

**Texas Automobile Insurance Plan Association
2019 Private Passenger Auto and Commercial Vehicle Rate Filing
Explanatory Memorandum**

Introduction

TAIPA is proposing an estimated overall average rate level change of +4.9% for private passenger cars. 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.

TAIPA is also proposing changes in base rates for commercial vehicles that will generate an estimated overall change of +4.8% in commercial vehicle premiums. No changes in any rate factors for commercial vehicles are being proposed in this filing.

Background

In 2004 over 12,000 private passenger cars were being insured through TAIPA. The following Table 1 presents the number of Texas assigned risks reported for 2014 through 2017. For the latest four years, TAIPA’s insured exposure counts have remained very low and relatively stable from year to year.

The 2017 exposure counts are the latest available statistical data. The private passenger counts are reported in the Texas QDE Report. The commercial vehicle exposure counts are provided by the ISO. The exposure counts in Table 1 are earned car years (i.e., the equivalent of one vehicle insured for 12 months) for the BI Liability coverage.

Table 1: TAIPA Bodily Injury Exposure Counts

<u>Type of Vehicle</u>	<u>BI Liability Earned Car Years</u>			
	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Private Passenger Autos	1,459	1,145	1,007	1,031
Non-Zone Rated:				
Trucks, Tractors, Trailers	291	350	300	239
Taxis, Limousines	180	228	190	144
School, Church Buses	91	101	83	65
Other Buses	65	121	108	85
Van Pools	0	0	1	1
Zone Rated:				
Trucks	0	0	0	0
Public Autos	0	0	0	0

As would be expected, the exposure counts for the PD Liability coverage are nearly identical to the BI Liability exposure counts shown in Table 1 for all types of vehicles. The TAIPA exposure counts for the private passenger Personal Injury Protection and Uninsured Motorist coverages are significantly less than the BIPD Liability exposure counts. For example, in 2017 there were only 73 PIP earned private passenger cars, 160 UMBI earned cars, and 160 UMPD earned cars. Only about one-third of the trucks insured through TAIPA are insured for either PIP, UMBI, or UMPD.

With only .01% of the insured private passenger cars in Texas being insured through TAIPA, we conclude that the voluntary competitive market is serving the vast majority of vehicles insured in Texas and that TAIPA is functioning as the legislature originally intended, as the insurer-of-last-resort. While a low count of insureds for TAIPA is the desirable situation, the low count does create challenges to traditional ratemaking procedures. The low count of insured vehicles means there are not enough historical claim losses to provide a credible database of assigned risk claim losses that are necessary to apply traditional actuarial ratemaking procedures.

TAIPA's Ratemaking Procedures

A decade ago when TAIPA had a much larger claim loss database, it used a classical actuarial ratemaking procedure that involved adjusting past premiums to the present rate level and the projection of past losses and expenses to future expected cost levels. When TAIPA's actuarially determined rate change indications were deemed to be less than 100% credible, the TDI required that the complement of the credibility be applied to the selected annual loss trend for each coverage. In other words, when the traditional actuarial ratemaking procedures were applied to TAIPA data with zero credibility, the resulting indicated rate change was set equal to the historical trend in claim losses for each coverage.

Due to the low count of TAIPA insured vehicles and the lack of any actuarial credibility in TAIPA's claim loss data, it became apparent in 2015 to TAIPA and to the TDI that there was a need to simplify TAIPA's past ratemaking procedures. TAIPA refers to the new ratemaking procedure as "indexing" to the historical annual change in industrywide Texas loss costs. The procedure could also be described as tracking the annual trend in claim losses, essentially replicating the procedure used by actuaries when the sophisticated actuarial rate change indications are deemed to have zero actuarial credibility.

It is important to note that TAIPA is not projecting future loss trends. TAIPA is monitoring how loss costs have actually changed in the recent past and is then adjusting its rates so as to track those historical changes. In other words, TAIPA's rates will lag by one year the actual loss cost changes, rather than projecting future expected loss cost changes. These actual historical changes in loss costs which TAIPA is tracking are commonly referred to as "loss trends" and are shown in the attached Exhibit VI.

