



NATALIE A. HUBLEY
PRESIDENT

COMMONWEALTH AUTOMOBILE REINSURERS

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RECORDS OF MEETING

ACTUARIAL COMMITTEE – OCTOBER 11, 2017

Members Present

Ms. Lynellen Ramirez – Chair	Arbella Insurance Group
Mr. Geoffrey Arnold	Plymouth Rock Assurance Corporation
Mr. Gregory Karabinos ⁽¹⁾	The Norfolk & Dedham Group
Ms. Sarah Clemens	MAPFRE U.S.A. Corporation
Mr. Hall Crowder	Allstate Insurance Company
Mr. Christopher Dupill	EM Freedman Insurance Agency, Inc.
Mr. Glenn Hiltbold	Safety Insurance Company
Mr. Adam Kreuser	The Hanover Insurance Company
Mr. Todd Lehmann	Quincy Mutual Group
Ms. Meredith Woodcock	Liberty Mutual Group

Substituted for:

⁽¹⁾Mr. Alex Butensky

Not in Attendance:

Mr. Joseph Cofield, Metropolitan P & C Insurance Company

17.01 Records of Previous Meeting

The Committee unanimously voted to approve the Records of the Actuarial Committee meeting of September 13, 2017. The Records have been distributed and are on file.

17.04 Quota Share Credits for Policies Effective April 1, 2018 and Later

Staff reviewed the Indexed Market Share Group Range proposal discussed at the prior meeting, updated to include statistical data reported through July, 2017. The indexing of the Market Share Group ranges reduces the minimum thresholds to obtain a credit from 5.0% to 2.6%, 2.6%, and 2.7% respectively, for the three years included in the calculation. The indexed relativity also tempers all credit group ranges based on the relativity of the residual market share ratio to the 2011 residual market share, separately by year. This methodology yields an expected 12.8% decrease to potential credit premium, and a 17.6% decrease to credit eligible exposures, compared to the prior year.

The Committee discussed the Safety proposal which incorporates merit rating parameters into the “indexed” model. Mr. Glenn Hiltbold discussed a revision to his proposal in which the merit rating values

and rate classes were re-grouped to enhance data credibility. Logic similar to the existing credit methodology was then used to select a final credit group range. This methodology results in a 25.8% increase to potential credit premium, and a 16.8% increase to credit eligible exposures, compared to the prior year.

Mr. Hiltbold also discussed an alternative selection methodology that includes Merit Rating parameters, but keeps the current Residual Market Group bands including the minimum threshold for credits at 5.0%. This methodology results in a 46.5% decrease to potential credit premium, and a 57.2% decrease to credit eligible exposures, compared to the prior year.

With the results so varied by the changing minimum thresholds, Mr. Hiltbold offered a third alternative that includes merit rating parameters, keeps the current residual market group bands, but lowers the minimum threshold for credits to 3.5%. This methodology results in a 17.6% decrease to potential credit premium, and a 27.1% decrease to credit eligible exposures, compared to the prior year.

For discussion purposes, Mr. Hiltbold distributed a summary of the estimated impact to potential credit eligible exposures and premium for each of the alternatives being discussed.

Mr. Geoffrey Arnold commented that the statute governing credits sets a goal to minimize disproportionate representation by classification and territory, and is silent regarding driving record. He opined that the statute contemplates that the residual market is intended for the higher risk insureds and therefore that a credit offer may more appropriately target risks with better driving histories in order to incent companies to voluntarily write those good drivers in riskier classes and territories.

Mr. Arnold commented on the original Merit Rating proposal from Safety, noting large increases in credit eligible exposures and premium to risks with the higher Merit Rating values, while the best drivers (Merit Rating values 98 and 99) lose most of their existing credits, reducing the chance that they will be written voluntarily. Mr. Arnold also noted the decrease in credits to three territories (Lowell-41, Lynn-43, and Brockton-45) on which the Division of Insurance (DOI) focused in its May 31, 2016 decision.

Mr. Arnold then distributed an exhibit that suggested another approach to incorporate merit rating into the credit selection methodology which he opined better aligns with the objectives he discussed.

Considerable discussion ensued relative to the merits of incorporating merit rating into the credit selection process. Several members strongly opposed Mr. Arnold's approach that increased credits for good drivers, citing the vibrant competitive voluntary market. It was also suggested that, in some instances, the better drivers in the assigned risk plan may be there only because they are included on a multi-vehicle policy with a higher risk driver.

While the Committee generally supported the approach proposed by Safety, some members noted that credits would increase significantly in some territories, while continuing to decrease in the so-called "DOI" territories. Members also expressed concern with decreasing credits for inexperienced drivers. Others suspected that the complex methodology would be rejected by the Division of Insurance.

The Committee then continued discussion regarding other alternatives. Recognizing that there has been little change in the size of the residual market, the Committee considered the option of retaining last year's credit factors as suggested in prior DOI Decisions. Some members emphasized that while that option ensures credits are not eliminated in territories of concern, it also prohibits increases in other rate class/territory cells with a demonstrated need for increased credits.

In order to address concerns expressed by the Division of Insurance, Mr. Hall Crowder suggested that a 3-5 year step-down approach for those cells that are indicated to eliminate credits would mitigate the potential for market disruption, and enable the self-correcting formula.

The Committee members then discussed concerns raised regarding the potential for market disruption that has been predicted to result from a large decrease to available credits. Several members discussed that although credits are proposed to decrease for class 10 risks in some of the “DOI” territories (Lowell, Lynn, Springfield, and Holyoke), the residual market is between 2% and 2.6% of the total exposures in those cells. It was noted that too many credits, not only in these in these cells but also statewide, has enabled easy access to purchase credits to avoid sharing in the assigned risk process. Several members agreed, noting that the current matrix of credit factors enables some carriers to satisfy their residual market quota with lower loss ratio exposures, leaving the true residual market burden distributed among just over half of the participating companies. Those members also opined that the low residual market shares in those cells are not driven by available credits, but rather by the competition among companies employing strategic underwriting decisions. Further, most members opined that the market is well represented by voluntary producers in those territories of concern, such that a decrease in available credits in those areas will not impact consumers access to insurance.

The majority of committee members considered that the Indexed Methodology was the best option to pursue. The indexing of the Market Share Group ranges appropriately reduces the minimum thresholds by year to adjust the definition of disproportionate representation with changes to the residual market size. The Committee also agreed that this methodology is objective and can be employed even in the event of larger swings in the size of the residual market.

After additional discussion, the Committee voted with six members in favor and three opposed to recommend to the Governing Committee the Indexed Market Share Group Range proposal.

Consistent with past years, Staff has updated the model to reflect data statistically reported through August, 2017. The final proposal results in an estimated 18.2% decrease to credit eligible exposures, and a 13.8% decrease to available credit premium. The corresponding Rule amendments have been prepared for presentation to the Governing Committee.

Additionally, the Committee recommended no changes to take-out credits.

17.05 Rule 21.D. Constraints on Placement of Clean-in-Three Risks through the MAIP

At its November 16, 2016 meeting, CAR’s Governing Committee voted to amend Rule 21 of the Rules of Operation to extend the clean-in-three non-renewal provision for qualifying former Exclusive Representative Producers (ERPs). As a result, clean-in-three risks cannot be non-renewed by the former ERP’s Servicing Carrier, pursuant to the Rules, through March 31, 2018. The Governing Committee also voted to have CAR participate in assisting the remaining eligible former ERPs seek voluntary appointments for their private passenger books of business.

Mr. John Metcalfe provided the Committee with a timeline of CAR’s efforts in this regard. He noted that in March 2017, CAR emailed the remaining eleven former ERPs to solicit interest in participating in CAR’s assistance effort and to inquire about their agency attempts and experience to date in seeking voluntary private passenger markets. In April, CAR followed up with the ERP agencies that failed to respond to the March email to confirm their understanding of the Governing Committee’s directive and to ascertain participation. In May, CAR contacted all eleven former ERPs and defined the solicitation process. The ERPs were informed that their responsibility would be to provide CAR with informational documentation that would assist insurance companies in determining whether a voluntary relationship with

the agency is feasible, and that CAR's role in the process would be to distribute the information supplied by the ERP agency to the industry for their consideration. CAR provided the agencies with suggestions as to the development of business plans.

Each former ERP was requested to provide its Agency Profiles/Business Plans to CAR by June 30, 2017. In July, CAR followed up with agencies that had not yet responded. On July 21, 2017 CAR forwarded a spreadsheet containing statistical data profiling the eleven former ERP agencies and included business plans submitted by five of the eleven agencies to all Assigned Risk Companies. The ARCs were asked to review the agency document submissions and respond by September 29 with any intention to either pursue or not pursue a voluntary offer to any of the agencies.

Mr. Metcalfe informed the Committee that this effort has now concluded, resulting in one of the 11 producers obtaining a voluntary contract. That producer had 114 clean-in-three exposures in his book of business. The remaining 10 former ERP agencies, writing a combined total of 403 clean-in-three exposures, have been unable to obtain a voluntary offer.

In a letter addressed to the Committee, Mr. Sumner Gilman wrote that, as a result of the efforts and remaining size of the clean-in-three pool, he would not advocate for an extension of the Rule. Rather, he suggested policy processing assistance to the remaining clean-in-three risks similar to that extended to expiring risk assignments addressed in CAR Rule 29.D. as he discussed with CAR staff prior to the meeting.

Following discussion, the Committee agreed that the effort had reduced the pool of clean-in-three business to a point where an extension is no longer warranted. The Committee unanimously voted to recommend that the April 1, 2018 sunset provision be ratified in accordance with the requirements of Rule 21.D.6.

The Committee also considered the suggestion made by Mr. Gilman and agreed that the addition of such language would provide assistance to the remaining former ERPs in transitioning their clean-in-three business to the MAIP, should that be required. The Committee discussed recommended Rule provisions that set forth notification requirements to the producer and provide for the modification of down payment and pre-inspection requirements in the event the producer is unable to place the risk in the voluntary market. The Committee unanimously voted to recommend adoption and directed staff to prepare amendments to Rule 21.D.6. for presentation to the Governing Committee.

SHANNON CHIU
Actuarial and Statistical Analyst

Boston, Massachusetts
November 8, 2017

ATTACHMENT LISTING

Docket #AC17.02, Exhibit #3	Attendance Listing
Docket #AC17.04, Exhibit #14	Exhibit Distributed By Safety Insurance Company
Docket #AC17.04, Exhibit #15	Exhibit Distributed By Plymouth Rock Assurance Corp.
Docket #AC17.04, Exhibit #16	Updated Credit Proposal Exhibit Using August 2017 Data

ACTUARIAL COMMITTEE MEETING
 SIGN-IN SHEET
 October 11, 2017

Individual's Name	Company / Agency
Alan Kreiser	Halover Insurance Company
Sarah Clemens	NAPFRE
Chris Dupic	EM Freedman Insurance
Meredith Woodcock	Liberty Mutual
Grey Knabner	Norfolk and Delham Group
Todd Lehmann	Quincy Mutual
Hall Crowder	Allstate
Geoffrey Arnold	Plymouth Rock
Glenn Huppert	Safety Insurance
JOHN METCALPE	CAR
Lynellen Ramirez	Arbelle Ins
Gully	Car
Shannon Chiu	CAR

SUMMARY OF CREDIT PROPOSALS (10/10/17 Meeting)

	Credit Eligible	Potential Credit Premium		Potential Credit Premium by Merit Rating Level				
				99	98	00	1-6	7+
4/1/2017 - Current Credit Offer	458,661	853,257,012		225,074,222 26.4%	71,398,611 8.4%	286,055,880 33.5%	219,003,556 25.7%	51,724,743 6.1%
4/1/2018 Indicated Credits pure update to DOI formula	99,439 -78.3%	263,564,504 -69.1%	This is from the 06.07.17 meeting. Traditional bands. Still have to be >5% to get a credit					
4/1/2018 Indicated Credits	377,709 -17.6%	744,088,779 -12.8%	Indexed approach. The grid moves for each year. Cell has to be greater than >2.7% in 2017 to get a credit.					
4/1/2018 Indicated Credits	535,862 16.8%	1,073,148,741 25.8%	"Safety Approach" - SDIP Matters. 99, 98 down significantly. 00 and above are up But this still used "Indexed" groupings.	67,653,945 6.3%	27,767,692 2.6%	353,764,122 33.0%	330,503,381 30.8%	293,459,601 27.3%
4/1/2018 Indicated Credits	196,120 -57.2%	456,232,748 -46.5%	"Safety Approach"...but keep the bands the same. "Traditional": You have to be >5% to get a credit.	0 0.0%	10,739,582 2.4%	125,282,002 27.5%	72,906,475 16.0%	247,304,689 54.2%
4/1/2018 Indicated Credits	334,243 -27.1%	703,020,647 -17.6%	"Safety Approach"...but an interim step/ You have to be >3.5% to get a credit.	11,282,804 1.6%	26,714,956 3.8%	267,131,576 38.0%	139,692,602 19.9%	258,198,709 36.7%

10/10/2017

Glenn Hiltbold, F.C.A.S. - Safety Insurance - (617) 951-0600 ext. 1277 - glennhiltbold@safetyinsurance.com

AC 17.04 – Quota Share Credits for Policies Effective April 1, 2018 and Later

At this committee's September 13, 2017 meeting, a method of incorporating SDIP as an additional dimension for use in establishing a 2018 credit offer was suggested by Safety Insurance Company. Several exhibits reflecting this approach have been distributed as additional information for our consideration.

While the use of SDIP does present us with the opportunity to produce a credit offer that better achieves the objectives of MGL c. 175, §113H (to "enhance the prospects that no classification or territory is disproportionately represented in the [assigned risk] plan"), the details of the approach taken so far prevent us from realizing that opportunity.

The statute explicitly requires that we establish a credit offer whose goal is to minimize disproportionate representation by "classification or territory". There is an implicit view that it is somehow inappropriate for any classification or territory to contribute more than its fair share of involuntary risks. But there is nothing in the statute that deals with driving record, as reflected in SDIP points or any other metric, and it is difficult to imagine that legislators, or anyone else, feel it inappropriate that "bad" (i.e. high SDIP) drivers make up a large-than-average share of involuntary risks.

Yet the exhibits which have been distributed simply add SDIP as a co-equal third dimension and thus convert the existing credit methodology into one which enhances the prospects that no classification, territory, or SDIP level is disproportionately represented. The result is a significant increase both in the number of credit-eligible exposures and the potential credit premium available for risks with high numbers of SDIP points — there is 69.6% more credit premium for SDIP 00, 74.9% more for SDIP 01-06, and 615.9% more for SDIP 07+.

At the same time, the very best drivers, SDIP 98 and SDIP 99, lose most of their existing credits, very likely reducing the chance that they will be written voluntarily, no matter which classification or territory they're in. SDIP 98 and 99 drivers make up 77% of all class 10/15/30 exposures (the other classes are not uniformly eligible for these two SDIP levels). This figure ranges from 61% to 77% by territory, so it is clear that even in the "worst" territory, the "best" drivers comprise the majority of risks. Stripping away their credits may make it more likely, not less, that these territories are disproportionately represented in the assigned risk plan. Moreover, the overall impact is particularly deleterious with respect to the three territories (Lowell - 41, Lynn - 43, and Brockton - 45) on which the DOI focused in its May 31, 2016, decision rejecting our 2016 credit offer. The 50.8%, 71.0%, and 45.7% reductions which are now being proposed stand out in stark contrast to the many territories which would receive increases ranging from 100% to as high as 600% and more.

