

This Experience Rating Plan is designed and its rating parameters have been calculated using experience for basic limits Bodily Injury Liability (BI), Personal Injury Protection (PIP), and Property Damage Liability (PDL). Premises and operations liability is also included for garage risks. Therefore, the premiums and losses used in deriving the experience modification for any risk under this Plan should include data from only these coverages.

A. ELIGIBILITY

The term risk as used in this Plan means the exposures of any one insured which are to be rated. Allied or subsidiary interests shall not be included unless:

1. The insured holds a majority financial interest therein, or
2. The following conditions exist under an exclusive franchise arrangement between the franchise grantor and the other interests to be rated:
 - a. all interests operate under a common trade name, and
 - b. all interests use one or more identical products or services obtained through the franchise grantor, and
 - c. one source establishes and maintains standards regarding management control and is responsible for insurance premium payment for all interests operating under the exclusive franchise, and
 - d. there is no legal prohibition against ownership by the franchise grantor of the operations of the other interests to be rated.

Expenses other than allocated loss adjustment expenses are not taken into consideration in the parameters of this Plan.

Any risk meeting the following qualifications for the BI, PIP, and PDL exposure to be rated shall be eligible for the application of this Plan:

- (1) Five or more private passenger or commercial automobiles, one or more taxicabs, three or more public automobiles of any other type, or five or more plates of any type for risks which include registration plates not issued for a specific automobile such as garage risks, or the equivalent of such exposures for automobiles hired by the risk, or
- (2) Annual basic limits manual premium of at least \$2,500, including premises and operations premium, for garage risks not subject to the Massachusetts Compulsory Law, or for employers non-ownership

liability exposure. Note that the headquarters location of the risk shall govern the application of this Plan for all employers non-ownership liability exposures regardless of location.

B. EXPERIENCE MODIFICATION

The experience modification for the risk shall be determined in accordance with the experience rating procedure described herein and shall be applied to the total current manual premium, including all increased limits, and premises and operations for garage risks for the BI, PIP, and PDL coverages on the policy being rated.

C. EXPERIENCE USED

The experience modification shall be determined, by the company establishing the rating, from the latest available three completed policy years of experience incurred in this state, or in all states by the risk. In the event the experience for the full experience period is not available, at least two completed policy years shall be used. Risks with less than two completed policy years of experience shall not be experience rated. The experience period shall end at least six months prior to the rating date.

Experience developed by companies other than the company establishing the modification or self-insured experience may be used subject to the periods specified above. If the risk has been self-insured or insured with a company from which the experience is not obtainable, the experience may be used if submitted to the company in the form of a statement signed by the insured. Experience in such form may be excluded from the rating if its reliability can not be established.

D. DETERMINATION OF EXPERIENCE MODIFICATION

The term basic limits shall mean \$20,000/40,000 BI, \$8,000 PIP, and \$5,000 PDL.

1. Total Basic Limits Premium Subject to Experience Rating

The premiums to be included in the rating are calculated as follows:

- a. Determine the current annual basic limits premium for BI, PIP and PDL for the policy being rated using CAR's current manual rates. The policy being rated is the policy to which the experience modification of D.6. of this Section shall apply.

- b. The annual basic limits premium for each year of the experience period is the annual basic limits premium determined according to D.1.a. of this Section, multiplied by the appropriate detrend factor from Table A of this Section.

Liability Experience Rating Plan Factors
Table A – Premium Detrend Factors

	<u>Latest Year</u>	^{2nd} <u>Latest Year</u>	^{3rd} <u>Latest Year</u>
Taxi	0.971	0.957	0.943
All Other	0.905	0.864	0.826

- c. The total basic limits premium subject to experience rating is equal to the sum of the detrended annual basic limits premiums calculated according to D.1.b. of this Section.
- d. If exposures have changed during the experience period, refer to the supplement to determine if an alternative rating methodology is in order.

