

DELAWARE COMPENSATION RATING BUREAU, INC.

Excess Loss Ratios and Loss Limitations

Page 1 shows a history of loss limits consistent with an excess loss ratio of 0.0757 for excess loss factor revisions since 1983, the 0.0757 ratio corresponding to a loss limit of \$1,288,146 (on a post-House Bill 175, pre-House Bill 373 basis) effective with the December 1, 2004 filing when a limited loss approach was first introduced. An exponential curve fit to the loss limitations from 1981 to 2004 showed an average annual change of 6.27% in loss limits, which is applicable to Policy Years December 1, 2004 and prior.

After review of recent changes in loss limitations, an average annual change of 4.61% was selected for policy periods after December 1, 2004.

Page 2 shows the calculation of loss limits by policy year tied to a limit of \$2,533,000 for policies effective during the twelve months beginning December 1, 2019 and with the underlying annual changes in the loss limit as described above.

All calculations on pages 1 and 2 are made on a post-House Bill 175, pre-House Bill 373 basis and indicate that a loss limit of \$2,533,000 is appropriate for the policy period beginning December 1, 2019.

The DCRB developed overall empirical distributions using Delaware data with losses adjusted to both post-House Bill 175, pre-House Bill 373 and post-House Bill 373 bases. A comparison of these distributions indicated that a post-House Bill 175, pre-House Bill 373 loss limit of \$2,533,000 produced an excess loss factor comparable to a post-House Bill 373 loss limit of \$1,657,464.

Page 3 shows the calculation of the excess loss ratio consistent with a loss limitation (post-House Bill 373) of \$1,657,464 per claim in the current filing. Excess ratios, prior to adjustments for expense and risk load, are weighted with standard premiums by hazard group to get an average excess ratio of 0.0853.

**Delaware December 1, 2019 Rate & Loss Cost Filing  
Loss Limitations for Excess Loss Factor = .0757  
All Losses at Post-HB175, Pre-HB373 Levels**

**Applicable to policy years beginning 12/1/2004 and Earlier**

<b>Policy Year</b>	<b>Midpoint</b>	<b>Time (t)</b>	<b>Loss Limit at ELF = 0.0757</b>
1983	1/1/1984	1.0000	339,727
1984	1/1/1985	2.0000	361,028
1985	1/1/1986	3.0000	383,664
1986	1/1/1987	4.0000	407,720
1987	1/1/1988	5.0000	433,284
1988	1/1/1989	6.0000	460,451
1989	1/1/1990	7.0000	489,321
1990	1/1/1991	8.0000	520,002
1991	1/1/1992	9.0000	552,606
1992	1/1/1993	10.0000	587,254
1993	1/1/1994	11.0000	624,075
1994	1/1/1995	12.0000	663,205
1995	1/1/1996	13.0000	704,788
1996	1/1/1997	14.0000	748,978
1997	1/1/1998	15.0000	795,939
1998	1/1/1999	16.0000	845,844
1999	1/1/2000	17.0000	898,878
2000	1/1/2001	18.0000	955,238
2001	1/1/2002	19.0000	1,015,131
2002	1/1/2003	20.0000	1,078,780
2003	1/1/2004	21.0000	1,146,420
2004	1/1/2005	22.0000	1,218,300
12/1/2004	12/1/2005	22.9167	1,288,146

**Annual Trend = .0627**

**Applicable to Policy Years after 12/1/2004**

<b>Policy Year</b>	<b>Midpoint</b>	<b>Time (t)</b>	<b>Loss Limit at ELF = 0.0757</b>	<b>Ratio to \$1,288,146</b>	<b>Annual Change from \$1,288,146</b>
12/1/2004	12/1/2005	1.0000	1,288,146	1.0000	
2005	1/1/2006	1.0833	1,295,879	1.0060	1.0745
2006	1/1/2007	2.0833	1,392,422	1.0810	1.0745
2007	1/1/2008	3.0833	1,496,158	1.1615	1.0745
2008	1/1/2009	4.0833	1,600,106	1.2422	1.0729
2009	1/1/2010	5.0833	1,695,313	1.3161	1.0696
2010	1/1/2011	6.0833	1,796,184	1.3944	1.0676
2011	1/1/2012	7.0833	1,903,057	1.4774	1.0663
2012	1/1/2013	8.0833	2,016,288	1.5653	1.0653
2013	1/1/2014	9.0833	2,130,712	1.6541	1.0642
2014	1/1/2015	10.0833	2,251,097	1.7475	1.0634
2015	1/1/2016	11.0833	2,378,284	1.8463	1.0627
12/1/2016	12/1/2017	13.0000	2,642,496	2.0514	1.0617
12/1/2017	12/1/2018	14.0000	2,494,761	1.9367	1.0522
12/1/2018	12/1/2019	15.0000	1,981,299	1.5381	1.0312
12/1/2019	12/1/2020	16.0000	1,842,198	1.4301	1.0241

