

PENNSYLVANIA COMPENSATION RATING BUREAU

Retrospective Test of Trend Projections for Loss Ratios

Attached is a retrospective test of the predictive accuracy of various trend procedures.

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 loss ratio three years hence, were used. Our current review trends policy year 2005 3.25 years, policy year 2004 4.25 years, and policy year 2003 5.25 years. An average of those three values is then calculated.

Current estimates of policy year ultimate loss (to expected loss) ratios are compared with predicted values based on trending through earlier years. The results are shown for three loss development approaches: incurred, paid to twentieth and the average of the incurred and the paid to twentieth methods.

As an illustration, the incurred loss development approach generated an indemnity loss ratio of 0.5218 for policy year 2000. Fitting the loss ratios for policy years 1994 to 1997 using a straight line and projecting that to 2000 yielded a loss ratio of 0.2848, which understates our current estimate for 2000 by 0.2370 points.

Please note that the boxed numbers correspond to those numbers that do not have a comparable value in Exhibit 11b, Retrospective Test of Trend Projections for Severity Ratios.

Indemnity
Actual Ultimate Loss Ratios
Including Average of Paid and Incurred

INDEMNITY	Loss Ratio	Loss	Loss
Policy	Average	Ratio	Ratio
Year	(Pd & Inc)	(Incur)	(Pd-20)
1988	0.6527	0.6484	0.6570
1989	0.7723	0.7663	0.7783
1990	0.7827	0.7784	0.7871
1991	0.7660	0.7637	0.7683
1992	0.7074	0.7067	0.7081
1993	0.6785	0.6782	0.6788
1994	0.6449	0.6413	0.6484
1995	0.5929	0.5846	0.6012
1996	0.4810	0.4713	0.4906
1997	0.5026	0.4858	0.5193
1998	0.4930	0.4763	0.5098
1999	0.5284	0.5071	0.5497
2000	0.5463	0.5218	0.5707
2001	0.5094	0.4813	0.5376
2002	0.4968	0.4710	0.5227
2003	0.4644	0.4318	0.4969
2004	0.4813	0.4518	0.5107
2005	0.4341	0.4011	0.4671

Trend # Years = 3

**Indemnity
Linear Fit
Trended Loss Ratios**

Years Used (# Yrs)	3 Yr Trend To	Loss Ratio Average (Pd & Inc)	Loss Ratio (Incur)	Loss Ratio (Pd-20)
88-91 (4)	1994	0.9011	0.9003	0.9019
89-92 (4)	1995	0.6620	0.6667	0.6572
90-93(4)	1996	0.5666	0.5708	0.5623
91-94 (4)	1997	0.5227	0.5194	0.5259
92-95(4)	1998	0.4862	0.4713	0.5011
93-96 (4)	1999	0.3093	0.2890	0.3294
94-97 (4)	2000	0.3129	0.2848	0.3408
95-98 (4)	2001	0.3922	0.3648	0.4198
96-99 (4)	2002	0.5609	0.5292	0.5929
97-00 (4)	2003	0.5925	0.5602	0.6247
98-01 (4)	2004	0.5495	0.5100	0.5889
99-02 (4)	2005	0.4610	0.4283	0.4938
88-92 (5)	1995	0.7878	0.7897	0.7859
89-93 (5)	1996	0.6099	0.6147	0.6051
90-94 (5)	1997	0.5344	0.5338	0.5347
91-95 (5)	1998	0.4736	0.4631	0.4840
92-96 (5)	1999	0.3517	0.3342	0.3691
93-97 (5)	2000	0.3221	0.2948	0.3493
94-98 (5)	2001	0.3458	0.3175	0.3743
95-99 (5)	2002	0.4611	0.4300	0.4922
96-00 (5)	2003	0.5885	0.5536	0.6233
97-01 (5)	2004	0.5494	0.5127	0.5862
98-02 (5)	2005	0.5091	0.4733	0.5450
88-93 (6)	1996	0.7137	0.7166	0.7107
89-94 (6)	1997	0.5669	0.5680	0.5656
90-95 (6)	1998	0.4846	0.4777	0.4915
91-96 (6)	1999	0.3619	0.3479	0.3759
92-97 (6)	2000	0.3390	0.3146	0.3633
93-98 (6)	2001	0.3351	0.3065	0.3637
94-99 (6)	2002	0.4052	0.3735	0.4370
95-00 (6)	2003	0.5083	0.4739	0.5426
96-01 (6)	2004	0.5586	0.5203	0.5970
97-02 (6)	2005	0.5187	0.4836	0.5540
88-94 (7)	1997	0.6536	0.6542	0.6529
89-95 (7)	1998	0.5133	0.5089	0.5176
90-96 (7)	1999	0.3832	0.3724	0.3939
91-97 (7)	2000	0.3401	0.3192	0.3608
92-98 (7)	2001	0.3374	0.3107	0.3641
93-99 (7)	2002	0.3792	0.3474	0.4112
94-00 (7)	2003	0.4528	0.4179	0.4878
95-01 (7)	2004	0.5018	0.4638	0.5398
96-02 (7)	2005	0.5327	0.4954	0.5702
88-95 (8)	1998	0.5893	0.5854	0.5931
89-96 (8)	1999	0.4166	0.4084	0.4247
90-97 (8)	2000	0.3533	0.3359	0.3706
91-98 (8)	2001	0.3313	0.3074	0.3552
92-99 (8)	2002	0.3682	0.3378	0.3985
93-00 (8)	2003	0.4202	0.3851	0.4553
94-01(8)	2004	0.4561	0.4178	0.4946
95-02 (8)	2005	0.4906	0.4530	0.5284
88-96 (9)	1999	0.4901	0.4828	0.4973
89-97 (9)	2000	0.3796	0.3651	0.3939
90-98 (9)	2001	0.3375	0.3166	0.3583
91-99 (9)	2002	0.3533	0.3254	0.3812
92-00 (9)	2003	0.4013	0.3675	0.4351
93-01 (9)	2004	0.4259	0.3874	0.4645
94-02 (9)	2005	0.4527	0.4143	0.4913
88-97 (10)	2000	0.4430	0.4301	0.4559
89-98 (10)	2001	0.3568	0.3387	0.3749
90-99 (10)	2002	0.3510	0.3259	0.3760
91-00 (10)	2003	0.3806	0.3490	0.4122
92-01 (10)	2004	0.4063	0.3689	0.4437
93-02 (10)	2005	0.4254	0.3864	0.4645

