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 2010 3.25 years, policy year 2009 4.25 years, and policy year 2008 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 twenty-fourth and the average of the incurred and the paid to twenty-fourth methods.

As an illustration, the incurred loss development approach generates an indemnity loss ratio of 0.5065 for policy year 2005. Fitting the loss ratios for policy years 1999 to 2002 using a straight line and projecting that to 2005 yields a loss ratio of 0.5505, which overstates our current estimate for 2005 by 0.0440.

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-24)
	1993	0.8141	0.8162	0.8120
	1994	0.7761	0.7770	0.7752
	1995	0.7181	0.7132	0.7230
	1996	0.6048	0.5982	0.6113
	1997	0.6192	0.6058	0.6327
	1998	0.5818	0.5668	0.5967
	1999	0.6171	0.6003	0.6340
	2000	0.6309	0.6145	0.6474
	2001	0.5944	0.5766	0.6121
	2002	0.5912	0.5813	0.6010
	2003	0.5523	0.5418	0.5628
	2004	0.5532	0.5482	0.5583
	2005	0.5162	0.5065	0.5259
	2006	0.5070	0.4994	0.5147
	2007	0.5290	0.5151	0.5428
	2008	0.5170	0.4937	0.5403
	2009	0.4990	0.4748	0.5232
	2010	0.4906	0.4654	0.5157

Trend # Years =   3

11a.1

Indemnity
Linear Fit
Trended Loss Ratios

Years Used (# Yrs)	3 Yr Trend To	Loss Ratio Average (Pd & Inc)	Loss Ratio (Incur)	Loss Ratio (Pd-24)
93-96 (4)	1999	0.4196	0.4031	0.4359
94-97 (4)	2000	0.4168	0.3907	0.4429
95-98 (4)	2001	0.4535	0.4268	0.4801
96-99 (4)	2002	0.6055	0.5781	0.6331
97-00 (4)	2003	0.6439	0.6237	0.6643
98-01 (4)	2004	0.6293	0.6092	0.6494
99-02 (4)	2005	0.5570	0.5505	0.5632
00-03 (4)	2006	0.4847	0.4825	0.4866
01-04 (4)	2007	0.4997	0.5059	0.4937
02-05 (4)	2008	0.4524	0.4464	0.4586
03-06 (4)	2009	0.4544	0.4480	0.4609
04-07 (4)	2010	0.4895	0.4694	0.5095
93-97 (5)	2000	0.4259	0.4023	0.4496
94-98 (5)	2001	0.4163	0.3883	0.4441
95-99 (5)	2002	0.5157	0.4883	0.5432
96-00 (5)	2003	0.6358	0.6107	0.6612
97-01(5)	2004	0.6084	0.5875	0.6293
98-02 (5)	2005	0.6011	0.5906	0.6116
99-03 (5)	2006	0.5125	0.5078	0.5171
00-04 (5)	2007	0.4857	0.4888	0.4826
01-05 (5)	2008	0.4643	0.4642	0.4645
02-06 (5)	2009	0.4417	0.4359	0.4478
03-07 (5)	2010	0.4851	0.4711	0.4991
93-98 (6)	2001	0.4114	0.3848	0.4379
94-99 (6)	2002	0.4659	0.4369	0.4950
95-00 (6)	2003	0.5601	0.5338	0.5865
96-01 (6)	2004	0.6109	0.5861	0.6358
97-02 (6)	2005	0.5919	0.5785	0.6051
98-03 (6)	2006	0.5535	0.5457	0.5613
99-04 (6)	2007	0.5021	0.5026	0.5015
00-05 (6)	2008	0.4574	0.4570	0.4578
01-06 (6)	2009	0.4485	0.4474	0.4498
02-07 (6)	2010	0.4654	0.4535	0.4774
93-99 (7)	2002	0.4448	0.4163	0.4733
94-00 (7)	2003	0.5082	0.4798	0.5366
95-01 (7)	2004	0.5550	0.5288	0.5812
96-02 (7)	2005	0.5968	0.5788	0.6147
97-03 (7)	2006	0.5543	0.5439	0.5646
98-04 (7)	2007	0.5340	0.5315	0.5366
99-05 (7)	2008	0.4721	0.4709	0.4734
00-06 (7)	2009	0.4423	0.4415	0.4432
01-07 (7)	2010	0.4632	0.4562	0.4702
93-00 (8)	2003	0.4790	0.4505	0.5076
94-01 (8)	2004	0.5106	0.4823	0.5389
95-02 (8)	2005	0.5524	0.5319	0.5728
96-03 (8)	2006	0.5637	0.5490	0.5783
97-04 (8)	2007	0.5365	0.5312	0.5418
98-05 (8)	2008	0.5009	0.4977	0.5041
99-06 (8)	2009	0.4537	0.4525	0.4550
00-07 (8)	2010	0.4529	0.4473	0.4585
93-01 (9)	2004	0.4822	0.4534	0.5111
94-02 (9)	2005	0.5133	0.4900	0.5366
95-03 (9)	2006	0.5300	0.5127	0.5473
96-04 (9)	2007	0.5459	0.5364	0.5555
97-05 (9)	2008	0.5062	0.5009	0.5115
98-06 (9)	2009	0.4783	0.4757	0.4810
99-07 (9)	2010	0.4585	0.4535	0.4636
93-02 (10)	2005	0.4859	0.4612	0.5106
94-03 (10)	2006	0.4975	0.4772	0.5178
95-04 (10)	2007	0.5181	0.5056	0.5306
96-05 (10)	2008	0.5170	0.5082	0.5258
97-06 (10)	2009	0.4842	0.4799	0.4885
98-07 (10)	2010	0.4772	0.4716	0.4829

