

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><b>Latest Year</b></u>	<sup>2<sup>nd</sup></sup> <u><b>Latest Year</b></u>	<sup>3<sup>rd</sup></sup> <u><b>Latest Year</b></u>
Taxi	0.907	0.867	0.831
All Other	0.919	0.883	0.850

- 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**

	<b>Latest</b>		<b>2<sup>nd</sup></b>		<b>3<sup>rd</sup></b>		<b>Factors for</b>	
	<b><u>Year</u></b>		<b><u>Latest</u></b>		<b><u>Latest</u></b>		<b><u>Immature</u></b>	
	Taxi	All	Taxi	All	Taxi	All	Taxi	All
		Other		Other		Other		Other
Maturity (Months)	18	18	30	30	42	42	6	6
LDF	0.000	0.020	0.000	0.003	0.000	0.000	0.701	0.768
Maturity (Months)	21	21	33	33	45	45	9	9
LDF	0.000	0.013	0.000	0.001	0.000	0.000	0.339	0.421
Maturity (Months)	24	24	36	36	48	48	12	12
LDF	0.000	0.005	0.000	0.000	0.000	0.000	0.040	0.117
Maturity (Months)	27	27	39	39	51	51	15	15
LDF	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.027

- \* 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 06/01/16 – 05/31/17 for private passenger type vehicles.

Assume the basic limits premium for BI, PIP, and PDL using CAR rates effective 06/01/16 is \$6,000.

Assume the losses and ALAE for three years, evaluated as of 06/01/16, are as follows:

<b><u>Year</u></b> <b>(1)</b>	<b><u>Maturity</u></b> <b>(2)</b>	<b><u>Total Limits Losses</u></b> <b>(3)</b>	<b><u>Basic Limits Losses</u></b> <b>(4)</b>	<b><u>ALAE</u></b> <b>(5)</b>	<b><u>Basic Limits Losses &amp; ALAE (4) + (5)</u></b> <b>(6)</b>
11/01/12 – 10/31/13	42	\$ 1,500	\$ 1,500	\$ 500	\$ 2,000
		500	500	100	600
		100,000	20,000	20,000	40,000
11/01/13 – 10/31/14	30	750	750	100	850
		250	250	50	300
11/01/14 – 10/31/15	18	250	250	50	300
		500	500	700	1,200
		250	250	75	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 <sup>rd</sup> Latest Year	\$ 6,000	0.850	\$ 5,100
2 <sup>nd</sup> Latest Year	6,000	0.883	5,298
Latest Year	6,000	0.919	<u>5,514</u>
			\$ 15,912

From Table C of this Section, given the total basic limits premium subject to experience rating of \$15,912, the credibility is 0.20, the AELR is 0.411, 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 &amp; ALAE</u>	<u>Basic Limits Losses &amp; ALAE Subject to MSL of \$8,000</u>
(1)	(2)	(3)
11/01/12 – 10/31/13	\$ 2,000	\$ 2,000
	600	600
	40,000	8,000
11/01/13 – 10/31/14	850	850
	300	300
11/01/14 – 10/31/15	300	300
	1,200	1,200
	325	<u>325</u>
		\$ 13,575

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)
11/01/12 – 10/31/13	42	\$ 5,100	0.411	0.000	\$ 0
11/01/13 – 10/31/14	30	5,298	0.411	0.003	7
11/01/14 – 10/31/15	18	<u>5,514</u>	0.411	0.020	<u>45</u>
		\$ 15,912			\$ 52

#### IV. Experience Modification

Credibility (Step II)	0.20
Adjusted Expected Loss Ratio (Step II)	0.411
Basic Limits Losses Subject to Experience Rating (\$13,575 + \$52) (Step III)	\$ 13,627
Basic Limits Premium (Step II)	\$ 15,912
Actual Loss Ratio (\$13,627/\$15,912)	0.856