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

Years Used (# Yrs)	3 Yr Trend To	Loss Ratio Average (Pd & Inc)	Loss Ratio (Incur)	Loss Ratio (Pd-20)
88-91 (4)	1994	-0.2562	-0.2590	-0.2535
89-92 (4)	1995	-0.0691	-0.0821	-0.0560
90-93(4)	1996	-0.0856	-0.0995	-0.0717
91-94 (4)	1997	-0.0201	-0.0336	-0.0065
92-95(4)	1998	0.0068	0.0050	0.0087
93-96 (4)	1999	0.2191	0.2181	0.2203
94-97 (4)	2000	0.2334	0.2370	0.2299
95-98 (4)	2001	0.1172	0.1165	0.1179
96-99 (4)	2002	-0.0641	-0.0582	-0.0702
97-00 (4)	2003	-0.1281	-0.1284	-0.1278
98-01 (4)	2004	-0.0682	-0.0582	-0.0782
99-02 (4)	2005	-0.0269	-0.0272	-0.0267
88-92 (5)	1995	-0.1949	-0.2051	-0.1847
89-93 (5)	1996	-0.1289	-0.1434	-0.1145
90-94 (5)	1997	-0.0318	-0.0480	-0.0154
91-95 (5)	1998	0.0194	0.0132	0.0258
92-96 (5)	1999	0.1767	0.1729	0.1806
93-97 (5)	2000	0.2242	0.2270	0.2214
94-98 (5)	2001	0.1636	0.1638	0.1633
95-99 (5)	2002	0.0357	0.0410	0.0305
96-00 (5)	2003	-0.1241	-0.1218	-0.1264
97-01 (5)	2004	-0.0681	-0.0609	-0.0755
98-02 (5)	2005	-0.0750	-0.0722	-0.0778
88-93 (6)	1996	-0.2327	-0.2453	-0.2201
89-94 (6)	1997	-0.0643	-0.0822	-0.0463
90-95 (6)	1998	0.0084	-0.0014	0.0183
91-96 (6)	1999	0.1665	0.1592	0.1738
92-97 (6)	2000	0.2073	0.2072	0.2074
93-98 (6)	2001	0.1743	0.1748	0.1739
94-99 (6)	2002	0.0916	0.0975	0.0857
95-00 (6)	2003	-0.0439	-0.0421	-0.0457
96-01 (6)	2004	-0.0773	-0.0685	-0.0863
97-02 (6)	2005	-0.0846	-0.0825	-0.0869
88-94 (7)	1997	-0.1510	-0.1684	-0.1336
89-95 (7)	1998	-0.0203	-0.0326	-0.0078
90-96 (7)	1999	0.1452	0.1347	0.1558
91-97 (7)	2000	0.2062	0.2026	0.2099
92-98 (7)	2001	0.1720	0.1706	0.1735
93-99 (7)	2002	0.1176	0.1237	0.1115
94-00 (7)	2003	0.0116	0.0139	0.0091
95-01 (7)	2004	-0.0205	-0.0120	-0.0291
96-02 (7)	2005	-0.0986	-0.0943	-0.1031
88-95 (8)	1998	-0.0963	-0.1091	-0.0833
89-96 (8)	1999	0.1118	0.0987	0.1250
90-97 (8)	2000	0.1930	0.1859	0.2001
91-98 (8)	2001	0.1781	0.1739	0.1824
92-99 (8)	2002	0.1286	0.1332	0.1242
93-00 (8)	2003	0.0442	0.0467	0.0416
94-01(8)	2004	0.0252	0.0340	0.0161
95-02 (8)	2005	-0.0565	-0.0519	-0.0613
88-96 (9)	1999	0.0383	0.0243	0.0524
89-97 (9)	2000	0.1667	0.1567	0.1768
90-98 (9)	2001	0.1719	0.1647	0.1793
91-99 (9)	2002	0.1435	0.1456	0.1415
92-00 (9)	2003	0.0631	0.0643	0.0618
93-01 (9)	2004	0.0554	0.0644	0.0462
94-02 (9)	2005	-0.0186	-0.0132	-0.0242
88-97 (10)	2000	0.1033	0.0917	0.1148
89-98 (10)	2001	0.1526	0.1426	0.1627
90-99 (10)	2002	0.1458	0.1451	0.1467
91-00 (10)	2003	0.0838	0.0828	0.0847
92-01 (10)	2004	0.0750	0.0829	0.0670
93-02 (10)	2005	0.0087	0.0147	0.0026