Indemnity
Linear Fit
Differences: (Actual - Trended)

Years Used (# Yrs)	3 Yr Trend To	Loss Ratio Average (Pd & Inc)	Loss Ratio (Incur)	Loss Ratio (Pd-24)
93-96 (4)	1999	0.1975	0.1972	0.1981
94-97 (4)	2000	0.2142	0.2238	0.2045
95-98 (4)	2001	0.1410	0.1498	0.1321
96-99 (4)	2002	-0.0143	0.0032	-0.0321
97-00 (4)	2003	-0.0916	-0.0819	-0.1015
98-01 (4)	2004	-0.0761	-0.0610	-0.0911
99-02 (4)	2005	-0.0408	-0.0440	-0.0373
00-03 (4)	2006	0.0224	0.0169	0.0281
01-04 (4)	2007	0.0293	0.0092	0.0491
02-05 (4)	2008	0.0646	0.0474	0.0817
03-06 (4)	2009	0.0446	0.0268	0.0623
04-07 (4)	2010	0.0011	-0.0040	0.0062
93-97 (5)	2000	0.2050	0.2122	0.1978
94-98 (5)	2001	0.1782	0.1883	0.1680
95-99 (5)	2002	0.0755	0.0930	0.0578
96-00 (5)	2003	-0.0835	-0.0689	-0.0984
97-01(5)	2004	-0.0552	-0.0393	-0.0710
98-02 (5)	2005	-0.0849	-0.0841	-0.0857
99-03 (5)	2006	-0.0055	-0.0084	-0.0024
00-04 (5)	2007	0.0433	0.0263	0.0602
01-05 (5)	2008	0.0527	0.0295	0.0758
02-06 (5)	2009	0.0573	0.0389	0.0754
03-07 (5)	2010	0.0055	-0.0057	0.0166
93-98 (6)	2001	0.1830	0.1918	0.1742
94-99 (6)	2002	0.1253	0.1444	0.1060
95-00 (6)	2003	-0.0078	0.0080	-0.0237
96-01 (6)	2004	-0.0577	-0.0379	-0.0775
97-02 (6)	2005	-0.0757	-0.0720	-0.0792
98-03 (6)	2006	-0.0465	-0.0463	-0.0466
99-04 (6)	2007	0.0269	0.0125	0.0413
00-05 (6)	2008	0.0596	0.0367	0.0825
01-06 (6)	2009	0.0505	0.0274	0.0734
02-07 (6)	2010	0.0252	0.0119	0.0383
93-99 (7)	2002	0.1464	0.1650	0.1277
94-00 (7)	2003	0.0441	0.0620	0.0262
95-01 (7)	2004	-0.0018	0.0194	-0.0229
96-02 (7)	2005	-0.0806	-0.0723	-0.0888
97-03 (7)	2006	-0.0473	-0.0445	-0.0499
98-04 (7)	2007	-0.0050	-0.0164	0.0062
99-05 (7)	2008	0.0449	0.0228	0.0669
00-06 (7)	2009	0.0567	0.0333	0.0800
01-07 (7)	2010	0.0274	0.0092	0.0455
93-00 (8)	2003	0.0733	0.0913	0.0552
94-01 (8)	2004	0.0426	0.0659	0.0194
95-02 (8)	2005	-0.0362	-0.0254	-0.0469
96-03 (8)	2006	-0.0567	-0.0496	-0.0636
97-04 (8)	2007	-0.0075	-0.0161	0.0010
98-05 (8)	2008	0.0161	-0.0040	0.0362
99-06 (8)	2009	0.0453	0.0223	0.0683
00-07 (8)	2010	0.0377	0.0181	0.0572
93-01 (9)	2004	0.0710	0.0948	0.0472
94-02 (9)	2005	0.0029	0.0165	-0.0107
95-03 (9)	2006	-0.0230	-0.0133	-0.0326
96-04 (9)	2007	-0.0169	-0.0213	-0.0127
97-05 (9)	2008	0.0108	-0.0072	0.0288
98-06 (9)	2009	0.0207	-0.0009	0.0422
99-07 (9)	2010	0.0321	0.0119	0.0521
93-02 (10)	2005	0.0303	0.0453	0.0153
94-03 (10)	2006	0.0095	0.0222	-0.0031
95-04 (10)	2007	0.0109	0.0095	0.0122
96-05 (10)	2008	0.0000	-0.0145	0.0145
97-06 (10)	2009	0.0148	-0.0051	0.0347
98-07 (10)	2010	0.0134	-0.0062	0.0328