Fortunately, there is a straightforward means of reflecting SDIP that avoids this particular problem. By using SDIP to *stratify* the measurement of disproportionate representation by classification and territory, the resulting indications should be considerably closer to achieving the objective of MGL c. 175, §113H. Stratification leaves the current class-plus-territory methodology intact, but changes the measure of disproportionate representation to an SDIP-specific set of relativities.

To facilitate the process, I translated the existing DOI Market Share Group into relativities which could be universally applied. This is considerably easier than having to restate the ranges for each year and for each SDIP level over and over again. The first exhibit shown below has both the original (absolute) Market Share Groups and the equivalent relativities for each of those groups. Note, for example, that the groupings selected in 2011, when translated into relativities, directly imply that a credit is warranted whenever disproportionate representation exceeds about twice the average, and that once it reaches

6.5 times average even more credits are to be offered. This same standard was applied consistently throughout the process.

The second exhibit shows an example for Class 10 / SDIP 99 which is where the action is, so to speak. As discussed previously, experienced drivers with no blemishes on their record do not belong in the MAIP, and it is these drivers that MGL c. 175, §113H was designed to benefit. The Residual Market Share numbers for each year are based on MAIP usage as compared for SDIP 99 as a whole for that same year. You can see that the ratio for Class 10, SDIP 99 – all territories combined – is pretty consistently 1.19 times SDIP 99 as a whole – the numbers for Class 15, Class 30 and M/M are about 0.46, 0.60, and 1.33 respectively, which balance – as they must – precisely to 1.00 (Classes 17, 18, 20, 21, 25 and 26 have no SDIP 99 exposures). Note the six territories for which Class 10 business in SDIP 99 has consistently been disproportionately represented to a degree that warrants an increase in credits when the DOI standards are used.

A complete analysis for the other nine Classes and the other four SDIP groups shows some interesting results (presented as the next three exhibits) when everything is aggregated by class and by territory. Now – instead of a 25.8% increase the amount of potential credit premium -- there is a reduction of about 10%. This is driven by a shift toward credits available to SDIP 99 drivers. Because there's an increase in available credits for lower-premium SDIP exposures and a decrease for higher-premium SDIP levels, this 10% decrease occurs in spite of a 7.8% increase in the actual number of credit-eligible exposures.

As with any new methodology, there are significant swings in all directions, both by class and by territory, and were we to adopt the enhanced Safety methodology, it would be worth considering a phase-in approach or some other means of tempering the changes, particularly where significant numbers of drivers would be slated to lose their credits. The final five exhibit show one possible way to achieve stability, in this case by adjusting the relative ranges "down" by 5%. The result is a net zero change in potential credit premium, a statistic which might be more consistent with the current DOI directive to keep things unchanged absent a significant change in the MAIP itself.

DOI SELECTED RANGES

2011 Res Mkt Share Groups			
Group	>	≤	Credits
0	0.000	0.050	0.00
1	0.050	0.080	1.00
2	0.080	0.110	1.00
3	0.110	0.170	1.00
4	0.170	0.230	1.25
5	0.230	0.290	1.50
6	0.290	0.350	1.75
7	0.350	0.410	2.00
8	0.410	0.470	2.25
9	0.470	1.000	2.50

MAIP = 2.58%

DOI SELECTED RELATIVITES

2011 Res Mkt Share Groups			
>	≤	Group	Credits
0.000	1.938	0	0.00
1.938	3.101	1	1.00
3.101	4.264	2	1.00
4.264	6.589	3	1.00
6.589	8.915	4	1.25
8.915	11.240	5	1.50
11.240	13.566	6	1.75
13.566	15.891	7	2.00
15.891	18.217	8	2.25
18.217	1000.000	9	2.50

Rate Class 10

Terr	MRG = 99									
	Residual Market Share			Indicated Mkt Share Range			Selected Range	Y=0 Credits	Y+1 Credits	Change
	Y-2	Y-1	Y=0	Y-2	Y-1	Y=0				
1	0.453	0.524	0.494	0	0	0	0	-	-	-
2	0.445	0.529	0.494	0	0	0	0	-	-	-
3	0.547	0.574	0.585	0	0	0	0	-	-	-
4	0.562	0.487	0.511	0	0	0	0	-	-	-
5	0.781	0.748	0.795	0	0	0	0	-	-	-
6	0.836	0.769	0.729	0	0	0	0	-	-	-
7	1.181	1.260	1.240	0	0	0	0	-	-	-
8	1.019	0.985	1.031	0	0	0	0	-	-	-
9	1.260	1.278	1.341	0	0	0	0	-	-	-
10	1.510	1.278	1.186	0	0	0	0	-	-	-
11	1.194	1.217	1.103	0	0	0	0	-	-	-
12	1.247	1.217	1.170	0	0	0	0	-	-	-
13	2.680	2.658	2.827	1	1	1	1	-	1.00	1.00
14	2.517	2.628	2.435	1	1	1	1	-	1.00	1.00
15	2.320	2.424	2.627	1	1	1	1	-	1.00	1.00
16	4.372	4.406	3.711	3	3	2	3	1.00	1.00	-
17	1.472	1.257	1.253	0	0	0	0	-	-	-
18	4.335	4.669	3.345	3	3	2	3	1.00	1.00	-
19	2.409	2.662	2.215	1	1	1	1	-	1.00	1.00
20	5.946	5.808	5.167	3	3	3	3	1.00	1.00	-
21	5.669	6.310	6.456	3	3	3	3	1.00	1.00	-
22	7.029	9.474	9.761	4	5	5	5	1.00	1.50	0.50
23	1.731	1.611	1.554	0	0	0	0	-	-	-
24	1.308	1.197	1.105	0	0	0	0	-	-	-
25	0.995	1.080	1.030	0	0	0	0	-	-	-
26	2.398	2.458	2.208	1	1	1	1	-	1.00	1.00
27	0.378	0.376	0.378	0	0	0	0	-	-	-
40	3.501	2.563	3.001	2	1	1	1	1.00	1.00	-
41	2.329	1.949	1.909	1	1	0	1	1.00	1.00	-
42	3.569	2.578	2.401	2	1	1	1	1.00	1.00	-
43	3.222	3.551	2.698	2	2	1	2	1.00	1.00	-
44	5.480	5.841	5.508	3	3	3	3	1.00	1.00	-
45	3.175	4.068	4.434	2	2	3	2	1.00	1.00	-
99	0.540	0.319	0.292	0	0	0	0	-	-	-
Tot	1.185	1.193	1.188							

**Commonwealth Automobile Reinsurers
Proposed Credit Offer - Data Through July, 2017
Summary by Rate Class**

Potential Credit Premium

2017 Credit Factors

	<u>00</u>	<u>1-6</u>	<u>7+</u>	<u>98</u>	<u>99</u>	<u>TOT</u>
10	\$ 66,015,683	\$ 143,108,486	\$ 32,568,150	\$ 43,801,197	\$ 214,942,131	\$ 500,235,647
15	\$ 697,432	\$ 3,436,676	\$ 720,203	\$ 1,015,799	\$ 7,366,962	\$ 13,237,073
17,18	\$ 68,208,595	\$ 41,268,907	\$ 12,380,809	\$ 26,075,753	\$ -	\$ 147,934,065
20,21,25,26	\$ 143,660,451	\$ 26,271,162	\$ 3,774,700	\$ -	\$ -	\$ 173,706,313
30	\$ 138,880	\$ 246,320	\$ 86,052	\$ 86,342	\$ 370,808	\$ 928,402
M/M	\$ 1,569,399	\$ 1,690,961	\$ 545,316	\$ 416,332	\$ 1,675,767	\$ 5,897,776
Total	\$ 280,290,442	\$ 216,022,512	\$ 50,075,231	\$ 71,195,424	\$ 224,355,668	\$ 841,939,276

2018 Credit Factors - Enhanced Safety Methodology

	<u>00</u>	<u>1-6</u>	<u>7+</u>	<u>98</u>	<u>99</u>	<u>TOT</u>
10	\$ 46,832,177	\$ 82,038,408	\$ -	\$ 40,941,189	\$ 384,008,491	\$ 553,820,265
15	\$ 1,120,123	\$ 4,172,709	\$ 848,501	\$ 1,928,647	\$ 16,581,267	\$ 24,651,247
17,18	\$ 19,964,627	\$ 20,512,281	\$ 1,367,904	\$ 3,646,632	\$ -	\$ 45,491,444
20,21,25,26	\$ 101,662,703	\$ 20,573,520	\$ 701,718	\$ -	\$ -	\$ 122,937,942
30	\$ 415,504	\$ 950,848	\$ 78,808	\$ 177,795	\$ 2,087,914	\$ 3,710,870
M/M	\$ 626,985	\$ 1,858,508	\$ 139,519	\$ 270,690	\$ 1,152,274	\$ 4,047,976
Total	\$ 170,622,120	\$ 130,106,273	\$ 3,136,450	\$ 46,964,953	\$ 403,829,948	\$ 754,659,744

% Difference (2018 Proposed / 2017)

	<u>00</u>	<u>1-6</u>	<u>7+</u>	<u>98</u>	<u>99</u>	<u>TOT</u>
10	-29.1%	-42.7%	-100.0%	-6.1%	+78.7%	+10.7%
15	+60.6%	+21.4%	+17.8%	+89.9%	+125.1%	+86.2%
17,18	-70.7%	-50.3%	-89.0%	-86.0%	#N/A	-69.2%
20,21,25,26	-29.2%	-21.7%	-81.4%	#N/A	#N/A	-29.2%
30	+199.2%	+286.0%	-8.4%	+105.9%	+463.1%	+299.7%
M/M	-60.0%	+9.9%	-74.4%	-35.0%	-31.2%	-31.4%
Total	-39.1%	-39.8%	-93.7%	-34.0%	+80.0%	-10.4%

Credit Eligible Exposures

2017 Credit Factors

	<u>00</u>	<u>1-6</u>	<u>7+</u>	<u>98</u>	<u>99</u>	<u>TOT</u>
10	42,599	61,011	8,823	29,714	163,118	305,265
15	475	1,572	213	745	6,053	9,059
17,18	36,328	17,502	3,961	14,906	-	72,697
20,21,25,26	40,682	5,792	654	-	-	47,128
30	91	108	24	61	296	581
M/M	5,456	4,263	815	1,808	8,304	20,647
Total	125,632	90,249	14,490	47,235	177,772	455,377

2018 Credit Factors - Enhanced Safety Methodology

	<u>00</u>	<u>1-6</u>	<u>7+</u>	<u>98</u>	<u>99</u>	<u>TOT</u>
10	29,138	32,675	-	29,849	311,705	403,366
15	877	2,001	261	1,537	16,136	20,812
17,18	8,133	7,566	288	1,466	-	17,452
20,21,25,26	27,908	4,481	105	-	-	32,504
30	252	408	22	124	1,646	2,452
M/M	1,894	5,121	202	1,250	5,705	14,171
Total	68,202	52,261	877	34,226	335,191	490,757

% Difference (2018 Proposed / 2017)

	<u>00</u>	<u>1-6</u>	<u>7+</u>	<u>98</u>	<u>99</u>	<u>TOT</u>
10	-31.6%	-46.4%	-100.0%	+0.5%	+91.1%	+32.1%
15	+84.6%	+27.2%	+22.1%	+106.4%	+166.6%	+129.7%
17,18	-77.6%	-56.8%	-92.7%	-90.2%	#N/A	-76.0%
20,21,25,26	-31.4%	-22.5%	-84.0%	#N/A	#N/A	-31.0%
30	+175.8%	+276.8%	-7.3%	+103.1%	+455.6%	+322.1%
M/M	-65.3%	+20.1%	-75.2%	-30.9%	-31.3%	-31.4%
Total	-45.7%	-42.1%	-93.9%	-27.5%	+88.6%	+7.8%

Commonwealth Automobile Reinsurers
Proposed Credit Offer - Data Through July, 2017
Summary by Territory

2017 Credit Eligible Exposures						
Terr	00	1-6	7+	98	99	TOT
1	-	-	-	-	-	-
2	995	136	22	-	-	1,153
3	2,281	313	40	-	-	2,634
4	1,334	174	32	-	-	1,539
5	3,000	472	62	-	-	3,534
6	1,571	248	27	-	-	1,846
7	8,547	3,155	775	2,493	-	14,970
8	4,240	1,783	408	1,424	-	7,855
9	5,933	2,136	461	1,529	-	10,060
10	2,558	1,101	219	728	-	4,607
11	571	66	9	-	-	646
12	4,658	1,680	373	1,564	-	8,275
13	9,845	4,246	821	2,275	2,947	20,133
14	4,265	1,427	264	824	814	7,595
15	1,434	535	100	342	476	2,887
16	2,809	2,563	360	1,343	5,848	12,923
17	290	105	22	92	-	509
18	2,082	2,618	433	1,307	7,516	13,955
19	360	96	19	123	-	597
20	2,332	3,173	545	1,557	7,667	15,275
21	7,610	9,842	1,440	4,950	24,572	48,414
22	3,117	3,316	483	1,685	7,344	15,945
23	1,878	471	80	434	245	3,108
24	858	177	26	58	168	1,288
25	352	106	20	141	-	619
26	1,066	311	64	217	133	1,791
27	1,684	197	25	-	-	1,906
40	2,984	3,013	433	1,639	9,229	17,299
41	10,964	11,388	1,822	5,676	22,572	52,422
42	11,700	12,145	1,760	5,790	31,717	63,112
43	8,403	8,236	1,228	3,746	19,685	41,297
44	8,227	6,062	774	3,133	14,697	32,893
45	7,683	8,957	1,344	4,165	22,142	44,291
99	-	-	-	-	-	-
Total	125,632	90,249	14,490	47,235	177,772	455,377

2018 Credit Eligible Exposures						
Terr	00	1-6	7+	98	99	TOT
1	-	89	14	-	-	103
2	-	-	-	-	-	-
3	-	-	-	-	-	-
4	-	-	-	-	-	-
5	3,000	472	-	-	-	3,472
6	1,571	248	-	-	-	1,819
7	2,286	410	-	-	-	2,695
8	1,118	153	-	-	-	1,271
9	1,688	1,550	-	546	-	3,784
10	622	-	-	-	-	622
11	571	93	-	-	-	665
12	1,495	224	-	-	2,427	4,146
13	2,756	4,246	-	13,384	88,625	109,011
14	7,675	1,383	-	164	31,669	40,890
15	3,361	280	45	75	11,318	15,078
16	2,684	2,492	-	28	6,783	11,987
17	77	121	-	19	134	352
18	1,976	2,564	-	1,148	8,986	14,674
19	301	2,091	-	1,033	9,286	12,710
20	2,491	3,705	94	1,796	9,735	17,821
21	7,379	10,034	281	5,035	24,822	47,552
22	2,776	3,257	57	1,511	7,233	14,835
23	1,363	359	23	-	245	1,991
24	389	44	10	36	1,648	2,128
25	175	95	3	34	109	416
26	806	343	2	79	10,828	11,858
27	-	-	-	-	-	-
40	1,003	334	18	1,402	8,923	11,680
41	923	1,323	78	-	22,199	24,523
42	2,005	638	-	172	31,717	34,532
43	1,968	755	17	434	19,361	22,535
44	8,381	6,040	8	2,873	17,202	34,504
45	7,364	8,917	227	4,455	22,142	43,105
99	-	-	0	-	-	0
Total	68,202	52,261	877	34,226	335,191	490,757