**Indemnity
Exponential Fit
Trended Loss Ratios**

Years Used (# Yrs)	3 Yr Trend To	Loss Ratio Average (Pd & Inc)	Loss Ratio (Incur)	Loss Ratio (Pd-20)
88-91 (4)	1994	0.9258	0.9260	0.9258
89-92 (4)	1995	0.6655	0.6695	0.6615
90-93(4)	1996	0.5827	0.5858	0.5796
91-94 (4)	1997	0.5429	0.5397	0.5458
92-95(4)	1998	0.5040	0.4915	0.5167
93-96 (4)	1999	0.3597	0.3453	0.3743
94-97 (4)	2000	0.3584	0.3377	0.3796
95-98 (4)	2001	0.4099	0.3863	0.4341
96-99 (4)	2002	0.5638	0.5306	0.5977
97-00 (4)	2003	0.5971	0.5635	0.6308
98-01 (4)	2004	0.5505	0.5098	0.5916
99-02 (4)	2005	0.4635	0.4319	0.4956
88-92 (5)	1995	0.7928	0.7954	0.7903
89-93 (5)	1996	0.6182	0.6220	0.6145
90-94 (5)	1997	0.5537	0.5526	0.5546
91-95 (5)	1998	0.4992	0.4902	0.5082
92-96 (5)	1999	0.3912	0.3779	0.4045
93-97 (5)	2000	0.3677	0.3477	0.3880
94-98 (5)	2001	0.3795	0.3572	0.4024
95-99 (5)	2002	0.4675	0.4390	0.4966
96-00 (5)	2003	0.5936	0.5566	0.6310
97-01 (5)	2004	0.5501	0.5124	0.5882
98-02 (5)	2005	0.5090	0.4731	0.5452
88-93 (6)	1996	0.7146	0.7177	0.7115
89-94 (6)	1997	0.5797	0.5800	0.5793
90-95 (6)	1998	0.5098	0.5033	0.5162
91-96 (6)	1999	0.4042	0.3930	0.4154
92-97 (6)	2000	0.3817	0.3633	0.4003
93-98 (6)	2001	0.3750	0.3535	0.3972
94-99 (6)	2002	0.4241	0.3976	0.4514
95-00 (6)	2003	0.5108	0.4779	0.5442
96-01 (6)	2004	0.5606	0.5206	0.6013
97-02 (6)	2005	0.5184	0.4830	0.5542
88-94 (7)	1997	0.6548	0.6552	0.6544
89-95 (7)	1998	0.5320	0.5273	0.5366
90-96 (7)	1999	0.4221	0.4128	0.4314
91-97 (7)	2000	0.3874	0.3714	0.4036
92-98 (7)	2001	0.3792	0.3590	0.3999
93-99 (7)	2002	0.4070	0.3817	0.4330
94-00 (7)	2003	0.4633	0.4326	0.4946
95-01 (7)	2004	0.5042	0.4677	0.5415
96-02 (7)	2005	0.5331	0.4949	0.5719
88-95 (8)	1998	0.5930	0.5886	0.5972
89-96 (8)	1999	0.4463	0.4384	0.4541
90-97 (8)	2000	0.3992	0.3851	0.4133
91-98 (8)	2001	0.3797	0.3614	0.3982
92-99 (8)	2002	0.4012	0.3775	0.4255
93-00 (8)	2003	0.4388	0.4097	0.4686
94-01(8)	2004	0.4654	0.4312	0.5005
95-02 (8)	2005	0.4930	0.4569	0.5299
88-96 (9)	1999	0.4981	0.4904	0.5056
89-97 (9)	2000	0.4176	0.4050	0.4302
90-98 (9)	2001	0.3865	0.3700	0.4032
91-99 (9)	2002	0.3949	0.3733	0.4169
92-00 (9)	2003	0.4262	0.3989	0.4541
93-01 (9)	2004	0.4426	0.4100	0.4761
94-02 (9)	2005	0.4615	0.4269	0.4970
88-97 (10)	2000	0.4597	0.4473	0.4719
89-98 (10)	2001	0.4001	0.3850	0.4153
90-99 (10)	2002	0.3959	0.3762	0.4159
91-00 (10)	2003	0.4146	0.3896	0.4401
92-01 (10)	2004	0.4293	0.3986	0.4608
93-02 (10)	2005	0.4411	0.4077	0.4754

