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April 17, 2018

Jude Daye, Executive Assistant  
Blue Cross and Blue Shield of Vermont  
445 Industrial Lane  
Montpelier, VT 05601

Re: Blue Cross and Blue Shield of Vermont  
3Q 2018 LG Rating Program Filing  
SERFF Tracking #: BCVT-131424513

Dear Jude Daye:

We have been retained by the Green Mountain Care Board (“GMCB”) to review the above referenced group products filing submitted on 3/15/2018. The following additional information is required for this filing.

Notice regarding proper responses:

- A minimum-acceptable response to quantitative questions from us must include a spreadsheet calculation with retained formulas such that we can replicate the calculations therein.
- Explanatory responses are merely a supplement to the spreadsheet material and in of themselves will constitute a lack of response.

Questions:

1. Did the GMCB billback have an implicit rate component in prior filings?
2. Please confirm that the completion factors used in this filing were based on best estimates and do not include margin for conservatism.
3. Please provide support for the proposed trends in the cells K33, O33, AL33, AP33, BC30, BC42 on the VHP Cost tab.
4. Please provide a revised time series analysis in a separate exhibit with claims from all members included.

Please be aware that we expect to have further questions regarding the filing as the review continues.

To ensure that the review of your filing has been completed before statutory deadlines, we expect you to respond as expeditiously as possible to every objection in our letter, but

no later than April 23, 2018. Note that the responses can be submitted separately and do not have to be submitted all at the same time.

We trust that you understand these forms may not be used in Vermont until they are formally approved by the GMCB.

Sincerely,

A handwritten signature in black ink that reads "Josh Hammerquist". The signature is written in a cursive style with a large, looped initial "J".

Josh Hammerquist F.S.A., M.A.A.A.  
Vice President & Consulting Actuary  
Lewis & Ellis, Inc.  
jhammerquist@lewisellis.com  
(972)850-0850

April 23, 2018

Mr. Josh Hammerquist, F.S.A., M.A.A.A.  
Assistant Vice President & Consulting Actuary  
Lewis & Ellis, Inc.

**Subject: Your 04/17/2018 Questions re: Blue Cross and Blue Shield of Vermont  
3Q 2018 Large Group Rating Program Filing (SERFF Tracking #: BCVT-131424513) and  
Your 04/17/2018 Questions re: The Vermont Health Plan 3Q 2018 Large Group Rating  
Program Filing (SERFF Tracking #: BCVT- 131424558)**

Dear Mr. Hammerquist:

In response to your requests dated April 17 2018, here are *your questions* and our answers:

*1. Did the GMCB billback have an implicit rate component in prior filings?*

The GMCB billback was previously included in the development of administrative charges. Given the increase in the billback, we decided to explicitly break out the component.

*2. Please confirm that the completion factors used in this filing were based on best estimates and do not include margin for conservatism.*

We confirm that the completion factors used in this filing are based on best estimates and do not include margin for conservatism.

*3. Please provide support for the proposed trends in the cells K33, O33, AL33, AP33, BC30, BC42 on the VHP Cost tab.*

For specific facilities that publically shared their intended commercial increases, the intended increase supplanted our general assumption that future unit cost increases would mirror past increases. This change was made to be consistent with our approach whereby the full benefit from lower ordered or proposed commercial hospital increases is shared in its entirety with BCBSVT and TVHP members.

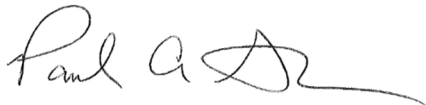
The support for this question involves confidential and proprietary information and has been provided under separate cover.

4. *Please provide a revised time series analysis in a separate exhibit with claims from all members included.*

Please see the attached file *Response to 3Q 2018 LG Rating Program Review Inquiry 2.xlsx* for the requested exhibit. Many of the seasonal time series produce trends near zero. We believe outlier claims are unduly impacting the trends calculated by the seasonal time series, and consider the time series with outliers removed to be better measures of utilization trend. We have also included Theil's U, which is a measure of uncertainty, for each time series method, including for the previously provided time series on claims with outliers excluded. Theil's U on the time series with outliers excluded is consistently lower than its value on the time series with all claims, which indicates the results excluding outliers have greater validity.

Please let us know if you have any further questions, or if we can provide additional clarity on any of the items above.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul Schultz", with a long horizontal flourish extending to the right.

---

Paul Schultz, F.S.A., M.A.A.A.