11a.3

Indemnity
Exponential Fit
Trended Loss Ratios

Years Used (# Yrs)	3 Yr Trend To	Loss Ratio Average (Pd & Inc)	Loss Ratio (Incur)	Loss Ratio (Pd-24)
93-96 (4)	1999	0.4679	0.4562	0.4797
94-97 (4)	2000	0.4612	0.4420	0.4810
95-98 (4)	2001	0.4784	0.4563	0.5009
96-99 (4)	2002	0.6050	0.5778	0.6328
97-00 (4)	2003	0.6445	0.6241	0.6651
98-01 (4)	2004	0.6298	0.6094	0.6501
99-02 (4)	2005	0.5588	0.5518	0.5655
00-03 (4)	2006	0.4931	0.4894	0.4967
01-04 (4)	2007	0.5038	0.5083	0.5000
02-05 (4)	2008	0.4605	0.4539	0.4671
03-06 (4)	2009	0.4592	0.4526	0.4660
04-07 (4)	2010	0.4912	0.4723	0.5102
93-97 (5)	2000	0.4710	0.4536	0.4888
94-98 (5)	2001	0.4566	0.4353	0.4783
95-99 (5)	2002	0.5281	0.5038	0.5528
96-00 (5)	2003	0.6358	0.6104	0.6617
97-01(5)	2004	0.6082	0.5872	0.6291
98-02 (5)	2005	0.6012	0.5907	0.6115
99-03 (5)	2006	0.5169	0.5112	0.5224
00-04 (5)	2007	0.4933	0.4946	0.4924
01-05 (5)	2008	0.4710	0.4694	0.4730
02-06 (5)	2009	0.4503	0.4441	0.4567
03-07 (5)	2010	0.4871	0.4735	0.5006
93-98 (6)	2001	0.4570	0.4371	0.4772
94-99 (6)	2002	0.4929	0.4694	0.5169
95-00 (6)	2003	0.5664	0.5422	0.5912
96-01 (6)	2004	0.6105	0.5857	0.6356
97-02 (6)	2005	0.5919	0.5785	0.6050
98-03 (6)	2006	0.5537	0.5457	0.5616
99-04 (6)	2007	0.5073	0.5065	0.5082
00-05 (6)	2008	0.4671	0.4650	0.4694
01-06 (6)	2009	0.4566	0.4540	0.4594
02-07 (6)	2010	0.4708	0.4592	0.4824
93-99 (7)	2002	0.4805	0.4584	0.5032
94-00 (7)	2003	0.5260	0.5020	0.5506
95-01 (7)	2004	0.5609	0.5365	0.5856
96-02 (7)	2005	0.5965	0.5787	0.6144
97-03 (7)	2006	0.5546	0.5442	0.5649
98-04 (7)	2007	0.5354	0.5324	0.5385
99-05 (7)	2008	0.4796	0.4768	0.4824
00-06 (7)	2009	0.4532	0.4507	0.4560
01-07 (7)	2010	0.4693	0.4617	0.4769
93-00 (8)	2003	0.5061	0.4831	0.5297
94-01 (8)	2004	0.5267	0.5022	0.5515
95-02 (8)	2005	0.5579	0.5387	0.5771
96-03 (8)	2006	0.5634	0.5490	0.5778
97-04 (8)	2007	0.5378	0.5323	0.5434
98-05 (8)	2008	0.5038	0.4997	0.5079
99-06 (8)	2009	0.4628	0.4600	0.4657
00-07 (8)	2010	0.4621	0.4555	0.4686
93-01 (9)	2004	0.5072	0.4835	0.5314
94-02 (9)	2005	0.5278	0.5075	0.5484
95-03 (9)	2006	0.5360	0.5199	0.5522
96-04 (9)	2007	0.5464	0.5371	0.5558
97-05 (9)	2008	0.5088	0.5030	0.5146
98-06 (9)	2009	0.4830	0.4793	0.4867
99-07 (9)	2010	0.4670	0.4608	0.4730
93-02 (10)	2005	0.5089	0.4883	0.5297
94-03 (10)	2006	0.5123	0.4946	0.5301
95-04 (10)	2007	0.5246	0.5129	0.5362
96-05 (10)	2008	0.5184	0.5096	0.5272
97-06 (10)	2009	0.4884	0.4833	0.4934
98-07 (10)	2010	0.4822	0.4758	0.4887