Indemnity
Exponential Fit
Differences: (Actual - Trended)

Years Used (# Yrs)	3 Yr Trend To	Loss Ratio Average (Pd & Inc)	Loss Ratio (Incur)	Loss Ratio (Pd-20)
88-91 (4)	1994	-0.2809	-0.2847	-0.2774
89-92 (4)	1995	-0.0726	-0.0849	-0.0603
90-93(4)	1996	-0.1017	-0.1145	-0.0890
91-94 (4)	1997	-0.0403	-0.0539	-0.0265
92-95(4)	1998	-0.0110	-0.0152	-0.0069
93-96 (4)	1999	0.1687	0.1618	0.1754
94-97 (4)	2000	0.1879	0.1841	0.1911
95-98 (4)	2001	0.0995	0.0950	0.1035
96-99 (4)	2002	-0.0670	-0.0596	-0.0750
97-00 (4)	2003	-0.1327	-0.1317	-0.1339
98-01 (4)	2004	-0.0692	-0.0580	-0.0809
99-02 (4)	2005	-0.0294	-0.0308	-0.0285
88-92 (5)	1995	-0.1999	-0.2108	-0.1891
89-93 (5)	1996	-0.1372	-0.1507	-0.1239
90-94 (5)	1997	-0.0511	-0.0668	-0.0353
91-95 (5)	1998	-0.0062	-0.0139	0.0016
92-96 (5)	1999	0.1372	0.1292	0.1452
93-97 (5)	2000	0.1786	0.1741	0.1827
94-98 (5)	2001	0.1299	0.1241	0.1352
95-99 (5)	2002	0.0293	0.0320	0.0261
96-00 (5)	2003	-0.1292	-0.1248	-0.1341
97-01 (5)	2004	-0.0688	-0.0606	-0.0775
98-02 (5)	2005	-0.0749	-0.0720	-0.0781
88-93 (6)	1996	-0.2336	-0.2464	-0.2209
89-94 (6)	1997	-0.0771	-0.0942	-0.0600
90-95 (6)	1998	-0.0168	-0.0270	-0.0064
91-96 (6)	1999	0.1242	0.1141	0.1343
92-97 (6)	2000	0.1646	0.1585	0.1704
93-98 (6)	2001	0.1344	0.1278	0.1404
94-99 (6)	2002	0.0727	0.0734	0.0713
95-00 (6)	2003	-0.0464	-0.0461	-0.0473
96-01 (6)	2004	-0.0793	-0.0688	-0.0906
97-02 (6)	2005	-0.0843	-0.0819	-0.0871
88-94 (7)	1997	-0.1522	-0.1694	-0.1351
89-95 (7)	1998	-0.0390	-0.0510	-0.0268
90-96 (7)	1999	0.1063	0.0943	0.1183
91-97 (7)	2000	0.1589	0.1504	0.1671
92-98 (7)	2001	0.1302	0.1223	0.1377
93-99 (7)	2002	0.0898	0.0893	0.0897
94-00 (7)	2003	0.0011	-0.0008	0.0023
95-01 (7)	2004	-0.0229	-0.0159	-0.0308
96-02 (7)	2005	-0.0990	-0.0938	-0.1048
88-95 (8)	1998	-0.1000	-0.1123	-0.0874
89-96 (8)	1999	0.0821	0.0687	0.0956
90-97 (8)	2000	0.1471	0.1367	0.1574
91-98 (8)	2001	0.1297	0.1199	0.1394
92-99 (8)	2002	0.0956	0.0935	0.0972
93-00 (8)	2003	0.0256	0.0221	0.0283
94-01(8)	2004	0.0159	0.0206	0.0102
95-02 (8)	2005	-0.0589	-0.0558	-0.0628
88-96 (9)	1999	0.0303	0.0167	0.0441
89-97 (9)	2000	0.1287	0.1168	0.1405
90-98 (9)	2001	0.1229	0.1113	0.1344
91-99 (9)	2002	0.1019	0.0977	0.1058
92-00 (9)	2003	0.0382	0.0329	0.0428
93-01 (9)	2004	0.0387	0.0418	0.0346
94-02 (9)	2005	-0.0274	-0.0258	-0.0299
88-97 (10)	2000	0.0866	0.0745	0.0988
89-98 (10)	2001	0.1093	0.0963	0.1223
90-99 (10)	2002	0.1009	0.0948	0.1068
91-00 (10)	2003	0.0498	0.0422	0.0568
92-01 (10)	2004	0.0520	0.0532	0.0499
93-02 (10)	2005	-0.0070	-0.0066	-0.0083

