	1999	0.9446	0.9478	0.9478	0.9478	0.9478	0.9478	0.9478	0.9151	0.9091	0.9394	0.9415
91-97 (7)	2000	1.0280	1.0335	1.0335	1.0335	1.0335	1.0335	1.0289	0.9849	0.9824	1.0203	1.0226
92-98 (7)	2001	1.1393	1.1637	1.1637	1.1637	1.1637	1.1387	1.1257	1.0741	1.0713	1.1126	1.1153
90-97 (8)	2000	1.0413	1.0486	1.0486	1.0486	1.0486	1.0486	1.0446	1.0046	0.9980	1.0321	1.0344
91-98 (8)	2001	1.1190	1.1389	1.1389	1.1389	1.1389	1.1182	1.1071	1.0597	1.0561	1.0968	1.0994
90-98 (9)	2001	1.1297	1.1499	1.1499	1.1499	1.1499	1.1317	1.1219	1.0775	1.0703	1.1074	1.1100

Medical
Exponential Fit
Differences: (Actual - Trended)

Years Used (# Yrs)	3 Yr Trend To	Severity Ratio (Avg Pd & Inc)	Severity Ratio (Incur)	Severity Ratio (Pd-2)	Severity Ratio (Pd-3)	Severity Ratio (Pd-4)	Severity Ratio (Pd-5)	Severity Ratio (Pd-6)	Severity Ratio (Pd-8)	Severity Ratio (Pd-12)	Severity Ratio (Pd-16)	Severity Ratio (Pd-20)
90-93 (4)	1996	-0.0156	-0.0096	-0.0096	-0.0096	-0.0096	-0.0096	-0.0096	-0.0314	-0.0294	-0.0217	-0.0216
91-94 (4)	1997	0.0813	0.0976	0.0976	0.0976	0.0976	0.0976	0.0928	0.0724	0.0624	0.0650	0.0653
92-95 (4)	1998	-0.0199	0.0001	0.0001	0.0001	0.0001	-0.0248	-0.0341	-0.0262	-0.0380	-0.0396	-0.0397
93-96 (4)	1999	0.0110	-0.0012	-0.0012	-0.0012	0.0020	-0.0124	-0.0225	0.0132	0.0217	0.0221	0.0222
94-97 (4)	2000	-0.0043	-0.0109	-0.0109	-0.0072	-0.0174	-0.0329	-0.0339	-0.0006	0.0017	0.0015	0.0014
95-98 (4)	2001	-0.0553	-0.0959	-0.0605	-0.0541	-0.0645	-0.0306	-0.0188	-0.0148	-0.0148	-0.0151	-0.0152
90-94 (5)	1997	0.0414	0.0505	0.0505	0.0505	0.0505	0.0505	0.0457	0.0253	0.0245	0.0322	0.0325
91-95 (5)	1998	0.0160	0.0366	0.0366	0.0366	0.0366	0.0117	0.0024	0.0022	-0.0044	-0.0046	-0.0045
92-96 (5)	1999	0.0266	0.0290	0.0290	0.0290	0.0322	0.0178	0.0077	0.0308	0.0236	0.0242	0.0243
93-97 (5)	2000	-0.0116	-0.0189	-0.0189	-0.0152	-0.0254	-0.0409	-0.0443	-0.0122	-0.0048	-0.0053	-0.0054
94-98 (5)	2001	-0.0779	-0.1222	-0.0868	-0.0804	-0.0908	-0.0683	-0.0605	-0.0353	-0.0333	-0.0346	-0.0347
90-95 (6)	1998	-0.0028	0.0138	0.0138	0.0138	0.0138	-0.0111	-0.0204	-0.0245	-0.0245	-0.0197	-0.0196
91-96 (6)	1999	0.0432	0.0483	0.0483	0.0483	0.0515	0.0371	0.0270	0.0415	0.0366	0.0379	0.0381
92-97 (6)	2000	0.0101	0.0137	0.0137	0.0174	0.0072	-0.0083	-0.0135	0.0116	0.0063	0.0064	0.0063
93-98 (6)	2001	-0.0848	-0.1275	-0.0921	-0.0857	-0.0961	-0.0814	-0.0767	-0.0482	-0.0417	-0.0434	-0.0435
90-96 (7)	1999	0.0222	0.0252	0.0252	0.0252	0.0284	0.0140	0.0039	0.0136	0.0136	0.0188	0.0190
91-97 (7)	2000	0.0318	0.0381	0.0381	0.0418	0.0316	0.0161	0.0098	0.0284	0.0245	0.0253	0.0254
92-98 (7)	2001	-0.0671	-0.0984	-0.0630	-0.0566	-0.0670	-0.0582	-0.0563	-0.0309	-0.0347	-0.0361	-0.0362
90-97 (8)	2000	0.0185	0.0230	0.0230	0.0267	0.0165	0.0010	-0.0059	0.0087	0.0089	0.0135	0.0136
91-98 (8)	2001	-0.0468	-0.0736	-0.0382	-0.0318	-0.0422	-0.0377	-0.0377	-0.0165	-0.0195	-0.0203	-0.0203
90-98 (9)	2001	-0.0575	-0.0846	-0.0492	-0.0428	-0.0532	-0.0512	-0.0525	-0.0343	-0.0337	-0.0309	-0.0309