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2020 Analysis for the State Reinsurance Program

MARYLAND HEALTH BENEFIT EXCHANGE

STATE OF MARYLAND

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INTRODUCTION

In 2019, the state of Maryland implemented the State Reinsurance Program ("SRP") for the individual market by using an Affordable Care Act ("ACA") Section 1332 waiver ("Waiver"). The SRP provides funds to health insurers operating in the individual market to help cover the costs of high-cost members.

Pursuant to the Code of Maryland Regulations ("COMAR") Section 14.35.17.04.B[1], each year the Maryland Health Benefit Exchange ("MHBE") Board of Trustees ("Board") must set the payment parameters for the State Reinsurance Program by determining the attachment point, the coinsurance rate, and the reinsurance cap.

For 2019, the Board set payment parameters such that the SRP will provide a payment equal to 80% of the claims incurred between $20,000 and $250,000 for each member in the individual market. The goal based on these parameters was to reduce premiums in the individual market by 30% (due to direct funding and associated morbidity improvements).

The federal risk adjustment program, operated by the Department of Health & Human Services ("HHS"), also provides payments to insurers for members who are expected to have high costs based on demographic characteristics and diagnosis data.

Because both programs cover some of the same high-risk, high-cost individuals, there is potential that some insurer claims are covered by both programs. This interaction of the reinsurance and risk adjustment programs could inappropriately disrupt the individual market if adjustments are not made.[2] Therefore, pursuant to Section 14.35.17.04.B.(4), the Board can set a market-level dampening factor provided by the Maryland Insurance Commissioner, if determined necessary to mitigate the interaction of the SRP and the federal risk adjustment program.

For 2019, the Board established a dampening factor of 0.80, i.e. a reduction of 20% to calculated risk adjustment transfers. The Board concluded that a 20% reduction was appropriate to address the potential for interaction between the SRP and federal risk adjustment program.

[1] http://mdrules.elaws.us/comar/14.35.17.04

[2] In this report, the word "interaction" refers to payments received by a carrier for the enrolled population whose risk and claims experience would be eligible for payments under both the Federal Risk Adjustment Program and the State Reinsurance Program.

The MHBE retained Lewis & Ellis, Inc. ("L&E") to provide an updated actuarial analysis of the Maryland individual health insurance market to assist the Board is setting the 2020 payment parameters and the 2020 dampening factor for the State Reinsurance Program.

The purpose of the report is to provide L&E's recommendation which will help inform the MHBE Board of Trustees decision to set final 2020 State Reinsurance Program parameters.

REINSURANCE PAYMENT PARAMETERS

METHODOLOGY

The steps in projecting the impact of the State Reinsurance Program's payment parameters for the 2020 individual market included:

1) **Reviewing original reinsurance reports and estimates** – These documents were produced by the Wakely Consulting Group ("Wakely") in 2018. These documents included estimated impacts to the individual ACA market for 2019 and beyond.

2) **Gathering experience data** – L&E collected 2017 – 2019 claims experience data from the insurers participating in the individual market, CareFirst and Kaiser.

3) **Collecting information for projection assumptions** - In addition to claims experience, L&E utilized actual 2019 plan enrollment as well as other information provided in the 2020 rate filings. L&E also had discussions with the Maryland Insurance Administration ("MIA") and MHBE concerning any internal reinsurance analyses performed.

4) **Developing and projecting reinsurance payments** – Starting with the claims data provided by CareFirst and Kaiser, L&E projected the claims through 2020 with estimated assumptions for claims trend, morbidity changes, enrollment and expenses.

5) **Comparing current results to prior projections** – An actual-to-expected analysis helped L&E understand differences versus prior projections and the implications for the State Reinsurance Program.

RESULTS

L&E projects Maryland's State Reinsurance Program will pay out approximately $370M in 2019 and $400M in 2020 and reduce premiums by approximately 28% in 2019 and 30% in 2020, compared to a scenario where the SRP did not exist[3]. The 2019 estimated reinsurance payment is $92M lower (~20% lower) than the $462M projected by Wakely in the previous analysis.

