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ADDITIONAL INFORMATION

TO MEMBERS OF THE JOINT ACTUARIAL COMMERCIAL LINES COMMITTEE

FOR THE MEETING OF:

Wednesday, February 26, 2020 at 1:00 p.m.

JACL

20.06 CAR Commercial Rate Need Review

Attached for the Committee's review is a working draft of the white paper summarizing the rate analysis for zone rated classes. The Committee should be prepared to prioritize the rating elements to be addressed in future filings in order to enable development of the transition plan. (Docket #JACL20.06, Exhibit #1)

KATY PROCTOR
Actuarial/Statistical Analyst

Attachment

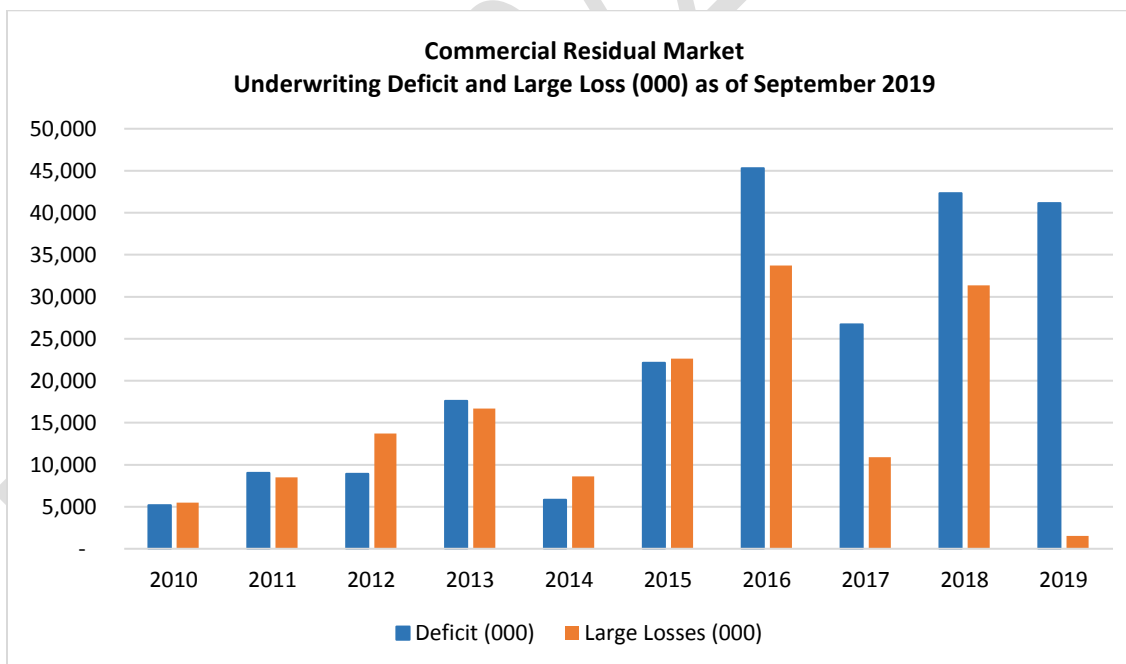
Boston, Massachusetts
February 21, 2020

Commonwealth Automobile Reinsurers Comprehensive Analysis of Commercial Residual Market Rate Phase I – Zone-Rated Classifications

