# Texas Automobile Insurance Plan Association 2024 Rate Filing Commercial Auto Memorandum

# **Proposed Rate Changes**

TAIPA is proposing an overall average rate level change of +12.7% for commercial vehicles. The average increase is generated by changes in the base rates for each territory. No changes are proposed in the current territory rate factors or class rate factors. The proposed base rate changes by coverage are below. The overall average change is based on the 2021 earned premium in the assigned risk market for each coverage from the 2022 Texas Commercial Auto Benchmark Reports.

Commercial Auto	Indicated	Proposed
Bodily Injury Liability	+18.8%	+15.0%
Property Damage Liability	+10.8%	+10.0%
Personal Injury Protection	-1.4%	0.0%
Uninsured Motorists - BI	+11.9%	+10.0%
Uninsured Motorists - PD	+13.0%	+10.0%
Total	+15.2%	+12.7%

# **Rate Filing History**

Throughout this memorandum, the year of a rate filing references the year in which the filing became effective, though it may have been prepared and submitted in the previous year.

In 2013 and prior, commercial auto liability rates for TAIPA were derived directly from the voluntary market loss costs filed by ISO. During this time, TAIPA was a subscriber to the ISO loss costs, and the actuarial staff at the TDI used the loss costs with TAIPA's filed loss cost multiplier and split point

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factor to determine the Association's commercial vehicle rates. As the commercial auto assigned risk market in Texas continued to depopulate, the ISO subscription fees became a prohibitive cost for TAIPA relative to the number of insured vehicles in the Plan.

Beginning in 2016, TAIPA's commercial auto rate filings were based on the change in the voluntary market aggregate loss costs that were included in the ISO filings, which had historically followed the filed loss costs very closely and would have produced substantially similar results to the prior methodology. However, the observed annual changes in three-year average loss costs proved to be more erratic than anticipated. Attempts were made to normalize the reported losses for shifts in the distribution of insured vehicles by territory and changes in the companies reporting losses to ISO, but the results remained highly variable. In the Association's 2021 rate filing, no adjustments were made to the change in loss costs, and the annual percentage change was directly used as the basis for the proposed rate increases.

Having filed annual commercial auto rate changes from 2016 to 2021, TAIPA did not file any changes to its commercial vehicle rates in 2022. Effective 6/1/2023, a flat +5.0% base rate increase was filed for each coverage. This latest rate revision was based on the changes to the voluntary market rates included in the November 2022 Commercial Auto Biennial Report prepared by the TDI, as required by House Bill 19 (87R, 2021). The Biennial Report showed that over the six-year period from 2017 to 2022, statewide commercial auto rates in Texas increased by 44.8%, an average of 6.4% per year. In that same time period, TAIPA had filed five rate changes with a combined impact of increasing the Association's commercial vehicle rates by 19.0%, indicating that TAIPA's rates had significantly lagged those of the voluntary market. Including the impact of the 2023 TAIPA commercial auto rate filing, the Association's rates have increased by 24.9% since 2017, which remains 15% below the voluntary market change from 2017 to 2022. The next edition of the Biennial Report with 2023 and 2024 voluntary rate changes will not be available until later this year, at the earliest, though TDI staff has indicated that the 2023 rate change will represent another significant increase.

In each of TAIPA's commercial auto filings from 2017 to 2023, the proposed rate increases for every coverage were capped at +5.0%, in order to avoid the additional cost associated with one or more rate hearings. The Association's average rate increases for each coverage in the filings effective since 2017 are as follows:

Eff. Date	BI	PD	PIP	UM BI	UMPD	Overall
2/1/2017	+3.8%	+1.0%	+1.2%	0.0%	0.0%	+2.5%
2/1/2018	+2.1%	+1.1%	0.0%	0.0%	0.0%	+1.7%
3/1/2019	+4.3%	+3.3%	+3.5%	0.0%	0.0%	+3.9%
2/1/2020	+4.8%	+5.0%	+1.3%	+3.6%	+3.2%	+4.8%
3/1/2021	+5.0%	+5.0%	0.0%	0.0%	0.0%	+4.8%
6/1/2023	+5.0%	+5.0%	+5.0%	+5.0%	+5.0%	+5.0%

### Indicated Rate Change Methodology

While the Biennial Report may be the best source of rate changes in the voluntary market, we recognize that the commercial vehicles covered by TAIPA differ from the average policy in the voluntary market. In particular, TAIPA only offers the minimum statutory limits and currently insures no zone-rated trucking risks, which constitute a significant portion of the premium in the voluntary market.

This analysis of TAIPA's commercial auto rate adequacy uses an approach similar to what has been employed for the Association's private passenger rates for several years, by examining statewide loss trends for each coverage offered by TAIPA. The source of the claims data contained in the commercial auto exhibits is the 2022 Texas Commercial Auto Liability Benchmark Reports. The 2022 Benchmark Reports contain data on commercial auto claims occurring through the end of 2021 with valuation dates up to 3/31/2022. The 2023 Benchmark Reports were not yet available at the time of filing.

The Benchmark Report's quarterly loss trend file, analogous to the QDE and TICO trend reports for private passenger auto, only contains losses at total limits, which presents a similar issue to the use of the Biennial Report's voluntary market rate changes. However, the loss development report (liability report #6) does contain basic limits reported losses, reported ALAE, and reported claim counts at annual valuation dates, which we have used to perform an analysis of the trend in statewide basic limits claim severity in Texas. In the exhibits for each coverage, Pages 2 and 3 display the development of loss/ALAE and claim counts to their ultimate level. The resulting claim severities are brought forward to Page 1, where an annual claim severity trend is selected.

Exhibit 1 contains the calculation of the indicated rate change for each coverage. Since TAIPA has made only a single commercial auto rate filing in the three-year period since 2021, we have applied the

selected trends for multiple years to account for the longer periods between rate changes. After determining the appropriate *annual* trend in claim severity for each coverage, we apply that trend for a period of 3.5 years—the length of time between 3/1/2021 and 9/1/2024, the effective dates of TAIPA's last regular annual rate change and the proposed effective date of this filing—to determine the total increase in claim costs over that time. From there, we obtain the rate indications by accounting for the impact of the single +5.0% rate increase filed in that period.