Utilization Trend Calculation - 48 Month Time Series

Month	Membership	Claims - Normalized for Contract Changes	Adjusted PMPM	Damped Trend Seasonal				Damped Trend Seasonal				Double Exponential Smoothing					
				Holt-Winters' Multiplicative		Holt-Winters' Additive		Damped Trend Non-Seasonal		Damped Trend Non-Seasonal		Double Exponential Smoothing		Double Exponential Smoothing			
				Monthly PMPM	Rolling 12 PMPM	Monthly PMPM	Rolling 12 PMPM	Monthly PMPM	Rolling 12 PMPM	Monthly PMPM	Rolling 12 PMPM	Monthly PMPM	Rolling 12 PMPM	Monthly PMPM	Rolling 12 PMPM	Monthly PMPM	Rolling 12 PMPM
Aug-13	80216	\$33,488,059	\$417.47	\$417.47	\$417.47	\$417.47	\$417.47	\$417.47	\$417.47	\$417.47	\$417.47	\$417.47	\$417.47	\$417.47	\$417.47	\$417.47	\$417.47
Sep-13	79795	\$32,360,329	\$405.54	\$405.54	\$405.54	\$405.54	\$405.54	\$405.54	\$405.54	\$405.54	\$405.54	\$405.54	\$405.54	\$405.54	\$405.54	\$405.54	\$405.54
Oct-13	79378	\$37,408,295	\$471.27	\$471.27	\$471.27	\$471.27	\$471.27	\$471.27	\$471.27	\$471.27	\$471.27	\$471.27	\$471.27	\$471.27	\$471.27	\$471.27	\$471.27
Nov-13	79083	\$33,322,861	\$421.37	\$421.37	\$421.37	\$421.37	\$421.37	\$421.37	\$421.37	\$421.37	\$421.37	\$421.37	\$421.37	\$421.37	\$421.37	\$421.37	\$421.37
Dec-13	78807	\$36,924,134	\$468.54	\$468.54	\$468.54	\$468.54	\$468.54	\$468.54	\$468.54	\$468.54	\$468.54	\$468.54	\$468.54	\$468.54	\$468.54	\$468.54	\$468.54
Jan-14	72695	\$30,807,644	\$423.79	\$423.79	\$423.79	\$423.79	\$423.79	\$423.79	\$423.79	\$423.79	\$423.79	\$423.79	\$423.79	\$423.79	\$423.79	\$423.79	\$423.79
Feb-14	72435	\$26,351,216	\$363.79	\$363.79	\$363.79	\$363.79	\$363.79	\$363.79	\$363.79	\$363.79	\$363.79	\$363.79	\$363.79	\$363.79	\$363.79	\$363.79	\$363.79
Mar-14	71840	\$28,035,840	\$390.25	\$390.25	\$390.25	\$390.25	\$390.25	\$390.25	\$390.25	\$390.25	\$390.25	\$390.25	\$390.25	\$390.25	\$390.25	\$390.25	\$390.25
Apr-14	69993	\$27,982,531	\$399.79	\$399.79	\$399.79	\$399.79	\$399.79	\$399.79	\$399.79	\$399.79	\$399.79	\$399.79	\$399.79	\$399.79	\$399.79	\$399.79	\$399.79
May-14	70396	\$25,971,555	\$368.94	\$368.94	\$368.94	\$368.94	\$368.94	\$368.94	\$368.94	\$368.94	\$368.94	\$368.94	\$368.94	\$368.94	\$368.94	\$368.94	\$368.94
Jun-14	70277	\$27,135,753	\$386.13	\$386.13	\$386.13	\$386.13	\$386.13	\$386.13	\$386.13	\$386.13	\$386.13	\$386.13	\$386.13	\$386.13	\$386.13	\$386.13	\$386.13
Jul-14	70679	\$27,468,548	\$388.64	\$410.07	\$388.64	\$410.07	\$388.64	\$410.07	\$388.64	\$410.07	\$388.64	\$410.07	\$388.64	\$410.07	\$388.64	\$410.07	\$388.64
Aug-14	70586	\$27,712,442	\$392.61	\$408.01	\$392.61	\$408.01	\$392.61	\$408.01	\$392.61	\$408.01	\$392.61	\$408.01	\$392.61	\$408.01	\$392.61	\$408.01	\$392.61
Sep-14	70751	\$30,511,869	\$431.26	\$410.11	\$431.26	\$410.11	\$431.26	\$410.11	\$431.26	\$410.11	\$431.26	\$410.11	\$431.26	\$410.11	\$431.26	\$410.11	\$431.26
Oct-14	70849	\$32,948,204	\$465.05	\$409.00	\$465.05	\$409.00	\$465.05	\$409.00	\$465.05	\$409.00	\$465.05	\$409.00	\$465.05	\$409.00	\$465.05	\$409.00	\$465.05
Nov-14	71034	\$27,737,915	\$390.49	\$406.34	\$390.49	\$406.34	\$390.49	\$406.34	\$390.49	\$406.34	\$390.49	\$406.34	\$390.49	\$406.34	\$390.49	\$406.34	\$390.49
Dec-14	71539	\$33,279,561	\$465.19	\$405.53	\$465.19	\$405.53	\$465.19	\$405.53	\$465.19	\$405.53	\$465.19	\$405.53	\$465.19	\$405.53	\$465.19	\$405.53	\$465.19
