# THE IMPACT OF LAW CHANGES ON RATEMAKING DATA FOR PRIVATE PASSENGER AUTOMOBILE INSURANCE

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## 1. Introduction

Various types of data are used in determining statewide rate level indications ("RLI") for private passenger automobile insurance. Some major types of data used in RLI's are the base data, loss development data, trend data, and data used to measure investment income. In this paper, the impacts of several hypothetical law changes on these various types of ratemaking data are analyzed. Beginning with actual Allstate data, the impact of the law change on that data is modelled, allowing the overall impact of the law change on the various types of ratemaking data to be determined.

This paper is intended primarily for students of the CAS, but also will serve as a ready reference for experienced actuaries working in a ratemaking capacity. Although the examples presented in this paper are from private passenger automobile, the applications and conclusions can be applied to other lines of business.

In an attempt to give this subject adequate coverage, yet keep it manageable, three different law changes are examined.

 Bodily Injury liability ("BI") coverage is analyzed for a change from a tort liability system to a strong verbal threshold restricting the right to sue. A

choice no-fault option is also examined.

- 2. Collision coverage is examined for a law change that mandates every policy be renewed with \$500 deductible. For simplicity, this paper assumes that all policies were previously written with a \$200 deductible and no "buy-down" is allowed. In practice, most insureds will not exercise the option to change coverage but stay with the default coverage option.
- Personal Injury Protection coverage is examined for a law change that mandates a \$250 deductible instead of no deductible.

## 2. Initial Data and Notation

Appendix 1 contains the definition and development of the notation and general assumptions used in this paper. Appendix 2 displays the data and results of the model for BI coverage. Exhibit 1, page 1 of Appendix 2 presents accident year payments by quarter in the column labeled "Amount Paid". Also presented are the "Cumulative Amount Paid" (Column 2) and "Loss Reserves" in Column 3.

In order to shorten the length of this paper, Collision and Personal Injury Protection ("PIP") data was excluded. The exhibits for these coverages, similar to Appendix 2, are available from the author upon request.

## 3. Bodily Injury - Verbal Threshold

In this section all exhibits are contained in Appendix 2, except where otherwise noted. The verbal threshold will essentially eliminate small claims from the insurance system. Further assumptions regarding the BI law change are:

- The overall reduction in pure premium due to the law change is 30%.
- 2. The law change is effective January 1, 1995.

3. The law change applies to all outstanding policies.

Data under a tort law is used to derive Exhibit 1, page 1. Column 1 of Exhibit 1, page 2 was created by beginning with the payment pattern on Exhibit 1, page 1 and assuming that the verbal threshold eliminates the first 30% of paid loss. Paid loss data by payment duration between accident date and payment date, and by size of loss was used to determine the amount and timing of payments eliminated by the verbal threshold. All payments under \$10,000 were eliminated, along with about 90% of the losses between \$10,000 and \$15,000. A portion of this data is included for reference in Appendix 3.<sup>1</sup>

#### Base Data

Assume the base data used in ratemaking is accident year. Is it necessary after a law changes to adjust base data to be used in a statewide rate level calculation? The answer is maybe. In order to make that evaluation, the ratemaker must know the

<sup>&</sup>lt;sup>1</sup> The data in Appendix 3 is included with Allstate's permission and represents data for BI coverage under a tort law.

period of base data, the effective date of the law change, if the law change applied to all outstanding policies or was applied at policy renewal, and if premiums were previously adjusted. The key determining factor is whether or not the premium and loss base data match. This paper will <u>not</u> deal with the costing of a law change. If the law change has not yet been implemented, then it must be costed and that is beyond the scope of this paper. <u>Base data is 100% pre-law change</u>

If the rates already reflect law change impact and the ratemaker is interested in a prospective rate level review, simply assuming that the previously determined price impact of the law change is proper would allow the ratemaker to proceed without adjustment of the base data. Of course, the ratemaker could adjust both losses and premiums to reflect this previously determined impact.

### Base data is 100% post-law change

When the base data is completely reflective of the law change, no adjustments are necessary. In this paper, the base data is 100% post law change for accident years 1995 and subsequent.

### Base data is a mix of pre-law change and post-law change

An adjustment may be necessary. In order to determine this, a complete understanding of how the law change was implemented from both a premium and loss perspective is necessary. If the base data is completely prior to 1995 or subsequent to 1995, the previously stated general conclusions apply. However, the case

where the base data is 1995 deserves further discussion.

Assume that a 30% premium reduction was implemented for policies effective on or after 1/1/95 to reflect the loss reduction due solely to the law change. Assume, just for this example, that the law change does not apply to outstanding policies, but only applies as policies renew.