The claims included in this analysis come from Rate Groups A, C, and J of the Benchmark Report, corresponding to the Rate Groups of the commercial vehicles written by TAIPA. These include non-zone-rated Trucks, non-zone-rated Publics, and All Other vehicles. Notably, this excludes zone-rated Trucks that are not present in the book of business currently underwritten by TAIPA. The three rate groups are combined for each coverage for the sake of credibility and stability in the results. Standard chain-ladder loss development methodology is used to develop the reported loss & ALAE and the reported claim counts to their ultimate level for each coverage, and the resulting values are compared to obtain the average basic limits loss & ALAE cost per claim in each accident year. The annual trends in the resulting basic limits claim severity serve as the basis for the indicated rate changes.

When analyzing the reported loss and reported claim count development triangles, we observed significant increases in the values of the latest diagonal, with valuation date 3/31/2022. This pattern was particularly noted in the Bodily Injury, UM Bodily Injury, and PIP coverages. At this time, we cannot be certain whether the observed increases relate to persisting changes in statewide commercial auto loss development, one-time aberrant results, or potential reporting anomalies. To avoid placing complete reliance on potentially anomalous values, we also developed estimates of ultimate claim severity using only data through the 3/31/2021 valuation.

Using the trend in claim severity as the basis for determining the indicated rate change implicitly assumes no trend in claim frequency. The exposure bases used for commercial auto rating vary (insured cars, employees, miles, etc.), and a large portion of the reported claims in the Benchmark Reports are not associated with any exposure base at all. We have therefore been unable to reliably determine the trend in statewide commercial auto claim frequency from the Benchmark Reports or to evaluate the pure premiums directly. However, the only mention of a trend in claim frequency contained in the 2022 Biennial Report refers to increases in the frequency of commercial auto claims.

This approach of analyzing prior years' claim severity is inherently retrospective. It is not intended to project the future costs of TAIPA or statewide commercial auto claims; rather, it allows for TAIPA's commercial auto rates to "catch up" to increases in average claim costs that have already been observed.

Furthermore, the latest valuation date for the data underlying this analysis was 3/31/2022, with reliance primarily placed on data valued through 3/31/2021 for three of the five coverages. The claim costs in this report are therefore only partially impacted by the high levels of inflation in the general economy, which began emerging in April of 2021 and peaked near the middle of 2022. As a result, it is expected that subsequent editions of the Benchmark Reports will show similar, if not greater, increases in claim costs.

		(1)	(2)	(3)	(4)	(5)	
	Effective Date	BI	Prior Rate C PD	<u>hange by Co</u> PIP	verage UMBI	UMPD	
(a)	3/1/2021 6/1/2023 9/1/2024	+5.0%	+5.0%	+5.0%	+5.0%	+5.0%	
(b)	Annual Severity Trend	+6.5%	+4.4%	+1.0%	+4.7%	+5.0%	
(c)	Trend Period in Years	3.50					
(d)	Cumulative Severity Change	+24.7%	+16.3%	+3.5%	+17.5%	+18.6%	
(e)	Indicated Rate Change	+18.8%	+10.8%	-1.4%	+11.9%	+13.0%	

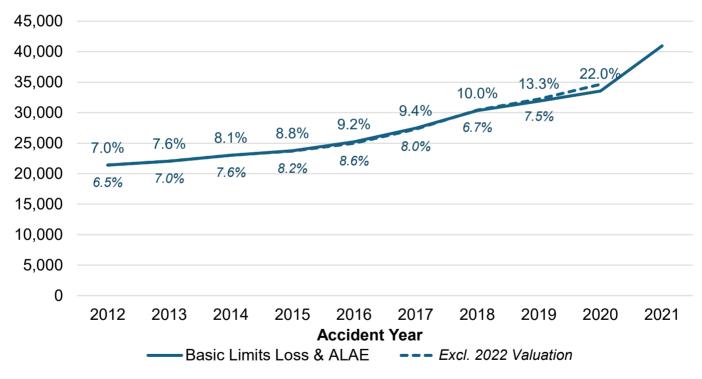
NOTES

(a) from 2023 TAIPA rate filing
(b) from Exhibit 2
(c) = 9/1/24 - 3/1/21, in years
(d) = [ 1.0 + (b) ] ^ (c) - 1.0
(e) = [ 1.0 + (d) ] / [ 1.0 + (a) ] - 1.0

#### Bodily Injury Liability Basic Limits Loss & ALAE Claim Severity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Including	y 3/31/2022 Cla	im Valuation		Excluding	3/31/2022 Cla	im Valuation	
_	Ultimate	Ultimate	Claim	Annual	Ultimate	Ultimate	Claim	Annual
AY	Loss/ALAE	Claim Ct.	Severity	Trend	Loss/ALAE	Claim Ct.	Severity	Trend
2012	178,395,889	8,333	21,408	7.0%	178,452,258	8,333	21,415	6.5%
2013	206,968,114	9,388	22,046	7.6%	206,853,700	9,377	22,059	7.0%
2014	235,143,447	10,218	23,013	8.1%	234,775,443	10,193	23,032	7.6%
2015	268,015,466	11,282	23,756	8.8%	265,712,335	11,215	23,692	8.2%
2016	283,118,379	11,220	25,233	9.2%	275,995,656	11,047	24,983	8.6%
2017	317,132,757	11,551	27,454	9.4%	300,871,312	11,019	27,304	8.0%
2018	384,003,398	12,654	30,345	10.0%	337,164,550	11,081	30,427	6.7%
2019	484,894,033	15,204	31,894	13.3%	368,522,284	11,431	32,240	7.5%
2020	484,746,641	14,442	33,566	22.0%	304,960,022	8,800	34,653	
2021	1,090,141,245	26,610	40,967					

Selected Annual Claim Severity Trend:



6.5%

#### NOTES

(1), (5) from Exhibit 2, Page 2 (2), (6) from Exhibit 2, Page 3

(3) = (1) / (2)

(7) = (5) / (6)

(4) based on exponential fit to (3)

(8) based on exponential fit to (7)

Exhibit 2 Page 1

Bodily Injury Liability, Rate Groups A, C, J.