Jan-15	70866	\$28,523,832	\$402.50	\$403.71	\$402.50	\$403.71	\$402.50	\$403.71	\$402.50	\$403.71	\$402.50	\$403.71	\$402.50	\$403.71	\$402.50	\$403.71	\$402.50
Feb-15	71012	\$25,952,524	\$365.47	\$403.92	\$365.47	\$403.92	\$365.47	\$403.92	\$365.47	\$403.92	\$365.47	\$403.92	\$365.47	\$403.92	\$365.47	\$403.92	\$365.47
Mar-15	70879	\$26,523,832	\$402.50	\$403.71	\$402.50	\$403.71	\$402.50	\$403.71	\$402.50	\$403.71	\$402.50	\$403.71	\$402.50	\$403.71	\$402.50	\$403.71	\$402.50
Apr-15	70436	\$28,603,101	\$406.09	\$407.57	\$406.09	\$407.57	\$406.09	\$407.57	\$406.09	\$407.57	\$406.09	\$407.57	\$406.09	\$407.57	\$406.09	\$407.57	\$406.09
May-15	70313	\$27,569,479	\$392.10	\$409.49	\$392.10	\$409.49	\$392.10	\$409.49	\$392.10	\$409.49	\$392.10	\$409.49	\$392.10	\$409.49	\$392.10	\$409.49	\$392.10
Jun-15	70827	\$29,118,747	\$411.12	\$411.56	\$411.12	\$411.56	\$411.12	\$411.56	\$411.12	\$411.56	\$411.12	\$411.56	\$411.12	\$411.56	\$411.12	\$411.56	\$411.12
Jul-15	70606	\$28,444,220	\$402.86	\$412.75	\$402.86	\$412.75	\$402.86	\$412.75	\$402.86	\$412.75	\$402.86	\$412.75	\$402.86	\$412.75	\$402.86	\$412.75	\$402.86
Aug-15	70323	\$26,104,799	\$371.21	\$410.98	\$371.21	\$410.98	\$371.21	\$410.98	\$371.21	\$410.98	\$371.21	\$410.98	\$371.21	\$410.98	\$371.21	\$410.98	\$371.21
Sep-15	69947	\$28,723,229	\$410.64	\$409.26	\$410.64	\$409.26	\$410.64	\$409.26	\$410.64	\$409.26	\$410.64	\$409.26	\$410.64	\$409.26	\$410.64	\$409.26	\$410.64
Oct-15	69962	\$29,636,762	\$423.61	\$405.78	\$423.61	\$405.78	\$423.61	\$405.78	\$423.61	\$405.78	\$423.61	\$405.78	\$423.61	\$405.78	\$423.61	\$405.78	\$423.61
Nov-15	69966	\$28,671,084	\$409.79	\$407.40	\$409.79	\$407.40	\$409.79	\$407.40	\$409.79	\$407.40	\$409.79	\$407.40	\$409.79	\$407.40	\$409.79	\$407.40	\$409.79
Dec-15	70172	\$29,995,220	\$427.45	\$404.17	\$427.45	\$404.17	\$427.45	\$404.17	\$427.45	\$404.17	\$427.45	\$404.17	\$427.45	\$404.17	\$427.45	\$404.17	\$427.45
Jan-16	67840	\$26,358,085	\$388.53	\$403.05	\$388.53	\$403.05	\$388.53	\$403.05	\$388.53	\$403.05	\$388.53	\$403.05	\$388.53	\$403.05	\$388.53	\$403.05	\$388.53
Feb-16	67786	\$26,650,766	\$393.16	\$405.43	\$393.16	\$405.43	\$393.16	\$405.43	\$393.16	\$405.43	\$393.16	\$405.43	\$393.16	\$405.43	\$393.16	\$405.43	\$393.16
Mar-16	67826	\$28,715,684	\$423.37	\$405.01	\$423.37	\$405.01	\$423.37	\$405.01	\$423.37	\$405.01	\$423.37	\$405.01	\$423.37	\$405.01	\$423.37	\$405.01	\$423.37
Apr-16	67678	\$26,064,618	\$385.13	\$403.31	\$385.13	\$403.31	\$385.13	\$403.31	\$385.13	\$403.31	\$385.13	\$403.31	\$385.13	\$403.31	\$385.13	\$403.31	\$385.13
May-16	67182	\$26,402,646	\$393.00	\$403.42	\$393.00	\$403.42	\$393.00	\$403.42	\$393.00	\$403.42	\$393.00	\$403.42	\$393.00	\$403.42	\$393.00	\$403.42	\$393.00
Jun-16	67016	\$29,218,366	\$435.99	\$405.40	\$435.99	\$405.40	\$435.99	\$405.40	\$435.99	\$405.40	\$435.99	\$405.40	\$435.99	\$405.40	\$435.99	\$405.40	\$435.99
Jul-16	66867	\$25,028,610	\$374.30	\$403.09	\$374.30	\$403.09	\$374.30	\$403.09	\$374.30	\$403.09	\$374.30	\$403.09	\$374.30	\$403.09	\$374.30	\$403.09	\$374.30
Aug-16	66690	\$28,237,817	\$423.42	\$407.49	\$423.42	\$407.49	\$423.42	\$407.49	\$423.42	\$407.49	\$423.42	\$407.49	\$423.42	\$407.49	\$423.42	\$407.49	\$423.42