The expected premium reductions are driven by a reduction in claims due to:

1. Reinsurance (27% in 2019 and 29% in 2020); and
2. An improvement to the covered population's morbidity (4% in 2019 and 3% in 2020) due to additional healthy members entering and staying in the individual market because of the lower premiums that result from the SRP. This is consistent with the 2017 to 2018 experience, as most of the decrease in membership came from the healthiest (or, lowest claims) individuals.

Additionally, there is a premium offset due to the health insurer provider fee (Section 6-102.1 of the Maryland Insurance Code) which is 2.75% for 2019 and 1% for 2020.

To target and maintain a 30% premium reduction for 2020, the attachment point is estimated to need to decrease from $20,000 to $19,600. L&E does not believe the calculated result in the attachment point necessitates a change in the parameters due to immateriality.

[3] 2020 compares a scenario with reinsurance in 2019 and 2020 to a scenario where there is reinsurance in 2019, but no reinsurance in 2020.

DIFFERENCES FROM THE 2019 REINSURANCE ANALYSIS

Given that any adjustments to the reinsurance payment parameters could have substantial ramifications for a wide range of stakeholders, L&E believes it is important to comment on the differences in the 2020 analysis versus the 2019 analysis.

Key differences between L&E's 2020 analysis and the prior analysis include:

- Reduction in premiums due to reinsurance payments
  - L&E – calculated the reduction in premiums due to reinsurance payments as a PMPM reduction in a given year between a scenario with reinsurance and a scenario where there is no reinsurance for that year (see prior footnote).
  - Wakely – calculated the total reinsurance payment dollars (not PMPM) divided by the total premium dollars in a scenario that never included reinsurance.
- Enrollment
  - Due to emerging 2019 experience, L&E assumed a smaller membership decline than did prior estimates in the reinsurance scenario.
  - In the scenario without reinsurance, L&E assumed a larger decline in membership than did prior estimates, specifically for persons not eligible for an Advance Premium Tax Credit ("APTC").
- Trend and morbidity
  - L&E used trend and morbidity assumptions that were directionally like the prior analysis (e.g., enrollment changes are the healthy); however, they were updated based on more recent data.

The following table summarizes the differences between projections from the 2020 and the 2019 analyses.

Model	Total Reinsurance Payment		Premium Reduction		Morbidity Improvement		Average Enrollment[4] (with reinsurance)	
	2019	*2020*	*2019*	*2020*	*2019*	*2020*	*2019*	*2020*
L&E	$370M	$400M	-28.1%	-29.7%	-4.0%	-2.7%	194.1k	193.0k
Wakely	$462M	$459M	-30.9%	-29.0%	-1.4%	-1.4%	181.5k	179.4k

In 2017 and 2018, the actual market average enrollment was 228.6k and 193.8k, respectively (see prior footnote for a discussion on average and unique enrollment). For perspective, the average

[4] Enrollment shown in this table is the total average enrollment for a year, which is calculated as the total member months divided by 12. Total average enrollment should not to be confused with the total unique enrollment.

For perspective, the actual total unique members in 2017 was 303.5k members and 259.4k members in 2018. L&E is projecting 259.6k and 258.4k total unique members in 2019 and 2020, respectively.

rate increase from 2017 to 2018 was 44% in the Individual Market. The 2018 actual claims came in lower than what was projected.

The following table compares the claims continuance data that Wakely received (2017 incurred with runout through early 2018) and L&E received (2017 incurred with runout through early 2019 and 2018 incurred with runout through early 2019). Comparing the two 2017 incurred claims datasets, total average or unique members is approximately the same and total estimated reinsurance payments decreased 0.4% with the additional year of runout.

Continuance data	Total Members (average / unique)	Total Estimated Reinsurance Payments[5]
2017 incurred with runout through early 2018	228.7k / 303.3k	$350.0M
2017 incurred with runout through early 2019	228.6k / 303.5k	$348.6M
2018 incurred with runout through early 2019	193.8k / 259.4k	$341.5M

[5] The estimated reinsurance in 2017 and 2018 is projected based off continuance tables for incurred claim provided. Although reinsurance was not in effect until 2019, these values are provided as a basis for comparison to 2019 and 2020 reinsurance payment projections. Additionally, the reinsurance parameters used are the same in the estimates for each year from 2017 through 2020 ($20k attachment point, 80% coinsurance, and $250k cap).