				Basi	c Limits Repor	rted Loss & AL	.AE - Age in Me	onths				Ultimate
<u>AY</u>	<u>@15</u>	<u>@27</u>	<u>@39</u>	<u>@51</u>	<u>@63</u>	<u>@75</u>	<u>@87</u>	<u>@99</u>	<u>@111</u>	<u>@123</u>	Ultimate	excl. last point
2012	41,727,831	96,068,886	137,162,409	162,677,396	172,650,851	176,216,885	177,280,921	178,184,934	178,452,258	178,395,889	178,395,889	178,452,258
2013	45,182,534	109,629,299	157,536,455	187,689,007	199,652,571	204,101,435	206,262,195	206,543,830	206,968,114		206,968,114	206,853,700
2014	49,199,913	116,920,945	172,928,251	210,827,670	226,044,967	232,200,994	233,701,305	234,791,199			235,143,447	234,775,443
2015	51,818,139	130,240,134	196,551,214	240,081,215	258,097,187	262,471,890	266,789,249				268,015,466	265,712,335
2016	54,328,022	133,538,961	203,389,024	252,212,279	266,851,355	279,665,662					283,118,379	275,995,656
2017	56,014,969	148,180,285	230,636,050	272,824,135	306,625,499						317,132,757	300,871,312
2018	58,269,777	170,440,036	253,151,845	348,206,661							384,003,398	337,164,550
2019	76,109,212	185,306,602	364,070,953								484,894,033	368,522,284
2020	60,848,675	243,748,497									484,746,641	304,960,022
2021	217,515,889										1,090,141,245	
				Histo	rical Loss Dev	elopment Fact	tors					
AY	<u>15-27</u>	<u>27-39</u>	<u>39-51</u>	<u>51-63</u>	<u>63-75</u>	<u>75-87</u>	<u>87-99</u>	<u>99-111</u>	<u>111-123</u>	<u>123-Ult</u>		
2012	2.302	1.428	1.186	1.061	1.021	1.006	1.005	1.002	1.000			
2013	2.426	1.437	1.191	1.064	1.022	1.011	1.001	1.002				
2014	2.376	1.479	1.219	1.072	1.027	1.006	1.005					
2015	2.513	1.509	1.221	1.075	1.017	1.016						
2016	2.458	1.523	1.240	1.058	1.048							
2017	2.645	1.556	1.183	1.124								
2018	2.925	1.485	1.375									
2019	2.435	1.965										
2020	4.006											
Weighted	2.703	1.573	1.239	1.078	1.028	1.010	1.004	1.002	1.000	1.000		
to Ult	5.931	2.194	1.395	1.125	1.044	1.016	1.005	1.001	1.000	1.000		
Excl Last Pt	2.520	1.493	1.208	1.066	1.022	1.008	1.003	1.002	1.000	1.000		
to Ult	5.012	1.989	1.332	1.103	1.034	1.012	1.005	1.002	1.000	1.000		
to Ult	5.012	1.989	1.332	1.103	1.034	1.012	1.005	1.002	1.000	1.000		

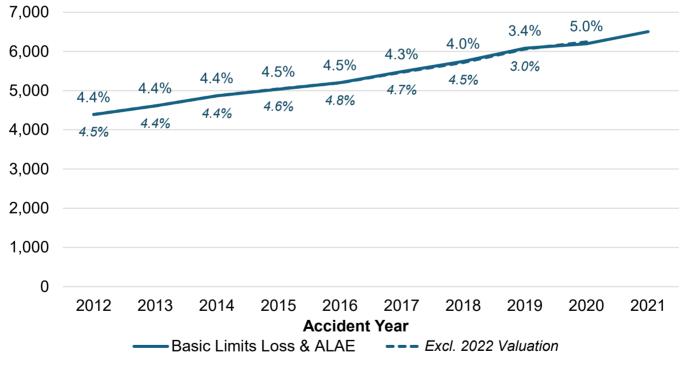
Bodily Injury Liability, Rate Groups A, C, J.

				Reported C	laim Count, R	ate Groups A,	C, J - Age in M	lonths				Ultimate
AY	<u>@15</u>	<u>@27</u>	<u>@39</u>	<u>@51</u>	<u>@63</u>	<u>@75</u>	<u>@87</u>	<u>@99</u>	<u>@111</u>	<u>@123</u>	Ultimate	<u>excl. last point</u>
2012	4,616	6,765	7,702	8,093	8,244	8,288	8,308	8,323	8,326	8,333	8,333	8,333
2013	5,011	7,601	8,650	9,093	9,277	9,337	9,372	9,374	9,388		9,388	9,377
2014	5,280	8,008	9,254	9,859	10,073	10,164	10,180	10,214			10,218	10,193
2015	5,933	8,843	10,151	10,787	11,117	11,172	11,267				11,282	11,215
2016	5,785	8,680	10,020	10,756	10,934	11,177					11,220	11,047
2017	5,389	8,537	10,096	10,674	11,433						11,551	11,019
2018	5,228	8,662	10,120	12,258							12,654	11,081
2019	5,609	9,032	13,885								15,204	11,431
2020	4,506	11,411									14,442	8,800
2021	13,625										26,610	
				Historical C	laim Count De	velopment Fac	tors					
AY	<u>15-27</u>	<u>27-39</u>	<u>39-51</u>	<u>51-63</u>	<u>63-75</u>	75-87	<u>87-99</u>	<u>99-111</u>	<u>111-123</u>	<u>123-Ult</u>		
2012	1.466	1.139	1.051	1.019	1.005	1.002	1.002	1.000	1.001			
2013	1.517	1.138	1.051	1.020	1.006	1.004	1.000	1.001				
2014	1.517	1.156	1.065	1.022	1.009	1.002	1.003					
2015	1.490	1.148	1.063	1.031	1.005	1.009						
2016	1.500	1.154	1.073	1.017	1.022							
2017	1.584	1.183	1.057	1.071								
2018	1.657	1.168	1.211									
2019	1.610	1.537										
2020	2.532											
Weighted	1.637	1.208	1.084	1.031	1.010	1.004	1.002	1.001	1.001	1.000		
to Ult	2.249	1.373	1.137	1.049	1.018	1.008	1.004	1.002	1.001	1.000		
Excl Last Pt	1.543	1.156	1.061	1.022	1.006	1.003	1.001	1.000	1.000	1.000		
to Ult	1.953	1.266	1.095	1.032	1.010	1.004	1.001	1.000	1.000	1.000		