% Difference (2018 Proposed / 2017)						
Terr	00	1-6	7+	98	99	TOT
1	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2	-100.0%	-100.0%	-100.0%	#N/A	#N/A	-100.0%
3	-100.0%	-100.0%	-100.0%	#N/A	#N/A	-100.0%
4	-100.0%	-100.0%	-100.0%	#N/A	#N/A	-100.0%
5	+0.0%	+0.0%	-100.0%	#N/A	#N/A	-1.8%
6	+0.0%	+0.0%	-100.0%	#N/A	#N/A	-1.4%
7	-73.3%	-87.0%	-100.0%	-100.0%	#N/A	-82.0%
8	-73.6%	-91.4%	-100.0%	-100.0%	#N/A	-83.8%
9	-71.5%	-27.5%	-100.0%	-64.3%	#N/A	-62.4%
10	-75.7%	-100.0%	-100.0%	-100.0%	#N/A	-86.5%
11	+0.0%	+41.4%	-100.0%	#N/A	#N/A	+2.9%
12	-67.9%	-86.7%	-100.0%	-100.0%	#N/A	-49.9%
13	-72.0%	+0.0%	-100.0%	+488.4%	+2907.5%	+441.4%
14	+79.9%	-3.1%	-100.0%	-80.1%	+3789.6%	+438.4%
15	+134.4%	-47.6%	-55.5%	-78.2%	+2277.3%	+422.3%
16	-4.4%	-2.8%	-100.0%	-97.9%	+16.0%	-7.2%
17	-73.4%	+15.6%	-100.0%	-79.6%	#N/A	-30.9%
18	-5.1%	-2.1%	-100.0%	-12.1%	+19.6%	+5.2%
19	-16.4%	+2089.1%	-100.0%	+741.2%	#N/A	+2028.6%
20	+6.8%	+16.8%	-82.7%	+15.3%	+27.0%	+16.7%
21	-3.0%	+2.0%	-80.5%	+1.7%	+1.0%	-1.8%
22	-10.9%	-1.8%	-88.2%	-10.3%	-1.5%	-7.0%
23	-27.4%	-23.7%	-71.4%	-100.0%	+0.0%	-35.9%
24	-54.7%	-75.1%	-61.5%	-37.9%	+881.6%	+65.2%
25	-50.3%	-10.6%	-84.7%	-76.0%	#N/A	-32.8%
26	-24.4%	+10.3%	-97.0%	-63.8%	+7907.4%	+582.3%
27	-100.0%	-100.0%	-100.0%	#N/A	#N/A	-100.0%
40	-66.4%	-88.9%	-96.0%	-14.5%	-3.3%	-32.5%
41	-91.6%	-88.4%	-95.7%	-100.0%	-1.7%	-53.2%
42	-82.9%	-94.7%	-100.0%	-97.0%	+0.0%	-45.3%
43	-76.6%	-90.8%	-98.7%	-86.4%	-1.6%	-45.4%
44	+1.9%	-0.4%	-99.0%	-8.3%	+17.0%	+4.9%
45	-4.2%	-0.5%	-83.1%	+7.0%	+0.0%	-2.7%
99	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Total	-45.7%	-42.1%	-93.9%	-27.5%	+88.6%	+7.8%

Commonwealth Automobile Reinsurers
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2017 Potential Premium (000's)						
Terr	00	1-6	7+	98	99	TOT
1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	\$ 2,198	\$ 382	\$ 83	\$ -	\$ -	\$ 2,663
3	\$ 5,347	\$ 924	\$ 155	\$ -	\$ -	\$ 6,426
4	\$ 3,512	\$ 581	\$ 137	\$ -	\$ -	\$ 4,230
5	\$ 7,360	\$ 1,456	\$ 258	\$ -	\$ -	\$ 9,073
6	\$ 4,292	\$ 854	\$ 124	\$ -	\$ -	\$ 5,269
7	\$ 15,604	\$ 6,289	\$ 1,975	\$ 3,308	\$ -	\$ 27,177
8	\$ 8,253	\$ 3,790	\$ 1,132	\$ 2,075	\$ -	\$ 15,250
9	\$ 12,393	\$ 4,790	\$ 1,324	\$ 2,243	\$ -	\$ 20,749
10	\$ 5,225	\$ 2,431	\$ 629	\$ 1,097	\$ -	\$ 9,382
11	\$ 1,953	\$ 287	\$ 48	\$ -	\$ -	\$ 2,288
12	\$ 10,895	\$ 4,366	\$ 1,217	\$ 2,714	\$ -	\$ 19,192
13	\$ 19,393	\$ 7,630	\$ 1,922	\$ 2,993	\$ 517	\$ 32,454
14	\$ 11,324	\$ 3,618	\$ 889	\$ 1,418	\$ 150	\$ 17,398
15	\$ 4,063	\$ 1,303	\$ 327	\$ 592	\$ 290	\$ 6,574
16	\$ 5,925	\$ 5,893	\$ 1,242	\$ 1,917	\$ 7,110	\$ 22,087
17	\$ 717	\$ 264	\$ 68	\$ 158	\$ -	\$ 1,206
18	\$ 4,187	\$ 5,976	\$ 1,495	\$ 1,905	\$ 9,300	\$ 22,864
19	\$ 1,019	\$ 305	\$ 79	\$ 246	\$ -	\$ 1,649
20	\$ 5,682	\$ 7,777	\$ 2,061	\$ 2,398	\$ 9,864	\$ 27,782
21	\$ 22,750	\$ 28,949	\$ 6,314	\$ 9,005	\$ 37,544	\$ 104,563
22	\$ 9,840	\$ 9,980	\$ 2,169	\$ 3,105	\$ 11,306	\$ 36,401
23	\$ 5,863	\$ 1,437	\$ 295	\$ 794	\$ 48	\$ 8,438
24	\$ 2,333	\$ 343	\$ 52	\$ 14	\$ 33	\$ 2,775
25	\$ 1,120	\$ 378	\$ 88	\$ 318	\$ -	\$ 1,904
26	\$ 3,379	\$ 850	\$ 199	\$ 358	\$ 28	\$ 4,814
27	\$ 3,161	\$ 468	\$ 78	\$ -	\$ -	\$ 3,706
40	\$ 5,584	\$ 6,043	\$ 1,322	\$ 2,067	\$ 8,897	\$ 24,912
41	\$ 15,129	\$ 19,411	\$ 4,788	\$ 6,170	\$ 20,913	\$ 66,412
42	\$ 25,669	\$ 30,335	\$ 6,826	\$ 9,107	\$ 42,148	\$ 114,084
43	\$ 18,358	\$ 20,548	\$ 4,647	\$ 5,851	\$ 26,339	\$ 75,743
44	\$ 15,330	\$ 11,686	\$ 2,224	\$ 3,787	\$ 14,619	\$ 47,646
45	\$ 22,433	\$ 26,681	\$ 5,910	\$ 7,556	\$ 34,250	\$ 96,830
99	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 280,290	\$ 216,023	\$ 50,075	\$ 71,195	\$ 224,356	\$ 841,939

2018 Potential Premium (000's)						
Terr	00	1-6	7+	98	99	TOT
1	\$ -	\$ 236	\$ 48	\$ -	\$ -	\$ 285
2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5	\$ 7,360	\$ 1,456	\$ -	\$ -	\$ -	\$ 8,815
6	\$ 4,292	\$ 854	\$ -	\$ -	\$ -	\$ 5,145
7	\$ 6,669	\$ 1,393	\$ -	\$ -	\$ -	\$ 8,063
8	\$ 3,360	\$ 580	\$ -	\$ -	\$ -	\$ 3,941
9	\$ 5,440	\$ 1,371	\$ -	\$ 94	\$ -	\$ 6,905
10	\$ 1,913	\$ -	\$ -	\$ -	\$ -	\$ 1,913
11	\$ 1,953	\$ 367	\$ -	\$ -	\$ -	\$ 2,319
12	\$ 4,993	\$ 944	\$ -	\$ -	\$ 390	\$ 6,327
13	\$ 9,177	\$ 7,630	\$ -	\$ 15,335	\$ 90,624	\$ 122,766
14	\$ 13,769	\$ 3,472	\$ -	\$ 38	\$ 39,335	\$ 56,615
15	\$ 5,984	\$ 490	\$ 97	\$ 20	\$ 13,617	\$ 20,208
16	\$ 5,446	\$ 5,751	\$ -	\$ 9	\$ 7,972	\$ 19,177
17	\$ 259	\$ 156	\$ -	\$ 5	\$ 27	\$ 447
18	\$ 3,905	\$ 5,800	\$ -	\$ 1,614	\$ 10,773	\$ 22,092
19	\$ 883	\$ 4,474	\$ -	\$ 1,321	\$ 10,270	\$ 16,949
20	\$ 4,912	\$ 8,528	\$ 375	\$ 2,653	\$ 11,758	\$ 28,226
21	\$ 20,815	\$ 29,276	\$ 1,189	\$ 9,190	\$ 37,931	\$ 98,402
22	\$ 8,046	\$ 9,617	\$ 211	\$ 2,630	\$ 16,419	\$ 36,922
23	\$ 4,219	\$ 1,231	\$ 51	\$ -	\$ 48	\$ 5,548
24	\$ 1,395	\$ 200	\$ 36	\$ 47	\$ 1,383	\$ 3,041
25	\$ 691	\$ 325	\$ 20	\$ 9	\$ 28	\$ 1,073
26	\$ 2,006	\$ 818	\$ 11	\$ 58	\$ 12,971	\$ 15,864
27	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
40	\$ 2,352	\$ 687	\$ 9	\$ 1,733	\$ 9,843	\$ 14,624
41	\$ 2,886	\$ 2,399	\$ 63	\$ -	\$ 20,996	\$ 26,343
42	\$ 6,544	\$ 1,543	\$ -	\$ 45	\$ 42,148	\$ 50,279
43	\$ 6,007	\$ 2,413	\$ 106	\$ 911	\$ 26,516	\$ 35,953
44	\$ 13,951	\$ 11,310	\$ 42	\$ 3,183	\$ 16,551	\$ 45,037
45	\$ 21,396	\$ 26,786	\$ 877	\$ 8,071	\$ 34,250	\$ 91,380
99	\$ -	\$ -	\$ 1	\$ -	\$ -	\$ 1
Total	\$ 170,822	\$ 130,106	\$ 3,136	\$ 46,965	\$ 403,830	\$ 754,660

% Difference (2018 Proposed / 2017)						
Terr	00	1-6	7+	98	99	TOT
1	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2	-100.0%	-100.0%	-100.0%	#N/A	#N/A	-100.0%
3	-100.0%	-100.0%	-100.0%	#N/A	#N/A	-100.0%
4	-100.0%	-100.0%	-100.0%	#N/A	#N/A	-100.0%
5	+0.0%	+0.0%	-100.0%	#N/A	#N/A	-2.8%
6	+0.0%	+0.0%	-100.0%	#N/A	#N/A	-2.3%
7	-57.3%	-77.8%	-100.0%	-100.0%	#N/A	-70.3%
8	-59.3%	-84.7%	-100.0%	-100.0%	#N/A	-74.2%
9	-56.1%	-71.4%	-100.0%	-95.8%	#N/A	-66.7%
10	-63.4%	-100.0%	-100.0%	-100.0%	#N/A	-79.6%
11	+0.0%	+27.6%	-100.0%	#N/A	#N/A	+1.4%
12	-54.2%	-78.4%	-100.0%	-100.0%	#N/A	-67.0%
13	-52.7%	+0.0%	-100.0%	+412.3%	+17445.1%	+278.3%
14	+21.6%	-4.0%	-100.0%	-97.3%	+26070.6%	+225.4%
15	+47.3%	-62.4%	-70.2%	-96.6%	+4599.6%	+207.4%
16	-8.1%	-2.4%	-100.0%	-99.5%	+12.1%	-13.2%
17	-63.9%	-41.0%	-100.0%	-97.1%	#N/A	-63.0%
18	-6.7%	-3.0%	-100.0%	-15.3%	+15.8%	-3.4%
19	-13.3%	+1368.3%	-100.0%	+436.5%	#N/A	+928.1%
20	-13.5%	+9.6%	-81.8%	+10.6%	+19.2%	+1.6%
21	-8.5%	+1.1%	-81.2%	+2.1%	+1.0%	-5.9%
22	-18.2%	-3.6%	-90.3%	-16.3%	+45.2%	+1.4%
23	-28.0%	-14.4%	-82.8%	-100.0%	+0.0%	-34.2%
24	-40.2%	-41.5%	-30.4%	+229.8%	+3969.1%	+9.6%
25	-38.4%	-14.0%	-77.0%	-97.3%	#N/A	-43.7%
26	-40.6%	-3.8%	-94.5%	-83.8%	+46407.3%	+229.5%
27	-100.0%	-100.0%	-100.0%	#N/A	#N/A	-100.0%
40	-57.9%	-88.6%	-99.3%	-16.1%	-0.5%	-41.3%
41	-80.9%	-87.6%	-98.7%	-100.0%	+0.4%	-60.3%
42	-74.5%	-94.9%	-100.0%	-99.5%	+0.0%	-55.9%
43	-67.3%	-88.3%	-97.7%	-84.4%	+0.7%	-52.5%
44	-9.0%	-3.2%	-98.1%	-15.9%	+13.2%	-5.5%
45	-4.6%	+0.4%	-85.2%	+6.8%	+0.0%	-5.6%
99	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Total	-39.1%	-39.8%	-93.7%	-34.0%	+80.0%	-10.4%

DOI SELECTED RANGES

2011 Res Mkt Share Groups			
Group	>	≤	Credits
0	0.000	0.050	0.00
1	0.050	0.080	1.00
2	0.080	0.110	1.00
3	0.110	0.170	1.00
4	0.170	0.230	1.25
5	0.230	0.290	1.50
6	0.290	0.350	1.75
7	0.350	0.410	2.00
8	0.410	0.470	2.25
9	0.470	1.000	2.50
MAIP = 2.58%			

DOI SELECTED RELATIVITES

2011 Res Mkt Share Groups			
>	≤	Group	Credits
0.000	1.841	0	0.00
1.841	2.946	1	1.00
2.946	4.050	2	1.00
4.050	6.260	3	1.00
6.260	8.469	4	1.25
8.469	10.678	5	1.50
10.678	12.888	6	1.75
12.888	15.097	7	2.00
15.097	17.306	8	2.25
17.306	1000.000	9	2.50