Medical
Actual Ultimate Loss Ratios
Including Average of Paid and Incurred

MEDICAL	Policy Year	Loss Ratio Average (Pd & Inc)	Loss Ratio (Incur)	Loss Ratio (Pd-20)
	1988	0.3770	0.3691	0.3849
	1989	0.4680	0.4628	0.4731
	1990	0.4938	0.4825	0.5050
	1991	0.5167	0.5110	0.5225
	1992	0.5118	0.5081	0.5156
	1993	0.4841	0.4775	0.4907
	1994	0.4707	0.4670	0.4745
	1995	0.4684	0.4669	0.4698
	1996	0.4302	0.4304	0.4300
	1997	0.4597	0.4578	0.4617
	1998	0.4755	0.4850	0.4661
	1999	0.4918	0.4979	0.4856
	2000	0.5004	0.5054	0.4953
	2001	0.4630	0.4562	0.4697
	2002	0.4758	0.4758	0.4758
	2003	0.4716	0.4680	0.4753
	2004	0.5193	0.5200	0.5185
	2005	0.4901	0.4960	0.4841

Trend # Years = 3

**Medical
Linear Fit
Trended Loss Ratios**

Years Used (# Yrs)	3 Yr Trend To	Loss Ratio Average (Pd & Inc)	Loss Ratio (Incur)	Loss Ratio (Pd-20)
88-91 (4)	1994	0.6641	0.6568	0.6715
89-92 (4)	1995	0.5670	0.5651	0.5693
90-93(4)	1996	0.4863	0.4867	0.4860
91-94 (4)	1997	0.4213	0.4177	0.4248
92-95(4)	1998	0.4191	0.4195	0.4185
93-96 (4)	1999	0.3896	0.3968	0.3822
94-97 (4)	2000	0.4252	0.4267	0.4238
95-98 (4)	2001	0.4813	0.4968	0.4662
96-99 (4)	2002	0.5546	0.5711	0.5379
97-00 (4)	2003	0.5441	0.5566	0.5313
98-01 (4)	2004	0.4697	0.4506	0.4884
99-02 (4)	2005	0.4443	0.4319	0.4569
88-92 (5)	1995	0.6326	0.6298	0.6356
89-93 (5)	1996	0.5200	0.5159	0.5243
90-94 (5)	1997	0.4560	0.4570	0.4553
91-95 (5)	1998	0.4215	0.4215	0.4214
92-96 (5)	1999	0.3836	0.3870	0.3801
93-97 (5)	2000	0.4180	0.4219	0.4141
94-98 (5)	2001	0.4614	0.4749	0.4480
95-99 (5)	2002	0.5112	0.5259	0.4965
96-00 (5)	2003	0.5578	0.5704	0.5450
97-01 (5)	2004	0.4938	0.4891	0.4983
98-02 (5)	2005	0.4672	0.4540	0.4803
88-93 (6)	1996	0.5836	0.5795	0.5879
89-94 (6)	1997	0.4876	0.4853	0.4902
90-95 (6)	1998	0.4449	0.4477	0.4422
91-96 (6)	1999	0.3898	0.3924	0.3870
92-97 (6)	2000	0.4041	0.4062	0.4020
93-98 (6)	2001	0.4468	0.4599	0.4338
94-99 (6)	2002	0.4906	0.5046	0.4766
95-00 (6)	2003	0.5277	0.5402	0.5150
96-01 (6)	2004	0.5176	0.5169	0.5182
97-02 (6)	2005	0.4858	0.4814	0.4900
88-94 (7)	1997	0.5456	0.5430	0.5483
89-95 (7)	1998	0.4710	0.4711	0.4710
90-96 (7)	1999	0.4119	0.4164	0.4073
91-97 (7)	2000	0.4024	0.4043	0.4004
92-98 (7)	2001	0.4290	0.4393	0.4188
93-99 (7)	2002	0.4738	0.4878	0.4597
94-00 (7)	2003	0.5098	0.5226	0.4969
95-01 (7)	2004	0.5034	0.5052	0.5014
96-02 (7)	2005	0.5070	0.5055	0.5083
88-95 (8)	1998	0.5217	0.5213	0.5222
89-96 (8)	1999	0.4373	0.4396	0.4351
90-97 (8)	2000	0.4164	0.4202	0.4126
91-98 (8)	2001	0.4220	0.4310	0.4130
92-99 (8)	2002	0.4544	0.4662	0.4424
93-00 (8)	2003	0.4935	0.5069	0.4801
94-01(8)	2004	0.4937	0.4976	0.4896
95-02 (8)	2005	0.4980	0.4988	0.4972
88-96 (9)	1999	0.4847	0.4864	0.4831
89-97 (9)	2000	0.4360	0.4381	0.4339
90-98 (9)	2001	0.4296	0.4394	0.4199
91-99 (9)	2002	0.4440	0.4549	0.4331
92-00 (9)	2003	0.4744	0.4864	0.4624
93-01 (9)	2004	0.4828	0.4887	0.4769
94-02 (9)	2005	0.4912	0.4939	0.4884
88-97 (10)	2000	0.4765	0.4784	0.4748
89-98 (10)	2001	0.4439	0.4517	0.4363
90-99 (10)	2002	0.4470	0.4586	0.4355
91-00 (10)	2003	0.4627	0.4740	0.4514
92-01 (10)	2004	0.4679	0.4736	0.4620
93-02 (10)	2005	0.4825	0.4870	0.4779

