

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.7. 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	0.980	0.971	0.962
All Other	0.908	0.869	0.833

- 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</u>		<u>2nd</u> <u>Latest</u> <u>Year</u>		<u>3rd</u> <u>Latest</u> <u>Year</u>		<u>Factors for</u> <u>Immature</u> <u>Years*</u>	
	Taxi	All Other	Taxi	All Other	Taxi	All Other	Taxi	All Other
Maturity (Months)	18	18	30	30	42	42	6	6
LDF	0.000	0.000	0.000	0.000	0.000	0.000	0.696	0.747
Maturity (Months)	21	21	33	33	45	45	9	9
LDF	0.000	0.000	0.000	0.000	0.000	0.000	0.323	0.389
Maturity (Months)	24	24	36	36	48	48	12	12
LDF	0.000	0.000	0.000	0.000	0.000	0.000	0.025	0.083
Maturity (Months)	27	27	39	39	51	51	15	15
LDF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

* 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 Rating Adjustment Factor

The Experience Rating Adjustment Factor (ERAF) is a component applied to each calculation of the experience modification. The factor is 0.80.

7. Experience Modification

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

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 07/01/17 – 06/30/18 for private passenger type vehicles.

Assume the basic limits premium for BI, PIP, and PDL using CAR rates effective 07/01/17 is \$6,000.

Assume the losses and ALAE for three years, evaluated as of 07/01/17, 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)
12/01/13 – 11/30/14	42	\$ 1,500 500 100,000	\$ 1,500 500 20,000	\$ 500 100 20,000	\$ 2,000 600 40,000
12/01/14 – 11/30/15	30	750 250	750 250	100 50	850 300
12/01/15 – 11/30/16	18	250 500 250	250 500 250	50 700 75	300 1,200 325

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	\$ 6,000	0.833	\$ 4,998
2 nd Latest Year	6,000	0.869	5,214
Latest Year	6,000	0.908	5,448
			<u>\$ 15,660</u>

From Table C of this Section, given the total basic limits premium subject to experience rating of \$15,660, the credibility is 0.20, the AELR is 0.398, and the MSL is \$8,000. (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 \$8,000</u>
(1)	(2)	(3)
12/01/13 – 11/30/14	\$ 2,000	\$ 2,000
	600	600
	40,000	8,000
12/01/14 – 11/30/15	850	850
	300	300
12/01/15 – 11/30/16	300	300
	1,200	1,200
	325	325
		<u>\$ 13,575</u>

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

<u>Year</u> (1)	<u>Maturity</u> (2)	<u>Premium Subject To Experience Rating (Step II)</u> (3)	<u>AELR (Step II)</u> (4)	<u>Table B LDF</u> (5)	<u>Adjustment to Reflect Ultimate Level of Losses (3) x (4) x (5)</u> (6)
12/01/13 – 11/30/14	42	\$ 4,998	0.398	0.000	\$ 0
12/01/14 – 11/30/15	30	5,214	0.398	0.000	0
12/01/15 – 11/30/16	18	<u>5,448</u>	0.398	0.000	<u>0</u>
		\$ 15,660			\$ 0

IV. Experience Modification

Credibility (Step II)	0.20
Adjusted Expected Loss Ratio (Step II)	0.398
Basic Limits Losses Subject to Experience Rating (\$13,575 + \$ 0) (Step III)	\$ 13,575
Basic Limits Premium (Step II)	\$ 15,660
Actual Loss Ratio (\$13,575/15,660)	0.867

$$\text{Experience Modification} = \frac{0.867 - 0.398}{0.398} \times 0.20 \times 0.80 = 0.189 \text{ (factor of 1.189) or a 18.9\% debit}$$

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

<u>Premium Levels</u>		<u>Credibility</u>	<u>Adjusted Expected Loss Ratio</u>			<u>Maximum Single Losses</u>
			<u>Taxicabs</u>	<u>Zone Rated</u>	<u>All Other</u>	
1 -	1,751	0.10	0.248	0.236	0.242	3,000
1,752 -	3,033	0.11	0.274	0.261	0.268	3,500
3,034 -	4,347	0.12	0.297	0.284	0.290	4,000
4,348 -	5,695	0.13	0.319	0.304	0.311	4,500
5,696 -	7,078	0.14	0.339	0.322	0.331	5,000
7,079 -	8,498	0.15	0.357	0.340	0.347	5,500
8,499 -	9,956	0.16	0.369	0.351	0.360	6,000
9,957 -	11,454	0.17	0.380	0.361	0.370	6,500
11,455 -	12,993	0.18	0.389	0.371	0.380	7,000
12,994 -	14,576	0.19	0.399	0.380	0.389	7,500
14,577 -	16,203	0.20	0.408	0.389	0.398	8,000
16,204 -	17,877	0.21	0.417	0.397	0.407	8,500
17,878 -	19,600	0.22	0.425	0.405	0.415	9,000
19,601 -	21,375	0.23	0.434	0.413	0.424	9,500
21,376 -	23,202	0.24	0.442	0.421	0.431	10,000
23,203 -	25,086	0.25	0.450	0.428	0.438	10,500
25,087 -	27,028	0.26	0.458	0.436	0.446	11,000
27,029 -	29,031	0.27	0.465	0.442	0.454	11,500
29,032 -	31,099	0.28	0.471	0.449	0.461	12,000
31,100 -	33,234	0.29	0.478	0.456	0.467	12,500
33,235 -	35,439	0.30	0.485	0.462	0.473	13,000
35,440 -	37,719	0.31	0.492	0.469	0.480	13,500
37,720 -	40,077	0.32	0.498	0.475	0.486	14,000
40,078 -	42,517	0.33	0.504	0.481	0.492	14,500
42,518 -	45,043	0.34	0.510	0.486	0.498	15,000
45,044 -	47,661	0.35	0.516	0.491	0.504	15,500
47,662 -	50,375	0.36	0.522	0.497	0.509	16,000
50,376 -	53,190	0.37	0.527	0.502	0.514	16,500
53,191 -	56,113	0.38	0.533	0.507	0.519	17,000
56,114 -	59,150	0.39	0.537	0.512	0.525	17,500