Rate Class 10

Terr	MRG = 99									
	Residual Market Share			Indicated Mkt Share Range			Selected Range	Y=0 Credits	Y+1 Credits	Change
	Y-2	Y-1	Y=0	Y-2	Y-1	Y=0				
1	0.453	0.524	0.494	0	0	0	0	-	-	-
2	0.445	0.529	0.494	0	0	0	0	-	-	-
3	0.547	0.574	0.585	0	0	0	0	-	-	-
4	0.562	0.487	0.511	0	0	0	0	-	-	-
5	0.781	0.748	0.795	0	0	0	0	-	-	-
6	0.836	0.769	0.729	0	0	0	0	-	-	-
7	1.181	1.260	1.240	0	0	0	0	-	-	-
8	1.019	0.985	1.031	0	0	0	0	-	-	-
9	1.260	1.278	1.341	0	0	0	0	-	-	-
10	1.510	1.278	1.186	0	0	0	0	-	-	-
11	1.194	1.217	1.103	0	0	0	0	-	-	-
12	1.247	1.217	1.170	0	0	0	0	-	-	-
13	2.680	2.658	2.827	1	1	1	1	-	1.00	1.00
14	2.517	2.628	2.435	1	1	1	1	-	1.00	1.00
15	2.320	2.424	2.627	1	1	1	1	-	1.00	1.00
16	4.372	4.406	3.711	3	3	2	3	1.00	1.00	-
17	1.472	1.257	1.253	0	0	0	0	-	-	-
18	4.335	4.669	3.345	3	3	2	3	1.00	1.00	-
19	2.409	2.662	2.215	1	1	1	1	-	1.00	1.00
20	5.946	5.808	5.167	3	3	3	3	1.00	1.00	-
21	5.669	6.310	6.456	3	4	4	4	1.00	1.25	0.25
22	7.029	9.474	9.761	4	5	5	5	1.00	1.50	0.50
23	1.731	1.611	1.554	0	0	0	0	-	-	-
24	1.308	1.197	1.105	0	0	0	0	-	-	-
25	0.995	1.080	1.030	0	0	0	0	-	-	-
26	2.398	2.458	2.208	1	1	1	1	-	1.00	1.00
27	0.378	0.376	0.378	0	0	0	0	-	-	-
40	3.501	2.563	3.001	2	1	2	2	1.00	1.00	-
41	2.329	1.949	1.909	1	1	1	1	1.00	1.00	-
42	3.569	2.578	2.401	2	1	1	1	1.00	1.00	-
43	3.222	3.551	2.698	2	2	1	2	1.00	1.00	-
44	5.480	5.841	5.508	3	3	3	3	1.00	1.00	-
45	3.175	4.068	4.434	2	3	3	3	1.00	1.00	-
99	0.540	0.319	0.292	0	0	0	0	-	-	-
Tot	1.185	1.193	1.188							

**Commonwealth Automobile Reinsurers
Proposed Credit Offer - Data Through July, 2017
Summary by Rate Class**

Potential Credit Premium

2017 Credit Factors

	<u>00</u>	<u>1-6</u>	<u>7+</u>	<u>98</u>	<u>99</u>	<u>TOT</u>
10	\$ 66,015,683	\$ 143,108,486	\$ 32,568,150	\$ 43,601,197	\$ 214,942,131	\$ 500,235,647
15	\$ 697,432	\$ 3,436,676	\$ 720,203	\$ 1,015,799	\$ 7,366,962	\$ 13,237,073
17,18	\$ 68,208,595	\$ 41,268,907	\$ 12,380,809	\$ 26,075,753	\$ -	\$ 147,934,065
20,21,25,26	\$ 143,660,451	\$ 26,271,162	\$ 3,774,700	\$ -	\$ -	\$ 173,706,313
30	\$ 138,880	\$ 246,320	\$ 86,052	\$ 86,342	\$ 370,808	\$ 928,402
M/M	\$ 1,569,399	\$ 1,690,961	\$ 545,316	\$ 416,332	\$ 1,675,767	\$ 5,897,776
Total	\$ 280,290,442	\$ 216,022,512	\$ 50,075,231	\$ 71,195,424	\$ 224,355,668	\$ 841,939,276

2018 Credit Factors - Enhanced Safety Methodology

	<u>00</u>	<u>1-6</u>	<u>7+</u>	<u>98</u>	<u>99</u>	<u>TOT</u>
10	\$ 88,737,337	\$ 82,038,408	\$ -	\$ 50,859,276	\$ 391,965,798	\$ 613,600,819
15	\$ 1,599,618	\$ 4,700,961	\$ 932,434	\$ 2,027,754	\$ 33,208,756	\$ 42,469,522
17,18	\$ 22,468,180	\$ 20,997,562	\$ 1,519,122	\$ 5,026,099	\$ -	\$ 50,010,963
20,21,25,26	\$ 104,816,261	\$ 22,083,600	\$ 701,718	\$ -	\$ -	\$ 127,601,580
30	\$ 415,504	\$ 950,848	\$ 78,808	\$ 206,806	\$ 2,087,914	\$ 3,739,881
M/M	\$ 626,985	\$ 2,475,003	\$ 288,344	\$ 270,690	\$ 1,152,274	\$ 4,813,296
Total	\$ 218,663,886	\$ 133,246,383	\$ 3,520,425	\$ 58,390,625	\$ 428,414,742	\$ 842,236,061

% Difference (2018 Proposed / 2017)

	<u>00</u>	<u>1-6</u>	<u>7+</u>	<u>98</u>	<u>99</u>	<u>TOT</u>
10	+34.4%	-42.7%	-100.0%	+16.6%	+82.4%	+22.7%
15	+129.4%	+36.8%	+29.5%	+99.6%	+350.8%	+220.8%
17,18	-67.1%	-49.1%	-87.7%	-80.7%	#N/A	-66.2%
20,21,25,26	-27.0%	-15.9%	-81.4%	#N/A	#N/A	-26.5%
30	+199.2%	+286.0%	-8.4%	+139.5%	+463.1%	+302.8%
M/M	-60.0%	+46.4%	-47.1%	-35.0%	-31.2%	-18.4%
Total	-22.0%	-38.3%	-93.0%	-18.0%	+91.0%	+0.0%

Credit Eligible Exposures

2017 Credit Factors

	<u>00</u>	<u>1-6</u>	<u>7+</u>	<u>98</u>	<u>99</u>	<u>TOT</u>
10	42,599	61,011	8,823	29,714	163,118	305,265
15	475	1,572	213	745	6,053	9,059
17,18	36,328	17,502	3,961	14,906	-	72,697
20,21,25,26	40,682	5,792	654	-	-	47,128
30	91	108	24	61	296	581
M/M	5,456	4,263	815	1,808	8,304	20,647
Total	125,632	90,249	14,490	47,235	177,772	455,377

2018 Credit Factors - Enhanced Safety Methodology

	<u>00</u>	<u>1-6</u>	<u>7+</u>	<u>98</u>	<u>99</u>	<u>TOT</u>
10	61,868	32,675	-	36,522	311,705	442,769
15	1,249	2,360	293	1,633	31,478	37,013
17,18	9,631	7,689	319	2,126	-	19,764
20,21,25,26	28,349	4,897	105	-	-	33,351
30	252	408	22	142	1,646	2,469
M/M	1,894	7,731	475	1,250	5,705	17,054
Total	103,241	55,759	1,214	41,673	350,533	552,420

% Difference (2018 Proposed / 2017)

	<u>00</u>	<u>1-6</u>	<u>7+</u>	<u>98</u>	<u>99</u>	<u>TOT</u>
10	+45.2%	-46.4%	-100.0%	+22.9%	+91.1%	+45.0%
15	+162.8%	+50.1%	+37.3%	+119.3%	+420.0%	+308.6%
17,18	-73.5%	-56.1%	-91.9%	-85.7%	#N/A	-72.8%
20,21,25,26	-30.3%	-15.5%	-84.0%	#N/A	#N/A	-29.2%
30	+175.8%	+276.8%	-7.3%	+131.8%	+455.6%	+325.1%
M/M	-65.3%	+81.3%	-41.7%	-30.9%	-31.3%	-17.4%
Total	-17.8%	-38.2%	-91.6%	-11.8%	+97.2%	+21.3%

Commonwealth Automobile Reinsurers
Proposed Credit Offer - Data Through July, 2017
Summary by Territory

2017 Credit Eligible Exposures						
Terr	00	1-6	7+	98	99	TOT
1	-	-	-	-	-	-
2	995	136	22	-	-	1,153
3	2,281	313	40	-	-	2,634
4	1,334	174	32	-	-	1,539
5	3,000	472	62	-	-	3,534
6	1,571	248	27	-	-	1,846
7	8,547	3,155	775	2,493	-	14,970
8	4,240	1,783	408	1,424	-	7,855
9	5,933	2,136	461	1,529	-	10,060
10	2,558	1,101	219	728	-	4,607
11	571	66	9	-	-	646
12	4,658	1,680	373	1,564	-	8,275
13	9,845	4,246	821	2,275	2,947	20,133
14	4,265	1,427	264	824	814	7,595
15	1,434	535	100	342	476	2,887
16	2,809	2,563	360	1,343	5,848	12,923
17	290	105	22	92	-	509
18	2,082	2,618	433	1,307	7,516	13,955
19	360	96	19	123	-	597
20	2,332	3,173	545	1,557	7,667	15,275
21	7,610	9,842	1,440	4,950	24,572	48,414
22	3,117	3,316	483	1,685	7,344	15,945
23	1,878	471	80	434	245	3,108
24	858	177	28	58	168	1,288
25	352	106	20	141	-	619
26	1,066	311	64	217	133	1,791
27	1,684	197	25	-	-	1,906
40	2,984	3,013	433	1,639	9,229	17,299
41	10,964	11,388	1,822	5,676	22,572	52,422
42	11,700	12,145	1,780	5,790	31,717	63,112
43	8,403	8,236	1,228	3,746	19,685	41,297
44	8,227	6,062	774	3,133	14,697	32,893
45	7,683	8,957	1,344	4,165	22,142	44,291
99	-	-	-	-	-	-
Total	125,632	90,249	14,480	47,235	177,772	455,377

2018 Credit Eligible Exposures						
Terr	00	1-6	7+	98	99	TOT
1	-	89	14	-	-	103
2	-	-	-	-	-	-
3	-	313	-	-	-	313
4	-	-	-	-	-	-
5	3,000	472	-	-	-	3,472
6	1,571	248	-	-	-	1,819
7	2,286	2,855	-	-	-	5,141
8	1,118	153	-	-	-	1,271
9	1,688	1,550	-	546	-	3,784
10	622	94	-	-	-	715
11	571	93	-	-	-	665
12	1,495	224	-	-	2,427	4,146
13	21,739	4,246	273	13,384	88,625	128,287
14	7,675	1,383	-	824	31,869	41,550
15	3,361	280	45	1,805	11,318	16,809
16	2,684	2,492	-	141	6,783	12,100
17	1,056	121	-	19	134	1,330
18	1,976	2,564	-	1,148	8,986	14,674
19	442	2,153	-	1,033	9,286	12,913
20	2,644	3,705	94	1,796	9,735	17,974
21	7,666	10,034	281	5,035	24,822	47,839
22	2,776	3,257	88	1,511	7,233	14,866
23	1,363	461	23	-	245	2,093
24	389	404	10	36	1,648	2,487
25	175	95	3	34	109	416
26	806	343	34	79	10,628	11,891
27	-	-	-	-	-	-
40	1,003	334	18	1,402	8,923	11,680
41	9,783	1,323	78	-	22,199	33,384
42	2,005	638	-	5,115	41,275	49,033
43	7,373	755	17	434	19,361	27,940
44	8,381	6,040	8	2,873	17,202	34,504
45	7,594	9,040	227	4,455	27,926	49,242
99	-	-	0	-	-	0
Total	103,241	55,759	1,214	41,673	350,533	552,420

% Difference (2018 Proposed / 2017)						
Terr	00	1-6	7+	98	99	TOT
1	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2	-100.0%	-100.0%	-100.0%	#N/A	#N/A	-100.0%
3	-100.0%	+0.0%	-100.0%	#N/A	#N/A	-88.1%
4	-100.0%	-100.0%	-100.0%	#N/A	#N/A	-100.0%
5	+0.0%	+0.0%	-100.0%	#N/A	#N/A	-1.8%
6	+0.0%	+0.0%	-100.0%	#N/A	#N/A	-1.4%
7	-73.3%	-9.5%	-100.0%	-100.0%	#N/A	-65.7%
8	-73.6%	-91.4%	-100.0%	-100.0%	#N/A	-83.8%
9	-71.5%	-27.5%	-100.0%	-64.3%	#N/A	-62.4%
10	-75.7%	-91.5%	-100.0%	-100.0%	#N/A	-84.5%
11	+0.0%	+41.4%	-100.0%	#N/A	#N/A	+2.9%
12	-67.9%	-86.7%	-100.0%	-100.0%	#N/A	-49.9%
13	+120.8%	+0.0%	-68.7%	+488.4%	+2907.5%	+537.1%
14	+79.9%	-3.1%	-100.0%	+0.0%	+3789.6%	+447.1%
15	+134.4%	-47.6%	-55.5%	+427.7%	+2277.3%	+482.2%
16	-4.4%	-2.8%	-100.0%	-99.5%	+16.0%	-6.4%
17	+263.6%	+15.6%	-100.0%	-79.6%	#N/A	+161.4%
18	-5.1%	-2.1%	-100.0%	-12.1%	+19.6%	+5.2%
19	+23.0%	+2154.0%	-100.0%	+741.2%	#N/A	+2062.6%
20	+13.4%	+16.8%	-82.7%	+15.3%	+27.0%	+17.7%
21	+0.7%	+2.0%	-80.5%	+1.7%	+1.0%	-1.2%
22	-10.9%	-1.8%	-81.7%	-10.3%	-1.5%	-6.8%
23	-27.4%	-2.1%	-71.4%	-100.0%	+0.0%	-32.7%
24	-54.7%	+127.5%	-81.5%	-37.9%	+881.6%	+93.1%
25	-50.3%	-10.6%	-84.7%	-76.0%	#N/A	-32.8%
26	-24.4%	+10.3%	-46.4%	-63.6%	+7907.4%	+584.1%
27	-100.0%	-100.0%	-100.0%	#N/A	#N/A	-100.0%
40	-66.4%	-88.9%	-96.0%	-14.5%	-3.3%	-32.5%
41	-10.8%	-88.4%	-95.7%	-100.0%	-1.7%	-36.3%
42	-82.9%	-94.7%	-100.0%	-11.7%	+30.1%	-22.3%
43	-12.3%	-90.8%	-98.7%	-88.4%	-1.6%	-32.3%
44	+1.0%	-0.4%	-99.0%	-8.3%	+17.0%	+4.9%
45	-1.2%	+0.9%	-83.1%	+7.0%	+26.1%	+11.2%
99	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Total	-17.8%	-38.2%	-91.6%	-11.8%	+97.2%	+21.3%

Commonwealth Automobile Reinsurers
Proposed Credit Offer - Data Through July, 2017
Summary by Territory