#### Property Damage Liability Basic Limits Loss & ALAE Claim Severity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Including	y 3/31/2022 Cla	im Valuation		Excluding	3/31/2022 Cla	im Valuation	
	Ultimate	Ultimate	Claim	Annual	Ultimate	Ultimate	Claim	Annual
AY	Loss/ALAE	Claim Ct.	Severity	Trend	Loss/ALAE	Claim Ct.	Severity	Trend
2012	124,742,051	28,418	4,390	4.4%	124,842,327	28,418	4,393	4.5%
2013	136,747,821	29,666	4,610	4.4%	136,819,788	29,669	4,612	4.4%
2014	147,673,592	30,324	4,870	4.4%	147,602,519	30,330	4,867	4.4%
2015	152,994,901	30,377	5,037	4.5%	153,206,784	30,381	5,043	4.6%
2016	157,880,447	30,344	5,203	4.5%	157,659,786	30,314	5,201	4.8%
2017	171,496,117	31,268	5,485	4.3%	170,798,299	31,223	5,470	4.7%
2018	190,199,870	33,105	5,745	4.0%	188,185,222	32,921	5,716	4.5%
2019	197,701,070	32,518	6,080	3.4%	194,898,897	32,160	6,060	3.0%
2020	155,813,011	25,143	6,197	5.0%	148,543,030	23,793	6,243	
2021	191,188,779	29,391	6,505					
elected A	nnual Claim Seve	erity Trend:	4.4%					

Selected Annual Claim Severity Trend:



#### NOTES

(1), (5) from Exhibit 3, Page 2 (2), (6) from Exhibit 3, Page 3 (3) = (1) / (2)(7) = (5) / (6)(4) based on exponential fit to (3)

(8) based on exponential fit to (7)

Property Damage Liability

_				Basi	c Limits Repor	ted Loss & AL	AE - Age in Me	onths				Ultimate
AY	<u>@15</u>	<u>@27</u>	<u>@39</u>	<u>@51</u>	<u>@63</u>	<u>@75</u>	<u>@87</u>	<u>@99</u>	<u>@111</u>	<u>@123</u>	Ultimate	excl. last point
2012	107,438,338	118,323,257	122,115,662	123,508,526	124,273,508	124,477,303	124,776,145	124,815,355	124,842,327	124,742,051	124,742,051	124,842,327
2013	115,051,427	128,053,933	132,153,025	134,955,863	136,089,539	136,608,604	136,773,804	136,790,228	136,747,821		136,747,821	136,819,788
2014	123,375,386	137,868,319	142,351,344	145,788,892	147,090,556	147,447,824	147,539,247	147,641,687			147,673,592	147,602,519
2015	127,697,139	143,417,876	148,651,440	151,426,617	152,807,205	152,933,173	152,929,317				152,994,901	153,206,784
2016	130,395,160	146,763,676	153,209,471	156,325,507	157,040,156	157,598,489					157,880,447	157,659,786
2017	140,509,599	159,330,200	166,312,025	168,871,049	170,822,108						171,496,117	170,798,299
2018	156,803,011	177,433,937	182,664,572	188,053,697							190,199,870	188,185,222
2019	163,390,208	182,631,230	191,901,261								197,701,070	194,898,897
2020	124,133,572	146,005,556									155,813,011	148,543,030
2021	159,771,523										191,188,779	
				Histo	rical Loss Dev	elopment Fact	tors					
AY	<u>15-27</u>	<u>27-39</u>	<u>39-51</u>	<u>51-63</u>	<u>63-75</u>	75-87	<u>87-99</u>	<u>99-111</u>	<u>111-123</u>	<u>123-Ult</u>		
2012	1.101	1.032	1.011	1.006	1.002	1.002	1.000	1.000	0.999			
2013	1.113	1.032	1.021	1.008	1.004	1.001	1.000	1.000				
2014	1.117	1.033	1.024	1.009	1.002	1.001	1.001					
2015	1.123	1.036	1.019	1.009	1.001	1.000						
2016	1.126	1.044	1.020	1.005	1.004							
2017	1.134	1.044	1.015	1.012								
2018	1.132	1.029	1.030									
2019	1.118	1.051										
2020	1.176											
Weighted	1.127	1.038	1.020	1.008	1.002	1.001	1.000	1.000	0.999	1.000		
to Ult	1.207	1.071	1.032	1.011	1.003	1.001	1.000	0.999	0.999	1.000		
Excl Last Pt	1.121	1.036	1.019	1.007	1.002	1.001	1.000	1.000	1.000	1.000		
to Ult	1.197	1.067	1.030	1.011	1.004	1.002	1.000	1.000	1.000	1.000		

Property Damage Liability

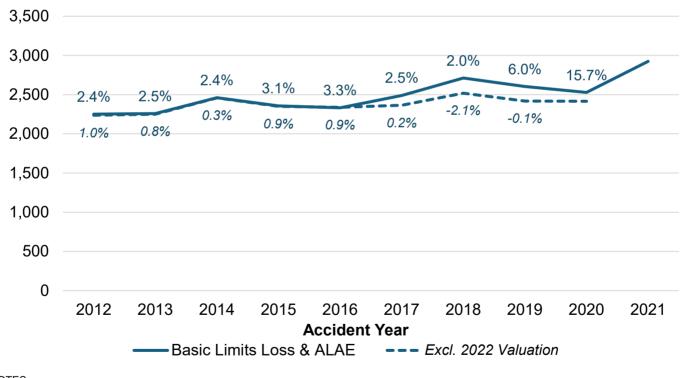
				Reported 0	Claim Count, R	ate Groups A,	C, J - Age in N	lonths				Ultimate
AY	<u>@15</u>	<u>@27</u>	<u>@39</u>	<u>@51</u>	<u>@63</u>	<u>@75</u>	<u>@87</u>	<u>@99</u>	<u>@111</u>	<u>@123</u>	Ultimate	<u>excl. last point</u>
2012	26,799	28,027	28,296	28,348	28,385	28,421	28,429	28,437	28,436	28,418	28,418	28,418
2013	27,802	29,260	29,480	29,581	29,635	29,659	29,668	29,670	29,666		29,666	29,669
2014	28,358	30,010	30,201	30,295	30,314	30,327	30,326	30,325			30,324	30,330
2015	28,474	30,001	30,289	30,340	30,360	30,371	30,373				30,377	30,381
2016	28,285	29,922	30,195	30,263	30,283	30,334					30,344	30,314
2017	29,054	30,861	31,078	31,160	31,236						31,268	31,223
2018	30,478	32,519	32,772	33,038							33,105	32,921
2019	29,841	31,757	32,371								32,518	32,160
2020	22,209	24,828									25,143	23,793
2021	27,434										29,391	
				Historical C	laim Count De	velopment Fac	ctors					
AY	<u>15-27</u>	<u>27-39</u>	<u>39-51</u>	<u>51-63</u>	<u>63-75</u>	75-87	<u>87-99</u>	<u>99-111</u>	<u>111-123</u>	<u>123-Ult</u>		
2012	1.046	1.010	1.002	1.001	1.001	1.000	1.000	1.000	0.999			
2013	1.052	1.008	1.003	1.002	1.001	1.000	1.000	1.000				
2014	1.058	1.006	1.003	1.001	1.000	1.000	1.000					
2015	1.054	1.010	1.002	1.001	1.000	1.000						
2016	1.058	1.009	1.002	1.001	1.002							
2017	1.062	1.007	1.003	1.002								
2018	1.067	1.008	1.008									
2019	1.064	1.019										
2020	1.118											
Weighted	1.063	1.010	1.003	1.001	1.001	1.000	1.000	1.000	0.999	1.000		
to Ult	1.079	1.015	1.005	1.002	1.000	1.000	0.999	0.999	0.999	1.000		
Excl Last Pt	1.058	1.008	1.002	1.001	1.001	1.000	1.000	1.000	1.000	1.000		
to Ult	1.071	1.013	1.005	1.002	1.001	1.000	1.000	1.000	1.000	1.000		
	-											