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

<u>Premium Levels</u>		<u>Credibility</u>	<u>Adjusted Expected Loss Ratio</u>			<u>Maximum Single Losses</u>
			<u>Taxicabs</u>	<u>Zone Rated</u>	<u>All Other</u>	
59,151 -	62,307	0.40	0.542	0.517	0.529	18,000
62,308 -	65,592	0.41	0.547	0.522	0.534	18,500
65,593 -	69,013	0.42	0.552	0.525	0.539	19,000
69,014 -	72,578	0.43	0.556	0.530	0.543	19,500
72,579 -	76,297	0.44	0.561	0.534	0.547	20,000
76,298 -	80,179	0.45	0.565	0.538	0.551	20,500
80,180 -	84,236	0.46	0.569	0.542	0.555	21,000
84,237 -	88,481	0.47	0.573	0.546	0.559	21,500
88,482 -	92,925	0.48	0.577	0.550	0.563	22,000
92,926 -	97,584	0.49	0.581	0.554	0.567	22,500
97,585 -	102,474	0.50	0.585	0.557	0.571	23,000
102,475 -	107,611	0.51	0.588	0.560	0.574	23,500
107,612 -	113,017	0.52	0.592	0.563	0.578	24,000
113,018 -	118,711	0.53	0.594	0.566	0.580	24,500
118,712 -	124,718	0.54	0.597	0.569	0.583	25,000
124,719 -	131,064	0.55	0.600	0.572	0.586	25,500
131,065 -	137,780	0.56	0.603	0.575	0.589	26,000
137,781 -	144,897	0.57	0.606	0.577	0.592	26,500
144,898 -	152,453	0.58	0.608	0.580	0.594	27,000
152,454 -	160,491	0.59	0.611	0.582	0.597	27,500
160,492 -	169,057	0.60	0.613	0.585	0.599	28,000
169,058 -	178,206	0.61	0.616	0.587	0.601	28,500
178,207 -	187,999	0.62	0.618	0.589	0.603	29,000
188,000 -	198,506	0.63	0.620	0.591	0.605	29,500
198,507 -	209,810	0.64	0.622	0.593	0.607	30,000
209,811 -	222,003	0.65	0.624	0.594	0.609	30,500
222,004 -	235,195	0.66	0.626	0.596	0.610	31,000
235,196 -	249,514	0.67	0.627	0.597	0.612	31,500
249,515 -	265,111	0.68	0.629	0.599	0.613	32,000
265,112 -	282,165	0.69	0.630	0.600	0.615	32,500

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

<u>Premium Levels</u>		<u>Credibility</u>	<u>Adjusted Expected Loss Ratio</u>			<u>Maximum Single Losses</u>
			<u>Taxicabs</u>	<u>Zone Rated</u>	<u>All Other</u>	
282,166 -	300,890	0.70	0.632	0. 602	0.616	33,000
300,891 -	321,545	0.71	0.633	0. 603	0.618	33,500
321,546 -	344,443	0.72	0.635	0. 604	0.619	34,000
344,444 -	369,973	0.73	0.636	0. 606	0.620	34,500
369,974 -	398,614	0.74	0.637	0. 607	0.622	35,000
398,615 -	430,972	0.75	0.638	0.608	0.623	35,500
430,973 -	467,822	0.76	0.639	0.609	0.624	36,000
467,823 -	510,168	0.77	0.640	0.610	0.625	36,500
510,169 -	559,340	0.78	0.641	0.611	0.626	37,000
559,341 -	617,130	0.79	0.642	0.612	0.627	37,500
617,131 -	686,025	0.80	0.643	0.613	0.628	38,000
686,026 -	769,564	0.81	0.644	0.614	0.630	38,500
769,565 -	872,972	0.82	0.645	0.615	0.630	39,000
872,973 -	1,004,293	0.83	0.646	0.616	0.631	39,500
1,004,294 -	1,176,595	0.84	0.647	0.617	0.632	40,000
1,176,596 -	1,412,604	0.85	0.648	0.618	0.633	40,500
1,412,605 -	1,755,669	0.86	0.649	0.619	0.634	41,000
1,755,670 -	2,299,999	0.87	0.650	0.620	0.635	41,500
2,300,000 -	3,296,225	0.88	0.651	0.621	0.636	42,000
3,296,226 -	5,706,451	0.89	0.651	0.621	0.637	42,500
5,706,452 -	and Over	0.90	0.652	0.622	0.637	43,000