Under the assumptions of this example, no adjustment is necessary. Both the calendar year earned premium and the accident year incurred losses will be half under the old law and half under the new law. Using the hypothetical data from Exhibit 1, pages 1 and 2 accident year 1995 pre-law incurred losses would be \$50 (3 of \$100) and post-law losses would be \$35 (3 of \$70). Assuming rate adequacy and a 20% expense ratio, the pre-law and post-law earned premium would have been \$62.5 and \$43.75, respectively. Using the loss ratio method of determining an RLI and the equation: RLI = ((EP/IL)/(1 - E)) - 1, where EP is Earned Premium, IL is Incurred Loss, and E is the expense ratio as a percent of premium. The impact of the law change can be examined. A law change, which applies only to policies as they renew, can be represented by a diagonal line:





The pre-law RLI is ((50/62.5)/.8)-1 = 0%, and the post-law RLI is ((35/43.75)/.8)-1 = 0%, and combining the data, the RLI is ((85/106.25)/.8)-1 = 0%. Thus, under these assumptions no adjustments to the base data are necessary as a result of the law change.

Instead, return to the base assumption that the law change is deemed to apply to all outstanding policies on 1/1/95, with all other assumptions unchanged including the 30% decrease in premiums as policies renew. The loss exposure can be represented by a vertical line, while the earned premium impact is still represented by a diagonal line:



1995

The combined RLI without adjustment is:

((70/106.25)/.8) - 1 = -17.6%

However, we know that the correct prospective RLI is 0%. The discrepancy arises because the 30% premium decrease was applied upon renewal while the 30% loss reduction attributable to the law change is completely realized during accident year 1995. Thus. the premiums and losses do not match, and it would be necessary and proper to adjust the premiums completely to their post-law level.

In summary, as long as the premium and losses in the base data are equally reflective of the law change, no adjustments are necessary. If the premium and losses in the base data are not equally reflective of the law change, then some adjustment is required.

#### Trend Data

Since there is one exposure, the ultimate incurred pure premium for each accident year before the law change is \$100. For simplicity, assume the trend data will be calendar year paid pure premium. Twelve month moving paid pure premium trend data can be developed. It is a relatively simple exercise to expand the model to severity and frequency separately, but it is not essential for the purposes of this paper.

Exhibit 2, page 1 displays twelve month moving paid pure premium data. In order to analyze the impact of the law change, the data displayed on Exhibit 2, page 1 is fit to an exponential curve. Exhibit 2, page 2 displays three examples of the calculation. The resulting annual trend for all the data evaluation periods is displayed on page 3 of Exhibit 2.

The expected pure premium trend for this data is 0% because it is assumed that there is no frequency and no severity trend. This allows the quantification of the impact of the change to a verbal threshold on BI trend data. Failure to account for the impact of the law change on trend data can result in an error of up to 10.6% on a 12 point basis and 12.4% on a 6 point basis depending on the duration between the effective date of the law

change and the evaluation date. Furthermore, from this model it can be concluded that the trend data has a measurable bias for up to 8 years after the law change.

#### Loss Development Data

Paid loss development factors can be determined easily from column (2) of Exhibit 1. Paid loss development triangles are derived by the formula developed in Appendix 1. Pre-law and the post-law paid development triangles are displayed on pages 1 and 2 of Exhibit 3, respectively. A comparison of the indicated factors from these two exhibits (see Exhibit 3, page 4) clearly leads to the conclusion that the law change significantly changes the payment pattern and it is clearly inappropriate to apply paid loss development factors from pre-law data to base data that is post-law change. The paid development factor for 5 quarters to ultimate changes from 5.319 to 8.140. Therefore, the use of the paid loss development factors based on pre-law patterns applied to post-law change base data will understate ultimate incurred losses by almost 35% (1 - (5.319/8.140)).

When the loss development factors are based on data that is a mix of pre-law and post-law, the analysis is a bit more complicated. Assume that the base data is paid loss from accident years 1996 and 1997 evaluated as of March 15, 1998 ( $P_{N,9}$ = \$ 28.6, and  $P_{N,5}$  = \$ 8.6). In a loss development triangle,. accident year 1995 development from 5 to 9 quarters and from 9 to 13 quarters, and accident year 1996 development from 5 to 9 quarters would be post-law change. All other observations in

the triangle would be pre-law change. This paid loss development triangle is shown on Exhibit 3, page 3. The indicated paid loss development factor would be 2.117 and 6.532 for accident years 1996 and 1997, respectively. The correct factors would be 2.448 and 8.140, respectively. The ultimate accident year losses for both these accident years are \$70, because both accident years are post-law change. However, typical ratemaking procedures would develop the following estimate of ultimate incurred loss:

Accident year 1996 paid loss = \$28.6 Accident year 1997 paid loss = \$8.6 Paid loss development factor 9 quarters to ultimate = 2.117 Paid loss development factor 5 quarters to ultimate 6.532 Ultimate accident year 1995 incurred losses: \$60.5

Ultimate accident year 1996 incurred losses: \$ 56.2 The ultimate incurred losses in this example are understated by 13.6% and 19.7% for the two accident years, respectively.