#### PIP Basic Limits Loss & ALAE Claim Severity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Including	3/31/2022 Cla	im Valuation		Excluding	3/31/2022 Cla	im Valuation	
_	Ultimate	Ultimate	Claim	Annual	Ultimate	Ultimate	Claim	Annual
AY	Loss/ALAE	Claim Ct.	Severity	Trend	Loss/ALAE	Claim Ct.	Severity	Trend
2012	3,122,162	1,387	2,251	2.4%	3,102,911	1,387	2,237	1.0%
2013	3,027,441	1,340	2,259	2.5%	3,015,985	1,340	2,251	0.8%
2014	3,544,784	1,441	2,460	2.4%	3,539,627	1,440	2,458	0.3%
2015	3,596,831	1,526	2,357	3.1%	3,588,890	1,527	2,351	0.9%
2016	3,556,600	1,526	2,331	3.3%	3,552,380	1,519	2,339	0.9%
2017	4,232,316	1,700	2,490	2.5%	3,990,353	1,687	2,365	0.2%
2018	4,569,785	1,685	2,711	2.0%	4,179,998	1,660	2,518	-2.1%
2019	4,373,878	1,680	2,603	6.0%	3,818,184	1,579	2,418	-0.1%
2020	3,426,008	1,355	2,528	15.7%	2,848,584	1,179	2,416	
2021	5,402,479	1,847	2,925					

1.0%

Selected Annual Claim Severity Trend:



NOTES

(1), (5) from Exhibit 4, Page 2
(2), (6) from Exhibit 4, Page 3
(3) = (1) / (2)
(7) = (5) / (6)
(4) based on exponential fit to (3)
(8) based on exponential fit to (7)

Personal Injury Protection

_				Basic	Limits Report	ed Loss & ALA	E - Age in Mo	nths				Ultimate
AY	<u>@15</u>	<u>@27</u>	<u>@39</u>	<u>@51</u>	<u>@63</u>	<u>@75</u>	<u>@87</u>	<u>@99</u>	<u>@111</u>	<u>@123</u>	<u>Ultimate</u>	excl. last point
2012	2,351,278	2,953,397	3,045,874	3,077,784	3,102,784	3,100,324	3,099,694	3,100,447	3,102,911	3,122,162	3,122,162	3,102,911
2013	2,178,515	2,719,814	2,925,678	2,961,464	2,980,687	2,998,192	3,005,715	3,013,590	3,027,441		3,027,441	3,015,985
2014	2,282,553	3,109,549	3,465,582	3,476,619	3,484,584	3,502,182	3,531,825	3,541,969			3,544,784	3,539,627
2015	2,341,608	3,226,179	3,431,854	3,510,854	3,562,836	3,567,404	3,588,903				3,596,831	3,588,890
2016	2,422,979	3,192,054	3,428,667	3,511,240	3,521,134	3,535,307					3,556,600	3,552,380
2017	2,487,331	3,591,874	3,852,426	3,928,162	4,195,089						4,232,316	3,990,353
2018	2,693,635	3,581,389	4,051,308	4,498,563							4,569,785	4,179,998
2019	2,515,389	3,421,247	4,239,219								4,373,878	3,818,184
2020	1,907,078	3,069,841									3,426,008	2,848,584
2021	3,616,866										5,402,479	
				Histor	ical Loss Deve	lopment Facto	ors					
AY	<u>15-27</u>	<u>27-39</u>	<u>39-51</u>	<u>51-63</u>	<u>63-75</u>	<u>75-87</u>	<u>87-99</u>	<u>99-111</u>	<u>111-123</u>	<u>123-Ult</u>		
2012	1.256	1.031	1.010	1.008	0.999	1.000	1.000	1.001	1.006			
2013	1.248	1.076	1.012	1.006	1.006	1.003	1.003	1.005				
2014	1.362	1.114	1.003	1.002	1.005	1.008	1.003					
2015	1.378	1.064	1.023	1.015	1.001	1.006						
2016	1.317	1.074	1.024	1.003	1.004							
2017	1.444	1.073	1.020	1.068								
2018	1.330	1.131	1.110									
2019	1.360	1.239										
2020	1.610											
Weighted	1.363	1.103	1.032	1.019	1.003	1.004	1.002	1.003	1.006	1.000		
to Ult	1.608	1.180	1.070	1.037	1.018	1.015	1.011	1.009	1.006	1.000		
Excl Last Pt	1.338	1.082	1.016	1.007	1.003	1.004	1.001	1.001	1.000	1.000		
to Ult	1.494	1.116	1.032	1.016	1.009	1.006	1.002	1.001	1.000	1.000		