Sep-16	66634	\$30,081,621	\$451.45	\$410.81	\$451.45	\$410.81	\$451.45	\$410.81	\$451.45	\$410.81	\$451.45	\$410.81	\$451.45	\$410.81	\$451.45	\$410.81	\$451.45
Oct-16	66850	\$28,313,934	\$423.54	\$410.75	\$423.54	\$410.75	\$423.54	\$410.75	\$423.54	\$410.75	\$423.54	\$410.75	\$423.54	\$410.75	\$423.54	\$410.75	\$423.54
Nov-16	66849	\$31,493,580	\$471.12	\$415.82	\$471.12	\$415.82	\$471.12	\$415.82	\$471.12	\$415.82	\$471.12	\$415.82	\$471.12	\$415.82	\$471.12	\$415.82	\$471.12
Dec-16	66565	\$31,648,264	\$475.45	\$419.73	\$475.45	\$419.73	\$475.45	\$419.73	\$475.45	\$419.73	\$475.45	\$419.73	\$475.45	\$419.73	\$475.45	\$419.73	\$475.45
Jan-17	68197	\$29,541,779	\$433.18	\$423.50	\$433.18	\$423.50	\$433.18	\$423.50	\$433.18	\$423.50	\$433.18	\$423.50	\$433.18	\$423.50	\$433.18	\$423.50	\$433.18
Feb-17	68114	\$25,701,030	\$377.32	\$422.15	\$377.32	\$422.15	\$377.32	\$422.15	\$377.32	\$422.15	\$377.32	\$422.15	\$377.32	\$422.15	\$377.32	\$422.15	\$377.32
Mar-17	68066	\$29,678,749	\$436.03	\$423.22	\$436.03	\$423.22	\$436.03	\$423.22	\$436.03	\$423.22	\$436.03	\$423.22	\$436.03	\$423.22	\$436.03	\$423.22	\$436.03
Apr-17	68016	\$26,555,605	\$390.43	\$423.65	\$390.43	\$423.65	\$390.43	\$423.65	\$390.43	\$423.65	\$390.43	\$423.65	\$390.43	\$423.65	\$390.43	\$423.65	\$390.43
May-17	68148	\$30,851,636	\$452.72	\$428.65	\$452.72	\$428.65	\$452.72	\$428.65	\$452.72	\$428.65	\$452.72	\$428.65	\$452.72	\$428.65	\$452.72	\$428.65	\$452.72
Jun-17	68192	\$29,968,418	\$439.47	\$428.95	\$439.47	\$428.95	\$439.47	\$428.95	\$439.47	\$428.95	\$439.47	\$428.95	\$439.47	\$428.95	\$439.47	\$428.95	\$439.47
Jul-17	68275	\$27,954,857	\$409.44	\$431.81	\$409.44	\$431.81	\$409.44	\$431.81	\$409.44	\$431.81	\$409.44	\$431.81	\$409.44	\$431.81	\$409.44	\$431.81	\$409.44
Aug-17	68275		\$425.38	\$431.96	\$425.38	\$431.96	\$425.07	\$431.94	\$425.07	\$431.93	\$417.32	\$431.29	\$417.31	\$431.28	\$417.31	\$431.28	\$417.31
Sep-17	68275		\$453.63	\$432.19	\$453.63	\$432.17	\$452.55	\$432.07	\$452.48	\$432.06	\$417.32	\$428.46	\$417.31	\$428.46	\$417.31	\$428.46	\$417.31
Oct-17	68275		\$443.23	\$433.82	\$443.09	\$433.79	\$441.98	\$433.60	\$441.86	\$433.58	\$417.32	\$427.93	\$417.31	\$427.93	\$417.31	\$427.93	\$417.31
Nov-17	68275		\$463.47	\$433.25	\$463.37	\$433.21	\$462.63	\$432.95	\$462.55	\$432.91	\$417.32	\$423.51	\$417.31	\$423.51	\$417.31	\$423.51	\$417.31
Dec-17	68275		\$475.84	\$433.37	\$475.68	\$433.32	\$474.29	\$432.95	\$474.16	\$432.91	\$417.32	\$418.77	\$417.31	\$418.77	\$417.31	\$418.77	\$417.31
Jan-18	68275		\$430.98	\$433.18	\$430.83	\$433.12	\$430.54	\$432.73	\$430.40	\$432.68	\$417.32	\$417.45	\$417.31	\$417.44	\$417.31	\$417.44	\$417.31
Feb-18	68275		\$389.53	\$434.19	\$389.38	\$434.12	\$389.57	\$433.74	\$389.41	\$433.67	\$417.32	\$420.78	\$417.31	\$420.77	\$417.31	\$420.77	\$417.31
Mar-18	68275		\$442.42	\$434.72	\$442.25	\$434.64	\$441.32	\$434.18	\$441.17	\$434.10	\$417.32	\$419.22	\$417.31	\$419.21	\$417.31	\$419.21	\$417.31
Apr-18	68275		\$401.94	\$435.67	\$401.76	\$435.57	\$401.65	\$435.10	\$401.47	\$435.01	\$417.32	\$421.45	\$417.31	\$421.45	\$417.31	\$421.45	\$417.31
May-18	68275		\$441.60	\$434.74	\$441.43	\$434.63	\$441.43	\$434.16	\$441.28	\$434.06	\$417.32	\$418.51	\$417.31	\$418.50	\$417.31	\$418.50	\$417.31
Jun-18	68275		\$442.10	\$434.96	\$4												