In addition to monitoring the annual historical loss trends in the Texas voluntary private passenger insurance market, TAIPA has also been tracking the actual annual change in the 3-year average loss costs for the Texas voluntary market. The 3-year average loss costs used were the reported incurred losses for the three latest available accident-years, unadjusted for estimated future loss development and unadjusted for estimated future trends. After monitoring these data for the past four years, TAIPA has

concluded that the annual change in the 3-year average loss costs adds no value to its analysis of loss cost trends. In our judgment, a regression analysis of loss cost trends over the last three years (i.e., 3-year linear trend) is the most reliable indication of the historical annual change in loss costs. The regression analysis recovers the year-to-year random variations in the data and exactly replicates the ratemaking procedure preferred by the TDI when the filer’s loss data has zero credibility.

Reliance on the Texas voluntary loss cost trend data minimizes the possibility that there will be large swings in the magnitude of future TAIPA rate changes. If the industrywide data are distorted by an unexpected anomaly in the data, or if economic conditions change dramatically so as to significantly accelerate Texas loss trends, then TAIPA’s actuary will need to adjust the TAIPA ratemaking procedure. But if economic conditions remain relatively constant into the future, TAIPA expects its future annual rate changes to be in the range of 0% to 5%. This will be the fifth filing since 2015 that TAIPA’s proposed overall rate change has been 5% or less.

Proposed Private Passenger Rates

Rate Level Changes

The following Table 2 summarizes the changes in private passenger loss cost trends in Texas which TAIPA relied on when selecting its proposed private passenger rate level changes.

Table 2: Private Passenger Loss Cost Changes

	(1)	(2)	(3)	(4)
<u>Coverage</u>	<u>1-Year Paid P.P. Change</u>	<u>3-Year Linear Trend</u>	<u>Proposed Rate Level Change</u>	
BI Liability	+7.3%	+9.8%	+5.0%	
PD Liability	+4.2%	+5.7%	+4.9%	
PIP	+2.4%	+4.0%	+4.0%	
UM-BI	+8.9%	+12.0%	+4.3%	
UM-PD	-2.7%	+2.1%	+1.7%	
Total			+4.9%	

The “1-Year Paid Pure Premium Change” in Column (2) is the actual change in the voluntary market’s 2017 paid pure premium as compared to the 2016 paid pure premium. These data are presented in the loss trend charts attached as Exhibit VI and were derived from data in the QDE Report. As an example, the BI Liability 1-year change of +7.3% was calculated by dividing \$152.57 by \$142.20 in Exhibit VI, Page 1, Column 6.

The “3-Year Linear Trend” in Column (3) is the actual average change, as measured by linear regression, in the paid pure premium quarterly data for 2015 through 2017, as shown in the attached Exhibit VI.

Rate Factor Changes

For many years TAIPA used the old “Texas Benchmark” territory and class rate factors. After Texas abandoned the benchmark rating approach, it was the TDI’s preference that TAIPA continue to use the old benchmark rate factors for private passenger autos. Over the years, TAIPA’s private passenger rate factors became increasingly out-of-step with the rate factors generally used in the voluntary private passenger auto insurance market.

Beginning with its 2015 rate filing, TAIPA introduced incremental changes to its territory and class rate factors in an effort to make its rate factors more consistent with industrywide Texas loss cost data and more consistent with the rate factors used by voluntary insurers in Texas. After three successive rate filings which incorporated territory and class rate factor changes, we judge that no further changes in rate factors are necessary with this rate filing. We will continue to monitor the voluntary loss cost data and the rate factors being used in the voluntary market, and propose appropriate changes to the territory and class rate factors in future rate filings when necessary.

The following Table 3 summarizes the premium effect of the proposed rate factor changes and the base rate changes.

Table 3: Proposed Private Passenger Rate Changes

<u>(1)</u> <u>Coverage</u>	<u>(2)</u> <u>Average</u> <u>Base Rate Chg.</u>	<u>(3)</u> <u>Terr. Factor Chg.</u>	<u>(4)</u> <u>Class Factor Chg.</u>	<u>(5)</u> <u>Total Rate Chg.</u>	<u>(6)</u> <u>2017 TAIPA E.P.</u>
BI Liab.	+5.0%	0.0%	0.0%	+5.0%	\$400,314
PD Liab.	+4.9%	0.0%	0.0%	+4.9%	369,886
PIP	+4.0%	0.0%	0.0%	+4.0%	18,398
UM-BI	+4.3%	0.0%	0.0%	+4.3%	18,843
UM-PD	+1.7%	0.0%	0.0%	+1.7%	10,860
Total	+4.9%	0.0%	0.0%	+4.9%	\$818,301