DAMPENING FACTOR

METHODOLOGIES

The first step in evaluating the 2020 dampening factor was to examine 2018 historical data. L&E collected the External Data Gathering Environment (EDGE) server data from the individual carriers. The EDGE data contains risk scores, diagnosis data, claims data, and premium data. Based on this data, L&E evaluated how effective the ACA risk adjustment methodology was at compensating issuers for their risks in 2018.

L&E calculated 2020 risk scores based on expected changes to the risk adjustment calculation for coverage during 2020 relative to the calculation for coverage during 2018.

In addition to the historical EDGE data, L&E utilized plan enrollment experience as well as information provided in the 2020 rate filings. L&E also calculated 2020 premiums and claims projections based on trending forward 2018 claims using projections in the 2020 rate filings, and actual and expected rate increases for 2019 and 2020 by carrier. Premiums were calculated under the actual expected 2020 outcome as well as in the hypothetical scenario in which the State Reinsurance Program did not exist.

L&E assumed slight changes to membership distributions in the market, consistent with the 2019 approved rate decreases and the latest estimates of the 2020 rate changes. As premiums decrease, coverage becomes more attractive to healthy young individuals for whom high-priced coverage may not be economically viable without the SRP. Therefore, L&E has assumed that there will be an increase in low-morbidity members relative to 2018 due to decreasing premium rates.

L&E used the updated 2020 HHS risk adjustment formula for calculating risk transfer payments based on allowable rating factors and risk scores by member. There are two transfer amounts based on the two premiums scenarios referenced above. For each member, the contributions from the SRP and the HHS high-cost member program were calculated based on projected 2020 claims. Based on the payment parameter analysis, the 2020 reinsurance payment parameters were assumed to be unchanged in the dampening factor analysis.

The language from COMAR 14.35.17.02B11 requires that the dampening factor modify payments such that "the claims-to-premium ratio between payers and receivers under the risk adjustment is normalized." This language is not entirely clear to what value these ratios should be "normalized."

Last year's analysis performed by Wakely[6] and the analysis performed by the MIA used a normalization approach where the population was divided into six cohorts. The first cohort represented members with no paid claims. The last cohort represented members with reinsurance payments, i.e. those with claims over the $20,000 attachment point. The remaining members were split evenly into four quartiles.

These six cohorts were then collapsed into two populations, intended to serve as a proxy for risk adjustment "payers" and risk adjustment "receivers". The payer population was made up of the non-claimants and the first three quartiles, while the receiver population was made up of the fourth quartile and the members with reinsurance payments. An adjusted loss ratio for each cohort was calculated based on the following formula:

$$Adjusted\ Loss\ Ratio = \frac{Claims - Reinsurance\ Contributions - Risk\ Adjustment\ Receivables}{Earned\ Premium}$$

The final 2019 dampening factor was calculated in order to ensure that the adjusted loss ratios between the payer and the receiver populations were equal.

The choice of a final dampening factor ultimately hinges on many financial and policy decisions regarding the interaction of the reinsurance and risk adjustment programs. There are many ways to assess and adjust the interaction of the federal risk adjustment program and the Maryland State Reinsurance Program. L&E believes that a potential improvement to the dampening factor analysis would include an approach based on the covered population's Plan Liability Risk Score (PLRS) since that is the measure of risk used in the federal risk adjustment program.

For 2020, L&E estimated the dampening factor based on three different approaches for consideration.

1. The same claims-based cohort analysis used to calculate the final 2019 dampening factor;
2. A revised analysis based on claims cohorts; and
3. A risk-based approach that groups the population into 6 cohorts based on a member's PLRS.

[6] https://www.marylandhbe.com/wp-content/uploads/2018/07/Maryland_Risk_Adjustment_State_Flexibility_Report_7_02_18_Draft.pdf

RESULTS – CLAIMS BASED COHORTS

This approach is consistent with the 2019 analysis that was ultimately used to determine the 0.80 dampening factor for 2019. In this approach L&E summarized the risk adjustment transfers, which are calculated at the member level, by grouping the members into six cohorts representing their overall claims level.