I. Introduction

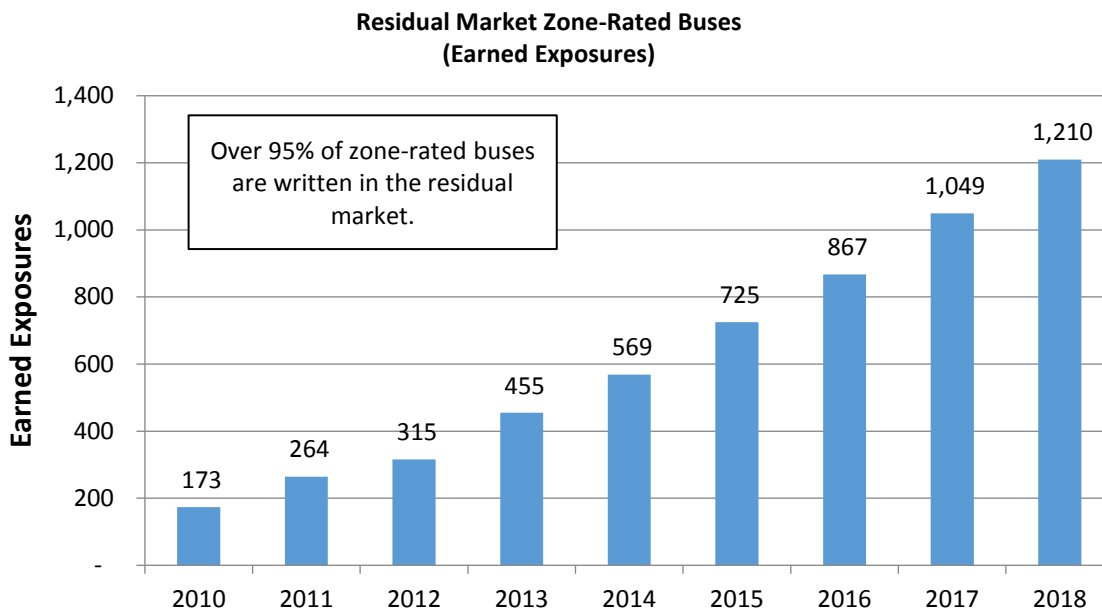
The Joint Actuarial Commercial Lines Committee (JALCL) has been charged to prepare a comprehensive analysis of the Massachusetts commercial residual market rate need and to recommend a plan to achieve rate adequacy. The Committee is expected to formulate reasonable transition schedules for those classifications for which substantial rate increases are indicated.

Several CAR committees have studied the recent growth in the volume of risks being ceded to the MA commercial residual market, as well as a significant growth of the underwriting deficit. The deteriorating financial results illustrated below are due in large part to a notable increase in the volume of high severity claims, particularly during the past five years. Since 2015, there have been 52 accidents with reported losses of \$1.0 million or more, a 63% increase over the previous five years. Eight of these accidents incurred losses and expenses in excess of \$5 million. In contrast, from 2010-2014, only 1 claim resulted in payments exceeding \$5.0 million. In the past year, there have been 12 reported accidents involving zone-rated buses, totaling over \$44 million in losses, 6 of which account for \$34 million.



The committees recognize that a major factor contributing to the growth of the residual market is an increase in applicants with multi-state bus and trucking operations seeking coverage in the MA residual market in order to benefit from the vastly lower MA residual market rates. By far the most dramatic example of this migration is evidenced by the growth in the number of zone-rated buses placed in the MA

residual market since 2010, as illustrated below. Historically, more than 95% of this class of business has been ceded due to its risk of catastrophic loss resulting from \$5 million federally mandated coverage requirements. Accordingly, it is reasonable to conclude that much of this increase is reflective of risks formerly written in higher-rated states' plans.



Not surprisingly, the JALC observes that the most significant and most immediate rate need exists for zone-rated vehicles. Because of the significance of this pricing shortfall and the urgency with which rating solutions are needed, the JALC has opted to address this class of business independently of all other commercial classifications as Phase I of its comprehensive rate analysis. This paper will identify the full extent of rate need for the zone-rated classes, outline an expected filing schedule, and itemize implementation requirements where updated rating procedures are recommended. Other rating issues will be addressed separately in subsequent phases.

II. Zone Rate Indications

In October 2019, CAR filed for an adjustment to zone-rated base rates in accordance with the MA residual market loss experience for combined zone-rated TTT and bus classifications. The filing indication is reflected on the attached Appendix 1. The indicated liability and physical damage base rate changes were applied uniformly to the current base rates.

In addition to the indicated base rate requirement, four additional areas need to be addressed in future filings to appropriately price all risks within the zone-rated classifications.

1) Zone Relativities

The underlying zone relativities embedded in CAR's base rates have not been updated in a number of years, and are out of sync with the ISO rating structure. Impacts of this correction are revenue

neutral but will impact individual zones as illustrated in the table below. More details of the impacts to each zone are attached as Appendix 2.