Indemnity
Exponential Fit
Differences: (Actual - Trended)

Years Used (# Yrs)	3 Yr Trend To	Loss Ratio Average (Pd & Inc)	Loss Ratio (Incur)	Loss Ratio (Pd-24)
93-96 (4)	1999	0.1492	0.1441	0.1543
94-97 (4)	2000	0.1697	0.1725	0.1664
95-98 (4)	2001	0.1160	0.1203	0.1112
96-99 (4)	2002	-0.0138	0.0035	-0.0318
97-00 (4)	2003	-0.0922	-0.0823	-0.1023
98-01 (4)	2004	-0.0766	-0.0612	-0.0918
99-02 (4)	2005	-0.0426	-0.0453	-0.0396
00-03 (4)	2006	0.0139	0.0100	0.0180
01-04 (4)	2007	0.0252	0.0068	0.0428
02-05 (4)	2008	0.0565	0.0398	0.0732
03-06 (4)	2009	0.0398	0.0222	0.0572
04-07 (4)	2010	-0.0006	-0.0069	0.0055
93-97 (5)	2000	0.1599	0.1609	0.1586
94-98 (5)	2001	0.1378	0.1413	0.1338
95-99 (5)	2002	0.0631	0.0775	0.0482
96-00 (5)	2003	-0.0835	-0.0686	-0.0989
97-01(5)	2004	-0.0550	-0.0390	-0.0708
98-02 (5)	2005	-0.0850	-0.0842	-0.0856
99-03 (5)	2006	-0.0099	-0.0118	-0.0077
00-04 (5)	2007	0.0357	0.0205	0.0504
01-05 (5)	2008	0.0460	0.0243	0.0673
02-06 (5)	2009	0.0487	0.0307	0.0665
03-07 (5)	2010	0.0035	-0.0081	0.0151
93-98 (6)	2001	0.1374	0.1395	0.1349
94-99 (6)	2002	0.0983	0.1119	0.0841
95-00 (6)	2003	-0.0141	-0.0004	-0.0284
96-01 (6)	2004	-0.0573	-0.0375	-0.0773
97-02 (6)	2005	-0.0757	-0.0720	-0.0791
98-03 (6)	2006	-0.0467	-0.0463	-0.0469
99-04 (6)	2007	0.0217	0.0086	0.0346
00-05 (6)	2008	0.0499	0.0287	0.0709
01-06 (6)	2009	0.0424	0.0208	0.0638
02-07 (6)	2010	0.0198	0.0062	0.0333
93-99 (7)	2002	0.1107	0.1229	0.0978
94-00 (7)	2003	0.0263	0.0398	0.0122
95-01 (7)	2004	-0.0077	0.0117	-0.0273
96-02 (7)	2005	-0.0803	-0.0722	-0.0885
97-03 (7)	2006	-0.0476	-0.0448	-0.0502
98-04 (7)	2007	-0.0064	-0.0173	0.0043
99-05 (7)	2008	0.0374	0.0169	0.0579
00-06 (7)	2009	0.0458	0.0241	0.0672
01-07 (7)	2010	0.0213	0.0037	0.0388
93-00 (8)	2003	0.0462	0.0587	0.0331
94-01 (8)	2004	0.0265	0.0460	0.0068
95-02 (8)	2005	-0.0417	-0.0322	-0.0512
96-03 (8)	2006	-0.0564	-0.0496	-0.0631
97-04 (8)	2007	-0.0088	-0.0172	-0.0006
98-05 (8)	2008	0.0132	-0.0060	0.0324
99-06 (8)	2009	0.0362	0.0148	0.0575
00-07 (8)	2010	0.0285	0.0099	0.0471
93-01 (9)	2004	0.0460	0.0647	0.0269
94-02 (9)	2005	-0.0116	-0.0010	-0.0225
95-03 (9)	2006	-0.0290	-0.0205	-0.0375
96-04 (9)	2007	-0.0174	-0.0220	-0.0130
97-05 (9)	2008	0.0082	-0.0093	0.0257
98-06 (9)	2009	0.0160	-0.0045	0.0365
99-07 (9)	2010	0.0236	0.0046	0.0427
93-02 (10)	2005	0.0073	0.0182	-0.0038
94-03 (10)	2006	-0.0053	0.0048	-0.0154
95-04 (10)	2007	0.0044	0.0022	0.0066
96-05 (10)	2008	-0.0014	-0.0159	0.0131
97-06 (10)	2009	0.0106	-0.0085	0.0298
98-07 (10)	2010	0.0084	-0.0104	0.0270