The first step in this analysis is based on the hypothetical scenario where the State Reinsurance Program is not in place for 2020. The results have been structured to replicate the reporting of last year's analysis:

1) Undampened Risk Adjustment, No Reinsurance

Cohort	Member Months	Claims	Premiums	Risk Adj	Reins	Loss Ratio
No claims incurred	420,541	$0	$230,614,913	($158,701,297)	$0	69%
Claims between $0.01 and $490	376,978	$9,427,633	$217,547,400	($126,453,417)	$0	62%
Claims between $490 and $1,400	422,285	$39,735,337	$269,172,170	($141,951,852)	$0	67%
Claims between $1,400 and $2,900	430,266	$82,086,875	$300,354,680	($127,279,176)	$0	70%
Claims between $2,900 and $20,000	469,501	$298,634,956	$376,376,360	$56,015,067	$0	64%
Claims >= $20,000	135,625	$821,318,226	$121,916,477	$498,370,675	$0	265%
Total	2,255,196	$1,251,203,027	$1,515,982,000	($0)	$0	83%
Low Claims (<$2,900)	1,650,069	$131,249,844	$1,017,689,163	($554,385,742)	$0	67%
High Claims (>$2,900)	605,126	$1,119,953,183	$498,292,837	$554,385,742	$0	114%

It is clear that the insurers have a significantly worse loss ratio for subscribers who had claims that qualified for the reinsurance program. This is to be expected, as members with high claims would be expected to have disproportionately higher loss ratios.

The second step in this analysis incorporates the implementation of the SRP parameters. As expected, premiums decrease significantly which decreases risk adjustment transfers proportionally.

2) Undampened Risk Adjustment, With Reinsurance

Cohort	Member Months	Claims	Premiums	Risk Adj	Reins	Loss Ratio
No claims incurred	444,264	$0	$173,404,878	($122,414,019)	$0	71%
Claims between $0.01 and $490	397,469	$9,924,221	$157,307,815	($96,942,969)	$0	68%
Claims between $490 and $1,400	439,284	$41,325,021	$197,695,596	($107,188,201)	$0	75%
Claims between $1,400 and $2,900	445,554	$85,003,667	$224,046,249	($94,927,510)	$0	80%
Claims between $2,900 and $20,000	486,184	$309,246,351	$274,949,862	$47,589,191	$0	95%
Claims >= $20,000	136,164	$822,385,719	$82,779,403	$373,883,508	$412,840,835	43%
Total	2,348,919	$1,267,884,979	$1,110,183,803	($0)	$412,840,835	77%
Low Claims (<$2,900)	1,726,571	$136,252,909	$752,454,538	($421,472,699)	$0	74%
High Claims (>$2,900)	622,348	$1,131,632,070	$357,729,265	$421,472,699	$412,840,835	83%

L&E notes that the application of the SRP reduces the loss ratio for the highest cohort to a lower value than the loss ratio for the next-highest claims cohort. Additionally, the "low" claimants are expected to have a 74% loss ratio while the "high" claimants have an 83% loss ratio.

In order to return the loss ratios for these groups back to the aggregate loss ratio of 77%, a dampening factor of -5% would be required. This methodology is summarized below:

3) Risk Adjustment Dampened by -5.0%, With Reinsurance

Cohort	Member Months	Claims	Premiums	Risk Adj	Reins	Loss Ratio
No claims incurred	444,264	$0	$173,404,878	($128,534,720)	$0	74%
Claims between $0.01 and $490	397,469	$9,924,221	$157,307,815	($101,790,118)	$0	71%
Claims between $490 and $1,400	439,284	$41,325,021	$197,695,596	($112,547,611)	$0	78%
Claims between $1,400 and $2,900	445,554	$85,003,667	$224,046,249	($99,673,886)	$0	82%
Claims between $2,900 and $20,000	486,184	$309,246,351	$274,949,862	$49,968,650	$0	94%
Claims >= $20,000	136,164	$822,385,719	$82,779,403	$392,577,684	$412,840,835	20%
Total	2,348,919	$1,267,884,979	$1,110,183,803	($0)	$412,840,835	77%
Low Claims (<$2,900)	1,726,571	$136,252,909	$752,454,538	($442,546,334)	$0	77%
High Claims (>$2,900)	622,348	$1,131,632,070	$357,729,265	$442,546,334	$412,840,835	77%

The 2019 dampening factor was 20%, which is drastically different from the -5% estimated in the above-described calculations, despite being developed in a consistent manner. The following section details L&E's understanding of the differences in the two years' results.