2017 Potential Premium (000's)						
Terr	00	1-6	7+	98	99	TOT
1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	\$ 2,198	\$ 382	\$ 83	\$ -	\$ -	\$ 2,663
3	\$ 5,347	\$ 924	\$ 155	\$ -	\$ -	\$ 6,426
4	\$ 3,512	\$ 581	\$ 137	\$ -	\$ -	\$ 4,230
5	\$ 7,360	\$ 1,456	\$ 258	\$ -	\$ -	\$ 9,073
6	\$ 4,292	\$ 854	\$ 124	\$ -	\$ -	\$ 5,269
7	\$ 15,604	\$ 6,289	\$ 1,975	\$ 3,308	\$ -	\$ 27,177
8	\$ 8,253	\$ 3,790	\$ 1,132	\$ 2,075	\$ -	\$ 15,250
9	\$ 12,393	\$ 4,790	\$ 1,324	\$ 2,243	\$ -	\$ 20,749
10	\$ 5,225	\$ 2,431	\$ 629	\$ 1,097	\$ -	\$ 9,382
11	\$ 1,953	\$ 287	\$ 48	\$ -	\$ -	\$ 2,288
12	\$ 10,895	\$ 4,366	\$ 1,217	\$ 2,714	\$ -	\$ 19,192
13	\$ 19,393	\$ 7,630	\$ 1,922	\$ 2,993	\$ 517	\$ 32,454
14	\$ 11,324	\$ 3,618	\$ 889	\$ 1,418	\$ 150	\$ 17,398
15	\$ 4,063	\$ 1,303	\$ 327	\$ 592	\$ 290	\$ 6,574
16	\$ 5,925	\$ 5,893	\$ 1,242	\$ 1,917	\$ 7,110	\$ 22,087
17	\$ 717	\$ 264	\$ 68	\$ 158	\$ -	\$ 1,206
18	\$ 4,187	\$ 5,976	\$ 1,495	\$ 1,905	\$ 9,300	\$ 22,864
19	\$ 1,019	\$ 305	\$ 79	\$ 246	\$ -	\$ 1,649
20	\$ 5,682	\$ 7,777	\$ 2,061	\$ 2,398	\$ 9,864	\$ 27,782
21	\$ 22,750	\$ 28,949	\$ 6,314	\$ 9,005	\$ 37,544	\$ 104,563
22	\$ 9,840	\$ 9,980	\$ 2,169	\$ 3,105	\$ 11,306	\$ 36,401
23	\$ 5,863	\$ 1,437	\$ 295	\$ 794	\$ 48	\$ 8,438
24	\$ 2,333	\$ 343	\$ 52	\$ 14	\$ 33	\$ 2,775
25	\$ 1,120	\$ 378	\$ 88	\$ 318	\$ -	\$ 1,904
26	\$ 3,379	\$ 850	\$ 199	\$ 358	\$ 28	\$ 4,814
27	\$ 3,161	\$ 468	\$ 78	\$ -	\$ -	\$ 3,706
40	\$ 5,584	\$ 6,043	\$ 1,322	\$ 2,067	\$ 9,897	\$ 24,912
41	\$ 15,129	\$ 19,411	\$ 4,788	\$ 6,170	\$ 20,913	\$ 66,412
42	\$ 25,669	\$ 30,335	\$ 6,826	\$ 9,107	\$ 42,148	\$ 114,084
43	\$ 18,358	\$ 20,548	\$ 4,647	\$ 5,851	\$ 26,339	\$ 75,743
44	\$ 15,330	\$ 11,686	\$ 2,224	\$ 3,787	\$ 14,619	\$ 47,646
45	\$ 22,433	\$ 26,681	\$ 5,910	\$ 7,556	\$ 34,250	\$ 96,830
99	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 280,290	\$ 216,023	\$ 50,075	\$ 71,195	\$ 224,356	\$ 841,939

2018 Potential Premium (000's)						
Terr	00	1-6	7+	98	99	TOT
1	\$ -	\$ 236	\$ 48	\$ -	\$ -	\$ 285
2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3	\$ -	\$ 924	\$ -	\$ -	\$ -	\$ 924
4	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5	\$ 7,360	\$ 1,456	\$ -	\$ -	\$ -	\$ 8,815
6	\$ 4,292	\$ 854	\$ -	\$ -	\$ -	\$ 5,145
7	\$ 6,669	\$ 1,938	\$ -	\$ -	\$ -	\$ 8,608
8	\$ 3,360	\$ 580	\$ -	\$ -	\$ -	\$ 3,941
9	\$ 5,440	\$ 1,371	\$ -	\$ 94	\$ -	\$ 6,905
10	\$ 1,913	\$ 361	\$ -	\$ -	\$ -	\$ 2,274
11	\$ 1,953	\$ 367	\$ -	\$ -	\$ -	\$ 2,319
12	\$ 4,993	\$ 944	\$ -	\$ -	\$ 390	\$ 6,327
13	\$ 32,564	\$ 7,630	\$ 149	\$ 15,335	\$ 90,624	\$ 146,302
14	\$ 13,789	\$ 3,472	\$ -	\$ 1,418	\$ 39,335	\$ 57,994
15	\$ 6,283	\$ 490	\$ 97	\$ 2,403	\$ 13,617	\$ 22,890
16	\$ 5,446	\$ 5,751	\$ -	\$ 132	\$ 7,972	\$ 19,301
17	\$ 1,467	\$ 156	\$ -	\$ 5	\$ 27	\$ 1,655
18	\$ 3,905	\$ 5,800	\$ -	\$ 1,614	\$ 10,773	\$ 22,092
19	\$ 1,157	\$ 4,501	\$ -	\$ 1,321	\$ 10,270	\$ 17,249
20	\$ 5,526	\$ 8,528	\$ 375	\$ 2,653	\$ 11,758	\$ 28,840
21	\$ 21,762	\$ 29,500	\$ 1,189	\$ 9,190	\$ 45,889	\$ 107,531
22	\$ 8,046	\$ 9,778	\$ 362	\$ 2,634	\$ 16,419	\$ 37,239
23	\$ 4,219	\$ 1,276	\$ 51	\$ -	\$ 48	\$ 5,594
24	\$ 1,395	\$ 729	\$ 36	\$ 47	\$ 1,363	\$ 3,569
25	\$ 691	\$ 325	\$ 20	\$ 9	\$ 28	\$ 1,073
26	\$ 2,006	\$ 818	\$ 95	\$ 58	\$ 12,971	\$ 15,947
27	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
40	\$ 2,352	\$ 687	\$ 9	\$ 1,733	\$ 9,843	\$ 14,624
41	\$ 13,776	\$ 2,399	\$ 63	\$ -	\$ 20,996	\$ 37,233
42	\$ 6,544	\$ 1,543	\$ -	\$ 7,579	\$ 51,905	\$ 67,571
43	\$ 14,931	\$ 2,413	\$ 106	\$ 911	\$ 26,516	\$ 44,877
44	\$ 13,951	\$ 11,310	\$ 42	\$ 3,183	\$ 16,551	\$ 45,037
45	\$ 22,896	\$ 27,110	\$ 877	\$ 8,071	\$ 41,120	\$ 100,074
99	\$ -	\$ -	\$ 1	\$ -	\$ -	\$ 1
Total	\$ 218,664	\$ 133,246	\$ 3,520	\$ 58,391	\$ 428,415	\$ 842,236

% Difference (2018 Proposed / 2017)						
Terr	00	1-6	7+	98	99	TOT
1	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2	-100.0%	-100.0%	-100.0%	#N/A	#N/A	-100.0%
3	-100.0%	+0.0%	-100.0%	#N/A	#N/A	-85.6%
4	-100.0%	-100.0%	-100.0%	#N/A	#N/A	-100.0%
5	+0.0%	+0.0%	-100.0%	#N/A	#N/A	-2.8%
6	+0.0%	+0.0%	-100.0%	#N/A	#N/A	-2.3%
7	-57.3%	-69.2%	-100.0%	-100.0%	#N/A	-68.3%
8	-59.3%	-84.7%	-100.0%	-100.0%	#N/A	-74.2%
9	-56.1%	-71.4%	-100.0%	-95.8%	#N/A	-66.7%
10	-63.4%	-85.1%	-100.0%	-100.0%	#N/A	-75.8%
11	+0.0%	+27.6%	-100.0%	#N/A	#N/A	+1.4%
12	-54.2%	-78.4%	-100.0%	-100.0%	#N/A	-67.0%
13	+67.9%	+0.0%	-92.3%	+412.3%	+17445.1%	+350.8%
14	+21.6%	-4.0%	-100.0%	+0.0%	+26070.6%	+233.3%
15	+54.8%	-62.4%	-70.2%	+306.1%	+4599.6%	+248.2%
16	-8.1%	-2.4%	-100.0%	-93.1%	+12.1%	-12.6%
17	+104.8%	-41.0%	-100.0%	-97.1%	#N/A	+37.2%
18	-6.7%	-3.0%	-100.0%	-15.3%	+15.8%	-3.4%
19	+13.5%	+1376.9%	-100.0%	+436.5%	#N/A	+946.3%
20	-2.7%	+9.6%	-81.8%	+10.6%	+19.2%	+3.8%
21	-4.3%	+1.9%	-81.2%	+2.1%	+22.2%	+2.8%
22	-18.2%	-2.0%	-83.3%	-15.2%	+45.2%	+2.3%
23	-28.0%	-11.2%	-82.8%	-100.0%	+0.0%	-33.7%
24	-40.2%	+112.5%	-30.4%	+229.8%	+3989.1%	+28.6%
25	-38.4%	-14.0%	-77.0%	-97.3%	#N/A	-43.7%
26	-40.6%	-3.8%	-52.3%	-83.8%	+46407.3%	+231.3%
27	-100.0%	-100.0%	-100.0%	#N/A	#N/A	-100.0%
40	-57.9%	-88.6%	-99.3%	-16.1%	-0.5%	-41.3%
41	-8.9%	-87.6%	-98.7%	-100.0%	+0.4%	-43.9%
42	-74.5%	-94.9%	-100.0%	-16.8%	+23.2%	-40.8%
43	-18.7%	-88.3%	-97.7%	-84.4%	+0.7%	-40.8%
44	-9.0%	-3.2%	-98.1%	-15.9%	+13.2%	-5.5%
45	+2.1%	+1.6%	-85.2%	+6.8%	+20.1%	+3.3%
99	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Total	-22.0%	-38.3%	-93.0%	-18.0%	+91.0%	+0.0%

Commonwealth Automobile Reinsurers
4/1/2018 Credit Offer - Data Through August, 2017 (2016 Rates)
Indexed Market Share Group Ranges By Year
Summary by Rate Class

4/1/2017 Credit Factors

4/1/18 Indicated - Indexed Ranges By Year

<u>Rate Class</u>	<u>Total Mkt Exposures</u>	<u>Credit Eligible Exposures</u>	<u>Potential Credit Premium</u>	<u>Credit Eligible Exposures</u>	<u>%Δ</u>	<u>Potential Credit Premium</u>	<u>%Δ</u>
10	3,132,294	306,225	501,618,668	208,430	-31.9%	354,736,987	-29.3%
15	858,449	9,134	13,335,509	11,860	29.8%	16,411,403	23.1%
17	165,463	72,315	147,229,775	72,315	0.0%	148,811,300	1.1%
18	54,504	1,250	2,176,054	1,312	5.0%	3,131,756	43.9%
20	38,339	37,413	141,416,668	36,671	-2.0%	148,304,041	4.9%
21	14,327	4,980	13,197,452	6,473	30.0%	16,225,126	22.9%
25	83,419	5,107	20,475,849	8,688	70.1%	31,246,616	52.6%
26	61,457	421	1,436,148	358	-15.0%	1,195,502	-16.8%
30	62,783	585	934,874	1,903	225.4%	3,179,220	240.1%
M/M	172,447	20,069	5,785,856	26,068	29.9%	7,159,282	23.7%
Total	4,643,483	457,498	847,606,855	374,077	-18.2%	730,401,232	-13.8%

% of Total Mkt. Exp. **9.9%**

8.1%

Estimated Credits Used
Credit Utilization

803,517,278
94.8%

Estimated Credits Used
Credit Utilization

686,528,452
94.0%

<u>Group</u>	<u>Factor</u>	<u>Original (2011) Ranges</u>		<u>2015 Ranges</u>		<u>2016 Ranges</u>		<u>2017 Ranges</u>	
		<u>Lower</u>	<u>Upper</u>	<u>Lower</u>	<u>Upper</u>	<u>Lower</u>	<u>Upper</u>	<u>Lower</u>	<u>Upper</u>
0	0	0.00	0.05	0.000	0.026	0.000	0.026	0.000	0.027
1	1	0.05	0.08	0.026	0.041	0.026	0.042	0.027	0.042
2	1	0.08	0.11	0.041	0.057	0.042	0.058	0.042	0.058
3	1	0.11	0.17	0.057	0.087	0.058	0.089	0.058	0.090
4	1.25	0.17	0.23	0.087	0.118	0.089	0.121	0.090	0.122
5	1.5	0.23	0.29	0.118	0.149	0.121	0.152	0.122	0.154
6	1.75	0.29	0.35	0.149	0.180	0.152	0.184	0.154	0.186
7	2	0.35	0.41	0.180	0.211	0.184	0.215	0.186	0.217
8	2.25	0.41	0.47	0.211	0.242	0.215	0.247	0.217	0.249
9	2.5	0.47	1.00	0.242	1.000	0.247	1.000	0.249	1.000
		MAIP Volume:	2.57%	MAIP Volume:	1.32%	MAIP Volume:	1.35%	MAIP Volume:	1.37%
				Relativity to Base:	0.51	Relativity to Base:	0.53	Relativity to Base:	0.53

Relative Ranges for each year are scaled to the original upper and lower bounds based on Residual Market Rate Ratio to Original Ranges (2011)

Example: 2017 Upper Threshold .027 = (1.37 (2017 Res. Mkt. Rate) / 2.57 (2011 Res. Mkt. Rate)) * .05 (Original Upper Threshold)

Commonwealth Automobile Reinsurers
4/1/2018 Credit Offer - Data Through August, 2017 (2016 Rates)
Summary by Territory

4/1/2017 Credit Factors

4/1/18 Indicated - Indexed Ranges By Year

<u>Territory</u>	<u>4/1/2017 Credit Factors</u>			<u>4/1/18 Indicated - Indexed Ranges By Year</u>			
	<u>Total Mkt Exposures</u>	<u>Credit Eligible Exposures</u>	<u>Potential Credit Premium</u>	<u>Credit Eligible Exposures</u>	<u>%Δ</u>	<u>Potential Credit Premium</u>	<u>%Δ</u>
1	185,519	0	0	813	0.0%	1,750,728	0.0%
2	248,700	1,164	2,684,227	1,164	0.0%	2,684,227	0.0%
3	534,836	2,687	6,569,096	2,687	0.0%	6,569,096	0.0%
4	339,207	1,555	4,275,740	0	-100.0%	0	-100.0%
5	523,718	3,643	9,340,781	3,643	0.0%	9,340,781	0.0%
6	349,920	1,857	5,288,993	1,857	0.0%	5,288,993	0.0%
7	359,758	15,215	27,631,632	16,111	5.9%	29,339,713	6.2%
8	204,707	7,887	15,316,519	7,887	0.0%	15,316,519	0.0%
9	205,351	10,208	21,096,980	10,208	0.0%	21,096,980	0.0%
10	98,894	4,703	9,578,108	4,703	0.0%	9,578,108	0.0%
11	74,042	636	2,252,184	636	0.0%	2,252,184	0.0%
12	199,113	8,360	19,365,910	14,502	73.5%	22,661,443	17.0%
13	219,654	20,193	33,198,482	23,358	15.7%	43,120,758	29.9%
14	75,163	7,569	17,415,334	62,685	728.2%	103,269,954	493.0%
15	26,980	2,909	6,674,412	2,909	0.0%	7,021,598	5.2%
16*	14,687	13,185	22,581,083	13,185	0.0%	22,943,094	1.6%
17	17,653	509	1,213,165	819	61.1%	1,381,587	13.9%
18	16,471	13,970	22,920,711	13,791	-1.3%	22,590,355	-1.4%
19	16,055	615	1,690,138	946	53.8%	2,238,588	32.5%
20*	18,824	15,319	27,819,326	18,554	21.1%	31,734,750	14.1%
21*	49,598	48,446	104,622,356	49,388	1.9%	111,016,117	6.1%
22*	16,003	16,003	36,570,934	15,841	-1.0%	37,372,209	2.2%
23	45,980	3,070	8,323,605	2,968	-3.3%	7,061,859	-15.2%
24	25,453	1,285	2,814,097	447	-65.2%	1,650,398	-41.4%
25	17,490	638	1,959,627	892	39.9%	2,356,260	20.2%
26*	22,538	1,818	4,882,842	1,799	-1.0%	4,383,247	-10.2%
27	424,279	1,945	3,781,260	1,945	0.0%	3,781,260	0.0%
40*	21,581	17,380	25,101,866	2,193	-87.4%	4,789,579	-80.9%
41*	61,712	52,608	66,767,463	6,927	-86.8%	12,858,810	-80.7%
42*	78,111	63,044	114,300,022	7,441	-88.2%	18,612,114	-83.7%
43*	49,746	41,636	76,645,492	5,635	-86.5%	15,632,370	-79.6%
44*	37,339	33,162	48,119,602	33,390	0.7%	48,428,467	0.6%
45*	52,811	44,279	96,804,869	44,750	1.1%	102,279,087	5.7%
99	11,591	0	0	0	0.0%	0	0.0%
Total	4,643,483	457,498	847,606,855	374,077	-18.2%	730,401,232	-13.8%
% of Total Mkt. Exp.		9.9%		8.1%			