Range of Zone Relativity Impact	Zone 03			Zone 49		
	Region Count	2018 Earned Exposures	Total Liability Rate Impact	Region Count	2018 Earned Exposures	Total Liability Rate Impact
< -30%	0	-	-	1	917	(980,061)
-30% to 0%	39	21,336	(5,816,348)	23	9,414	(2,376,561)
0% to +30%	8	743	243,722	22	15,928	3,178,312
> +30%	0	-	-	1	6,258	5,751,125
Total	47	22,079	(5,572,626)	47	32,517	5,572,815

2) Increased Limits Factors (ILFs)

CAR's zone rates currently use ILFs for non-zone-rated TTTs and buses. Indications support higher BI ILFs for zone-rated vehicles, consistent with those of other states. Indications also support higher PDL ILFs for zone-rated bus classifications. The impact of this correction is reflected in the table below.

Proposed Zone-Rated Increased Limits Factors

Bodily Injury				Property Damage			
Limit(000)	Current ILF	Proposed ILF	Change	Limit(000)	Current ILF	Proposed ILF	Change
20/40	1.00	1.00		5	1.000	1.000	
20/50	1.02	1.03	1.0%	10	1.240	1.251	0.9%
25/50	1.12	1.17	4.5%	15	1.320	1.356	2.8%
25/60	1.14	1.29	13.2%	25	1.380	1.461	5.8%
30/70	1.22	1.31	7.4%	35	1.400	1.517	8.4%
35/80	1.29	1.42	10.1%	50	1.420	1.569	10.5%
50/100	1.45	1.72	18.3%	100	1.430	1.661	16.2%
100/300	1.85	2.54	37.2%	250	1.440	1.769	22.8%
250/500	2.39	3.72	55.5%	500	1.440	1.935	34.4%
500/500	2.78	4.42	59.1%	1000	1.440	1.903	32.2%
500/1000	2.80	4.56	62.9%	5000	1.781	2.278	27.9%
1000/1000	3.13	5.65	80.4%				
5000/5000	3.86	8.95	131.9%				

3) Primary Rating Factors

CAR's primary rating factors are out of sync with the ISO rate structure for a number of classes as noted below.

Zone-Rated Class	2018 Earned Exposures		ZR Primary Class Factor	
	Ceded	Voluntary	CAR	ISO
Buses				
Airport	0	3	1.10	1.10
Inter-City	100	0	1.30	1.85
Charter	947	56	1.30	1.85
Sightseeing	88	0	1.30	1.65
Trucks, Tractors, Trailers				
Medium Trucks	120	17	0.84	0.95
Heavy Trucks	167	42	0.90	1.00
Ex Heavy Trucks	12	11	0.96	1.10

Heavy TT	6	17	0.88	1.00
Ex Heavy TT	1638	231	0.96	1.10
Trailers	1674	227	0.15	0.15

The total premium impact resulting from the realignment of zone relativities, ILFs, and primary rating factors as described represents an approximate rate effect of 72%, or \$29 million. Those classes of risk most impacted are best illustrated through the examples reflected on the attached Appendix 3. The examples demonstrate indicated rate calculations for a sample risk representing the most extreme area of rate need (i.e. a zone-rated charter bus written at a \$5M limit traveling between New England and New York City). To provide additional perspective, sample rate calculations for the same risks rated in neighboring states' plans are also included. The exhibit also illustrates the impact to a sample zone-rated TTT. The premium differences are summarized below.

Zone Rated Charter Bus (\$5M Limit) Zone 49 (New England) to Zone 26 (NYC) Non Fleet Liability Only			ZR TTT - Extra Heavy Truck (\$1M Limit) Zone 49 (New England) to Zone 26 (NYC) Non Fleet Liability Only		
CAR Rates	Current Rates	11,921	CAR Rates	Current Rates	7,682
	2020 Filed Rates	17,014		2020 Filed Rates	10,969
	Indicated Rates	46,195		Indicated Rates	15,855
Other State Rates	New York 2020 Rates	77,339	Other State Rates	New York 2020 Rates	29,226
	North Carolina 2019 Rates	45,597		North Carolina 2019 Rates	14,143
	Connecticut 2018 Rates	21,476		Connecticut 2018 Rates	11,203
	New Jersey 2018 Rates	53,359		New Jersey 2018 Rates	28,561
	Rhode Island 2020 Rates	27,417		Rhode Island 2020 Rates	14,279

4) Operations Outside of MA

MA has seen a significant migration of multi-state operations seeking coverage in the MA commercial residual market in order to benefit from our lower rates. Some states, such as North Carolina and Illinois, have experienced the same migration with similar negative impact to their residual markets. These states have effectively addressed this issue from a rating perspective with successful results.