L&E does not believe this method produces reasonable results. The risk adjustment payments and the reinsurance payments clearly have an interaction and some degree of correlation. L&E does not believe that a negative dampening factor is an appropriate response to the interaction. Therefore, an alternative claims-based method was analyzed in order to isolate only the interaction between the two programs.

In the scenario with no reinsurance, the loss ratio for high claimants was higher than the loss ratio for low claimants by approximately 46%. To return the market to this loss ratio relationship post-reinsurance, a dampening factor of 21.5% is necessary, as demonstrated below. L&E recommends the use of this dampening factor in order to ensure that the reinsurance program does not introduce unwanted disruptions to the market.

4) Risk Adjustment Dampened by 21.5%, With Reinsurance

Cohort	Member Months	Claims		Premiums	Risk Adj	Reins	Loss Ratio
No claims incurred	444,264	$0	#	$173,404,878	($96,095,005)	$0	55%
Claims between $0.01 and $490	397,469	$9,924,221	#	$157,307,815	($76,100,231)	$0	55%
Claims between $490 and $1,400	439,284	$41,325,021	#	$197,695,596	($84,142,738)	$0	63%
Claims between $1,400 and $2,900	445,554	$85,003,667	#	$224,046,249	($74,518,096)	$0	71%
Claims between $2,900 and $20,000	486,184	$309,246,351	#	$274,949,862	$37,357,515	$0	99%
Claims >= $20,000	136,164	$822,385,719	#	$82,779,403	$293,498,554	$412,840,835	140%
Total	2,348,919	$1,267,884,979	#	$1,110,183,803	($0)	$412,840,835	77%
Low Claims (<$2,900)	1,726,571	$136,252,909		$752,454,538	($330,856,069)	$0	62%
High Claims (>$2,900)	622,348	$1,131,632,070		$357,729,265	$330,856,069	$412,840,835	108%

L&E believes this approach is compliant with the COMAR 14.35.17 since it "normalizes" the results back to the loss ratio relationship that would have occurred in absence of the SRP.

DIFFERENCES BETWEEN THE 2019 AND 2020 CLAIMS BASED COHORT ANALYSIS

Given that any adjustments to the assumed dampening factor has substantial ramifications for a wide range of stakeholders, L&E believes it is important to comment on the differences between the claims cohort analysis performed in 2020 versus 2019.

Crucially, the curve of adjusted loss ratios by claims cohort with no dampening factor are projected to be much steeper than what was projected in the prior analysis.

Claims Cohort	Previously Projected 2019 Loss Ratio with No Reinsurance	L&E's Projected 2020 Loss Ratio with No Reinsurance
No Claims	91%	69%
1st "Quartile"	77%	62%
2nd "Quartile"	86%	67%
3rd "Quartile"	80%	70%
4th "Quartile"	66%	64%
Above Threshold	105%	265%

L&E has reviewed the materials that are available in support of the prior calculation and believes there are four main drivers of the difference. The two primary differences are: 1) the decrease in premiums from projected 2019 to projected 2020, and 2) the apparent exclusion of the Centers for Medicare and Medicaid Services' (CMS) 2018 introduction of the 86% reduction to market wide average premiums for the purpose of calculating risk adjustment transfers. If these two modifications were made to the 2019 analysis, the results would have been highly consistent with L&E's projections for 2020.

The four drivers of the difference between 2019 and 2020 are described in further detail below.

1. DECREASE IN PREMIUM RELATIVE TO CLAIMS

Risk adjustment transfers bear a strong linear relationship to the market-wide average premium. Last year's analysis assumed the market-wide average premium PMPM would be $525 if reinsurance were in place, or $744 otherwise.

L&E's analysis, which is based on actual rate filings not available in 2019, suggests that these values will be $473 and $672, respectively, in 2020. The approximate 10% reduction in premiums means that risk adjustment transfers, all else equal, will be dampened by approximately 10%. With lower risk transfer payments expected, there is less potential for an interaction between the risk adjustment and reinsurance programs.