Utilization Trend Calculation - 36 Month Time Series

Month	Membership	Claims - Normalized for Contract Changes	Adjusted PMPM	Holt-Winters' Multiplicative		Damped Trend Seasonal Multiplicative		Holt-Winters' Additive		Damped Trend Seasonal Additive		Damped Trend Non-Seasonal		Double Exponential Smoothing	
				Monthly PMPM	Rolling 12 PMPM	Monthly PMPM	Rolling 12 PMPM	Monthly PMPM	Rolling 12 PMPM	Monthly PMPM	Rolling 12 PMPM	Monthly PMPM	Rolling 12 PMPM	Monthly PMPM	Rolling 12 PMPM
Aug-14	70586	\$27,712,442	\$392.61	\$392.61	\$392.61	\$392.61	\$392.61	\$392.61	\$392.61	\$392.61	\$392.61	\$392.61	\$392.61	\$392.61	\$392.61
Sep-14	70751	\$30,511,869	\$431.26	\$431.26	\$431.26	\$431.26	\$431.26	\$431.26	\$431.26	\$431.26	\$431.26	\$431.26	\$431.26	\$431.26	\$431.26
Oct-14	70849	\$32,948,204	\$465.05	\$465.05	\$465.05	\$465.05	\$465.05	\$465.05	\$465.05	\$465.05	\$465.05	\$465.05	\$465.05	\$465.05	\$465.05
Nov-14	71034	\$27,737,915	\$390.49	\$390.49	\$390.49	\$390.49	\$390.49	\$390.49	\$390.49	\$390.49	\$390.49	\$390.49	\$390.49	\$390.49	\$390.49
Dec-14	71539	\$33,279,561	\$465.19	\$465.19	\$465.19	\$465.19	\$465.19	\$465.19	\$465.19	\$465.19	\$465.19	\$465.19	\$465.19	\$465.19	\$465.19
Jan-15	70866	\$28,523,832	\$402.50	\$402.50	\$402.50	\$402.50	\$402.50	\$402.50	\$402.50	\$402.50	\$402.50	\$402.50	\$402.50	\$402.50	\$402.50
Feb-15	71012	\$25,952,524	\$365.47	\$365.47	\$365.47	\$365.47	\$365.47	\$365.47	\$365.47	\$365.47	\$365.47	\$365.47	\$365.47	\$365.47	\$365.47
Mar-15	70879	\$30,306,791	\$427.58	\$427.58	\$427.58	\$427.58	\$427.58	\$427.58	\$427.58	\$427.58	\$427.58	\$427.58	\$427.58	\$427.58	\$427.58
Apr-15	70436	\$28,603,101	\$406.09	\$406.09	\$406.09	\$406.09	\$406.09	\$406.09	\$406.09	\$406.09	\$406.09	\$406.09	\$406.09	\$406.09	\$406.09
May-15	70313	\$27,569,479	\$392.10	\$392.10	\$392.10	\$392.10	\$392.10	\$392.10	\$392.10	\$392.10	\$392.10	\$392.10	\$392.10	\$392.10	\$392.10
Jun-15	70827	\$29,118,747	\$411.12	\$411.12	\$411.12	\$411.12	\$411.12	\$411.12	\$411.12	\$411.12	\$411.12	\$411.12	\$411.12	\$411.12	\$411.12
Jul-15	70606	\$28,444,220	\$402.86	\$402.86	\$402.86	\$402.86	\$402.86	\$402.86	\$402.86	\$402.86	\$402.86	\$402.86	\$402.86	\$402.86	\$402.86
Aug-15	70323	\$26,104,799	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21
Sep-15	69947	\$28,723,229	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64
Oct-15	69962	\$29,636,762	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61
Nov-15	69966	\$28,671,084	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79
Dec-15	70172	\$29,995,220	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45
Jan-16	67840	\$26,358,085	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53
Feb-16	67786	\$26,650,766	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16
Mar-16	67826	\$28,715,684	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37
Apr-16	67678	\$26,064,618	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13
May-16	67182	\$26,402,646	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00
Jun-16	67016	\$28,237,817	\$423.42	\$423.42	\$423.42	\$423.42	\$423.42	\$423.42	\$423.42	\$423.42	\$423.42	\$423.42	\$423.42	\$423.42	\$423.42
Jul-16	66867	\$25,028,610	\$374.30	\$374.30	\$374.30	\$374.30	\$374.30	\$374.30	\$374.30	\$374.30	\$374.30	\$374.30	\$374.30	\$374.30	\$374.30
Aug-16	66690	\$23,237,817	\$423.42	\$423.42	\$423.42	\$423.42	\$423.42	\$423.42	\$423.42	\$423.42	\$423.42	\$423.42	\$423.42	\$423.42	\$423.42
Sep-16	66634	\$30,081,621	\$451.45	\$451.45	\$451.45	\$451.45	\$451.45	\$451.45	\$451.45	\$451.45	\$451.45	\$451.45	\$451.45	\$451.45	\$451.45
Oct-16	66850	\$28,313,934	\$423.54	\$423.54	\$423.54	\$423.54	\$423.54	\$423.54	\$423.54	\$423.54	\$423.54	\$423.54	\$423.54	\$423.54	\$423.54
Nov-16	66849	\$31,493,580	\$471.12	\$471.12	\$471.12	\$471.12	\$471.12	\$471.12	\$471.12	\$471.12	\$471.12	\$471.12	\$471.12	\$471.12	\$471.12
Dec-16	66565	\$31,648,264	\$475.45	\$475.45	\$475.45	\$475.45	\$475.45	\$475.45	\$475.45	\$475.45	\$475.45	\$475.45	\$475.45	\$475.45	\$475.45
Jan-17	68197	\$29,541,779	\$433.18	\$433.18	\$433.18	\$433.18	\$433.18	\$433.18	\$433.18	\$433.18	\$433.18	\$433.18	\$433.18	\$433.18	\$433.18
Feb-17	68114	\$25,701,030	\$377.32	\$377.32	\$377.32	\$377.32	\$377.32	\$377.32	\$377.32	\$377.32	\$377.32	\$377.32	\$377.32	\$377.32	\$377.32
Mar-17	68066	\$29,678,749	\$436.03	\$436.03	\$436.03	\$436.03	\$436.03	\$436.03	\$436.03	\$436.03	\$436.03	\$436.03	\$436.03	\$436.03	\$436.03