The problem of competitive MA rates is exacerbated by a deficiency within CAR's rating plan. Consistent with other states' residual markets, applicants with multi-state operations whose principal place of business is located in MA are written in the MA residual market. However, unlike other states' plans, CAR's current rating methodology does not have a provision for rating vehicles principally operated in another state(s).

CAR proposes to raise rates for vehicles which mainly operate from and between terminals located outside of MA by introducing a rating differential to anticipate the expected loss experience based on country-wide residual market results. More detail relative to the recommended approach is described in Section III.

III. Non-Zone Rated Classifications

The JALC should consider whether to address operations outside of MA for non-zone rated classes within Phase I, or to include this in subsequent phases. If addressed in Phase I, the impact of any proposed changes to ILFs for these classes should also be included.

IV. Transition to Rate Adequacy

The JALC will need to consider alternative approaches to introduce the above rate modifications in a manner that achieves rate adequacy over a reasonable timeframe. Alternatives are described below. As the JALC makes its selections, and integrates any AIPSO recommendations, the selected approach will be more fully developed and summarized in a chart as illustrated in Appendix 4. Alternative approaches are described below.

Option: Introduce a rating differential for operations outside of MA.

Option: Gradually increase ILFs

Option: Combined rating differential for operations outside of MA and increased ILFs

Considerations:

- Revenue neutrality*
- Supporting data*
- Garaging vs terminus (Rules 52 and 72 of the Commercial Auto Manual)*
- Current zone-rating Rule deficiency*
- Rating elements in subsequent filings (i.e. primary rating factors and zone relativities)*

V. Implementation Requirements

This section will be developed as the JALC makes its selections. It will describe data needs to support initial filing(s), rule amendments, and ongoing statistical reporting requirements resulting from the selected approach(es). This section may also include reference to standard procedures to be developed in order to ensure consistency among Servicing Carriers in validating risk characteristics, such as terminus of origin, affecting the rate calculations.

VI. Expected Subsequent Phase(s)

Additional areas of rate need will be evaluated in subsequent phase(s) of the analysis. These may include a review of ILFs for all other classes, alternative pricing approaches for the non-owned classifications, continued review of CAR's experience rating plan, an evaluation of non-MA PIP exposure, and any other miscellaneous classifications and/or coverages as may be identified by the JALC.

Appendix 1

Massachusetts Commercial Automobile
Commonwealth Automobile Reinsurers
Residual Market Zone-Rate Indications

	A-1/B	A-2	A-1/B & A-2	PDL	TOTAL LIABILITY	\$500 ded. Collision	\$500 ded. OTC	TOTAL PHYSDAM	Coverage Weighted
(A) 2018 Earned Exposures	4,826.5	4,826.5		4,826.5	4,826.5	2,550.5	2,606.4		
(B) Projected Ultimate Pure Premium	1,050.00	265.00		518.00		1,182.80	347.37		
(C) Claim Adjustment Expense Factor (Section 100E)	1.090	1.090		1.090		1.144	1.144		
(D) Symbol Drift Factor (Section 100I)	N/A	N/A		N/A		1.079	1.053		
(E) Average Rating Factor	0.7545	0.7545		0.7545		1.0247	1.0256		
(F) Base Pure Premium = (B)x(C)x(D)/(E)	1,516.85	382.82		748.31		1,424.79	407.85		
(G) Company Base Expense Pure Premium (Section 100F)	80.57	5.44		95.15		170.68	39.03		
(H) Company Expense Trend (Section 100G)	0.981	0.9809		0.9809		0.9809	0.9809		
(I) Trended Base Expense Pure Premium = (G)x(H)	79.03	5.34		93.33		167.42	38.28		
(J) Premium Tax Allowance	0.023	2.30%		2.30%		2.30%	2.30%		
(K) Profit Load (Section 100H)	3.97%	3.97%		2.23%		4.52%	4.52%		
(L) Commission (Section 100F)	8.34%	8.34%		8.34%		8.34%	8.34%		
(M) Indicated Average Rate = [(F)+(I)]/[(1.0 - (J)-(K)-(L)) (Adjusted for Average Rating Factors)	1,868.93	454.57	2,323.50	965.97	3,289.47	1,876.73	525.86	2,362.34	4,565.15
(N) Formula Average Rate = (M)x(E) (Including Average Rating Factors & Deductibles)	1,410.15	342.98	1,753.14	728.85	2,481.98	1,923.12	539.32	2,421.20	3,789.45
(O) Current Average Rate (Exhibit 2)			1,204.76	546.18	1,750.94	1,926.72	480.94	2,366.34	3,028.78
(P) Formula Rate Change = (N)/(O) - 1.0			45.5%	33.4%	41.8%	-0.2%	12.1%	2.3%	25.1%
<hr/>									
(Q) Credibility = sqrt[2018 Ultimate Claims/1082]			0.58	0.81		0.28	0.42		
(R) Indicated Rate Change = (P)x(Q) + (no change)x(1.0-(Q))			26.5%	27.1%	26.7%	-0.1%	5.1%	1.0%	15.8%
(S) Indicated Average Rate = (O) x (1.0 + (R))			1,524.03	694.19	2,218.22	1,924.80	505.46	2,388.98	3,508.29