While the premiums are projected to decrease, claims are projected to increase (primarily due to trend). Therefore, the risk adjustment transfers are projected to become less sufficient at covering expected extreme claims. This is because the cost of high cost members is increasing while the risk adjustment transfers for those members are decreasing. This implicit muting of risk adjustment transfers results in a reduction of the interaction of risk adjustment and reinsurance which reduces the magnitude of an explicit dampening factor.

2. CMS "86%" ADJUSTMENT

Beginning with the 2018 plan year, CMS instituted a risk transfer calculation adjustment which functionally operates as a dampening factor. This adjustment reduces transfer payments by 14% and is intended to reduce payments from a "premium basis" to a "claims basis." The market-wide average premium, which features prominently in the risk adjustment calculation, includes some cost components, e.g. administrative expenses, which are not related to claims and therefore should not vary based on the morbidity of the covered population.

Last year's analysis stated that this adjustment was considered. Based on a review of the prior analysis, it cannot be confirmed that the expense adjustment was applied. The results of the prior analysis appear consistent with modeling future risk adjustment transfers without the adjustment included. For example, last year's analysis stated that risk adjustment transfers paid for members with no claims would be equal to 91% of those members' premiums. Since this value exceeds 86%, it provides some evidence that the adjustment may have been excluded from last year's analysis.

If it is correct to assume that last year's projection did not include the 0.86 adjustment factor, then the projected interaction between the risk adjustment and reinsurance programs was likely overstated. That is, the recommended 2019 dampening factor may have been too large based on the claims-based cohort method that was selected.

3. ENROLLMENT SHIFTS

The 2019 analysis assumed that there would be a 20% drop in individual enrollment between 2017 and 2019, with the number of members in the no-claims cohort dropping by 40%. While there was undeniably a decrease in enrollment in 2018, actual decreases are less than 20% and the emerging 2019 enrollment suggests that enrollment has stabilized.

Moreover, L&E expects that enrollment will increase in 2020 in response to further rate decreases. Therefore, the population expected to be in the 2020 market is expected to be significantly different than the population in the 2019 market. These enrollment changes, and the associated morbidity change, significantly impact the interaction between the risk adjustment and reinsurance programs.

4. MARKET-WIDE AVERAGE PLRS

Documentation of the 2019 analysis includes the statement "A simplifying assumption is made so that Risk Adjustment is 'forced' to be net $0 by adjusting all payments down by the RA dollars 'leaving' the market place."

L&E believes this assumption, if used in the 2020 analysis, would distort results. The prior projections assumed that there would be a significant number of healthy members that would leave the market, which would materially increase the market-wide risk score. This implies that the prior analysis could have included the projection that some members were risk adjustment "receivers" in 2017 but would become risk adjustment "payers" in 2019. The "simplifying assumption" prohibits this from happening in the calculation, and therefore, appears to misallocate the transfer receivable for the highest-cost members. L&E did not include this assumption in the 2020 analysis.

RESULTS – RISK BASED COHORTS

As stated previously, COMAR 14.35.17.02B11 requires that the dampening factor modify payments such that "the claims-to-premium ratio between payers and receivers under the risk adjustment is normalized." Consistent with last year's analysis, L&E has used a grouping by claims level as a proxy for members being payers and receivers under the risk adjustment program.

As an alternative analysis that L&E believes should be considered for future calendar years, L&E evaluated the dampening factor based on the covered population's Plan Liability Risk Score, not claims, since that is the most significant variable underlying the federal risk adjustment program.

The first step in calculating the dampening factor under the risk-based method is to group the data by PLRS cohort (instead of by claims). The first scenario assumes that reinsurance program is not in place.

1) Undampened Risk Adjustment, No Reinsurance

Risk Score Cohort	Member Months	Claims	Premiums	Risk Adj	Reins	Loss Ratio
0-0.5	1,625,031	$255,596,258	$994,972,006	($713,605,601)	$0	97%
0.5-1.5	250,924	$115,920,288	$186,612,643	($57,453,707)	$0	93%
1.5-2.5	72,717	$52,851,934	$54,075,380	$5,518,241	$0	88%
2.5-3.5	81,817	$59,042,241	$72,848,059	$22,164,682	$0	51%
3.5-4.5	38,089	$40,010,099	$34,241,883	$23,726,927	$0	48%
4.5+	186,619	$727,782,207	$173,232,028	$719,649,458	$0	5%
Total	2,255,196	$1,251,203,027	$1,515,982,000	($0)	$0	83%
Risk Adj Payers	1,875,954	$371,516,546	$1,181,584,650	($771,059,308)	$0	97%
Risk Adj Receivers	379,242	$879,686,481	$334,397,350	$771,059,308	$0	32%

The difference in loss ratios between risk adjustment payers and receivers is equal to 64% - 65% (97% less 32%). This is the loss ratio differential which would exist if the reinsurance program did not exist.