Notes:

Col (2) – Source: Exhibits I – V

Col (6) – Source: QDE Report

Commercial Vehicle Rates

Basis for Proposed Rate Changes

For several years prior to its 2015 rate filing, TAIPA's commercial vehicle rates were derived directly from the voluntary market loss costs filed in Texas by the ISO. During that era, TAIPA subscribed to the ISO loss costs and the actuarial staff of the TDI used those loss costs to calculate TAIPA's commercial vehicle rate schedule. By 2015 this approach was no longer cost-effective for TAIPA. With so few insured commercial vehicles, the ISO subscription fees expressed on a per insured vehicle basis were no longer economically reasonable.

Beginning with its 2015 rate filing, TAIPA began tracking the annual change in the voluntary market's loss costs and using those loss cost changes as the basis for its annual rate changes. TAIPA originally anticipated that the annual change in the three-year average loss costs for the voluntary commercial vehicle market would provide a sufficiently reliable and credible indication of the actual trend in Texas loss costs.

TAIPA's original anticipation of reasonable stability in the voluntary market's three-year average loss costs has never been realized. Instead we have observed large, random swings in the three-year loss costs for commercial vehicles. Some of the random variation was undoubtedly due to TAIPA's need to subdivide the aggregate commercial vehicle loss data into eleven (11) categories of commercial vehicles.

For the last three rate filings TAIPA has attempted to remove some of the random variation by normalizing the data for distribution shifts between territories and for the effects of year-to-year changes in the insurers that report their data to the ISO. None of our past attempts to remove distortions in the commercial loss cost data have been fruitful. Even after our attempts to remove some of the variations in the loss cost data, the adjusted three-year average loss costs have been highly variable with insufficient credibility for ratemaking purposes.

With this filing TAIPA is no longer attempting to remove any distorting effects of either the territory distribution shifts or the year-to-year changes in insurers that report commercial loss data. TAIPA is now relying more heavily on the year-to-year percentage changes in the commercial vehicle loss costs filed with the TDI by the ISO. In TAIPA's judgment the percentage change in ISO loss costs, filed with and accepted by the TDI, provides the most reliable measure of both the magnitude of the industrywide annual change in commercial vehicle loss costs in Texas and the magnitude of the change in commercial vehicle rate levels in the voluntary market.

It must be emphasized that TAIPA is not adopting ISO loss costs, as it did prior to 2015, or in any way developing its rate schedule or rate change indications derived from ISO loss costs. TAIPA does not review or refer to ISO's filed loss costs. TAIPA is simply monitoring the overall annual percentage change in commercial vehicle loss costs reported by ISO in its loss cost filings with the TDI. It is TAIPA's judgment that the annual percentage change in ISO loss costs approximates the annual change in the industry's loss costs for commercial vehicles.

In this filing TAIPA is continuing to present the annual change in the voluntary market's 3-year average loss costs by type of commercial vehicle and by coverage, just as it has in the past. The high degree of year-to-year variability in the annual changes in the 3-year average loss costs makes the data non-

credible for determining an overall average commercial vehicle rate change. TAIPA is continuing to present the 3-year average loss cost data solely because these data were reviewed when judgmentally selecting the proposed rate change for each type of commercial vehicle. The history of changes in the 3-year average loss costs may provide an indication of the general direction, but not the precise magnitude, of the industry's loss costs and TAIPA's proposed rate changes.

If the TDI prefers a commercial vehicle rate change for each coverage that is uniform across the eleven (11) categories of commercial vehicles for each coverage, TAIPA would agree to that approach, rather than judgmentally varying the rate changes by type of vehicle.

In 2017 ISO filed loss costs in Texas for commercial trucks that produced a combined increase for the liability coverages of 10.7%. ISO's 2018 loss cost filing also resulted in a 10.7% increase for the combined liability coverages for commercial trucks. The combined effect over two ISO filings has been an increase of 22.5%. In contrast, TAIPA's last two commercial vehicle rate filings produced a combined two-year increase of only +5.7%.

The fact that ISO's loss costs for commercial vehicles insured in the voluntary market have been recently increasing 10.7% per year provides reasonable actuarial support for TAIPA's proposed commercial rate change of +4.8%.