2. Basic Limits Losses Subject to Experience Rating

The losses to be included in the rating shall be the total of the following:

- a. Paid and outstanding losses, including allocated loss adjustment expense (ALAE) for each year in the experience period, with the indemnity amount limited to basic limits, and with the amount of indemnity and allocated loss adjustment expense resulting from any single occurrence limited by the maximum single loss (MSL) value specified in Table C of this Section based on the total basic limits premium subject to experience rating.

Property damage losses and ALAE from the experience period shall be adjusted to the deductible basis, if any, that applies for the policy being rated.

- b. Adjustment to reflect ultimate level of losses for each year in the experience period, is calculated by multiplying the annual basic limits premium from D.1.b. of this Section for the year by the adjusted expected loss ratio (AELR) and by the appropriate basic limits loss development factor (LDF). The formula for this adjustment is $P \times AELR \times LDF$, where
 - (1) P is the annual basic limits premium for the particular year in the experience period from D.1.b. of this Section.

- (2) AELR is the adjusted expected loss ratio specified in Table C of this Section based on the total basic limits premium subject to experience rating from D.1.c. of this Section. If a risk includes more than one vehicle type, then the AELR from Table C of this Section should be the AELR for the predominant class of risk on the policy.
- (3) LDF is the appropriate CAR basic limits loss development factor from Table B of this Section.

Liability Experience Rating Plan Factors
Table B – Loss Development Factors

	<u>Latest Year</u>		<u>2nd Latest Year</u>		<u>3rd Latest Year</u>		<u>Factors for Immature Years*</u>	
	Taxi	All Other	Taxi	All Other	Taxi	All Other	Taxi	All Other
Maturity (Months) LDF	18 0.000	18 0.000	30 0.000	30 0.000	42 0.000	42 0.000	6 0.706	6 0.746
Maturity (Months) LDF	21 0.000	21 0.000	33 0.000	33 0.000	45 0.000	45 0.000	9 0.337	9 0.385
Maturity (Months) LDF	24 0.000	24 0.000	36 0.000	36 0.000	48 0.000	48 0.000	12 0.045	12 0.079
Maturity (Months) LDF	27 0.000	27 0.000	39 0.000	39 0.000	51 0.000	51 0.000	15 0.000	15 0.002

* In cases where an insured has changed carriers, the company establishing the rating may be unable to obtain current valuations of past losses from previous carriers. Therefore losses may be evaluated at less than 18 months.

The maturity of the losses for any year in the experience period is defined as the number of months between the latest loss valuation and the effective date of the policy to which these losses are assignable.

3. Actual Loss Ratio

Determine the actual loss ratio (ALR) by dividing the basic limits losses subject to experience rating from D.2.a. and D.2.b. of this Section by the

total basic limits premium subject to experience rating from D.1.c. of this Section.

4. Credibility

The credibility for the risk is obtained from Table C of this Section, based on the total basic limits premium subject to experience rating.

5. Adjusted Expected Loss Ratio

The AELR for the risk is obtained from Table C of this Section based on the total basic limits premium subject to experience rating. If a risk includes more than one vehicle type, then the AELR from Table C of this Section should be the AELR for the predominant class of risk on the policy.

6. Experience Modification

$$\frac{\text{ALR} - \text{AELR}}{\text{AELR}} \times \text{CREDIBILITY} = \text{EXPERIENCE MODIFICATION}$$

If the experience modification is negative, it is a credit; if positive, it is a debit.

LIABILITY EXPERIENCE RATING PLAN EXAMPLE

I. Basic Information

Assume the policy to be rated is effective 03/01/19 – 02/29/20 for private passenger type vehicles.

Assume the basic limits premium for BI, PIP, and PDL using CAR rates effective 03/01/19 is \$25,000.