(B) Developed from residual market zone-rated data in Projected Pure Premium exhibit.

(C), (D), (G), (H), (J), (K), (L) from related sections of the main filing.

(E) Average rating factors reflect primary class factors averaged over 2018 residual market zone-rated earned exposures

(O) Current manual rates averaged across zones using 2018 earned exposures and adjusted for current average rating factors

Commonwealth Automobile Reinsurers
Comprehensive Analysis of Commercial Residual Market
Phase 1 - Zone Rated Classification
Appendix 2

CAR DOCKET #JACL20.06
EXHIBIT #1
PAGE 7 OF 10

Liability - Current Average Rates
BUSES+TTTs

Zone Rated Relativities

CAR										Change in Rates							
Current Zone Base Rates										CAR Rates on Current ISO Relativities							
Zone 03		Zone 49								Zone 03		Zone 49		Zone 03		Zone 49	
Uses Zone																	
Region																	
Factor:																	
Liability																	
Collision																	
OTC																	
BI																	
PDL																	
BI																	
PDL																	
bal adj																	
1,596.72										723.87							
0.9793										0.9793							
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Commonwealth Automobile Reinsurers
Comprehensive Analysis of Commercial Residual Market
Phase 1 - Zone Rated Classification
Appendix 2
Zone Rated Relativities

Commercial Residual Mkt.