***Summary for Key Territories cited by the Division of Insurance**

Total	422,950	346,879	624,215,856	199,104	-42.6%	410,049,844	-34.3%
% of Total Mkt. Exp.		82.0%		47.1%			

Indexed Market Share Group Ranges by Year

Base Year			>	≤	Credits	
	2011	0	0.00	0.05	0.00	0
		1	0.05	0.08	1.00	1
MAIP:	2.57%	2	0.08	0.11	1.00	2
Relativity:	1.00	3	0.11	0.17	1.00	3
		4	0.17	0.23	1.25	4
		5	0.23	0.29	1.50	5
		6	0.29	0.35	1.75	6
		7	0.35	0.41	2.00	7
		8	0.41	0.47	2.25	8
		9	0.47	1.00	2.50	9

			>	≤	Credits	
	2015	0	0.000	0.026	0.00	0
		1	0.026	0.041	1.00	1
MAIP:	1.32%	2	0.041	0.057	1.00	2
Relativity:	0.514	3	0.057	0.087	1.00	3
		4	0.087	0.118	1.25	4
		5	0.118	0.149	1.50	5
		6	0.149	0.180	1.75	6
		7	0.180	0.211	2.00	7
		8	0.211	0.242	2.25	8
		9	0.242	1.000	2.50	9

			>	≤	Credits	
	2016	0	0.0000	0.0260	0.00	0
		1	0.0260	0.0420	1.00	1
MAIP:	1.35%	2	0.0420	0.0580	1.00	2
Relativity:	0.525	3	0.0580	0.0890	1.00	3
		4	0.0890	0.1210	1.25	4
		5	0.1210	0.1520	1.50	5
		6	0.1520	0.1840	1.75	6
		7	0.1840	0.2150	2.00	7
		8	0.2150	0.2470	2.25	8
		9	0.2470	1.0000	2.50	9

			>	≤	Credits	
	2017	0	0.000	0.027	0.00	0
		1	0.027	0.042	1.00	1
MAIP:	1.37%	2	0.042	0.058	1.00	2
Relativity:	0.53	3	0.058	0.090	1.00	3
		4	0.090	0.122	1.25	4
		5	0.122	0.154	1.50	5
		6	0.154	0.186	1.75	6
		7	0.186	0.217	2.00	7
		8	0.217	0.249	2.25	8
		9	0.249	1.000	2.50	9

Commonwealth Automobile Reinsurers - 4/1/2018 Credit Offer
Indicated Private Passenger Auto Residual Market Share Group - Operator Class 10
Indexed Market Share Group Ranges By Year

Terr	Residual Market Share			Indicated Mkt Share Range			Selected Range*	2018 Credits	2017 Credits	Change	Residual Mark Shr Group	Keep Out Credits	
	Aug-15	Aug-16	Aug-17	2016	2017	2018							
1	0.72%	0.74%	0.74%	0	0	0	0	-	-	-	0	0.00	
2	0.75%	0.77%	0.77%	0	0	0	0	-	-	-	1	1.00	
3	0.80%	0.79%	0.83%	0	0	0	0	-	-	-	2	1.00	
4	0.78%	0.70%	0.75%	0	0	0	0	-	-	-	3	1.00	
5	1.05%	1.07%	1.14%	0	0	0	0	-	-	-	4	1.25	
6	1.11%	1.08%	1.07%	0	0	0	0	-	-	-	5	1.50	
7	1.37%	1.45%	1.49%	0	0	0	0	-	-	-	6	1.75	
8	1.28%	1.30%	1.35%	0	0	0	0	-	-	-	7	2.00	
9	1.44%	1.57%	1.62%	0	0	0	0	-	-	-	8	2.25	
10	1.69%	1.60%	1.63%	0	0	0	0	-	-	-	9	2.50	
11	1.19%	1.27%	1.27%	0	0	0	0	-	-	-			
12	1.56%	1.55%	1.56%	0	0	0	0	-	-	-			
13	2.39%	2.54%	2.64%	0	0	0	0	-	-	-			
14	2.25%	2.60%	2.84%	0	1	1	1	1.00	-	1.00			
15	2.13%	2.45%	2.78%	0	0	1	0	-	-	-			
16	3.51%	3.63%	3.47%	1	1	1	1	1.00	1.00	-			
17	1.73%	1.66%	1.70%	0	0	0	0	-	-	-			
18	3.61%	3.78%	3.29%	1	1	1	1	1.00	1.00	-			
19	2.51%	2.49%	2.33%	0	0	0	0	-	-	-			
20	4.65%	4.97%	4.90%	2	2	2	2	1.00	1.00	-	<u>Available Credit Prem:</u>	<u>Credit Eligible Exp:</u>	
21	5.13%	5.41%	5.85%	2	2	3	2	1.00	1.00	-			
22	5.76%	6.46%	7.63%	3	3	3	3	1.00	1.00	-	2018	354,736,987	208,430
23	1.70%	1.58%	1.62%	0	0	0	0	-	-	-			
24	1.34%	1.34%	1.27%	0	0	0	0	-	-	-	2017	501,618,668	306,225
25	1.19%	1.29%	1.30%	0	0	0	0	-	-	-			
26	2.11%	2.18%	2.20%	0	0	0	0	-	-	-	<u>Difference:</u>	<u>Difference:</u>	
27	0.60%	0.57%	0.60%	0	0	0	0	-	-	-			
40	2.60%	2.10%	2.59%	1	0	0	0	-	1.00	(1.00)	(146,881,681)	(97,796)	
41	2.48%	2.49%	2.59%	0	0	0	0	-	1.00	(1.00)			
42	2.60%	2.11%	2.01%	1	0	0	0	-	1.00	(1.00)	<u>Percent Change:</u>	<u>Percent Change:</u>	
43	2.40%	2.53%	2.64%	0	0	0	0	-	1.00	(1.00)			
44	4.36%	4.65%	4.55%	2	2	2	2	1.00	1.00	-	-29.3%	-31.9%	
45	2.73%	3.74%	4.08%	1	1	1	1	1.00	1.00	-			
99	0.60%	0.53%	0.51%	0	0	0	0	-	-	-			
Tot	1.37%	1.40%	1.46%										

*Selection Criteria

- a. If the indicated residual market share group equal in all three years, select that residual market share group.
- b. If two of the three years indicate the same residual market share group, select that residual market share group.
- c. If all three years indicate a different residual market share group, select the median residual market share group.

Commonwealth Automobile Reinsurers - 4/1/2018 Credit Offer
Indicated Private Passenger Auto Residual Market Share Group - Operator Class 15
Indexed Market Share Group Ranges By Year

Terr	Residual Market Share			Indicated Mkt Share Range			Selected Range*	2018 Credits	2017 Credits	Change	Residual Mark Shr Group	Keep Out Credits	
	Aug-15	Aug-16	Aug-17	2016	2017	2018							
1	0.28%	0.27%	0.23%	0	0	0	0	-	-	-	0	0.00	
2	0.28%	0.26%	0.25%	0	0	0	0	-	-	-	1	1.00	
3	0.26%	0.25%	0.25%	0	0	0	0	-	-	-	2	1.00	
4	0.26%	0.25%	0.27%	0	0	0	0	-	-	-	3	1.00	
5	0.32%	0.27%	0.27%	0	0	0	0	-	-	-	4	1.25	
6	0.42%	0.38%	0.39%	0	0	0	0	-	-	-	5	1.50	
7	0.41%	0.43%	0.44%	0	0	0	0	-	-	-	6	1.75	
8	0.58%	0.51%	0.48%	0	0	0	0	-	-	-	7	2.00	
9	0.50%	0.44%	0.48%	0	0	0	0	-	-	-	8	2.25	
10	0.53%	0.53%	0.52%	0	0	0	0	-	-	-	9	2.50	
11	0.68%	0.58%	0.66%	0	0	0	0	-	-	-			
12	0.76%	0.72%	0.72%	0	0	0	0	-	-	-			
13	0.87%	0.98%	0.95%	0	0	0	0	-	-	-			
14	1.13%	1.32%	1.33%	0	0	0	0	-	-	-			
15	1.24%	1.65%	1.47%	0	0	0	0	-	-	-			
16	2.00%	2.41%	2.84%	0	0	1	0	-	-	-			
17	0.96%	0.79%	1.09%	0	0	0	0	-	-	-			
18	1.99%	1.98%	2.17%	0	0	0	0	-	-	-			
19	2.04%	2.09%	1.81%	0	0	0	0	-	-	-			
20	2.50%	2.99%	3.16%	0	1	1	1	1.00	-	1.00	<u>Available Credit Prem:</u>	<u>Credit Eligible Exp:</u>	
21	4.05%	4.21%	4.37%	1	2	2	2	1.00	1.00	-			
22	5.40%	5.89%	6.67%	2	3	3	3	1.00	1.00	-	2018	16,411,403	11,860
23	1.38%	1.06%	0.94%	0	0	0	0	-	-	-			
24	2.31%	1.86%	1.38%	0	0	0	0	-	-	-	2017	13,335,509	9,134
25	1.11%	0.80%	0.58%	0	0	0	0	-	-	-			
26	1.45%	1.44%	1.52%	0	0	0	0	-	-	-	<u>Difference:</u>	<u>Difference:</u>	
27	0.20%	0.19%	0.20%	0	0	0	0	-	-	-			
40	1.03%	1.22%	1.22%	0	0	0	0	-	-	-	3,075,893	2,726	
41	1.00%	0.81%	0.80%	0	0	0	0	-	-	-			
42	2.21%	1.55%	1.38%	0	0	0	0	-	-	-	<u>Percent Change:</u>	<u>Percent Change:</u>	
43	0.84%	0.77%	0.81%	0	0	0	0	-	-	-			
44	1.97%	1.93%	2.54%	0	0	0	0	-	-	-	23.1%	29.8%	
45	1.43%	1.70%	2.37%	0	0	0	0	-	-	-			
99	0.22%	0.19%	0.16%	0	0	0	0	-	-	-			
Tot	0.52%	0.51%	0.52%										

*Selection Criteria

- If the indicated residual market share group equal in all three years, select that residual market share group.
- If two of the three years indicate the same residual market share group, select that residual market share group.
- If all three years indicate a different residual market share group, select the median residual market share group.

Commonwealth Automobile Reinsurers - 4/1/2018 Credit Offer
Indicated Private Passenger Auto Residual Market Share Group - Operator Class 17
Indexed Market Share Group Ranges By Year

Terr	Residual Market Share			Indicated Mkt Share Range			Selected Range*	2018 Credits	2017 Credits	Change	Residual Mark Shr Group	Keep Out Credits	
	Aug-15	Aug-16	Aug-17	2016	2017	2018							
1	1.94%	1.44%	1.59%	0	0	0	0	-	-	-	0	0.00	
2	1.95%	1.53%	1.61%	0	0	0	0	-	-	-	1	1.00	
3	1.99%	1.74%	1.74%	0	0	0	0	-	-	-	2	1.00	
4	1.84%	1.83%	1.74%	0	0	0	0	-	-	-	3	1.00	
5	2.33%	2.35%	2.44%	0	0	0	0	-	-	-	4	1.25	
6	3.01%	2.41%	2.32%	1	0	0	0	-	-	-	5	1.50	
7	2.76%	2.82%	2.70%	1	1	1	1	1.00	1.00	-	6	1.75	
8	3.33%	3.07%	2.46%	1	1	0	1	1.00	1.00	-	7	2.00	
9	2.90%	2.72%	3.32%	1	1	1	1	1.00	1.00	-	8	2.25	
10	2.74%	3.11%	2.94%	1	1	1	1	1.00	1.00	-	9	2.50	
11	2.59%	2.36%	2.23%	0	0	0	0	-	-	-			
12	3.67%	3.63%	3.12%	1	1	1	1	1.00	1.00	-			
13	4.40%	4.26%	4.43%	2	2	2	2	1.00	1.00	-			
14	4.96%	4.54%	4.31%	2	2	2	2	1.00	1.00	-			
15	4.34%	4.71%	3.44%	2	2	1	2	1.00	1.00	-			
16	6.34%	6.07%	4.68%	3	3	2	3	1.00	1.00	-			
17	3.27%	2.74%	4.71%	1	1	2	1	1.00	1.00	-			
18	6.31%	7.58%	4.59%	3	3	2	3	1.00	1.00	-			
19	4.71%	6.60%	6.04%	2	3	3	3	1.00	1.00	-			
20	9.64%	7.18%	7.50%	4	3	3	3	1.00	1.00	-	<u>Available Credit Prem:</u>	<u>Credit Eligible Exp:</u>	
21	8.89%	10.11%	10.56%	4	4	4	4	1.25	1.00	0.25			
22	8.57%	9.59%	8.95%	3	4	3	3	1.00	1.00	-	2018	148,811,300	72,315
23	5.36%	5.97%	3.36%	2	3	1	2	1.00	1.00	-			
24	3.19%	2.44%	2.52%	1	0	0	0	-	-	-	2017	147,229,775	72,315
25	2.83%	3.93%	5.02%	1	1	2	1	1.00	1.00	-			
26	4.84%	5.44%	3.56%	2	2	1	2	1.00	1.00	-	<u>Difference:</u>	<u>Difference:</u>	
27	1.49%	1.45%	1.56%	0	0	0	0	-	-	-			
40	5.34%	4.20%	4.21%	2	2	2	2	1.00	1.00	-		1,581,525	-
41	4.48%	4.67%	5.08%	2	2	2	2	1.00	1.00	-			
42	3.25%	2.83%	2.73%	1	1	1	1	1.00	1.00	-	<u>Percent Change:</u>	<u>Percent Change:</u>	
43	6.26%	5.57%	5.09%	3	2	2	2	1.00	1.00	-			
44	6.43%	5.99%	5.19%	3	3	2	3	1.00	1.00	-		1.1%	0.0%
45	6.50%	8.61%	9.82%	3	3	4	3	1.00	1.00	-			
99	0.40%	0.48%	0.46%	0	0	0	0	-	-	-			
Tot	2.93%	2.85%	2.82%										

*Selection Criteria

- a. If the indicated residual market share group equal in all three years, select that residual market share group.
- b. If two of the three years indicate the same residual market share group, select that residual market share group.
- c. If all three years indicate a different residual market share group, select the median residual market share group.