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-24)
	1993	0.5697	0.5659	0.5735
	1994	0.5565	0.5528	0.5602
	1995	0.5539	0.5522	0.5555
	1996	0.5308	0.5310	0.5305
	1997	0.5561	0.5522	0.5600
	1998	0.5557	0.5518	0.5597
	1999	0.5663	0.5609	0.5717
	2000	0.5636	0.5515	0.5756
	2001	0.5265	0.5088	0.5442
	2002	0.5375	0.5252	0.5498
	2003	0.5342	0.5185	0.5500
	2004	0.5555	0.5403	0.5706
	2005	0.5220	0.5108	0.5333
	2006	0.5061	0.4922	0.5200
	2007	0.5379	0.5280	0.5479
	2008	0.5094	0.4938	0.5249
	2009	0.4958	0.4791	0.5124
	2010	0.5219	0.5105	0.5333

Trend # Years =   3

11a.6

Medical
Linear Fit
Trended Loss Ratios

Years Used (# Yrs)	3 Yr Trend To	Loss Ratio Average (Pd & Inc)	Loss Ratio (Incur)	Loss Ratio (Pd-24)
93-96 (4)	1999	0.4990	0.5031	0.4948
94-97 (4)	2000	0.5384	0.5367	0.5400
95-98 (4)	2001	0.5629	0.5558	0.5704
96-99 (4)	2002	0.6000	0.5892	0.6110
97-00 (4)	2003	0.5753	0.5573	0.5932
98-01 (4)	2004	0.5124	0.4810	0.5436
99-02 (4)	2005	0.4929	0.4692	0.5166
00-03 (4)	2006	0.5057	0.4888	0.5229
01-04 (4)	2007	0.5761	0.5627	0.5894
02-05 (4)	2008	0.5260	0.5141	0.5379
03-06 (4)	2009	0.4764	0.4667	0.4862
04-07 (4)	2010	0.4995	0.4929	0.5063
93-97 (5)	2000	0.5270	0.5262	0.5276
94-98 (5)	2001	0.5509	0.5470	0.5549
95-99 (5)	2002	0.5774	0.5687	0.5863
96-00 (5)	2003	0.5924	0.5743	0.6105
97-01(5)	2004	0.5280	0.5015	0.5544
98-02 (5)	2005	0.5118	0.4870	0.5366
99-03 (5)	2006	0.5005	0.4774	0.5237
00-04 (5)	2007	0.5392	0.5225	0.5559
01-05 (5)	2008	0.5396	0.5303	0.5491
02-06 (5)	2009	0.4936	0.4806	0.5066
03-07 (5)	2010	0.5101	0.5034	0.5170
93-98 (6)	2001	0.5390	0.5363	0.5417
94-99 (6)	2002	0.5657	0.5597	0.5719
95-00 (6)	2003	0.5787	0.5634	0.5940
96-01 (6)	2004	0.5517	0.5264	0.5770
97-02 (6)	2005	0.5221	0.4988	0.5455
98-03 (6)	2006	0.5110	0.4864	0.5356
99-04 (6)	2007	0.5266	0.5050	0.5483
00-05 (6)	2008	0.5204	0.5077	0.5332
01-06 (6)	2009	0.5103	0.4996	0.5211
02-07 (6)	2010	0.5140	0.5043	0.5238
93-99 (7)	2002	0.5535	0.5488	0.5583
94-00 (7)	2003	0.5699	0.5577	0.5821
95-01 (7)	2004	0.5490	0.5268	0.5713
96-02 (7)	2005	0.5414	0.5178	0.5650
97-03 (7)	2006	0.5182	0.4942	0.5422
98-04 (7)	2007	0.5290	0.5055	0.5524
99-05 (7)	2008	0.5134	0.4959	0.5309
00-06 (7)	2009	0.5000	0.4870	0.5131
01-07 (7)	2010	0.5226	0.5142	0.5311
93-00 (8)	2003	0.5594	0.5492	0.5697
94-01 (8)	2004	0.5469	0.5280	0.5658
95-02 (8)	2005	0.5408	0.5190	0.5626
96-03 (8)	2006	0.5340	0.5096	0.5585
97-04 (8)	2007	0.5312	0.5077	0.5547
98-05 (8)	2008	0.5168	0.4969	0.5366
99-06 (8)	2009	0.4967	0.4799	0.5137
00-07 (8)	2010	0.5116	0.5011	0.5223
93-01 (9)	2004	0.5414	0.5248	0.5579
94-02 (9)	2005	0.5400	0.5207	0.5594
95-03 (9)	2006	0.5343	0.5112	0.5576
96-04 (9)	2007	0.5423	0.5181	0.5666
97-05 (9)	2008	0.5199	0.4992	0.5405
98-06 (9)	2009	0.5012	0.4821	0.5203
99-07 (9)	2010	0.5065	0.4924	0.5208
93-02 (10)	2005	0.5360	0.5185	0.5535
94-03 (10)	2006	0.5343	0.5131	0.5555
95-04 (10)	2007	0.5414	0.5180	0.5649
96-05 (10)	2008	0.5305	0.5087	0.5524
97-06 (10)	2009	0.5052	0.4852	0.5252
98-07 (10)	2010	0.5084	0.4919	0.5250