Medical

Linear Fit

Differences: (Actual - Trended)

Years Used (# Yrs)	3 Yr Trend To	Loss Ratio Average (Pd & Inc)	Loss Ratio (Incur)	Loss Ratio (Pd-20)
88-91 (4)	1994	-0.1934	-0.1898	-0.1970
89-92 (4)	1995	-0.0986	-0.0982	-0.0995
90-93(4)	1996	-0.0561	-0.0563	-0.0560
91-94 (4)	1997	0.0384	0.0401	0.0369
92-95(4)	1998	0.0564	0.0655	0.0476
93-96 (4)	1999	0.1023	0.1011	0.1034
94-97 (4)	2000	0.0752	0.0787	0.0715
95-98 (4)	2001	-0.0183	-0.0406	0.0035
96-99 (4)	2002	-0.0788	-0.0953	-0.0621
97-00 (4)	2003	-0.0725	-0.0886	-0.0560
98-01 (4)	2004	0.0496	0.0694	0.0301
99-02 (4)	2005	0.0458	0.0642	0.0272
88-92 (5)	1995	-0.1642	-0.1629	-0.1658
89-93 (5)	1996	-0.0898	-0.0855	-0.0943
90-94 (5)	1997	0.0037	0.0008	0.0064
91-95 (5)	1998	0.0540	0.0636	0.0447
92-96 (5)	1999	0.1082	0.1109	0.1055
93-97 (5)	2000	0.0824	0.0835	0.0812
94-98 (5)	2001	0.0017	-0.0187	0.0217
95-99 (5)	2002	-0.0354	-0.0501	-0.0207
96-00 (5)	2003	-0.0862	-0.1024	-0.0697
97-01 (5)	2004	0.0255	0.0309	0.0202
98-02 (5)	2005	0.0229	0.0420	0.0038
88-93 (6)	1996	-0.1534	-0.1491	-0.1579
89-94 (6)	1997	-0.0279	-0.0275	-0.0285
90-95 (6)	1998	0.0306	0.0373	0.0239
91-96 (6)	1999	0.1020	0.1055	0.0986
92-97 (6)	2000	0.0963	0.0992	0.0933
93-98 (6)	2001	0.0162	-0.0037	0.0359
94-99 (6)	2002	-0.0148	-0.0288	-0.0008
95-00 (6)	2003	-0.0561	-0.0722	-0.0397
96-01 (6)	2004	0.0017	0.0031	0.0003
97-02 (6)	2005	0.0043	0.0146	-0.0059
88-94 (7)	1997	-0.0859	-0.0852	-0.0866
89-95 (7)	1998	0.0045	0.0139	-0.0049
90-96 (7)	1999	0.0800	0.0815	0.0783
91-97 (7)	2000	0.0980	0.1011	0.0949
92-98 (7)	2001	0.0340	0.0169	0.0509
93-99 (7)	2002	0.0020	-0.0120	0.0161
94-00 (7)	2003	-0.0382	-0.0546	-0.0216
95-01 (7)	2004	0.0160	0.0148	0.0171
96-02 (7)	2005	-0.0169	-0.0095	-0.0242
88-95 (8)	1998	-0.0462	-0.0363	-0.0561
89-96 (8)	1999	0.0545	0.0583	0.0505
90-97 (8)	2000	0.0840	0.0852	0.0827
91-98 (8)	2001	0.0410	0.0252	0.0567
92-99 (8)	2002	0.0214	0.0096	0.0334
93-00 (8)	2003	-0.0219	-0.0389	-0.0048
94-01(8)	2004	0.0256	0.0224	0.0289
95-02 (8)	2005	-0.0079	-0.0028	-0.0131
88-96 (9)	1999	0.0071	0.0115	0.0025
89-97 (9)	2000	0.0644	0.0673	0.0614
90-98 (9)	2001	0.0334	0.0168	0.0498
91-99 (9)	2002	0.0318	0.0209	0.0427
92-00 (9)	2003	-0.0028	-0.0184	0.0129
93-01 (9)	2004	0.0365	0.0313	0.0416
94-02 (9)	2005	-0.0011	0.0021	-0.0043
88-97 (10)	2000	0.0239	0.0270	0.0205
89-98 (10)	2001	0.0191	0.0045	0.0334
90-99 (10)	2002	0.0288	0.0172	0.0403
91-00 (10)	2003	0.0089	-0.0060	0.0239
92-01 (10)	2004	0.0514	0.0464	0.0565
93-02 (10)	2005	0.0076	0.0090	0.0062