Commonwealth Automobile Reinsurers - 4/1/2018 Credit Offer
Indicated Private Passenger Auto Residual Market Share Group - Operator Class 18
Indexed Market Share Group Ranges By Year

Terr	Residual Market Share			Indicated Mkt Share Range			Selected Range*	2018 Credits	2017 Credits	Change	Residual Mark Shr Group	Keep Out Credits	
	Aug-15	Aug-16	Aug-17	2016	2017	2018							
1	0.67%	0.58%	0.54%	0	0	0	0	-	-	-	0	0.00	
2	0.43%	0.63%	0.69%	0	0	0	0	-	-	-	1	1.00	
3	0.74%	0.60%	0.53%	0	0	0	0	-	-	-	2	1.00	
4	0.47%	0.52%	0.63%	0	0	0	0	-	-	-	3	1.00	
5	0.95%	0.99%	1.04%	0	0	0	0	-	-	-	4	1.25	
6	0.75%	0.87%	0.82%	0	0	0	0	-	-	-	5	1.50	
7	0.93%	0.85%	1.10%	0	0	0	0	-	-	-	6	1.75	
8	0.99%	0.90%	0.88%	0	0	0	0	-	-	-	7	2.00	
9	0.91%	1.41%	1.12%	0	0	0	0	-	-	-	8	2.25	
10	1.62%	1.32%	0.96%	0	0	0	0	-	-	-	9	2.50	
11	1.06%	0.94%	0.81%	0	0	0	0	-	-	-			
12	1.25%	1.16%	1.27%	0	0	0	0	-	-	-			
13	1.78%	2.24%	2.35%	0	0	0	0	-	-	-			
14	1.79%	2.71%	1.88%	0	1	0	0	-	-	-			
15	3.21%	2.50%	2.64%	1	0	0	0	-	-	-			
16	1.26%	1.01%	3.99%	0	0	1	0	-	-	-			
17	0.74%	1.44%	0.84%	0	0	0	0	-	-	-			
18	3.48%	0.84%	0.88%	1	0	0	0	-	1.00	(1.00)			
19	0.81%	3.90%	2.00%	0	1	0	0	-	-	-			
20	2.78%	6.45%	6.87%	1	3	3	3	1.00	-	1.00	<u>Available Credit Prem:</u>	<u>Credit Eligible Exp:</u>	
21	3.20%	4.03%	5.68%	1	1	2	1	1.00	-	1.00			
22	3.28%	3.88%	6.61%	1	1	3	1	1.00	1.00	-	2018	3,131,756	1,312
23	1.80%	0.69%	1.73%	0	0	0	0	-	-	-			
24	2.02%	0.17%	1.59%	0	0	0	0	-	-	-	2017	2,176,054	1,250
25	0.93%	0.86%	3.27%	0	0	1	0	-	-	-			
26	2.02%	1.02%	0.96%	0	0	0	0	-	-	-	<u>Difference:</u>	<u>Difference:</u>	
27	0.49%	0.42%	0.36%	0	0	0	0	-	-	-			
40	0.06%	1.03%	1.93%	0	0	0	0	-	1.00	(1.00)	955,702	62	
41	1.72%	2.06%	1.95%	0	0	0	0	-	1.00	(1.00)			
42	1.03%	0.62%	1.10%	0	0	0	0	-	-	-	<u>Percent Change:</u>	<u>Percent Change:</u>	
43	1.67%	1.02%	1.86%	0	0	0	0	-	-	-			
44	2.75%	1.96%	2.07%	1	0	0	0	-	-	-	43.9%	5.0%	
45	2.60%	4.33%	6.35%	1	2	3	2	1.00	-	1.00			
99	0.00%	0.43%	0.43%	0	0	0	0	-	-	-			
Tot	0.95%	0.99%	1.06%										

*Selection Criteria

- a. If the indicated residual market share group equal in all three years, select that residual market share group.
- b. If two of the three years indicate the same residual market share group, select that residual market share group.
- c. If all three years indicate a different residual market share group, select the median residual market share group.

Commonwealth Automobile Reinsurers - 4/1/2018 Credit Offer
Indicated Private Passenger Auto Residual Market Share Group - Operator Class 20
Indexed Market Share Group Ranges By Year

Terr	Residual Market Share			Indicated Mkt Share Range			Selected Range*	2018 Credits	2017 Credits	Change	Residual Mark Shr Group	Keep Out Credits		
	Aug-15	Aug-16	Aug-17	2016	2017	2018							Available Credit Prem:	Credit Eligible Exp:
1	5.87%	5.47%	4.04%	3	2	1	2	1.00	-	1.00	0	0.00		
2	3.53%	3.84%	2.18%	1	1	0	1	1.00	1.00	-	1	1.00		
3	3.96%	4.04%	3.29%	1	1	1	1	1.00	1.00	-	2	1.00		
4	2.44%	2.90%	2.63%	0	1	0	0	-	1.00	(1.00)	3	1.00		
5	5.19%	6.36%	4.35%	2	3	2	2	1.00	1.00	-	4	1.25		
6	5.59%	5.16%	3.50%	2	2	1	2	1.00	1.00	-	5	1.50		
7	5.32%	6.46%	4.70%	2	3	2	2	1.00	1.00	-	6	1.75		
8	5.87%	6.24%	5.69%	3	3	2	3	1.00	1.00	-	7	2.00		
9	6.24%	6.15%	4.82%	3	3	2	3	1.00	1.00	-	8	2.25		
10	6.11%	7.28%	5.95%	3	3	3	3	1.00	1.00	-	9	2.50		
11	4.78%	6.61%	3.94%	2	3	1	2	1.00	1.00	-				
12	6.85%	7.64%	5.55%	3	3	2	3	1.00	1.00	-				
13	8.11%	9.26%	8.38%	3	4	3	3	1.00	1.00	-				
14	11.61%	11.27%	9.64%	4	4	4	4	1.25	1.00	0.25				
15	12.66%	14.61%	11.33%	5	5	4	5	1.50	1.25	0.25				
16	19.40%	16.39%	12.01%	7	6	4	6	1.75	1.50	0.25				
17	9.29%	14.00%	13.66%	4	5	5	5	1.50	1.25	0.25				
18	14.20%	8.63%	9.10%	5	3	4	4	1.25	1.25	-				
19	14.31%	15.81%	17.14%	5	6	6	6	1.75	1.00	0.75				
20	18.45%	16.33%	16.15%	7	6	6	6	1.75	1.50	0.25	<u>Available Credit Prem:</u>	<u>Credit Eligible Exp:</u>		
21	24.45%	24.33%	24.69%	9	8	8	8	2.25	1.75	0.50				
22	20.34%	27.23%	23.86%	7	9	8	8	2.25	1.75	0.50	2018	148,304,041	36,671	
23	9.64%	7.28%	6.73%	4	3	3	3	1.00	1.25	(0.25)				
24	5.63%	5.53%	6.27%	2	2	3	2	1.00	1.00	-	2017	141,416,668	37,413	
25	12.53%	15.05%	11.07%	5	5	4	5	1.50	1.00	0.50				
26	13.21%	14.32%	12.78%	5	5	5	5	1.50	1.50	-	<u>Difference:</u>	<u>Difference:</u>		
27	2.67%	3.97%	3.33%	1	1	1	1	1.00	1.00	-				
40	10.16%	13.23%	6.71%	4	5	3	4	1.25	1.50	(0.25)		6,887,372	(742)	
41	8.79%	8.88%	8.32%	4	3	3	3	1.00	1.00	-				
42	9.19%	7.59%	5.52%	4	3	2	3	1.00	1.25	(0.25)	<u>Percent Change:</u>	<u>Percent Change:</u>		
43	12.33%	12.58%	9.34%	5	5	4	5	1.50	1.25	0.25				
44	13.68%	13.72%	11.42%	5	5	4	5	1.50	1.50	-		4.9%	-2.0%	
45	15.16%	22.95%	21.35%	6	8	7	7	2.00	1.25	0.75				
99	1.49%	1.37%	1.25%	0	0	0	0	-	-	-				
Tot	7.95%	8.59%	6.93%											

*Selection Criteria

- If the indicated residual market share group equal in all three years, select that residual market share group.
- If two of the three years indicate the same residual market share group, select that residual market share group.
- If all three years indicate a different residual market share group, select the median residual market share group.

Commonwealth Automobile Reinsurers - 4/1/2018 Credit Offer
Indicated Private Passenger Auto Residual Market Share Group - Operator Class 21
Indexed Market Share Group Ranges By Year

Terr	Residual Market Share			Indicated Mkt Share Range			Selected Range*	2018 Credits	2017 Credits	Change	Residual Mark Shr Group	Keep Out Credits		
	Aug-15	Aug-16	Aug-17	2016	2017	2018							Available Credit Prem:	Credit Eligible Exp:
1	1.08%	1.40%	0.96%	0	0	0	0	-	-	-	0	0.00		
2	1.07%	1.61%	1.72%	0	0	0	0	-	-	-	1	1.00		
3	1.53%	1.39%	1.85%	0	0	0	0	-	-	-	2	1.00		
4	0.96%	1.33%	1.18%	0	0	0	0	-	-	-	3	1.00		
5	2.49%	2.31%	2.23%	0	0	0	0	-	-	-	4	1.25		
6	1.91%	1.65%	2.11%	0	0	0	0	-	-	-	5	1.50		
7	2.33%	3.24%	3.08%	0	1	1	1	1.00	-	1.00	6	1.75		
8	2.47%	1.25%	1.73%	0	0	0	0	-	-	-	7	2.00		
9	1.96%	2.60%	2.95%	0	1	1	1	1.00	1.00	-	8	2.25		
10	3.51%	2.18%	2.88%	1	0	1	1	1.00	1.00	-	9	2.50		
11	1.77%	1.56%	2.01%	0	0	0	0	-	-	-				
12	2.66%	3.18%	3.36%	1	1	1	1	1.00	-	1.00				
13	4.20%	2.67%	4.62%	2	1	2	2	1.00	1.00	-				
14	3.24%	3.47%	4.04%	1	1	1	1	1.00	1.00	-				
15	2.38%	5.64%	7.68%	0	2	3	2	1.00	1.00	-				
16	4.72%	6.28%	4.05%	2	3	1	2	1.00	1.00	-				
17	0.00%	2.48%	1.79%	0	0	0	0	-	-	-				
18	3.76%	5.68%	4.16%	1	2	1	1	1.00	1.00	-				
19	2.62%	2.63%	1.65%	1	1	0	1	1.00	1.00	-				
20	4.71%	4.87%	9.06%	2	2	4	2	1.00	1.00	-			<u>Available Credit Prem:</u>	<u>Credit Eligible Exp:</u>
21	3.92%	7.15%	5.67%	1	3	2	2	1.00	1.00	-				
22	1.72%	3.53%	13.53%	0	1	5	1	1.00	1.00	-	2018	16,225,126		6,473
23	3.09%	3.33%	4.16%	1	1	1	1	1.00	-	1.00				
24	1.07%	1.94%	1.63%	0	0	0	0	-	1.00	(1.00)	2017	13,197,452		4,980
25	2.01%	2.46%	1.89%	0	0	0	0	-	-	-				
26	1.76%	4.54%	2.21%	0	2	0	0	-	1.00	(1.00)			<u>Difference:</u>	<u>Difference:</u>
27	1.27%	1.41%	0.97%	0	0	0	0	-	-	-				
40	5.19%	3.77%	5.68%	2	1	2	2	1.00	1.00	-		3,027,674		1,493
41	4.67%	2.15%	3.71%	2	0	1	1	1.00	1.00	-				
42	1.36%	2.79%	3.53%	0	1	1	1	1.00	1.00	-			<u>Percent Change:</u>	<u>Percent Change:</u>
43	2.16%	4.00%	2.52%	0	1	0	0	-	1.00	(1.00)				
44	3.96%	5.05%	5.17%	1	2	2	2	1.00	1.00	-		22.9%		30.0%
45	3.53%	7.38%	7.23%	1	3	3	3	1.00	1.00	-				
99	0.00%	-3.28%	3.97%	0	0	1	0	-	-	-				
Tot	2.37%	2.58%	2.86%											

*Selection Criteria

- If the indicated residual market share group equal in all three years, select that residual market share group.
- If two of the three years indicate the same residual market share group, select that residual market share group.
- If all three years indicate a different residual market share group, select the median residual market share group.

Commonwealth Automobile Reinsurers - 4/1/2018 Credit Offer
Indicated Private Passenger Auto Residual Market Share Group - Operator Class 25
Indexed Market Share Group Ranges By Year

Terr	Residual Market Share			Indicated Mkt Share Range			Selected Range*	2018 Credits	2017 Credits	Change	Residual Mark Shr Group	Keep Out Credits	
	Aug-15	Aug-16	Aug-17	2016	2017	2018							
1	1.29%	1.25%	1.06%	0	0	0	0	-	-	-	0	0.00	
2	1.18%	1.10%	1.12%	0	0	0	0	-	-	-	1	1.00	
3	0.92%	1.07%	1.01%	0	0	0	0	-	-	-	2	1.00	
4	1.12%	0.88%	0.95%	0	0	0	0	-	-	-	3	1.00	
5	1.55%	1.62%	1.48%	0	0	0	0	-	-	-	4	1.25	
6	1.59%	1.54%	1.64%	0	0	0	0	-	-	-	5	1.50	
7	1.51%	1.50%	1.20%	0	0	0	0	-	-	-	6	1.75	
8	2.34%	1.84%	1.92%	0	0	0	0	-	-	-	7	2.00	
9	2.10%	1.95%	1.69%	0	0	0	0	-	-	-	8	2.25	
10	2.20%	1.99%	1.55%	0	0	0	0	-	-	-	9	2.50	
11	2.22%	1.68%	1.17%	0	0	0	0	-	-	-			
12	2.68%	2.39%	2.33%	1	0	0	0	-	-	-			
13	3.31%	3.12%	2.66%	1	1	0	1	1.00	-	1.00			
14	3.12%	3.46%	2.38%	1	1	0	1	1.00	1.00	-			
15	4.17%	4.55%	3.38%	2	2	1	2	1.00	1.00	-			
16	4.49%	5.74%	5.42%	2	2	2	2	1.00	1.00	-			
17	1.74%	1.48%	0.37%	0	0	0	0	-	-	-			
18	5.39%	2.69%	4.59%	2	1	2	2	1.00	1.00	-			
19	5.52%	0.35%	1.20%	2	0	0	0	-	-	-			
20	4.32%	3.11%	1.88%	2	1	0	1	1.00	1.00	-	<u>Available Credit Prem:</u>	<u>Credit Eligible Exp:</u>	
21	6.11%	5.32%	5.16%	3	2	2	2	1.00	1.00	-			
22	2.92%	3.41%	3.64%	1	1	1	1	1.00	1.00	-	2018	31,246,616	8,688
23	0.08%	1.20%	3.48%	0	0	1	0	-	1.00	(1.00)			
24	0.23%	0.49%	0.46%	0	0	0	0	-	1.00	(1.00)	2017	20,475,849	5,107
25	3.65%	8.23%	4.59%	1	3	2	2	1.00	1.00	-			
26	2.37%	3.42%	0.58%	0	1	0	0	-	1.00	(1.00)	<u>Difference:</u>	<u>Difference:</u>	
27	0.65%	0.82%	0.91%	0	0	0	0	-	-	-			
40	2.84%	0.78%	3.27%	1	0	1	1	1.00	-	1.00	10,770,767	3,581	
41	4.37%	2.01%	3.23%	2	0	1	1	1.00	-	1.00			
42	2.38%	2.15%	1.94%	0	0	0	0	-	-	-	<u>Percent Change:</u>	<u>Percent Change:</u>	
43	2.97%	3.61%	3.35%	1	1	1	1	1.00	1.00	-			
44	4.71%	4.05%	2.49%	2	1	0	1	1.00	1.00	-	52.6%	70.1%	
45	6.72%	5.35%	8.21%	3	2	3	3	1.00	1.00	-			
99	0.53%	0.02%	0.40%	0	0	0	0	-	-	-			
Tot	1.63%	1.58%	1.51%										

*Selection Criteria

- If the indicated residual market share group equal in all three years, select that residual market share group.
- If two of the three years indicate the same residual market share group, select that residual market share group.
- If all three years indicate a different residual market share group, select the median residual market share group.