Apr-17	68016	\$26,555,605	\$390.43	\$390.43	\$390.43	\$390.43	\$390.43	\$390.43	\$390.43	\$390.43	\$390.43	\$390.43	\$390.43	\$390.43	\$390.43
May-17	68148	\$30,851,636	\$452.72	\$452.72	\$452.72	\$452.72	\$452.72	\$452.72	\$452.72	\$452.72	\$452.72	\$452.72	\$452.72	\$452.72	\$452.72
Jun-17	68192	\$29,968,418	\$439.47	\$439.47	\$439.47	\$439.47	\$439.47	\$439.47	\$439.47	\$439.47	\$439.47	\$439.47	\$439.47	\$439.47	\$439.47
Jul-17	68275	\$27,954,857	\$409.44	\$409.44	\$409.44	\$409.44	\$409.44	\$409.44	\$409.44	\$409.44	\$409.44	\$409.44	\$409.44	\$409.44	\$409.44
Aug-17	68275		\$429.38	\$429.38	\$429.38	\$429.38	\$429.38	\$429.38	\$429.38	\$429.38	\$429.38	\$429.38	\$429.38	\$429.38	\$429.38
Sep-17	68275		\$457.06	\$457.06	\$457.06	\$457.06	\$457.06	\$457.06	\$457.06	\$457.06	\$457.06	\$457.06	\$457.06	\$457.06	\$457.06
Oct-17	68275		\$442.75	\$442.75	\$442.75	\$442.75	\$442.75	\$442.75	\$442.75	\$442.75	\$442.75	\$442.75	\$442.75	\$442.75	\$442.75
Nov-17	68275		\$466.58	\$466.58	\$466.58	\$466.58	\$466.58	\$466.58	\$466.58	\$466.58	\$466.58	\$466.58	\$466.58	\$466.58	\$466.58
Dec-17	68275		\$474.65	\$474.65	\$474.65	\$474.65	\$474.65	\$474.65	\$474.65	\$474.65	\$474.65	\$474.65	\$474.65	\$474.65	\$474.65
Jan-18	68275		\$429.11	\$429.11	\$429.11	\$429.11	\$429.11	\$429.11	\$429.11	\$429.11	\$429.11	\$429.11	\$429.11	\$429.11	\$429.11
Feb-18	68275		\$386.85	\$386.85	\$386.85	\$386.85	\$386.85	\$386.85	\$386.85	\$386.85	\$386.85	\$386.85	\$386.85	\$386.85	\$386.85
Mar-18	68275		\$442.98	\$442.98	\$442.98	\$442.98	\$442.98	\$442.98	\$442.98	\$442.98	\$442.98	\$442.98	\$442.98	\$442.98	\$442.98
Apr-18	68275		\$401.50	\$401.50	\$401.50	\$401.50	\$401.50	\$401.50	\$401.50	\$401.50	\$401.50	\$401.50	\$401.50	\$401.50	\$401.50
May-18	68275		\$445.60	\$445.60	\$445.60	\$445.60	\$445.60	\$445.60	\$445.60	\$445.60	\$445.60	\$445.60	\$445.60	\$445.60	\$445.60
Jun-18	68275		\$443.51	\$443.51	\$443.51	\$443.51	\$443.51	\$443.51	\$443.51	\$443.51	\$443.51	\$443.51	\$443.51	\$443.51	\$443.51
Jul-18	68275		\$408.03	\$408.03	\$408.03	\$408.03	\$408.03	\$408.03	\$408.03	\$408.03	\$408.03	\$408.03	\$408.03	\$408.03	\$408.03
Aug-18	68275		\$429.60	\$429.60	\$429.60	\$429.60	\$429.60	\$429.60	\$429.60	\$429.60	\$429.60	\$429.60	\$429.60	\$429.60	\$429.60
Sep-18	68275		\$457.30	\$457.30	\$457.30	\$457.30	\$457.30	\$457.30	\$457.30	\$457.30	\$457.30	\$457.30	\$457.30	\$457.30	\$457.30
Oct-18	68275		\$442.98	\$442.98	\$442.98	\$442.98	\$442.98	\$442.98	\$442.98	\$442.98	\$442.98	\$442.98	\$442.98	\$442.98	\$442.98
Nov-18	68275		\$466.82	\$466.82	\$466.82	\$466.82	\$466.82	\$466.82	\$466.82	\$466.82	\$466.82	\$466.82	\$466.82	\$466.82	\$466.82
Dec-18	68275		\$474.90	\$474.90	\$474.90	\$474.90	\$474.90	\$474.90	\$474.90	\$474.90	\$474.90	\$474.90	\$474.90	\$474.90	\$474.90
Jan-19	68275		\$429.33	\$429.33	\$429.33	\$429.33	\$429.33	\$429.33	\$429.33	\$429.33	\$429.33	\$429.33	\$429.33	\$429.33	\$429.33
Feb-19	68275		\$387.05	\$387.05	\$387.05	\$387.05	\$387.05	\$387.05	\$387.05	\$387.05	\$387.05	\$387.05	\$387.05	\$387.05	\$387.05
Mar-19	68275		\$443.21	\$443.21	\$443.21	\$443.21	\$443.21	\$443.21	\$443.21	\$443.21	\$443.21	\$443.21	\$443.21	\$443.21	\$443.21
Apr-19	68275		\$401.70	\$401.70	\$401.70	\$401.70	\$401.70	\$401.70	\$401.70	\$401.70	\$401.70	\$401.70	\$401.70	\$401.70	\$401.70
May-19	68275		\$445.83	\$445.83	\$445.83	\$445.83	\$445.83	\$445.83	\$445.83	\$445.83	\$445.83	\$445.83	\$445.83	\$445.83	\$445.83
Jun-19	68275		\$443.74	\$443.74	\$443.74	\$443.74	\$443.74	\$443.74	\$443.74	\$443.74	\$443.74	\$443.74	\$443.74	\$443.74	\$443.74
Jul-19	68275		\$408.24	\$408.24	\$408.24	\$408.24	\$408.24	\$408.24	\$408.24	\$408.24	\$408.24	\$408.24	\$408.24	\$408.24	\$408.24
Aug-19	68275		\$429.83	\$429.83	\$429.83	\$429.83	\$429.83	\$429.83	\$429.83	\$429.83	\$429.83	\$429.83	\$429.83	\$429.83	\$429.83
Sep-19	68275		\$457.53	\$457.53	\$457.53	\$457.53	\$457.53	\$457.53	\$457.53	\$457.53	\$457.53	\$457.53	\$457.53	\$457.53	\$457.53
Oct-19	68275		\$443.21	\$443.21	\$443.21	\$443.21	\$443.21	\$443.21	\$443.21	\$443.21	\$443.21	\$443.21	\$443.21	\$443.21	\$443.21
Nov-19	68275		\$467.06	\$467.06	\$467.06	\$467.06	\$467.06	\$467.06	\$467.06	\$467.06	\$467.06	\$467.06	\$467.06	\$467.06	\$467.06
Dec-19	68275		\$475.14	\$475.14	\$475.14	\$475.14	\$475.14	\$475.14	\$475.14	\$475.14	\$475.14	\$475.14	\$475.14	\$475.14	\$475.14