The next step in the risk-based analysis is to layer in the reinsurance program without any dampening adjustments.

2) Undampened Risk Adjustment, With Reinsurance

Risk Score Cohort	Member Months	Claims	Premiums	Risk Adj	Reins	Loss Ratio
0-0.5	1,698,621	$263,534,778	$735,973,355	($544,829,250)	$16,950,391	108%
0.5-1.5	260,675	$118,835,032	$136,710,528	($42,464,776)	$14,498,069	107%
1.5-2.5	75,323	$53,981,054	$38,977,121	$4,877,672	$9,277,904	102%
2.5-3.5	84,678	$60,299,633	$52,980,334	$17,961,387	$10,673,819	60%
3.5-4.5	39,347	$40,610,276	$24,490,607	$18,685,839	$11,073,305	44%
4.5+	190,274	$730,624,207	$121,051,859	$545,769,128	$350,367,348	-137%
Total	2,348,919	$1,251,203,027	$1,110,183,803	($0)	$412,840,835	76%
Risk Adj Payers	1,959,296	$382,369,809	$872,683,883	($587,294,026)	$31,448,459	108%
Risk Adj Receivers	389,622	$885,515,169	$237,499,921	$587,294,026	$381,392,376	-35%

The loss ratio of -137% demonstrates that carriers would be materially overcompensated for the highest risk subscribers. This clearly demonstrates a material interaction between the risk adjustment program and the SRP. The difference in loss ratios between payers and receivers has grown from approximately 64% to approximately 143%.

In order to return this loss ratio difference to the targeted, pre-reinsurance rate of 64%, a dampening factor of approximately 25% would need to be applied. This is demonstrated below:

3) Risk Adjustment Dampened by 25%, With Reinsurance

Risk Score Cohort	Member Months	Claims	Premiums	Risk Adj	Reins	Loss Ratio
0-0.5	1,698,621	$263,534,778	$735,973,355	($408,621,937)	$16,950,391	89%
0.5-1.5	260,675	$118,835,032	$136,710,528	($31,848,582)	$14,498,069	100%
1.5-2.5	75,323	$53,981,054	$38,977,121	$3,658,254	$9,277,904	105%
2.5-3.5	84,678	$60,299,633	$52,980,334	$13,471,040	$10,673,819	68%
3.5-4.5	39,347	$40,610,276	$24,490,607	$14,014,379	$11,073,305	63%
4.5+	190,274	$730,624,207	$121,051,859	$409,326,846	$350,367,348	-24%
Total	2,348,919	$1,251,203,027	$1,110,183,803	($0)	$412,840,835	76%
Risk Adj Payers	1,959,296	$382,369,809	$872,683,883	($440,470,519)	$31,448,459	91%
Risk Adj Receivers	389,622	$885,515,169	$237,499,921	$440,470,519	$381,392,376	27%

Based on the risk-based cohort analysis, the implied dampening factor would be approximately 25%. Given the importance of the overall State Reinsurance Program process, L&E is not recommending a change away from a claims-based method until the newly considered method is fully vetted by all stakeholders. However, these results appear to confirm the previously estimated 21.5% dampening factor to be reasonable.

APPENDICES

APPENDIX A: CAVEATS

L&E performed reasonability tests on the data used; however, L&E did not perform a detailed audit of the data. To the extent that the information provided was incomplete or inaccurate, the results in this report may be incomplete or inaccurate.