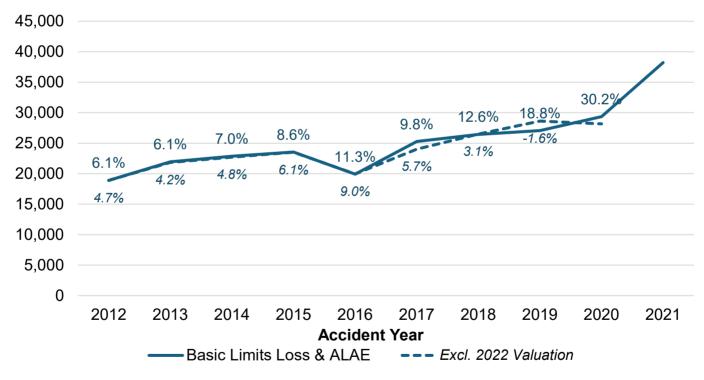
Personal Injury Protection

AY@15@27@39@51@63@75@87@99@111@123Ultimateexcl. las20121,1031,3351,3671,3761,3851,3851,3851,3851,3851,3851,3851,3871,38720131,0591,2631,3221,3341,3381,3401,3401,3401,3401,3401,34020141,0751,3691,4291,4371,4401,4381,4401,4411,44120151,0881,4381,5001,5191,5261,5261,5261,5261,52620161,1171,4111,4981,5131,5181,525111,526	1,387 1,340 1,440 1,527 1,519 1,687
20131,0591,2631,3221,3341,3381,3401,3401,3401,3401,34020141,0751,3691,4291,4371,4401,4381,4401,4411,44120151,0881,4381,5001,5191,5261,5261,5261,52620161,1171,4111,4981,5131,5181,5251,526	1,340 1,440 1,527 1,519
20141,0751,3691,4291,4371,4401,4381,4401,4411,44120151,0881,4381,5001,5191,5261,5261,5261,52620161,1171,4111,4981,5131,5181,5251,526	1,440 1,527 1,519
20151,0881,4381,5001,5191,5261,5261,5261,52620161,1171,4111,4981,5131,5181,5251,526	1,527 1,519
<b>2016</b> 1,117 1,411 1,498 1,513 1,518 1,525 1,526	1,519
	1,687
<b>2017</b> 1,193 1,594 1,660 1,680 1,699 1,700	
<b>2018</b> 1,240 1,552 1,637 1,678 1,685	1,660
<b>2019</b> 1,152 1,490 1,657 1,680	1,579
<b>2020</b> 877 1,279 1,355	1,179
<b>2021</b> 1,374 1,847	
Historical Claim Count Development Factors	
<u>AY 15-27 27-39 39-51 51-63 63-75 75-87 87-99 99-111 111-123 123-Ult</u>	
<b>2012</b> 1.210 1.024 1.007 1.007 1.000 1.000 1.000 1.000 1.000 1.001	
<b>2013</b> 1.193 1.047 1.009 1.003 1.001 1.000 1.000 1.000	
<b>2014</b> 1.273 1.044 1.006 1.002 0.999 1.001 1.001	
<b>2015</b> 1.322 1.043 1.013 1.005 1.000 1.000	
<b>2016</b> 1.263 1.062 1.010 1.003 1.005	
<b>2017</b> 1.336 1.041 1.012 1.011	
<b>2018</b> 1.252 1.055 1.025	
<b>2019</b> 1.293 1.112	
<b>2020</b> 1.458	
Weighted 1.285 1.054 1.012 1.005 1.001 1.000 1.000 1.000 1.001 1.000	
to Ult 1.382 1.075 1.020 1.008 1.003 1.002 1.002 1.001 1.001 1.000	
Excl Last Pt 1.269 1.045 1.009 1.004 1.000 1.000 1.000 1.000 1.000 1.000 1.000	
to Ult 1.344 1.060 1.014 1.004 1.000 1.000 1.000 1.000 1.000 1.000 1.000	

#### UM/UIM Bodily Injury Basic Limits Loss & ALAE Claim Severity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)				
	Including	y 3/31/2022 Cla	im Valuation		Excluding 3/31/2022 Claim Valuation							
	Ultimate	Ultimate Ultimate Claim		Annual	Ultimate	Ultimate	Claim	Annual				
AY	Loss/ALAE	Claim Ct.	Severity	Trend	Loss/ALAE	Claim Ct.	Severity	Trend				
2012	9,163,551	485	18,894	6.1%	9,163,551	485	18,894	4.7%				
2013	11,130,110	507	21,953	6.1%	10,989,618	503	21,848	4.2%				
2014	13,233,936	579	22,857	7.0%	13,132,806	579	22,698	4.8%				
2015	14,121,241	600	23,551	8.6%	14,072,713	599	23,510	6.1%				
2016	12,942,036	650	19,909	11.3%	12,906,410	647	19,952	9.0%				
2017	15,772,378	624	25,268	9.8%	13,854,049	576	24,031	5.7%				
2018	17,930,001	678	26,449	12.6%	15,921,715	601	26,482	3.1%				
2019	26,186,693	967	27,076	18.8%	19,109,378	668	28,626	-1.6%				
2020	32,908,642	1,121	29,354	30.2%	19,581,701	695	28,167					
2021	56,788,561	1,486	38,221									

Selected Annual Claim Severity Trend:



4.7%

#### NOTES

(1), (5) from Exhibit 5, Page 2

(2), (6) from Exhibit 5, Page 3

(3) = (1) / (2)

(7) = (5) / (6)

(4) based on exponential fit to (3)

(8) based on exponential fit to (7)