Medical
Linear Fit
Differences: (Actual - Trended)

Years Used (# Yrs)	3 Yr Trend To	Loss Ratio Average (Pd & Inc)	Loss Ratio (Incur)	Loss Ratio (Pd-24)
93-96 (4)	1999	0.0673	0.0578	0.0769
94-97 (4)	2000	0.0252	0.0148	0.0356
95-98 (4)	2001	-0.0364	-0.0470	-0.0262
96-99 (4)	2002	-0.0625	-0.0640	-0.0612
97-00 (4)	2003	-0.0411	-0.0388	-0.0432
98-01 (4)	2004	0.0431	0.0593	0.0270
99-02 (4)	2005	0.0291	0.0416	0.0167
00-03 (4)	2006	0.0004	0.0034	-0.0029
01-04 (4)	2007	-0.0382	-0.0347	-0.0415
02-05 (4)	2008	-0.0166	-0.0203	-0.0130
03-06 (4)	2009	0.0194	0.0124	0.0262
04-07 (4)	2010	0.0224	0.0176	0.0270
93-97 (5)	2000	0.0366	0.0253	0.0480
94-98 (5)	2001	-0.0244	-0.0382	-0.0107
95-99 (5)	2002	-0.0399	-0.0435	-0.0365
96-00 (5)	2003	-0.0582	-0.0558	-0.0604
97-01(5)	2004	0.0275	0.0388	0.0162
98-02 (5)	2005	0.0102	0.0238	-0.0032
99-03 (5)	2006	0.0056	0.0148	-0.0037
00-04 (5)	2007	-0.0013	0.0055	-0.0080
01-05 (5)	2008	-0.0302	-0.0365	-0.0242
02-06 (5)	2009	0.0022	-0.0015	0.0058
03-07 (5)	2010	0.0118	0.0071	0.0163
93-98 (6)	2001	-0.0125	-0.0275	0.0025
94-99 (6)	2002	-0.0282	-0.0345	-0.0221
95-00 (6)	2003	-0.0445	-0.0449	-0.0440
96-01 (6)	2004	0.0038	0.0139	-0.0064
97-02 (6)	2005	-0.0001	0.0120	-0.0122
98-03 (6)	2006	-0.0049	0.0058	-0.0156
99-04 (6)	2007	0.0113	0.0230	-0.0004
00-05 (6)	2008	-0.0110	-0.0139	-0.0083
01-06 (6)	2009	-0.0145	-0.0205	-0.0087
02-07 (6)	2010	0.0079	0.0062	0.0095
93-99 (7)	2002	-0.0160	-0.0236	-0.0085
94-00 (7)	2003	-0.0357	-0.0392	-0.0321
95-01 (7)	2004	0.0065	0.0135	-0.0007
96-02 (7)	2005	-0.0194	-0.0070	-0.0317
97-03 (7)	2006	-0.0121	-0.0020	-0.0221
98-04 (7)	2007	0.0089	0.0225	-0.0045
99-05 (7)	2008	-0.0040	-0.0021	-0.0060
00-06 (7)	2009	-0.0042	-0.0079	-0.0007
01-07 (7)	2010	-0.0007	-0.0037	0.0022
93-00 (8)	2003	-0.0252	-0.0307	-0.0197
94-01 (8)	2004	0.0086	0.0123	0.0048
95-02 (8)	2005	-0.0188	-0.0082	-0.0293
96-03 (8)	2006	-0.0279	-0.0174	-0.0385
97-04 (8)	2007	0.0067	0.0203	-0.0068
98-05 (8)	2008	-0.0074	-0.0031	-0.0117
99-06 (8)	2009	-0.0009	-0.0008	-0.0013
00-07 (8)	2010	0.0103	0.0094	0.0110
93-01 (9)	2004	0.0141	0.0155	0.0127
94-02 (9)	2005	-0.0180	-0.0099	-0.0261
95-03 (9)	2006	-0.0282	-0.0190	-0.0376
96-04 (9)	2007	-0.0044	0.0099	-0.0187
97-05 (9)	2008	-0.0105	-0.0054	-0.0156
98-06 (9)	2009	-0.0054	-0.0030	-0.0079
99-07 (9)	2010	0.0154	0.0181	0.0125
93-02 (10)	2005	-0.0140	-0.0077	-0.0202
94-03 (10)	2006	-0.0282	-0.0209	-0.0355
95-04 (10)	2007	-0.0035	0.0100	-0.0170
96-05 (10)	2008	-0.0211	-0.0149	-0.0275
97-06 (10)	2009	-0.0094	-0.0061	-0.0128
98-07 (10)	2010	0.0135	0.0186	0.0083