Experience Modification =  $\frac{0.856 - 0.411}{0.411} \times 0.20 \times 0.80 = 0.173$  (factor of 1.173) or a 17.3% 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	0.258	0.247	0.250	3,000
1,752 -	3,033	0.11	0.285	0.273	0.276	3,500
3,034 -	4,347	0.12	0.309	0.296	0.299	4,000
4,348 -	5,695	0.13	0.331	0.317	0.320	4,500
5,696 -	7,078	0.14	0.351	0.336	0.340	5,000
7,079 -	8,498	0.15	0.370	0.354	0.358	5,500
8,499 -	9,956	0.16	0.383	0.367	0.370	6,000
9,957 -	11,454	0.17	0.394	0.377	0.381	6,500
11,455 -	12,993	0.18	0.405	0.388	0.392	7,000
12,994 -	14,576	0.19	0.415	0.398	0.402	7,500
14,577 -	16,203	0.20	0.425	0.407	0.411	8,000
16,204 -	17,877	0.21	0.434	0.416	0.420	8,500
17,878 -	19,600	0.22	0.443	0.425	0.429	9,000
19,601 -	21,375	0.23	0.452	0.433	0.438	9,500
21,376 -	23,202	0.24	0.461	0.441	0.446	10,000
23,203 -	25,086	0.25	0.469	0.449	0.454	10,500
25,087 -	27,028	0.26	0.477	0.457	0.462	11,000
27,029 -	29,031	0.27	0.485	0.465	0.469	11,500
29,032 -	31,099	0.28	0.493	0.472	0.477	12,000
31,100 -	33,234	0.29	0.500	0.479	0.484	12,500
33,235 -	35,439	0.30	0.507	0.486	0.491	13,000
35,440 -	37,719	0.31	0.514	0.493	0.498	13,500
37,720 -	40,077	0.32	0.521	0.499	0.504	14,000
40,078 -	42,517	0.33	0.528	0.505	0.511	14,500
42,518 -	45,043	0.34	0.534	0.511	0.517	15,000
45,044 -	47,661	0.35	0.540	0.517	0.523	15,500
47,662 -	50,375	0.36	0.546	0.523	0.528	16,000
50,376 -	53,190	0.37	0.552	0.529	0.534	16,500
53,191 -	56,113	0.38	0.557	0.534	0.539	17,000
56,114 -	59,150	0.39	0.563	0.539	0.545	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	0.568	0.544	0.550	18,000
62,308 -	65,592	0.41	0.573	0.549	0.555	18,500
65,593 -	69,013	0.42	0.578	0.554	0.559	19,000
69,014 -	72,578	0.43	0.583	0.558	0.564	19,500
72,579 -	76,297	0.44	0.587	0.563	0.568	20,000
76,298 -	80,179	0.45	0.592	0.567	0.573	20,500
80,180 -	84,236	0.46	0.596	0.571	0.577	21,000
84,237 -	88,481	0.47	0.600	0.575	0.581	21,500
88,482 -	92,925	0.48	0.605	0.579	0.585	22,000
92,926 -	97,584	0.49	0.609	0.583	0.589	22,500
97,585 -	102,474	0.50	0.612	0.587	0.593	23,000
102,475 -	107,611	0.51	0.616	0.590	0.596	23,500
107,612 -	113,017	0.52	0.620	0.594	0.600	24,000
113,018 -	118,711	0.53	0.623	0.597	0.603	24,500
118,712 -	124,718	0.54	0.626	0.600	0.606	25,000
124,719 -	131,064	0.55	0.629	0.603	0.609	25,500
131,065 -	137,780	0.56	0.632	0.606	0.612	26,000
137,781 -	144,897	0.57	0.635	0.609	0.615	26,500
144,898 -	152,453	0.58	0.638	0.611	0.617	27,000
152,454 -	160,491	0.59	0.641	0.614	0.620	27,500
160,492 -	169,057	0.60	0.643	0.616	0.622	28,000
169,058 -	178,206	0.61	0.646	0.618	0.625	28,500
178,207 -	187,999	0.62	0.648	0.621	0.627	29,000
188,000 -	198,506	0.63	0.650	0.623	0.629	29,500
198,507 -	209,810	0.64	0.652	0.625	0.631	30,000
209,811 -	222,003	0.65	0.654	0.627	0.633	30,500
222,004 -	235,195	0.66	0.656	0.628	0.635	31,000
235,196 -	249,514	0.67	0.658	0.630	0.636	31,500
249,515 -	265,111	0.68	0.659	0.632	0.638	32,000
265,112 -	282,165	0.69	0.661	0.633	0.640	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	0.662	0. 635	0.641	33,000
300,891 -	321,545	0.71	0.664	0. 636	0.643	33,500
321,546 -	344,443	0.72	0.665	0. 637	0.644	34,000
344,444 -	369,973	0.73	0.667	0. 639	0.645	34,500
369,974 -	398,614	0.74	0.668	0. 640	0.647	35,000
398,615 -	430,972	0.75	0.669	0.641	0.648	35,500
430,973 -	467,822	0.76	0.671	0.642	0.649	36,000
467,823 -	510,168	0.77	0.672	0.644	0.650	36,500
510,169 -	559,340	0.78	0.673	0.645	0.651	37,000
559,341 -	617,130	0.79	0.674	0.646	0.652	37,500
617,131 -	686,025	0.80	0.675	0.647	0.653	38,000
686,026 -	769,564	0.81	0.676	0.648	0.654	38,500
769,565 -	872,972	0.82	0.677	0.649	0.655	39,000
872,973 -	1,004,293	0.83	0.678	0.650	0.656	39,500
1,004,294 -	1,176,595	0.84	0.679	0.651	0.657	40,000
1,176,596 -	1,412,604	0.85	0.680	0.652	0.658	40,500
1,412,605 -	1,755,669	0.86	0.681	0.652	0.659	41,000
1,755,670 -	2,299,999	0.87	0.682	0.653	0.660	41,500
2,300,000 -	3,296,225	0.88	0.683	0.654	0.661	42,000
3,296,226 -	5,706,451	0.89	0.684	0.655	0.661	42,500
5,706,452 -	and Over	0.90	0.684	0.656	0.662	43,000