UM/UIM Bodily Injury

AY         @15         @27         @39         @51         @63         @75         @87         @99         @111         @123         Ultimate         excl. last pote           2012         2,117,038         4,745,836         6,429,302         7,831,770         8,518,293         8,903,964         9,129,018         9,165,371         9,163,551	551 518 306 713 410 049 715 378										
2013       1,528,467       4,202,218       6,636,307       9,023,651       10,197,655       10,718,500       10,958,536       10,991,801       11,130,110       11,130,110       10,989,6         2014       2,283,575       6,374,656       9,525,831       11,423,614       12,243,091       12,863,608       13,090,048       13,236,564       13,233,936       13,132,6         2015       2,722,103       5,848,968       9,301,127       11,904,808       13,158,110       13,734,528       14,075,265       14,121,241       14,072,7         2016       2,512,787       6,395,293       9,196,623       11,242,201       12,023,011       12,631,023       12,942,036       12,904,406 <td< th=""><th>518 306 713 410 049 715 378</th></td<>	518 306 713 410 049 715 378										
2014       2,283,575       6,374,656       9,525,831       11,423,614       12,243,091       12,863,608       13,090,048       13,236,564       13,233,936       13,132,6         2015       2,722,103       5,848,968       9,301,127       11,904,808       13,158,110       13,734,528       14,075,265       14,121,241       14,072,7         2016       2,512,787       6,395,293       9,196,623       11,242,201       12,023,011       12,631,023       12,942,036       12,942,036       12,906,4         2017       2,365,762       5,943,590       9,553,688       11,822,082       14,692,813       15,772,378       13,854,0         2018       2,324,841       7,088,969       10,878,720       15,300,216       17,930,001       15,921,7	306 713 410 049 715 378										
20152,722,1035,848,9689,301,12711,904,80813,158,11013,734,52814,075,26514,121,24114,072,720162,512,7876,395,2939,196,62311,242,20112,023,01112,631,02312,942,03612,942,03612,942,03620172,365,7625,943,5909,553,68811,822,08214,692,81315,772,37813,854,020182,324,8417,088,96910,878,72015,300,21617,930,00115,921,7	713 410 049 715 378										
20162,512,7876,395,2939,196,62311,242,20112,023,01112,631,02312,942,03612,942,03612,942,03612,906,420172,365,7625,943,5909,553,68811,822,08214,692,81315,772,37813,854,020182,324,8417,088,96910,878,72015,300,21617,930,00115,921,7	410 049 715 378										
2017         2,365,762         5,943,590         9,553,688         11,822,082         14,692,813         15,772,378         13,854,0           2018         2,324,841         7,088,969         10,878,720         15,300,216         17,930,001         15,921,7	049 715 378										
<b>2018</b> 2,324,841 7,088,969 10,878,720 15,300,216 17,930,001 15,921,7	715 378										
	378										
<b>2019</b> 3,573,413 8,616,441 17,892,401 26,186,693 19,109,3	701										
<b>2020</b> 3,485,407 14,838,545 32,908,642 19,581,7											
<b>2021</b> 10,107,970 56,788,561											
Historical Loss Development Factors											
<u>AY 15-27 27-39 39-51 51-63 63-75 75-87 87-99 99-111 11-123 123-Ult</u>											
<b>2012</b> 2.242 1.355 1.218 1.088 1.045 1.025 1.004 1.000 1.000											
<b>2013</b> 2.749 1.579 1.360 1.130 1.051 1.022 1.003 1.013											
<b>2014</b> 2.792 1.494 1.199 1.072 1.051 1.018 1.011											
<b>2015</b> 2.149 1.590 1.280 1.105 1.044 1.025											
<b>2016</b> 2.545 1.438 1.222 1.069 1.051											
<b>2017</b> 2.512 1.607 1.237 1.243											
<b>2018</b> 3.049 1.535 1.406											
<b>2019</b> 2.411 2.077											
<b>2020</b> 4.257											
Weighted 2.796 1.614 1.277 1.120 1.048 1.022 1.007 1.007 1.000 1.000											
to Ult 7.004 2.506 1.553 1.216 1.086 1.036 1.013 1.007 1.000 1.000											
Excl Last Pt 2.533 1.515 1.249 1.092 1.048 1.021 1.003 1.000 1.000 1.000											
to Ult 5.618 2.218 1.464 1.172 1.073 1.025 1.003 1.000 1.000 1.000											

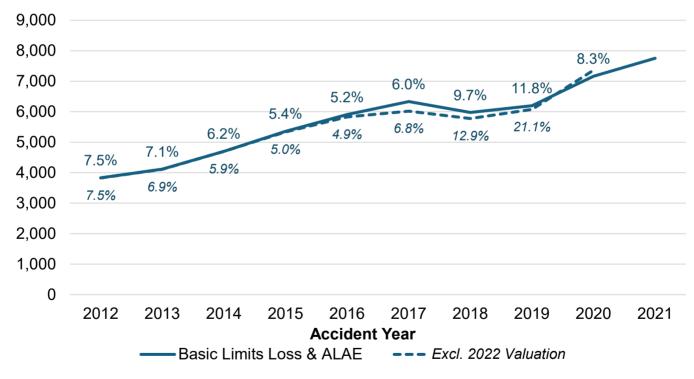
UM/UIM Bodily Injury

Reported Claim Count, Rate Groups A, C, J - Age in Months											Ultimate	
AY	<u>@15</u>	<u>@27</u>	<u>@39</u>	<u>@51</u>	<u>@63</u>	<u>@75</u>	<u>@87</u>	<u>@99</u>	<u>@111</u>	<u>@123</u>	<u>Ultimate</u>	excl. last point
2012	252	363	417	454	470	479	485	485	485	485	485	485
2013	206	337	408	467	489	499	502	503	507		507	503
2014	256	418	498	542	561	574	578	579			579	579
2015	280	415	500	560	582	593	599				600	599
2016	305	477	568	611	628	644					650	647
2017	241	395	489	540	606						624	576
2018	239	410	511	635							678	601
2019	271	471	822								967	668
2020	306	791									1,121	695
2021	654										1,486	
Historical Claim Count Development Factors												
AY	<u>15-27</u>	<u>27-39</u>	<u>39-51</u>	<u>51-63</u>	<u>63-75</u>	75-87	<u>87-99</u>	<u>99-111</u>	<u>111-123</u>	<u>123-Ult</u>		
2012	1.440	1.149	1.089	1.035	1.019	1.013	1.000	1.000	1.000			
2013	1.636	1.211	1.145	1.047	1.020	1.006	1.002	1.008				
2014	1.633	1.191	1.088	1.035	1.023	1.007	1.002					
2015	1.482	1.205	1.120	1.039	1.019	1.010						
2016	1.564	1.191	1.076	1.028	1.025							
2017	1.639	1.238	1.104	1.122								
2018	1.715	1.246	1.243									
2019	1.738	1.745										
2020	2.585											
Weighted	1.730	1.282	1.123	1.051	1.022	1.009	1.001	1.004	1.000	1.000		
to Ult	2.714	1.568	1.223	1.089	1.036	1.014	1.005	1.004	1.000	1.000		
Excl Last Pt	1.603	1.205	1.102	1.036	1.020	1.008	1.001	1.000	1.000	1.000		
to Ult	2.272	1.417	1.177	1.068	1.030	1.009	1.001	1.000	1.000	1.000		