Average of latest 5 years  
 $2,267,808 = (2,378,284 + 2,642,496 + 2,494,761 + 1,981,299 + 1,842,198) / 5$

Annual Trend from 12/1/2005 to 6/15/2018  
 $= (2,267,808 / 1,288,146)^{(1/12.5417)} = 1.0461$

**Annual Trend = .0461**

**Delaware December 1, 2019 Rate & Loss Cost Filing**  
**Calculation of Policy Year Loss Limitations**  
**All Losses at Post-HB175, Pre-HB373 Levels**

Policy Year * (1)	Midpoint (2)	Time (t) (3)	Trend period To/From 12/1/2005 (4)	Annual Trend + (5)	Trend Factor (6) = [1+(5)]^(4)	Loss Limit (7) = (6) * 1,288,146
1983	1/1/1984	1.0000	-21.9167	0.0627	0.263734	339,728
1984	1/1/1985	2.0000	-20.9167	0.0627	0.280270	361,029
1985	1/1/1986	3.0000	-19.9167	0.0627	0.297843	383,665
1986	1/1/1987	4.0000	-18.9167	0.0627	0.316518	407,721
1987	1/1/1988	5.0000	-17.9167	0.0627	0.336363	433,285
1988	1/1/1989	6.0000	-16.9167	0.0627	0.357453	460,452
1989	1/1/1990	7.0000	-15.9167	0.0627	0.379866	489,322
1990	1/1/1991	8.0000	-14.9167	0.0627	0.403683	520,003
1991	1/1/1992	9.0000	-13.9167	0.0627	0.428994	552,607
1992	1/1/1993	10.0000	-12.9167	0.0627	0.455892	587,256
1993	1/1/1994	11.0000	-11.9167	0.0627	0.484477	624,076
1994	1/1/1995	12.0000	-10.9167	0.0627	0.514853	663,206
1995	1/1/1996	13.0000	-9.9167	0.0627	0.547134	704,789
1996	1/1/1997	14.0000	-8.9167	0.0627	0.581440	748,979
1997	1/1/1998	15.0000	-7.9167	0.0627	0.617896	795,940
1998	1/1/1999	16.0000	-6.9167	0.0627	0.656638	845,846
1999	1/1/2000	17.0000	-5.9167	0.0627	0.697809	898,880
2000	1/1/2001	18.0000	-4.9167	0.0627	0.741562	955,240
2001	1/1/2002	19.0000	-3.9167	0.0627	0.788058	1,015,134
2002	1/1/2003	20.0000	-2.9167	0.0627	0.837469	1,078,783
2003	1/1/2004	21.0000	-1.9167	0.0627	0.889979	1,146,422
2004	1/1/2005	22.0000	-0.9167	0.0627	0.945780	1,218,303
12/1/2004	12/1/2005	22.9167	0.0000	-	1.000000	1,288,146
2005	1/1/2006	23.0000	0.0833	0.0461	1.003763	1,292,993
2006	1/1/2007	24.0000	1.0833	0.0461	1.050036	1,352,600
2007	1/1/2008	25.0000	2.0833	0.0461	1.098443	1,414,955
2008	1/1/2009	26.0000	3.0833	0.0461	1.149081	1,480,184
2009	1/1/2010	27.0000	4.0833	0.0461	1.202054	1,548,421
2010	1/1/2011	28.0000	5.0833	0.0461	1.257468	1,619,803
2011	1/1/2012	29.0000	6.0833	0.0461	1.315438	1,694,476
2012	1/1/2013	30.0000	7.0833	0.0461	1.376079	1,772,591
2013	1/1/2014	31.0000	8.0833	0.0461	1.439517	1,854,308
2014	1/1/2015	32.0000	9.0833	0.0461	1.505878	1,939,791
2015	1/1/2016	33.0000	10.0833	0.0461	1.575299	2,029,216
2016	1/1/2017	34.0000	11.0833	0.0461	1.647921	2,122,763
2017	1/1/2018	35.0000	12.0833	0.0461	1.723890	2,220,622
2018	1/1/2019	36.0000	13.0833	0.0461	1.803361	2,322,993
12/1/2019	12/1/2020	37.9167	15.0000	0.0461	1.966066	2,532,580
						<b>2,533,000 (Selected)</b>

\* Beginning 1/1/XXXX unless otherwise noted.

+ See page 1.

**Delaware December 1, 2019 Rate & Loss Cost Filing  
Average Excess Ratio for Losses Limited at \$1,657,464 #  
(Post-HB373 Basis)**

Hazard Group	Standard Earned Premium	Average Excess Ratio \$1,657,464 #
A	35,813,511	0.0325
B	101,435,245	0.0743
C	263,488,820	0.0655
D	70,028,966	0.0939
E	138,726,871	0.1019
F	77,216,924	0.1339
G	16,490,331	0.1796
TOTAL	703,200,668	0.0853

# \$1,657,464 represents a loss limit on a post-House Bill 373 basis consistent with a post-House Bill 175, pre-House Bill 373 loss limit of \$2,533,000.