Assume the losses and ALAE for three years, evaluated as of 03/01/19, are as follows:

<u>Year</u> (1)	<u>Maturity</u> (2)	<u>Total Limits Losses</u> (3)	<u>Basic Limits Losses</u> (4)	<u>ALAE</u> (5)	<u>Basic Limits Losses & ALAE (4) + (5)</u> (6)
03/01/15 – 02/29/16	48	\$ 1,500	\$ 1,500	\$ 500	\$ 2,000
		500	500	100	600
		100,000	20,000	20,000	40,000
03/01/16 – 02/28/17	36	750	750	100	850
		250	250	50	300
03/01/17 – 02/28/18	24	250	250	50	300
		500	500	700	1,200
		22,250	20,000	5,000	25,000

II. Total Basic Limits Premium Subject to Experience Rating (See D.1. of this Section)

<u>Year</u>	<u>Annual Basic Limits Premium</u>	<u>Table A Detrend Factors</u>	<u>Basic Limits Premium Subject to Experience Rating</u>
(1)	(2)	(3)	(4)
3 rd Latest Year	\$ 25,000	0.826	\$ 20,650
2 nd Latest Year	25,000	0.864	21,600
Latest Year	25,000	0.905	<u>22,625</u>
			\$ 64,875

From Table C of this Section, given the total basic limits premium subject to experience rating of \$64,875, the credibility is 0.26, the AELR is 0.638, and the MSL is \$36,150. (See D.1., 2. and 3. of this Section)

III. Basic Limits Losses Subject to Experience Rating

A. Paid and Outstanding Losses & ALAE (See D.2. of this Section)

<u>Year</u>	<u>Basic Limits Losses & ALAE</u>	<u>Basic Limits Losses & ALAE Subject to MSL of \$36,150</u>
(1)	(2)	(3)
03/01/15 – 02/29/16	\$ 2,000 600 40,000	\$ 2,000 600 36,150
03/01/16 – 02/28/17	850 300	850 300
03/01/17 – 02/28/18	300 1,200 25,000	300 1,200 <u>25,000</u>
		\$ 66,400

B. Adjustment to Reflect the Ultimate Level of Losses (See D.2. of this Section)

<u>Year</u> (1)	<u>Maturity</u> (2)	Premium Subject To Experience Rating (Step II) (3)	AELR (Step II) (4)	Table B LDF (5)	Adjustment to Reflect Ultimate Level of Losses (3) x (4) x (5) (6)
03/01/15 – 02/29/16	48	\$ 20,650	0.638	0.000	\$ 0
03/01/16 – 02/28/17	36	21,600	0.638	0.000	0
03/01/17 – 02/28/18	24	<u>22,625</u>	0.638	0.000	<u>0</u>
		\$ 64,875			\$ 0

IV. Experience Modification

Credibility (Step II)	0.26
Adjusted Expected Loss Ratio (Step II)	0.638
Basic Limits Losses Subject to Experience Rating (\$66,400 + \$ 0) (Step III)	\$ 66,400
Basic Limits Premium (Step II)	\$ 64,875
Actual Loss Ratio (\$66,400/64,875)	1.024

$$\text{Experience Modification} = \frac{1.024 - 0.638}{0.638} \times 0.26 = 0.157 \text{ (factor of 1.157) or a 15.7\% debit}$$

Liability Experience Rating Plan Factors
Table C – Credibility, Adjusted Expected Loss Ratios and Maximum Single Losses