#### UM/UIM Property Damage Basic Limits Loss & ALAE Claim Severity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	Including	y 3/31/2022 Cla	im Valuation		Excluding	1					
	Ultimate	Ultimate	Claim	Annual	Ultimate	Ultimate	Claim	Annual			
AY	Loss/ALAE	Claim Ct.	Severity	Trend	Loss/ALAE	Claim Ct.	Severity	Trend			
2012	6,641,552	1,734	3,830	7.5%	6,637,036	1,734	3,828	7.5%			
2013	6,902,697	1,678	4,114	7.1%	6,886,299	1,675	4,111	6.9%			
2014	8,593,420	1,829	4,699	6.2%	8,583,292	1,827	4,698	5.9%			
2015	10,528,114	1,966	5,356	5.4%	10,466,791	1,962	5,335	5.0%			
2016	12,651,279	2,141	5,908	5.2%	12,418,470	2,131	5,828	4.9%			
2017	12,165,408	1,921	6,332	6.0%	11,521,381	1,915	6,016	6.8%			
2018	11,573,350	1,937	5,975	9.7%	11,092,649	1,921	5,776	12.9%			
2019	10,897,450	1,758	6,198	11.8%	10,629,479	1,749	6,077	21.1%			
2020	11,630,342	1,624	7,161	8.3%	11,865,869	1,612	7,361				
2021	12,472,646	1,609	7,753			,	·				
elected Annual Claim Severity Trend: 5.0%											

Selected Annual Claim Severity Trend:



#### NOTES

(1), (5) from Exhibit 6, Page 2 (2), (6) from Exhibit 6, Page 3

- (3) = (1) / (2)(7) = (5) / (6)
- (4) based on exponential fit to (3)

(8) based on exponential fit to (7)

UM/UIM Property Damage

	Basic Limits Reported Loss & ALAE - Age in Months											Ultimate
AY	<u>@15</u>	<u>@27</u>	<u>@39</u>	<u>@51</u>	<u>@63</u>	<u>@75</u>	<u>@87</u>	<u>@99</u>	<u>@111</u>	<u>@123</u>	<u>Ultimate</u>	excl. last point
2012	6,261,811	6,408,568	6,460,686	6,496,980	6,665,375	6,650,188	6,646,874	6,637,919	6,637,036	6,641,552	6,641,552	6,637,036
2013	6,551,288	6,597,571	6,692,711	6,856,818	6,850,535	6,850,790	6,887,559	6,887,215	6,902,697		6,902,697	6,886,299
2014	7,088,530	7,736,843	8,200,378	8,387,230	8,469,181	8,590,820	8,590,336	8,594,563			8,593,420	8,583,292
2015	7,790,181	9,279,323	9,930,504	10,202,472	10,308,406	10,459,770	10,536,754				10,528,114	10,466,791
2016	9,673,739	10,832,432	11,897,770	12,211,013	12,311,751	12,642,793					12,651,279	12,418,470
2017	9,500,879	10,376,064	10,818,773	11,306,949	12,060,864						12,165,408	11,521,381
2018	9,547,485	10,343,857	10,599,496	11,357,951							11,573,350	11,092,649
2019	9,303,835	9,681,202	10,412,975								10,897,450	10,629,479
2020	9,967,332	10,592,776									11,630,342	11,865,869
2021	10,477,025										12,472,646	
Historical Loss Development Factors												
AY	<u>15-27</u>	<u>27-39</u>	<u>39-51</u>	<u>51-63</u>	<u>63-75</u>	75-87	<u>87-99</u>	<u>99-111</u>	<u>111-123</u>	<u>123-Ult</u>		
2012	1.023	1.008	1.006	1.026	0.998	1.000	0.999	1.000	1.001			
2013	1.007	1.014	1.025	0.999	1.000	1.005	1.000	1.002				
2014	1.091	1.060	1.023	1.010	1.014	1.000	1.000					
2015	1.191	1.070	1.027	1.010	1.015	1.007						
2016	1.120	1.098	1.026	1.008	1.027							
2017	1.092	1.043	1.045	1.067								
2018	1.083	1.025	1.072									
2019	1.041	1.076										
2020	1.063											
Weighted	1.081	1.053	1.034	1.022	1.013	1.003	1.000	1.001	1.001	1.000		
to Ult	1.225	1.133	1.076	1.040	1.018	1.005	1.002	1.002	1.001	1.000		
Excl Last Pt	1.084	1.049	1.027	1.010	1.008	1.001	0.999	1.000	1.000	1.000		
to Ult	1.190	1.098	1.047	1.019	1.009	1.001	0.999	1.000	1.000	1.000		

#### UM/UIM Property Damage

Reported Claim Count, Rate Groups A, C, J - Age in Months											Ultimate	
AY	<u>@15</u>	<u>@27</u>	<u>@39</u>	<u>@51</u>	<u>@63</u>	<u>@75</u>	<u>@87</u>	<u>@99</u>	<u>@111</u>	<u>@123</u>	<u>Ultimate</u>	<u>excl. last point</u>
2012	1,711	1,735	1,743	1,744	1,743	1,738	1,737	1,735	1,733	1,734	1,734	1,734
2013	1,626	1,662	1,665	1,678	1,677	1,677	1,677	1,677	1,678		1,678	1,675
2014	1,701	1,787	1,815	1,825	1,826	1,831	1,830	1,831			1,829	1,827
2015	1,767	1,916	1,960	1,964	1,965	1,966	1,969				1,966	1,962
2016	1,927	2,076	2,125	2,131	2,135	2,146					2,141	2,131
2017	1,783	1,877	1,902	1,918	1,925						1,921	1,915
2018	1,831	1,906	1,915	1,940							1,937	1,921
2019	1,650	1,722	1,753								1,758	1,749
2020	1,513	1,599									1,624	1,612
2021	1,510										1,609	
Historical Claim Count Development Factors												
AY	<u>15-27</u>	<u>27-39</u>	<u>39-51</u>	<u>51-63</u>	<u>63-75</u>	75-87	<u>87-99</u>	<u>99-111</u>	<u>111-123</u>	<u>123-Ult</u>		
2012	1.014	1.005	1.001	0.999	0.997	0.999	0.999	0.999	1.001			
2013	1.022	1.002	1.008	0.999	1.000	1.000	1.000	1.001				
2014	1.051	1.016	1.006	1.001	1.003	0.999	1.001					
2015	1.084	1.023	1.002	1.001	1.001	1.002						
2016	1.077	1.024	1.003	1.002	1.005							
2017	1.053	1.013	1.008	1.004								
2018	1.041	1.005	1.013									
2019	1.044	1.018										
2020	1.057											
Weighted	1.050	1.013	1.006	1.001	1.001	1.000	1.000	1.000	1.001	1.000		
to Ult	1.073	1.022	1.008	1.002	1.002	1.000	1.000	1.000	1.001	1.000		
Excl Last Pt	1.049	1.013	1.004	1.000	1.000	1.000	0.999	0.999	1.000	1.000		
to Ult	1.065	1.016	1.003	0.998	0.998	0.998	0.998	0.999	1.000	1.000		