2018 Earned Exposures

Zone 3	Zone 49	Total (Zone 3 + Zone 49)
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Description	Zone	BI	PDL	BI	PDL	BI	PDL
Atlanta	01	47.5	47.5	111.4	111.4	158.9	158.9
Baltimore/Washington	02	1,087.6	1,087.6	1,429.6	1,429.6	2,517.2	2,517.2
Boston	03	32.5	32.5	138.0	138.0	170.5	170.5
Buffalo	04	633.5	633.5	963.8	963.8	1,597.3	1,597.3
Charlotte	05	157.6	157.6	346.0	346.0	503.6	503.6
Chicago	06	28.5	28.5	15.4	15.4	43.9	43.9
Cincinnati	07	0.0	0.0	156.4	156.4	156.4	156.4
Cleveland	08	13.9	13.9	911.3	911.3	925.2	925.2
Dallas/Fort Worth	09	45.2	45.2	360.2	360.2	405.4	405.4
Denver	10	4.0	4.0	541.5	541.5	545.5	545.5
Detroit	11	0.0	0.0	0.0	0.0	0.0	0.0
Hartford	12	8.0	8.0	12.0	12.0	20.0	20.0
Houston	13	21.5	21.5	916.6	916.6	938.1	938.1
Indianapolis	14	0.0	0.0	15.0	15.0	15.0	15.0
Jacksonville	15	34.0	34.0	0.0	0.0	34.0	34.0
Kansas City	16	95.0	95.0	73.7	73.7	168.7	168.7
Little Rock	17	59.0	59.0	41.5	41.5	100.5	100.5
Los Angeles	18	1,966.7	1,966.7	1,055.9	1,055.9	3,022.6	3,022.6
Louisville	19	12.2	12.2	10.0	10.0	22.2	22.2
Memphis	20	1,112.9	1,112.9	327.7	327.7	1,440.6	1,440.6
Miami	21	212.8	212.8	374.2	374.2	587.0	587.0
Milwaukee	22	0.0	0.0	24.0	24.0	24.0	24.0
Minneapolis/St Paul	23	0.0	0.0	25.7	25.7	25.7	25.7
Nashville	24	248.9	248.9	16.4	16.4	265.3	265.3
New Orleans	25	0.0	0.0	3.5	3.5	3.5	3.5
New York City	26	1,589.9	1,589.9	705.2	705.2	2,295.1	2,295.1
Oklahoma City	27	0.0	0.0	58.5	58.5	58.5	58.5
Omaha	28	0.0	0.0	0.0	0.0	0.0	0.0
Phoenix	29	0.0	0.0	0.0	0.0	0.0	0.0
Philadelphia	30	1,025.8	1,025.8	356.9	356.9	1,382.7	1,382.7
Pittsburgh	31	448.0	448.0	107.2	107.2	555.2	555.2
Portland	32	51.0	51.0	44.7	44.7	95.7	95.7
Richmond	33	445.5	445.5	21.7	21.7	467.2	467.2
St. Louis	34	0.0	0.0	37.5	37.5	37.5	37.5
Salt Lake City	35	0.0	0.0	4.5	4.5	4.5	4.5
San Francisco	36	150.0	150.0	191.8	191.8	341.8	341.8
Tulsa	37	0.0	0.0	0.0	0.0	0.0	0.0
Pacific	40	1,799.8	1,799.8	1,510.4	1,510.4	3,310.2	3,310.2
Mountain	41	54.4	54.4	2,064.9	2,064.9	2,119.3	2,119.3
Midwest	42	648.0	648.0	6,257.9	6,257.9	6,905.9	6,905.9
Southwest	43	1,241.8	1,241.8	4,513.9	4,513.9	5,755.7	5,755.7
North Central	44	1,084.5	1,084.5	234.4	234.4	1,318.9	1,318.9
Mideast	45	0.0	0.0	94.2	94.2	94.2	94.2
Gulf	46	0.0	0.0	487.2	487.2	487.2	487.2
Southeast	47	1,093.4	1,093.4	1,812.2	1,812.2	2,905.6	2,905.6
Eastern	48	4,098.0	4,098.0	3,311.3	3,311.3	7,409.3	7,409.3
New England	49	2,527.7	2,527.7	2,832.5	2,832.5	5,360.2	5,360.2
		22,079.1	22,079.1	32,516.7	32,516.7	54,595.8	54,595.8
Annual Earned Expos (Totals)		1,840		2,710		4,550	

ISO Zone Combination Factors

		Liability	Collision	OTC
40	Pacific	1.399	1.192	1.101
41	Mountain	1.364	1.38	1.205
42	Midwest	1.719	1.804	1.012
43	Southwest	1.185	1.315	0.902
44	North Central	1.501	1.303	0.83
45	Mideast	1.342	1.366	1.007
46	Gulf	1.613	1.492	0.925
47	Southeast	1.652	1.63	0.973
48	Eastern	1.463	1.455	0.85
49	New England	1.399	1.711	0.787

From ISO CA-2012-RZR1 (Sections A and B)
AIB relativities are one round behind these.

Metro Factors	Liab	Coll	OTC
Metro-Metro	0.950	0.900	0.950
Metro-NonMetro	0.975	0.900	1.000
NonMetro-NonMetro	1.000	1.000	1.000

**ISO Zone Combo Factors
Converted to Relativities
(Base = New England)**

		Liability	Collision	OTC
40	Pacific	1.000	0.697	1.399
41	Mountain	0.975	0.807	1.531
42	Midwest	1.229	1.054	1.286
43	Southwest	0.847	0.769	1.146
44	North Central	1.073	0.762	1.055
45	Mideast	0.959	0.798	1.280
46	Gulf	1.153	0.872	1.175
47	Southeast	1.181	0.953	1.236
48	Eastern	1.046	0.850	1.080
49	New England	1.000	1.000	1.000