<u>Premium Level</u>	<u>Credibility</u>	<u>Adjusted Expected Loss Ratio</u>			<u>Maximum Single Loss</u>
		<u>Taxicabs</u>	<u>Zone Rated</u>	<u>All Other</u>	
1,500 - 6,640	0.03	0.549	0.539	0.554	20,000
6,641 - 8,627	0.04	0.564	0.553	0.569	21,783
8,628 - 10,655	0.05	0.574	0.563	0.579	23,044
10,656 - 12,727	0.06	0.580	0.569	0.586	24,001
12,728 - 14,844	0.07	0.586	0.575	0.591	24,827
14,845 - 17,007	0.08	0.590	0.579	0.596	25,544
17,008 - 19,218	0.09	0.594	0.583	0.600	26,196
19,219 - 21,478	0.10	0.598	0.587	0.603	26,826
21,479 - 23,789	0.11	0.601	0.590	0.606	27,413
23,790 - 26,153	0.12	0.604	0.593	0.609	28,000
26,154 - 28,572	0.13	0.607	0.595	0.612	28,565
28,573 - 31,047	0.14	0.609	0.598	0.615	29,130
31,048 - 33,580	0.15	0.612	0.600	0.617	29,673
33,581 - 36,175	0.16	0.614	0.603	0.620	30,238
36,176 - 38,832	0.17	0.616	0.605	0.622	30,803
38,833 - 41,554	0.18	0.618	0.607	0.624	31,368
41,555 - 44,344	0.19	0.620	0.608	0.626	31,933
44,345 - 47,204	0.20	0.622	0.610	0.628	32,498
47,205 - 50,138	0.21	0.624	0.612	0.629	33,085
50,139 - 53,148	0.22	0.625	0.614	0.631	33,694
53,149 - 56,236	0.23	0.627	0.615	0.633	34,281
56,237 - 59,406	0.24	0.629	0.617	0.634	34,890
59,407 - 62,660	0.25	0.630	0.618	0.636	35,520
62,661 - 66,002	0.26	0.632	0.620	0.638	36,150
66,003 - 69,437	0.27	0.633	0.621	0.639	36,802
69,438 - 72,969	0.28	0.635	0.623	0.640	37,454
72,970 - 76,600	0.29	0.636	0.624	0.642	38,128
76,601 - 80,337	0.30	0.637	0.626	0.643	38,824
80,338 - 84,183	0.31	0.639	0.627	0.645	39,520
84,184 - 88,142	0.32	0.640	0.628	0.646	40,237

Liability Experience Rating Plan Factors
Table C – Credibility, Adjusted Expected Loss Ratios and Maximum Single Losses

<u>Premium Level</u>	<u>Credibility</u>	<u>Adjusted Expected Loss Ratio</u>			<u>Maximum Single Loss</u>
		<u>Taxicabs</u>	<u>Zone Rated</u>	<u>All Other</u>	
88,143 - 92,220	0.33	0.641	0.629	0.647	40,976
92,221 - 96,424	0.34	0.643	0.631	0.649	41,737
96,425 - 100,757	0.35	0.644	0.632	0.650	42,498
100,758 - 105,226	0.36	0.645	0.633	0.651	43,302
105,227 - 109,838	0.37	0.646	0.634	0.652	44,106
109,839 - 114,599	0.38	0.648	0.636	0.654	44,936
114,600 - 119,519	0.39	0.649	0.637	0.655	45,801
119,520 - 124,606	0.40	0.650	0.638	0.656	46,671
124,607 - 129,865	0.41	0.651	0.639	0.657	47,584
129,866 - 135,307	0.42	0.652	0.640	0.658	48,497
135,308 - 140,942	0.43	0.654	0.641	0.660	49,475
140,943 - 146,779	0.44	0.655	0.642	0.661	50,453
146,780 - 152,832	0.45	0.656	0.643	0.662	51,475
152,833 - 159,110	0.46	0.657	0.644	0.663	52,518
159,111 - 165,627	0.47	0.658	0.645	0.664	53,605
165,628 - 172,397	0.48	0.659	0.646	0.665	54,735
172,398 - 179,436	0.49	0.659	0.647	0.665	55,887
179,437 - 186,758	0.50	0.660	0.648	0.666	57,104
186,759 - 194,382	0.51	0.661	0.648	0.667	58,343
194,383 - 202,328	0.52	0.661	0.649	0.668	59,647
202,329 - 210,616	0.53	0.662	0.650	0.668	60,973
210,617 - 219,268	0.54	0.663	0.650	0.669	62,386
219,269 - 228,308	0.55	0.664	0.651	0.670	63,842
228,309 - 237,765	0.56	0.664	0.652	0.670	65,342
237,766 - 247,668	0.57	0.665	0.652	0.671	66,929
247,669 - 258,046	0.58	0.666	0.653	0.672	68,581
258,047 - 268,937	0.59	0.666	0.654	0.672	70,298
268,938 - 280,380	0.60	0.667	0.654	0.673	72,124
280,381 - 292,417	0.61	0.667	0.655	0.674	74,015
292,418 - 305,096	0.62	0.668	0.655	0.674	75,993