Commonwealth Automobile Reinsurers - 4/1/2018 Credit Offer
Indicated Private Passenger Auto Residual Market Share Group - Operator Class 26
Indexed Market Share Group Ranges By Year

Terr	Residual Market Share			Indicated Mkt Share Range			Selected Range*	2018 Credits	2017 Credits	Change	Residual Mark Shr Group	Keep Out Credits	
	Aug-15	Aug-16	Aug-17	2016	2017	2018							
1	0.39%	0.27%	0.50%	0	0	0	0	-	-	-	0	0.00	
2	0.36%	0.56%	0.41%	0	0	0	0	-	-	-	1	1.00	
3	0.37%	0.49%	0.45%	0	0	0	0	-	-	-	2	1.00	
4	0.39%	0.39%	0.32%	0	0	0	0	-	-	-	3	1.00	
5	0.46%	0.66%	0.63%	0	0	0	0	-	-	-	4	1.25	
6	0.56%	0.42%	0.56%	0	0	0	0	-	-	-	5	1.50	
7	0.54%	0.74%	0.59%	0	0	0	0	-	-	-	6	1.75	
8	0.61%	0.62%	0.84%	0	0	0	0	-	-	-	7	2.00	
9	0.65%	0.66%	0.65%	0	0	0	0	-	-	-	8	2.25	
10	1.23%	1.08%	1.08%	0	0	0	0	-	-	-	9	2.50	
11	0.62%	0.21%	0.16%	0	0	0	0	-	-	-			
12	0.98%	0.92%	1.25%	0	0	0	0	-	-	-			
13	1.22%	1.10%	1.43%	0	0	0	0	-	-	-			
14	0.46%	0.98%	0.92%	0	0	0	0	-	-	-			
15	1.53%	1.99%	2.99%	0	0	1	0	-	-	-			
16	2.43%	0.43%	2.31%	0	0	0	0	-	-	-			
17	0.37%	0.36%	0.32%	0	0	0	0	-	-	-			
18	1.60%	1.93%	1.06%	0	0	0	0	-	-	-			
19	0.00%	0.11%	0.00%	0	0	0	0	-	-	-			
20	0.33%	4.65%	1.85%	0	2	0	0	-	-	-	<u>Available Credit Prem:</u>	<u>Credit Eligible Exp:</u>	
21	1.20%	2.17%	1.74%	0	0	0	0	-	-	-			
22	0.00%	1.79%	0.00%	0	0	0	0	-	1.00	(1.00)	2018	1,195,502	358
23	0.48%	1.46%	0.41%	0	0	0	0	-	-	-			
24	1.02%	0.00%	0.27%	0	0	0	0	-	-	-	2017	1,436,148	421
25	0.00%	0.43%	1.21%	0	0	0	0	-	-	-			
26	1.34%	0.36%	0.12%	0	0	0	0	-	-	-	<u>Difference:</u>	<u>Difference:</u>	
27	0.28%	0.35%	0.40%	0	0	0	0	-	-	-			
40	0.48%	0.08%	0.68%	0	0	0	0	-	-	-	(240,646)	(63)	
41	1.50%	1.31%	1.11%	0	0	0	0	-	-	-			
42	1.01%	0.66%	1.88%	0	0	0	0	-	-	-	<u>Percent Change:</u>	<u>Percent Change:</u>	
43	0.66%	0.54%	1.04%	0	0	0	0	-	-	-			
44	2.21%	1.00%	2.47%	0	0	0	0	-	-	-	-16.8%	-15.0%	
45	1.24%	2.65%	3.63%	0	1	1	1	1.00	1.00	-			
99	0.00%	0.78%	0.00%	0	0	0	0	-	-	-			
Tot	0.52%	0.59%	0.62%										

*Selection Criteria

- If the indicated residual market share group equal in all three years, select that residual market share group.
- If two of the three years indicate the same residual market share group, select that residual market share group.
- If all three years indicate a different residual market share group, select the median residual market share group.

Commonwealth Automobile Reinsurers - 4/1/2018 Credit Offer
Indicated Private Passenger Auto Residual Market Share Group - Operator Class 30
Indexed Market Share Group Ranges By Year

Terr	Residual Market Share			Indicated Mkt Share Range			Selected Range*	2018 Credits	2017 Credits	Change	Residual Mark Shr Group	Keep Out Credits		
	Aug-15	Aug-16	Aug-17	2016	2017	2018							Available Credit Prem:	Credit Eligible Exp:
1	0.32%	0.26%	0.23%	0	0	0	0	-	-	-	0	0.00		
2	0.64%	0.68%	0.60%	0	0	0	0	-	-	-	1	1.00		
3	0.49%	0.57%	0.50%	0	0	0	0	-	-	-	2	1.00		
4	0.55%	0.62%	0.64%	0	0	0	0	-	-	-	3	1.00		
5	0.78%	0.96%	0.94%	0	0	0	0	-	-	-	4	1.25		
6	0.73%	0.74%	0.63%	0	0	0	0	-	-	-	5	1.50		
7	0.87%	0.69%	0.94%	0	0	0	0	-	-	-	6	1.75		
8	1.13%	1.07%	1.24%	0	0	0	0	-	-	-	7	2.00		
9	0.56%	0.95%	1.54%	0	0	0	0	-	-	-	8	2.25		
10	1.62%	1.49%	1.07%	0	0	0	0	-	-	-	9	2.50		
11	1.19%	1.40%	1.03%	0	0	0	0	-	-	-				
12	1.28%	1.49%	1.22%	0	0	0	0	-	-	-				
13	1.32%	1.31%	1.03%	0	0	0	0	-	-	-				
14	2.96%	2.56%	2.21%	1	0	0	0	-	-	-				
15	3.85%	3.32%	4.49%	1	1	2	1	1.00	1.00	-				
16	3.60%	3.77%	4.28%	1	1	2	1	1.00	1.00	-				
17	2.32%	1.39%	0.00%	0	0	0	0	-	-	-				
18	0.53%	0.32%	0.55%	0	0	0	0	-	-	-				
19	1.56%	1.94%	0.35%	0	0	0	0	-	-	-				
20	1.41%	1.34%	1.27%	0	0	0	0	-	-	-			<u>Available Credit Prem:</u>	<u>Credit Eligible Exp:</u>
21	2.60%	1.66%	3.04%	1	0	1	1	1.00	-	1.00				
22	2.34%	1.87%	6.41%	0	0	3	0	-	1.00	(1.00)	2018	3,179,220		1,903
23	0.98%	0.75%	1.05%	0	0	0	0	-	-	-				
24	1.58%	1.27%	1.22%	0	0	0	0	-	-	-	2017	934,874		585
25	0.53%	1.24%	0.83%	0	0	0	0	-	-	-				
26	2.89%	3.39%	3.01%	1	1	1	1	1.00	-	1.00			<u>Difference:</u>	<u>Difference:</u>
27	0.35%	0.40%	0.51%	0	0	0	0	-	-	-				
40	0.60%	0.51%	0.00%	0	0	0	0	-	-	-			2,244,346	1,318
41	1.22%	1.37%	1.19%	0	0	0	0	-	-	-				
42	1.52%	0.73%	0.44%	0	0	0	0	-	-	-			<u>Percent Change:</u>	<u>Percent Change:</u>
43	2.29%	3.05%	4.30%	0	1	2	1	1.00	-	1.00				
44	2.82%	4.92%	4.96%	1	2	2	2	1.00	-	1.00			240.1%	225.4%
45	0.79%	1.82%	2.01%	0	0	0	0	-	-	-				
99	0.71%	0.00%	0.00%	0	0	0	0	-	-	-				
Tot	0.82%	0.87%	0.90%											

*Selection Criteria

- If the indicated residual market share group equal in all three years, select that residual market share group.
- If two of the three years indicate the same residual market share group, select that residual market share group.
- If all three years indicate a different residual market share group, select the median residual market share group.

Commonwealth Automobile Reinsurers - 4/1/2018 Credit Offer
Indicated Private Passenger Auto Residual Market Share Group - Operator Class MM
Indexed Market Share Group Ranges By Year

Terr	Residual Market Share			Indicated Mkt Share Range			Selected Range*	2018 Credits	2017 Credits	Change	Residual Mark Shr Group	Keep Out Credits	
	Aug-15	Aug-16	Aug-17	2016	2017	2018							
1	1.05%	0.97%	1.12%	0	0	0	0	-	-	-	0	0.00	
2	1.21%	1.27%	1.00%	0	0	0	0	-	-	-	1	1.00	
3	1.34%	1.32%	1.23%	0	0	0	0	-	-	-	2	1.00	
4	1.17%	1.09%	1.03%	0	0	0	0	-	-	-	3	1.00	
5	1.59%	1.74%	1.53%	0	0	0	0	-	-	-	4	1.25	
6	1.69%	1.74%	1.41%	0	0	0	0	-	-	-	5	1.50	
7	2.04%	2.26%	1.99%	0	0	0	0	-	-	-	6	1.75	
8	1.88%	1.89%	1.67%	0	0	0	0	-	-	-	7	2.00	
9	2.22%	2.38%	1.89%	0	0	0	0	-	-	-	8	2.25	
10	2.35%	2.00%	1.95%	0	0	0	0	-	-	-	9	2.50	
11	1.33%	1.75%	2.15%	0	0	0	0	-	-	-			
12	3.18%	2.98%	2.61%	1	1	0	1	1.00	-	1.00			
13	3.78%	3.61%	2.86%	1	1	1	1	1.00	1.00	-			
14	3.44%	3.47%	3.10%	1	1	1	1	1.00	1.00	-			
15	5.26%	5.88%	5.72%	2	3	2	2	1.00	1.00	-			
16	7.86%	5.29%	2.99%	3	2	1	2	1.00	1.00	-			
17	3.87%	3.92%	2.47%	1	1	0	1	1.00	-	1.00			
18	4.13%	5.25%	4.05%	2	2	1	2	1.00	1.00	-			
19	4.19%	3.92%	2.27%	2	1	0	1	1.00	-	1.00			
20	5.71%	4.38%	4.48%	3	2	2	2	1.00	-	1.00	<u>Available Credit Prem:</u>	<u>Credit Eligible Exp:</u>	
21	8.10%	7.83%	6.46%	3	3	3	3	1.00	1.00	-			
22	4.95%	4.92%	4.00%	2	2	1	2	1.00	1.00	-	2018	7,159,282	26,068
23	3.91%	2.83%	2.16%	1	1	0	1	1.00	1.00	-			
24	1.69%	1.63%	1.76%	0	0	0	0	-	1.00	(1.00)	2017	5,785,856	20,069
25	3.01%	3.57%	3.60%	1	1	1	1	1.00	-	1.00			
26	4.59%	6.82%	5.13%	2	3	2	2	1.00	1.00	-	<u>Difference:</u>	<u>Difference:</u>	
27	0.92%	1.05%	0.98%	0	0	0	0	-	-	-			
40	6.43%	3.91%	3.49%	3	1	1	1	1.00	1.00	-	1,373,425	5,999	
41	3.72%	4.05%	3.65%	1	1	1	1	1.00	1.00	-			
42	5.29%	4.69%	3.47%	2	2	1	2	1.00	1.00	-	<u>Percent Change:</u>	<u>Percent Change:</u>	
43	3.70%	2.81%	2.42%	1	1	0	1	1.00	1.00	-			
44	6.66%	8.90%	6.60%	3	4	3	3	1.00	1.00	-	23.7%	29.9%	
45	4.69%	5.03%	4.87%	2	2	2	2	1.00	1.00	-			
99	0.40%	1.18%	1.23%	0	0	0	0	-	-	-			
Tot	1.89%	1.92%	1.68%										

*Selection Criteria

- If the indicated residual market share group equal in all three years, select that residual market share group.
- If two of the three years indicate the same residual market share group, select that residual market share group.
- If all three years indicate a different residual market share group, select the median residual market share group.

2018 Proposed Credit Factors

Terr	Rate Class Group									MC/Misc.
	10	15	17	18	20	21	25	26	30	
1	-	-	-	-	1.00	-	-	-	-	-
2	-	-	-	-	1.00	-	-	-	-	-
3	-	-	-	-	1.00	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	1.00	-	-	-	-	-
6	-	-	-	-	1.00	-	-	-	-	-
7	-	-	1.00	-	1.00	1.00	-	-	-	-
8	-	-	1.00	-	1.00	-	-	-	-	-
9	-	-	1.00	-	1.00	1.00	-	-	-	-
10	-	-	1.00	-	1.00	1.00	-	-	-	-
11	-	-	-	-	1.00	-	-	-	-	-
12	-	-	1.00	-	1.00	1.00	-	-	-	1.00
13	-	-	1.00	-	1.00	1.00	1.00	-	-	1.00
14	1.00	-	1.00	-	1.25	1.00	1.00	-	-	1.00
15	-	-	1.00	-	1.50	1.00	1.00	-	1.00	1.00
16	1.00	-	1.00	-	1.75	1.00	1.00	-	1.00	1.00
17	-	-	1.00	-	1.50	-	-	-	-	1.00
18	1.00	-	1.00	-	1.25	1.00	1.00	-	-	1.00
19	-	-	1.00	-	1.75	1.00	-	-	-	1.00
20	1.00	1.00	1.00	1.00	1.75	1.00	1.00	-	-	1.00
21	1.00	1.00	1.25	1.00	2.25	1.00	1.00	-	1.00	1.00
22	1.00	1.00	1.00	1.00	2.25	1.00	1.00	-	-	1.00
23	-	-	1.00	-	1.00	1.00	-	-	-	1.00
24	-	-	-	-	1.00	-	-	-	-	-
25	-	-	1.00	-	1.50	-	1.00	-	-	1.00
26	-	-	1.00	-	1.50	-	-	-	1.00	1.00
27	-	-	-	-	1.00	-	-	-	-	-
40	-	-	1.00	-	1.25	1.00	1.00	-	-	1.00
41	-	-	1.00	-	1.00	1.00	1.00	-	-	1.00
42	-	-	1.00	-	1.00	1.00	-	-	-	1.00
43	-	-	1.00	-	1.50	-	1.00	-	1.00	1.00
44	1.00	-	1.00	-	1.50	1.00	1.00	-	1.00	1.00
45	1.00	-	1.00	1.00	2.00	1.00	1.00	1.00	-	1.00
99	-	-	-	-	-	-	-	-	-	-

Highlighted 4/1/2017 Credit Eligible Cells