Utilization Trend	<b>0.03%</b>	<b>0.04%</b>	<b>0.03%</b>	<b>0.02%</b>	<b>3.68%</b>	<b>3.77%</b>
RMSE (root mean square error)	27.86	27.61	28.24	28.07	30.16	30.16
Theil's U (No Exclusions)	0.7391	0.7327	0.7498	0.7455	0.7281	0.728

Utilization Trend Calculation - 24 Month Time Series

Month	Membership	Claims - Normalized for Contract Changes	Adjusted PMPM	Damped Trend Seasonal Multiplicative				Damped Trend Seasonal Additive				Damped Trend Non-Seasonal				Double Exponential Smoothing	
				Monthly PMPM	Rolling 12 PMPM	Monthly PMPM	Rolling 12 PMPM	Monthly PMPM	Rolling 12 PMPM	Monthly PMPM	Rolling 12 PMPM	Monthly PMPM	Rolling 12 PMPM	Monthly PMPM	Rolling 12 PMPM	Monthly PMPM	Rolling 12 PMPM
Aug-15	70323	\$26,104,799	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21	\$371.21
Sep-15	69947	\$28,723,229	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64	\$410.64
Oct-15	69962	\$29,636,762	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61	\$423.61
Nov-15	69966	\$28,671,084	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79	\$409.79
Dec-15	70172	\$29,995,220	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45	\$427.45
Jan-16	67840	\$26,358,085	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53	\$388.53
Feb-16	67786	\$26,650,766	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16	\$393.16
Mar-16	67826	\$28,715,684	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37	\$423.37
Apr-16	67678	\$26,064,618	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13	\$385.13
May-16	67182	\$26,402,646	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00	\$393.00
Jun-16	67016	\$29,218,366	\$435.99	\$435.99	\$435.99	\$435.99	\$435.99	\$435.99	\$435.99	\$435.99	\$435.99	\$435.99	\$435.99	\$435.99	\$435.99	\$435.99	\$435.99
Jul-16	66867	\$25,028,610	\$374.30	\$403.09	\$374.30	\$403.09	\$374.30	\$403.09	\$374.30	\$403.09	\$374.30	\$403.09	\$374.30	\$403.09	\$374.30	\$403.09	\$374.30
Aug-16	66690	\$28,237,817	\$423.42	\$407.49	\$423.42	\$407.49	\$423.42	\$407.49	\$423.42	\$407.49	\$423.42	\$407.49	\$423.42	\$407.49	\$423.42	\$407.49	\$423.42
Sep-16	66634	\$30,081,621	\$451.45	\$410.81	\$451.45	\$410.81	\$451.45	\$410.81	\$451.45	\$410.81	\$451.45	\$410.81	\$451.45	\$410.81	\$451.45	\$410.81	\$451.45
Oct-16	66850	\$28,313,934	\$423.54	\$410.75	\$423.54	\$410.75	\$423.54	\$410.75	\$423.54	\$410.75	\$423.54	\$410.75	\$423.54	\$410.75	\$423.54	\$410.75	\$423.54
Nov-16	66849	\$31,493,580	\$471.12	\$415.82	\$471.12	\$415.82	\$471.12	\$415.82	\$471.12	\$415.82	\$471.12	\$415.82	\$471.12	\$415.82	\$471.12	\$415.82	\$471.12
Dec-16	66565	\$31,648,264	\$475.45	\$419.73	\$475.45	\$419.73	\$475.45	\$419.73	\$475.45	\$419.73	\$475.45	\$419.73	\$475.45	\$419.73	\$475.45	\$419.73	\$475.45
Jan-17	68197	\$29,541,779	\$433.18	\$423.50	\$433.18	\$423.50	\$433.18	\$423.50	\$433.18	\$423.50	\$433.18	\$423.50	\$433.18	\$423.50	\$433.18	\$423.50	\$433.18
Feb-17	68114	\$25,701,030	\$377.32	\$422.15	\$377.32	\$422.15	\$377.32	\$422.15	\$377.32	\$422.15	\$377.32	\$422.15	\$377.32	\$422.15	\$377.32	\$422.15	\$377.32
Mar-17	68066	\$29,678,749	\$436.03	\$423.22	\$436.03	\$423.22	\$436.03	\$423.22	\$436.03	\$423.22	\$436.03	\$423.22	\$436.03	\$423.22	\$436.03	\$423.22	\$436.03
Apr-17	68016	\$26,555,605	\$390.43	\$423.65	\$390.43	\$423.65	\$390.43	\$423.65	\$390.43	\$423.65	\$390.43	\$423.65	\$390.43	\$423.65	\$390.43	\$423.65	\$390.43
May-17	68148	\$30,851,636	\$452.72	\$428.65	\$452.72	\$428.65	\$452.72	\$428.65	\$452.72	\$428.65	\$452.72	\$428.65	\$452.72	\$428.65	\$452.72	\$428.65	\$452.72
Jun-17	68192	\$29,968,418	\$439.47	\$428.95	\$439.47	\$428.95	\$439.47	\$428.95	\$439.47	\$428.95	\$439.47	\$428.95	\$439.47	\$428.95	\$439.47	\$428.95	\$439.47
Jul-17	68275	\$27,954,857	\$409.44	\$431.81	\$409.44	\$431.81	\$409.44	\$431.81	\$409.44	\$431.81	\$409.44	\$431.81	\$409.44	\$431.81	\$409.44	\$431.81	\$409.44
Aug-17	68275		\$436.23	\$432.88	\$436.23	\$432.88	\$436.23	\$432.88	\$436.23	\$432.88	\$436.23	\$432.88	\$436.23	\$432.88	\$436.23	\$432.88	\$436.23
Sep-17	68275		\$458.91	\$433.54	\$458.91	\$433.54	\$458.91	\$433.54	\$458.91	\$433.54	\$458.91	\$433.54	\$458.91	\$433.54	\$458.91	\$433.54	\$458.91