Medical
Exponential Fit
Trended Loss Ratios

Years Used (# Yrs)	3 Yr Trend To	Loss Ratio Average (Pd & Inc)	Loss Ratio (Incur)	Loss Ratio (Pd-24)
93-96 (4)	1999	0.5012	0.5048	0.4974
94-97 (4)	2000	0.5383	0.5366	0.5398
95-98 (4)	2001	0.5631	0.5559	0.5707
96-99 (4)	2002	0.6023	0.5908	0.6141
97-00 (4)	2003	0.5755	0.5572	0.5938
98-01 (4)	2004	0.5128	0.4829	0.5434
99-02 (4)	2005	0.4955	0.4732	0.5181
00-03 (4)	2006	0.5073	0.4907	0.5241
01-04 (4)	2007	0.5771	0.5640	0.5902
02-05 (4)	2008	0.5255	0.5137	0.5374
03-06 (4)	2009	0.4783	0.4682	0.4885
04-07 (4)	2010	0.5005	0.4934	0.5079
93-97 (5)	2000	0.5274	0.5267	0.5281
94-98 (5)	2001	0.5508	0.5469	0.5548
95-99 (5)	2002	0.5779	0.5690	0.5870
96-00 (5)	2003	0.5940	0.5751	0.6131
97-01(5)	2004	0.5277	0.5018	0.5540
98-02 (5)	2005	0.5127	0.4889	0.5368
99-03 (5)	2006	0.5024	0.4805	0.5248
00-04 (5)	2007	0.5394	0.5228	0.5560
01-05 (5)	2008	0.5393	0.5301	0.5485
02-06 (5)	2009	0.4941	0.4810	0.5071
03-07 (5)	2010	0.5102	0.5032	0.5174
93-98 (6)	2001	0.5391	0.5365	0.5418
94-99 (6)	2002	0.5657	0.5596	0.5719
95-00 (6)	2003	0.5792	0.5636	0.5950
96-01 (6)	2004	0.5512	0.5255	0.5773
97-02 (6)	2005	0.5224	0.4996	0.5453
98-03 (6)	2006	0.5120	0.4884	0.5360
99-04 (6)	2007	0.5271	0.5061	0.5483
00-05 (6)	2008	0.5206	0.5081	0.5333
01-06 (6)	2009	0.5100	0.4992	0.5208
02-07 (6)	2010	0.5139	0.5040	0.5238
93-99 (7)	2002	0.5534	0.5487	0.5582
94-00 (7)	2003	0.5700	0.5577	0.5824
95-01 (7)	2004	0.5486	0.5261	0.5713
96-02 (7)	2005	0.5411	0.5176	0.5651
97-03 (7)	2006	0.5186	0.4954	0.5422
98-04 (7)	2007	0.5292	0.5063	0.5523
99-05 (7)	2008	0.5141	0.4972	0.5312
00-06 (7)	2009	0.5007	0.4878	0.5137
01-07 (7)	2010	0.5223	0.5138	0.5309
93-00 (8)	2003	0.5594	0.5492	0.5696
94-01 (8)	2004	0.5464	0.5274	0.5656
95-02 (8)	2005	0.5405	0.5188	0.5626
96-03 (8)	2006	0.5339	0.5097	0.5586
97-04 (8)	2007	0.5313	0.5083	0.5545
98-05 (8)	2008	0.5172	0.4980	0.5366
99-06 (8)	2009	0.4979	0.4816	0.5144
00-07 (8)	2010	0.5119	0.5013	0.5227
93-01 (9)	2004	0.5411	0.5245	0.5577
94-02 (9)	2005	0.5398	0.5204	0.5593
95-03 (9)	2006	0.5342	0.5113	0.5575
96-04 (9)	2007	0.5422	0.5181	0.5667
97-05 (9)	2008	0.5201	0.5001	0.5404
98-06 (9)	2009	0.5020	0.4836	0.5206
99-07 (9)	2010	0.5072	0.4933	0.5213
93-02 (10)	2005	0.5359	0.5185	0.5533
94-03 (10)	2006	0.5342	0.5132	0.5554
95-04 (10)	2007	0.5413	0.5180	0.5649
96-05 (10)	2008	0.5304	0.5089	0.5523
97-06 (10)	2009	0.5058	0.4865	0.5253
98-07 (10)	2010	0.5090	0.4929	0.5252