Liability Metro Distribution	Mo. EE	Ann. EE	Metro Factor
Metro-Metro	9,531.5	794	0.950
Metro-NonMetro	21,945.4	1,829	0.975
NonMetro-NonMetro	23,118.9	1,927	1.000
		4,550	0.981

**Commonwealth Automobile Reinsurers
Comprehensive Analysis of Commercial Residual Market
Phase 1 - Zone Rated Classifications
Appendix 3**

Zone Rating Example

Example 1 Zone Rated Charter Bus (\$5M Limit) Zone 49 (NE) to Zone 26 (NY) Non Fleet													
CAR Rates	CAR Current Rates (NE to NYC)				CAR 2020 Filed Rates				CAR Indicated Rates				
	BI	PDL	Total		BI	PDL	Total	change	BI	PDL	Total	change	
	Base Rate	1,963	889		2,483	1,130			2,483	1,130			
	Primary Factor	1.30	1.30		1.30	1.30			1.85	1.85			
	ILF	3.860	1.792		4.440	1.825			8.950	2.430			
	Basic Limits Premium	2,552	1,156	3,708	3,228	1,469	4,697	26.7%	4,594	2,091	6,685	80.3%	
Other State Rates	Total Limits Premium	9,850	2,071	11,921	14,332	2,681	17,013	42.7%	41,116	5,080	46,196	287.5%	
	AIPSO NY (NYC to NE)				North Carolina (NE to Eastern)				AIPSO CT (NE-NYC)				AIPSO NJ (NYC-NE)
	BI	PDL	Total		BI	PDL	Total		Liab	Total		Liab	Total
	Base Rate	7,994	1,296		1,834	1,931			3,769			7,671	
	Primary Factor	1.85	1.85		1.85	1.85			1.85			1.85	
	ILF	4.500	4.500		11.870	1.490			3.080			3.760	
	Basic Limits Premium	14,789	2,398	17,187	3,393	3,572	6,965		6,973	6,973		14,191	14,191
	Total Limits Premium	66,551	10,791	77,342	40,275	5,322	45,597		21,476	21,476		53,359	53,359
	20/50/10 v2020				30/60/25 Garaged out of state v2019				\$75K CSL v2018				\$35K CSL v2018
													\$75K CSL v2020

Example 2 TTT - Extra Heavy Truck (\$1M Limit) Zone 49 (NE) to Zone 26 (NY) Non Fleet													
CAR Rates	CAR Current Rates (NE to NYC)				CAR 2020 Filed Rates				CAR Indicated Rates				
	BI	PDL	Total		BI	PDL	Total	change	BI	PDL	Total	change	
	Base Rate	1,963	889		2,483	1,130			2,483	1,130			
	Primary Factor	0.96	0.96		0.96	0.96			0.96	0.96			
	ILF	3.130	2.090		3.600	2.201			5.650	2.200			
	Basic Limits Premium	1,884	853	2,737	2,384	1,085	3,469	26.7%	2,384	1,085	3,469	26.7%	
Other State Rates	Total Limits Premium	5,897	1,783	7,680	8,582	2,388	10,970	42.8%	13,470	2,387	15,857	106.5%	
	AIPSO NY (NYC to NE)				North Carolina (NE to Eastern)				AIPSO CT (NE-NYC)				AIPSO NJ (NYC-NE)
	BI	PDL	Total		BI	PDL	Total		Liab	Total		Liab	Total
	Base Rate	7,994	1,296		1,834	1,931			3,769			8,007	
	Primary Factor	1.10	1.10		1.10	1.10			1.15			1.45	
	ILF	2.860	2.860		5.610	1.330			2.050			2.460	
	Basic Limits Premium	8,793	1,426	10,219	2,017	2,124	4,141		4,334	4,334		11,610	11,610
	Total Limits Premium	25,148	4,078	29,226	11,318	2,825	14,143		8,885	8,885		28,561	28,561
	20/50/10 v2020				30/60/25 Garaged out of state v2019				\$75K CSL v2018				\$35K CSL v2018
													\$75K CSL v2020

**Commonwealth Automobile Reinsurers
Commercial Residual Market Rate Need
Phase I - Zone Rated Classifications**

Appendix 4

Anticipated Filing Schedule

Filing	Effective Date	List of Changes	Rate Impact	
			%	\$
Filing 1				
Filing 2				
Filing 3				
Filing 4				