L&E made several assumptions in performing the analysis. Several of these assumptions are subject to material uncertainty and it is not unexpected that actual results could materially differ from the projections. Examples of uncertainty inherent in the assumptions include, but are not limited to:

- Data Limitations.
  - L&E relied on the data submitted from the insurers for significant portions of this analysis. To the extent that the data is inaccurate, the analysis will be impacted.
- Enrollment Uncertainty.
  - Beyond changes to premiums and market wide programs, consumer responses to these has inherent uncertainty. Therefore, actual enrollment could vary significantly.
- Political and Health Policy Uncertainty.
  - Future federal or state actions could dramatically change premiums and enrollment in 2020.
- Risk Adjustment Transfers.
  - Given large enrollment changes in the Maryland market up through 2019, estimates of risk adjustment transfers by cost category is highly uncertain.

This report has been prepared for the MHBE and the MIA for discussion purposes in relation to the State Reinsurance Program analysis. Any other use may not be appropriate. L&E understands that this report may be distributed to other parties; however, any user of this report must possess a certain level of expertise in actuarial science and/or health insurance so as not to misinterpret the data presented. Any distribution of this report should be made in its entirety. Any third party with access to this report acknowledges, as a condition of receipt, that L&E does not make any representations or warranties as to the accuracy or completeness of the material. Any third party with access to these materials cannot bring suit, claim, or action against L&E, under any theory of law, related in any way to this material.

APPENDIX B: DISCLOSURES

The Actuarial Standards Board (ASB), vested by the U.S.-based actuarial organizations[7], promulgates Actuarial Standards of Practice (ASOPs) for use by actuaries when providing professional services in the United States.

Each of these organizations requires its members, through its Code of Professional Conduct[8], to observe the ASOPs of the ASB when practicing in the United States. ASOP 41 provides guidance to actuaries with respect to actuarial communications and requires certain disclosures which are contained in the following.

IDENTIFICATION OF THE RESPONSIBLE ACTUARIES

The responsible actuaries are:

- Dave Dillon, FSA, MAAA, MS, Senior Vice President & Principal
- Josh Hammerquist, FSA, MAAA, Vice President & Consulting Actuary
- Kevin Ruggeberg, ASA, MAAA, Assistant Vice President & Consulting Actuary
- Michael Lin, FSA, MAAA, Vice President & Consulting Actuary

The actuaries are available to provide supplementary information and explanation.

IDENTIFICATION OF ACTUARIAL DOCUMENTS

The date of this document is September 12, 2019. The date (a.k.a. "latest information date") through which data or other information has been considered in performing this analysis is August 30, 2019.

DISCLOSURES IN ACTUARIAL REPORTS

- The contents of this report are intended for the use of the Maryland Health Benefit Exchange and the Maryland Insurance Administration. Any third party with access to this report acknowledges, as a condition of receipt, that they cannot bring suit, claim, or action against L&E, under any theory of law, related in any way to this material.
- Lewis & Ellis Inc. is financially and organizationally independent from the companies that participate in the Maryland individual market. L&E is not aware of anything that would impair or seem to impair the objectivity of the work.
- The purpose of this report is to assist the MHBE and the MIA with an analysis of the 2020 State Reinsurance Program.
- The responsible actuaries identified above are qualified as specified in the Qualification Standards of the American Academy of Actuaries.

[7] The American Academy of Actuaries (Academy), the American Society of Pension Professionals and Actuaries, the Casualty Actuarial Society, the Conoference of Consulting Actuaries, and the Society of Actuaries.
[8] These organizations adopted identical Codes of Professional Conduct effective January 1, 2001.

- Lewis & Ellis has reviewed the data provided for reasonableness but has not audited it. L&E nor the responsible actuaries assume responsibility for items that may have a material impact on the analysis. To the extent that there are material inaccuracies in, misrepresentations in, or lack of adequate disclosure by the data, the results may be accordingly affected.
- L&E is not aware of any subsequent events that may have a material effect on the findings.

ACTUARIAL FINDINGS

The actuarial findings of the report can be found in the body of this report.

METHODS, PROCEDURES, ASSUMPTIONS, AND DATA

The methods, procedures, assumptions and data used can be found in the body of this report.

ASSUMPTIONS OR METHODS PRESCRIBED BY LAW

This report was prepared as prescribed by applicable law, statutes, regulations and other legally binding authority.

RESPONSIBILITY FOR ASSUMPTIONS AND METHODS

The actuaries do not disclaim responsibility for material assumptions or methods.

DEVIATION FROM THE GUIDANCE OF AN ASOP

The actuaries do not believe that material deviations from the guidance set forth in an applicable ASOP have been made.