Liability Experience Rating Plan Factors
Table C – Credibility, Adjusted Expected Loss Ratios and Maximum Single Losses

<u>Premium Level</u>	<u>Credibility</u>	<u>Adjusted Expected Loss Ratio</u>			<u>Maximum Single Loss</u>
		<u>Taxicabs</u>	<u>Zone Rated</u>	<u>All Other</u>	
305,097 - 318,471	0.63	0.669	0.656	0.675	78,080
318,472 - 332,597	0.64	0.669	0.657	0.675	80,275
332,598 - 347,544	0.65	0.670	0.657	0.676	82,601
347,545 - 363,382	0.66	0.670	0.658	0.676	85,057
363,383 - 380,197	0.67	0.671	0.658	0.677	87,644
380,198 - 398,079	0.68	0.671	0.659	0.677	90,405
398,080 - 417,134	0.69	0.672	0.659	0.678	93,318
417,135 - 437,478	0.70	0.672	0.659	0.678	96,426
437,479 - 459,251	0.71	0.673	0.660	0.679	99,730
459,252 - 482,609	0.72	0.673	0.660	0.679	103,317
482,610 - 507,731	0.73	0.673	0.661	0.679	107,078
507,732 - 534,822	0.74	0.674	0.661	0.680	111,165
534,823 - 564,124	0.75	0.674	0.661	0.680	115,556
564,125 - 595,917	0.76	0.674	0.662	0.680	120,316
595,918 - 630,539	0.77	0.674	0.662	0.681	125,468
630,540 - 668,379	0.78	0.675	0.662	0.681	131,076
668,380 - 709,914	0.79	0.675	0.662	0.681	137,206
709,915 - 755,709	0.80	0.675	0.663	0.681	143,923
755,710 - 806,450	0.81	0.675	0.663	0.682	151,335
806,451 - 862,995	0.82	0.676	0.663	0.682	159,552
862,996 - 926,395	0.83	0.676	0.663	0.682	168,682
926,396 - 997,972	0.84	0.676	0.663	0.682	178,942
997,973 - 1,079,420	0.85	0.676	0.664	0.683	190,506
1,079,421 - 1,172,939	0.86	0.677	0.664	0.683	203,679
1,172,940 - 1,281,416	0.87	0.677	0.664	0.683	218,786
1,281,417 - 1,408,760	0.88	0.677	0.665	0.683	236,306
1,408,761 - 1,560,360	0.89	0.678	0.665	0.684	256,891
1,560,361 - 1,743,877	0.90	0.678	0.665	0.684	281,367
1,743,878 - 1,970,579	0.91	0.678	0.665	0.684	311,017
1,970,580 - 2,257,733	0.92	0.678	0.665	0.684	347,623

Liability Experience Rating Plan Factors
Table C – Credibility, Adjusted Expected Loss Ratios and Maximum Single Losses

<u>Premium Level</u>	<u>Credibility</u>	<u>Adjusted Expected Loss Ratio</u>			<u>Maximum Single Loss</u>
		<u>Taxicabs</u>	<u>Zone Rated</u>	<u>All Other</u>	
2,257,734 - 2,633,237	0.93	0.678	0.666	0.685	394,010
2,633,238 - 3,145,291	0.94	0.679	0.666	0.685	454,657
3,145,292 - 3,884,927	0.95	0.679	0.666	0.685	537,346
3,884,928 - 5,047,205	0.96	0.679	0.667	0.686	656,792
5,047,206 - 7,139,307	0.97	0.680	0.668	0.686	844,493
7,139,308 - 12,020,880	0.98	0.680	0.668	0.687	1,182,355
12,020,881- 36,428,755	0.99	0.680	0.668	0.687	1,970,700
36,428,756 and Over	1.00	0.680	0.668	0.687	5,912,383