Medical
Exponential Fit
Differences: (Actual - Trended)

Years Used (# Yrs)	3 Yr Trend To	Loss Ratio Average (Pd & Inc)	Loss Ratio (Incur)	Loss Ratio (Pd-24)
93-96 (4)	1999	0.0651	0.0561	0.0743
94-97 (4)	2000	0.0253	0.0149	0.0358
95-98 (4)	2001	-0.0366	-0.0471	-0.0265
96-99 (4)	2002	-0.0648	-0.0656	-0.0643
97-00 (4)	2003	-0.0413	-0.0387	-0.0438
98-01 (4)	2004	0.0427	0.0574	0.0272
99-02 (4)	2005	0.0265	0.0376	0.0152
00-03 (4)	2006	-0.0012	0.0015	-0.0041
01-04 (4)	2007	-0.0392	-0.0360	-0.0423
02-05 (4)	2008	-0.0161	-0.0199	-0.0125
03-06 (4)	2009	0.0175	0.0109	0.0239
04-07 (4)	2010	0.0214	0.0171	0.0254
93-97 (5)	2000	0.0362	0.0248	0.0475
94-98 (5)	2001	-0.0243	-0.0381	-0.0106
95-99 (5)	2002	-0.0404	-0.0438	-0.0372
96-00 (5)	2003	-0.0598	-0.0566	-0.0631
97-01(5)	2004	0.0278	0.0385	0.0166
98-02 (5)	2005	0.0093	0.0219	-0.0035
99-03 (5)	2006	0.0037	0.0117	-0.0048
00-04 (5)	2007	-0.0015	0.0052	-0.0081
01-05 (5)	2008	-0.0299	-0.0363	-0.0236
02-06 (5)	2009	0.0017	-0.0019	0.0053
03-07 (5)	2010	0.0117	0.0073	0.0159
93-98 (6)	2001	-0.0126	-0.0277	0.0024
94-99 (6)	2002	-0.0282	-0.0344	-0.0221
95-00 (6)	2003	-0.0450	-0.0451	-0.0450
96-01 (6)	2004	0.0043	0.0148	-0.0067
97-02 (6)	2005	-0.0004	0.0112	-0.0120
98-03 (6)	2006	-0.0059	0.0038	-0.0160
99-04 (6)	2007	0.0108	0.0219	-0.0004
00-05 (6)	2008	-0.0112	-0.0143	-0.0084
01-06 (6)	2009	-0.0142	-0.0201	-0.0084
02-07 (6)	2010	0.0080	0.0065	0.0095
93-99 (7)	2002	-0.0159	-0.0235	-0.0084
94-00 (7)	2003	-0.0358	-0.0392	-0.0324
95-01 (7)	2004	0.0069	0.0142	-0.0007
96-02 (7)	2005	-0.0191	-0.0068	-0.0318
97-03 (7)	2006	-0.0125	-0.0032	-0.0222
98-04 (7)	2007	0.0087	0.0217	-0.0044
99-05 (7)	2008	-0.0047	-0.0034	-0.0063
00-06 (7)	2009	-0.0049	-0.0087	-0.0013
01-07 (7)	2010	-0.0004	-0.0033	0.0024
93-00 (8)	2003	-0.0252	-0.0307	-0.0196
94-01 (8)	2004	0.0091	0.0129	0.0050
95-02 (8)	2005	-0.0185	-0.0080	-0.0293
96-03 (8)	2006	-0.0278	-0.0175	-0.0386
97-04 (8)	2007	0.0066	0.0197	-0.0066
98-05 (8)	2008	-0.0078	-0.0042	-0.0117
99-06 (8)	2009	-0.0021	-0.0025	-0.0020
00-07 (8)	2010	0.0100	0.0092	0.0106
93-01 (9)	2004	0.0144	0.0158	0.0129
94-02 (9)	2005	-0.0178	-0.0096	-0.0260
95-03 (9)	2006	-0.0281	-0.0191	-0.0375
96-04 (9)	2007	-0.0043	0.0099	-0.0188
97-05 (9)	2008	-0.0107	-0.0063	-0.0155
98-06 (9)	2009	-0.0062	-0.0045	-0.0082
99-07 (9)	2010	0.0147	0.0172	0.0120
93-02 (10)	2005	-0.0139	-0.0077	-0.0200
94-03 (10)	2006	-0.0281	-0.0210	-0.0354
95-04 (10)	2007	-0.0034	0.0100	-0.0170
96-05 (10)	2008	-0.0210	-0.0151	-0.0274
97-06 (10)	2009	-0.0100	-0.0074	-0.0129
98-07 (10)	2010	0.0129	0.0176	0.0081