**Medical
Exponential Fit
Trended Loss Ratios**

Years Used (# Yrs)	3 Yr Trend To	Loss Ratio Average (Pd & Inc)	Loss Ratio (Incur)	Loss Ratio (Pd-20)
88-91 (4)	1994	0.7222	0.7161	0.7284
89-92 (4)	1995	0.5726	0.5712	0.5745
90-93(4)	1996	0.4861	0.4864	0.4861
91-94 (4)	1997	0.4261	0.4224	0.4297
92-95(4)	1998	0.4236	0.4236	0.4234
93-96 (4)	1999	0.3938	0.3999	0.3879
94-97 (4)	2000	0.4260	0.4273	0.4248
95-98 (4)	2001	0.4817	0.4974	0.4665
96-99 (4)	2002	0.5641	0.5835	0.5449
97-00 (4)	2003	0.5483	0.5622	0.5342
98-01 (4)	2004	0.4691	0.4502	0.4884
99-02 (4)	2005	0.4456	0.4342	0.4574
88-92 (5)	1995	0.6710	0.6705	0.6719
89-93 (5)	1996	0.5208	0.5167	0.5251
90-94 (5)	1997	0.4568	0.4574	0.4565
91-95 (5)	1998	0.4259	0.4255	0.4262
92-96 (5)	1999	0.3905	0.3931	0.3878
93-97 (5)	2000	0.4197	0.4231	0.4164
94-98 (5)	2001	0.4610	0.4742	0.4481
95-99 (5)	2002	0.5129	0.5287	0.4975
96-00 (5)	2003	0.5665	0.5810	0.5519
97-01 (5)	2004	0.4937	0.4883	0.4987
98-02 (5)	2005	0.4671	0.4543	0.4803
88-93 (6)	1996	0.6044	0.6014	0.6076
89-94 (6)	1997	0.4874	0.4851	0.4900
90-95 (6)	1998	0.4465	0.4488	0.4443
91-96 (6)	1999	0.3964	0.3983	0.3944
92-97 (6)	2000	0.4084	0.4100	0.4069
93-98 (6)	2001	0.4469	0.4592	0.4349
94-99 (6)	2002	0.4905	0.5049	0.4763
95-00 (6)	2003	0.5306	0.5443	0.5170
96-01 (6)	2004	0.5205	0.5191	0.5214
97-02 (6)	2005	0.4858	0.4811	0.4902
88-94 (7)	1997	0.5571	0.5555	0.5589
89-95 (7)	1998	0.4710	0.4710	0.4711
90-96 (7)	1999	0.4150	0.4187	0.4113
91-97 (7)	2000	0.4075	0.4088	0.4061
92-98 (7)	2001	0.4309	0.4401	0.4219
93-99 (7)	2002	0.4732	0.4871	0.4596
94-00 (7)	2003	0.5105	0.5240	0.4971
95-01 (7)	2004	0.5043	0.5058	0.5025
96-02 (7)	2005	0.5090	0.5071	0.5106
88-95 (8)	1998	0.5291	0.5297	0.5286
89-96 (8)	1999	0.4376	0.4396	0.4357
90-97 (8)	2000	0.4193	0.4224	0.4164
91-98 (8)	2001	0.4250	0.4328	0.4172
92-99 (8)	2002	0.4547	0.4658	0.4436
93-00 (8)	2003	0.4932	0.5068	0.4797
94-01(8)	2004	0.4938	0.4975	0.4898
95-02 (8)	2005	0.4989	0.4994	0.4982
88-96 (9)	1999	0.4877	0.4902	0.4852
89-97 (9)	2000	0.4367	0.4386	0.4350
90-98 (9)	2001	0.4315	0.4402	0.4231
91-99 (9)	2002	0.4452	0.4551	0.4354
92-00 (9)	2003	0.4741	0.4857	0.4626
93-01 (9)	2004	0.4824	0.4880	0.4767
94-02 (9)	2005	0.4914	0.4940	0.4887
88-97 (10)	2000	0.4791	0.4816	0.4769
89-98 (10)	2001	0.4445	0.4516	0.4375
90-99 (10)	2002	0.4478	0.4584	0.4374
91-00 (10)	2003	0.4629	0.4735	0.4523
92-01 (10)	2004	0.4678	0.4730	0.4624
93-02 (10)	2005	0.4823	0.4867	0.4778