Proposed Rate Changes

The following Table 4 provides a summary of TAIPA's proposed commercial base rate changes by type of commercial vehicle. TAIPA is proposing only base rate changes with no changes being proposed to any territory or class rate factors. The proposed base rates and the base rate changes for each territory are presented in Exhibits VII – XVII. The calculation of the 3-Year Loss Cost data in Table 4 is presented in Exhibit VIII.

Table 4: Proposed Commercial Vehicle Rate Changes

<u>Coverage</u>		<u>3-Year Loss Cost</u>				<u>Proposed Rate Change</u>
		<u>2014-2016</u>	<u>Annual Change</u>	<u>2015-2017</u>	<u>Annual Change</u>	
Non-Zone Rated:						
Trucks	BI	\$10.696	+9.2%	\$11.209	+4.8	+5.0%
	PD	8.659	+3.7	9.151	+5.7	+5.0
	PIP	.415	+8.6	.383	-7.7	0.0
Taxis/Limos	BI	8.006	+17.5	12.421	+55.1	+5.0
	PD	7.659	+2.7	13.240	+72.9	+5.0
	PIP	1.378	-20.6	1.297	-5.9	0.0
Sch./Ch. Buses	BI	4.288	-0.1	3.993	-6.9	0.0
	PD	4.803	+7.9	4.342	-9.6	+5.1
	PIP	.695	+4.0	.596	-14.2	0.0
Other Buses	BI	15.349	+32.2	14.921	-2.8	+5.0
	PD	12.717	+45.7	12.506	-1.7	+5.0
	PIP	1.533	+84.9	1.820	+18.7	+5.3
Vans	BI	18.100	+38.1	5.885	-67.5	+5.0
	PD	9.568	-21.6	6.171	-35.5	0.0
	PIP	1.354	-12.0	.706	-48.9	0.0
Zone Rated:						
Trucks Zone 9	BI	26.074	+41.3	28.765	+10.3	+5.0
	PD	19.144	+6.9	22.720	+18.7	+5.0
Trucks Zone 13	BI	32.808	+40.6	33.171	+1.1	+5.0
	PD	18.790	-6.1	17.134	-8.8	0.0
Trucks Zone 43	BI	22.228	+25.6	21.515	-3.2	+5.0
	PD	16.789	+11.4	16.904	+0.7	+5.0
Public Autos Zone 9	BI	15,370	-9.5	26.682	+73.6	+5.0
	PD	35.174	+22.5	25.184	-28.4	+5.1
Public Autos Zone 13	BI	83.164	+145.9	50.822	-38.9	+5.0
	PD	35.593	-49.3	13.461	-62.2	0.0
Public Autos Zone 43	BI	38.346	+213.9	51.144	+33.4	+5.0
	PD	3.459	+10.2	2.708	-21.7	+5.0
Total			+9.3		+3.9	+4.8%

As previously discussed, the year-to-year variability in the 3-year average loss costs provide an unreliable indication of an appropriate commercial vehicle rate change for TAIPA. The problem of data variability is even more severe for the UMBI and UMPD coverages. As a result, TAIPA has not proposed a change in its commercial vehicle UMBI and UMPD rates for the previous four years. With this filing,

TAIPA is proposing a \$1 increase in its UMBI rates and a \$1 increase in its UMPD rates. Since the injuries in a BI Liability claim are similar to the injuries in an UMBI claim, and damages in a PD Liability claim are similar to damages in an UMPD claim, TAIPA is proposing UMBI and UMPD rate changes that are similar to the proposed rate changes for BI Liability and PD Liability.

In order to calculate the overall average rate level for commercial vehicles, TAIPA needs a premium distribution by type of commercial vehicle. Such data are not provided in the ISO data reports. TAIPA derives the needed premium distribution based on its estimate of “base premiums”, which are defined as the number of exposure units times the current average base rate for each coverage and type of vehicle. The calculation of the premium distribution used in the following Table 5 is presented in Exhibit XIX.

Table 5: Total Commercial Rate Change

<u>Coverage</u>	<u>Proposed Premium Change</u>	<u>TAIPA Premium Distribution</u>
BI Liability	+4.8%	.552
PD Liability	+5.0%	.404
PIP	+1.3%	.014
UMBI	+3.6%	.014
UMPD	+3.2%	.016
All Coverages	+4.8%	1.000