Oct-17	68275		\$434.84	\$434.47	\$434.84	\$434.47	\$434.84	\$434.47	\$434.84	\$434.47	\$434.84	\$434.47	\$434.84	\$434.47	\$434.84	\$434.47	\$434.84
Nov-17	68275		\$472.09	\$434.61	\$472.09	\$434.61	\$472.09	\$434.61	\$472.09	\$434.61	\$472.09	\$434.61	\$472.09	\$434.61	\$472.09	\$434.61	\$472.09
Dec-17	68275		\$471.73	\$434.39	\$472.27	\$434.69	\$472.12	\$434.45	\$467.19	\$432.44	\$430.85	\$423.78	\$430.88	\$423.79	\$430.88	\$423.79	\$430.88
Jan-18	68275		\$426.10	\$433.80	\$426.12	\$434.10	\$427.03	\$433.94	\$422.72	\$431.57	\$431.60	\$423.65	\$431.64	\$423.66	\$431.64	\$423.66	\$431.64
Feb-18	68275		\$380.53	\$434.05	\$379.60	\$434.28	\$383.98	\$434.48	\$386.89	\$432.36	\$432.36	\$428.23	\$432.41	\$428.25	\$432.41	\$428.25	\$432.41
Mar-18	68275		\$441.42	\$434.50	\$439.52	\$434.57	\$442.82	\$435.05	\$440.95	\$432.77	\$433.11	\$427.99	\$433.17	\$428.01	\$433.17	\$428.01	\$433.17
Apr-18	68275		\$398.12	\$435.13	\$397.05	\$435.11	\$400.71	\$435.89	\$399.72	\$433.53	\$433.86	\$431.60	\$433.94	\$431.62	\$433.94	\$431.62	\$433.94
May-18	68275		\$451.14	\$435.00	\$451.48	\$435.01	\$451.82	\$435.82	\$444.05	\$432.81	\$434.61	\$430.09	\$434.70	\$430.13	\$434.70	\$430.13	\$434.70
Jun-18	68275		\$443.56	\$435.34	\$443.90	\$435.38	\$446.53	\$436.41	\$446.40	\$433.39	\$435.37	\$429.75	\$435.46	\$429.79	\$435.46	\$429.79	\$435.46
Jul-18	68275		\$409.57	\$435.35	\$409.47	\$435.38	\$412.13	\$436.63	\$407.17	\$433.20	\$436.12	\$431.98	\$436.23	\$432.03	\$436.23	\$432.03	\$436.23
Aug-18	68275		\$436.53	\$435.38	\$437.75	\$435.41	\$438.82	\$436.91	\$428.47	\$433.21	\$436.87	\$432.73	\$436.99	\$432.79	\$436.99	\$432.79	\$436.99
Sep-18	68275		\$459.23	\$435.41	\$460.68	\$435.43	\$462.06	\$437.19	\$454.16	\$433.22	\$437.61	\$433.48	\$437.76	\$433.55	\$437.76	\$433.55	\$437.76
Oct-18	68275		\$435.14	\$435.43	\$435.04	\$435.43	\$440.03	\$437.46	\$437.09	\$433.22	\$438.36	\$434.23	\$438.52	\$434.32	\$438.52	\$434.32	\$438.52
Nov-18	68275		\$472.42	\$435.46	\$472.32	\$435.43	\$474.86	\$437.74	\$463.81	\$433.22	\$439.11	\$434.99	\$439.28	\$435.08	\$439.28	\$435.08	\$439.28
Dec-18	68275		\$472.05	\$435.48	\$472.28	\$435.43	\$475.45	\$438.02	\$467.19	\$433.22	\$439.86	\$435.74	\$440.05	\$435.85	\$440.05	\$435.85	\$440.05
Jan-19	68275		\$426.39	\$435.51	\$426.12	\$435.43	\$430.37	\$438.30	\$422.72	\$433.22	\$440.60	\$436.49	\$440.81	\$436.61	\$440.81	\$436.61	\$440.81
Feb-19	68275		\$380.79	\$435.53	\$379.60	\$435.43	\$387.32	\$438.58	\$386.89	\$433.22	\$441.35	\$437.24	\$441.58	\$437.37	\$441.58	\$437.37	\$441.58
Mar-19	68275		\$441.73	\$435.56	\$439.52	\$435.43	\$446.16	\$438.86	\$440.95	\$433.22	\$442.09	\$437.98	\$442.34	\$438.14	\$442.34	\$438.14	\$442.34
Apr-19	68275		\$398.40	\$435.58	\$397.05	\$435.43	\$404.05	\$439.13	\$399.72	\$433.22	\$442.84	\$438.73	\$443.11	\$438.90	\$443.11	\$438.90	\$443.11
May-19	68275		\$451.46	\$435.61	\$451.48	\$435.43	\$455.15	\$439.41	\$444.05	\$433.22	\$443.58	\$439.48	\$443.87	\$439.67	\$443.87	\$439.67	\$443.87
Jun-19	68275		\$443.86	\$435.63	\$443.90	\$435.43	\$449.86	\$439.69	\$446.40	\$433.22	\$444.32	\$440.23	\$444.63	\$440.43	\$444.63	\$440.43	\$444.63
Jul-19	68275		\$409.85	\$435.65	\$409.47	\$435.43	\$415.46	\$439.97	\$407.17	\$433.22	\$445.06	\$440.97	\$445.40	\$441.20	\$445.40	\$441.20	\$445.40
Aug-19	68275		\$436.84	\$435.68	\$437.75	\$435.43	\$442.16	\$440.24	\$428.47	\$433.22	\$445.80	\$441.72	\$446.16	\$441.96	\$446.16	\$441.96	\$446.16
Sep-19	68275		\$459.55	\$435.71	\$460.68	\$435.43	\$465.40	\$440.52	\$454.16	\$433.22	\$446.54	\$442.46	\$446.93	\$442.72	\$446.93	\$442.72	\$446.93
Oct-19	68275		\$435.44	\$435.73	\$435.04	\$435.43	\$443.37	\$440.80	\$437.09	\$433.22	\$447.28	\$443.20	\$447.69	\$443.49	\$447.69	\$443.49	\$447.69
Nov-19	68275		\$472.74	\$435.76	\$472.32	\$435.43	\$478.19	\$441.08	\$463.81	\$433.22	\$448.02	\$443.95	\$448.46	\$444.25	\$448.46	\$444.25	\$448.46
Dec-19	68275		\$472.38	\$435.79	\$472.28	\$435.43	\$478.79	\$441.36	\$467.19	\$433.22	\$448.76	\$444.69	\$449.22	\$445.02	\$449.22	\$445.02	\$449.22

Utilization Trend	0.07%	0.01%	0.75%	-0.03%	2.30%	2.35%
RMSE (root mean square error)	31.85	31.82	31.84	31.84	31.7	31.7
Theil's U (No Exclusions)	0.747	0.7466	0.7462	0.7468	0.8142	0.8143
Theil's U (Selected)	0.6151	0.6152	0.6141	0.6142	0.7578	0.7558