Medical
Exponential Fit
Differences: (Actual - Trended)

Years Used (# Yrs)	3 Yr Trend To	Loss Ratio Average (Pd & Inc)	Loss Ratio (Incur)	Loss Ratio (Pd-20)
88-91 (4)	1994	-0.2515	-0.2491	-0.2539
89-92 (4)	1995	-0.1042	-0.1043	-0.1047
90-93(4)	1996	-0.0559	-0.0560	-0.0561
91-94 (4)	1997	0.0336	0.0354	0.0320
92-95(4)	1998	0.0519	0.0614	0.0427
93-96 (4)	1999	0.0980	0.0980	0.0977
94-97 (4)	2000	0.0744	0.0781	0.0705
95-98 (4)	2001	-0.0187	-0.0412	0.0032
96-99 (4)	2002	-0.0883	-0.1077	-0.0691
97-00 (4)	2003	-0.0767	-0.0942	-0.0589
98-01 (4)	2004	0.0502	0.0698	0.0301
99-02 (4)	2005	0.0445	0.0618	0.0267
88-92 (5)	1995	-0.2026	-0.2036	-0.2021
89-93 (5)	1996	-0.0906	-0.0863	-0.0951
90-94 (5)	1997	0.0029	0.0004	0.0052
91-95 (5)	1998	0.0496	0.0595	0.0399
92-96 (5)	1999	0.1013	0.1048	0.0978
93-97 (5)	2000	0.0807	0.0823	0.0789
94-98 (5)	2001	0.0020	-0.0180	0.0216
95-99 (5)	2002	-0.0371	-0.0529	-0.0217
96-00 (5)	2003	-0.0949	-0.1130	-0.0766
97-01 (5)	2004	0.0256	0.0317	0.0198
98-02 (5)	2005	0.0230	0.0417	0.0038
88-93 (6)	1996	-0.1742	-0.1710	-0.1776
89-94 (6)	1997	-0.0277	-0.0273	-0.0283
90-95 (6)	1998	0.0290	0.0362	0.0218
91-96 (6)	1999	0.0954	0.0996	0.0912
92-97 (6)	2000	0.0920	0.0954	0.0884
93-98 (6)	2001	0.0161	-0.0030	0.0348
94-99 (6)	2002	-0.0147	-0.0291	-0.0005
95-00 (6)	2003	-0.0590	-0.0763	-0.0417
96-01 (6)	2004	-0.0012	0.0009	-0.0029
97-02 (6)	2005	0.0043	0.0149	-0.0061
88-94 (7)	1997	-0.0974	-0.0977	-0.0972
89-95 (7)	1998	0.0045	0.0140	-0.0050
90-96 (7)	1999	0.0768	0.0792	0.0743
91-97 (7)	2000	0.0929	0.0966	0.0892
92-98 (7)	2001	0.0321	0.0161	0.0478
93-99 (7)	2002	0.0026	-0.0113	0.0162
94-00 (7)	2003	-0.0389	-0.0560	-0.0218
95-01 (7)	2004	0.0150	0.0142	0.0160
96-02 (7)	2005	-0.0189	-0.0111	-0.0265
88-95 (8)	1998	-0.0536	-0.0447	-0.0625
89-96 (8)	1999	0.0542	0.0583	0.0499
90-97 (8)	2000	0.0811	0.0830	0.0789
91-98 (8)	2001	0.0380	0.0234	0.0525
92-99 (8)	2002	0.0211	0.0100	0.0322
93-00 (8)	2003	-0.0216	-0.0388	-0.0044
94-01(8)	2004	0.0255	0.0225	0.0287
95-02 (8)	2005	-0.0088	-0.0034	-0.0141
88-96 (9)	1999	0.0041	0.0077	0.0004
89-97 (9)	2000	0.0637	0.0668	0.0603
90-98 (9)	2001	0.0315	0.0160	0.0466
91-99 (9)	2002	0.0306	0.0207	0.0404
92-00 (9)	2003	-0.0025	-0.0177	0.0127
93-01 (9)	2004	0.0369	0.0320	0.0418
94-02 (9)	2005	-0.0013	0.0020	-0.0046
88-97 (10)	2000	0.0213	0.0238	0.0184
89-98 (10)	2001	0.0185	0.0046	0.0322
90-99 (10)	2002	0.0280	0.0174	0.0384
91-00 (10)	2003	0.0087	-0.0055	0.0230
92-01 (10)	2004	0.0515	0.0470	0.0561
93-02 (10)	2005	0.0078	0.0093	0.0063