Incurred loss development factor evaluation is more complicated because it requires assumptions on the development patterns both pre- and post-law change. If loss reserves are adequate before and after the law change, then incurred loss development factors will be 1.000 and the law change will not impact the use of incurred loss development factors.

#### Investment Income Data

Although much potential bias exists, ratemakers have utilized the ratio of reserves to incurred losses to estimate the amount of investment income potential that exists from the investment of premiums. The reserve to incurred ratio is not generally an accurate measure of investment income potential. This is recognized by both the actuarial and academic communities. Dr. Cummins states: "The k factor represents only a crude approximation of the discounting process that can lead to serious errors when estimating premiums (Myers and Cohn (1987)."2 In his study note on the CAS Part 6 Examination Syllabus, Dr. Ira Robbin also recognizes the shortfall: "However, since calendar year results are an inherently retrospective summary of contributions from current and prior policy years, their applicability in prospective ratemaking could be challenged. Tn particular, the prior growth history and loss experience of the line could distort answers."3

The development of the reserve to incurred ratios for BI coverage is displayed on Exhibit 4, page 1. The incurred loss for accident year 1994 is \$100, and for accident year 1995 and

<sup>&</sup>lt;sup>2</sup>Journal of Risk and Insurance, July 1991, J. David Cummins, "Statistical and Financial Models of Insurance Pricing and the Insurance Firm." pp 286-287. The k factor referred to in this quote is the reserve to premium ratio. However, the comment is equally applicable to reserve to incurred ratios.

<sup>&</sup>lt;sup>3</sup>Casualty Actuarial Society Syllabus of Examinations, 1992, Part 6, Study Note Reading: Robbin, I. - "The Underwriting Profit Provision", p. 13.

subsequent is \$70. Since accidents are equally distributed throughout the year, incurred losses for the fiscal accident years ending 3/31/95, 6/30/95, and 9/30/95 are \$92.5, \$85 and \$77.5, respectively. The reserve to incurred ratio increases 25% from 12/31/94 to 12/31/95 (2.00 to 2.51), because incurred losses under the new law are immediately reduced while the reserves gradually reflect the new law over 25 quarters or 6¼ years. The true reserve to incurred ratio under the new law is 2.24, thus using the incurred to reserve ratio to measure investment income in an RLI can overstate the true investment income by up to 12.0% (2.51/2.24).

A superior method of measuring the investment income potential of policyholder supplied funds is a discounted cash flow of the policy transaction. For simplicity, it is assumed that all expenses are paid and all premium is collected on the policy effective date. Policy year loss payment patterns are superior because ratemaking is always done for a set of policies. Accident year patterns have already been developed and are used here for illustrative purposes. The average effective date of the policies providing coverage for losses occurring in an accident year under an annual policy is January 1 of that year. Since it is assumed in this paper that accidents and policies are equally distributed throughout the year, it is proper to discount to the average premium collection date (the beginning of the accident year).

The cash flow calculations are derived on Exhibit 4, page 2. It is assumed that the average payment date is half way through the quarter. The difference between the discounted payments and undiscounted payments yield the investment income opportunity of the loss portion the premium. Using a 6% annual yield, the investment income opportunity is 13.9% under the old law and 15.1% under the new law. Until the payment pattern data fully recognizes the new law an adjustment is necessary. Using the old payment pattern understates the investment income potential (13.9% vs. 15.1%).

### Sensitivity of the Projected Payment Pattern

The original model assumes all small losses are eliminated from the system by a change from a tort system to a verbal threshold. This was done by using the distribution in Appendix 3. Two other post-law change distributions were used to test whether the results of the model were sensitive to the chosen post-law distribution. The first is based on the current distribution of another state where the data was completely under a verbal threshold. These results are shown in Appendix 4. Using the distribution of this other state removes more of the earlier payments and less of the later payments from the accident year. This makes the impact of the law change greater than under the model in Appendix 2. The impacts, however, are not significantly different.

In Appendix 5, the data from Appendix 2 is used to model what would happen under a choice no-fault system where 20% of the

exposures select the pre-law system and 80% select the verbal threshold. This was accomplished by weighing Column 1 of Exhibit 1, page 1 and Column 1 of Exhibit 1, page 2 (from Appendix 2) 20% and 80%, respectively. The impact of the law change under a choice system is less by the proportion of exposures that do not convert to the verbal threshold.

#### <u>Conclusion</u>

The implementation of a verbal threshold obviously creates significant distortions in BI ratemaking data for years. This includes the base data, trend data, loss development data, and investment income data. The accident year payment pattern is a function of coverage in effect, the environment, the economy and anything else that would affect how much is paid and when. Thus, it is impossible to isolate the sole impact of a law change on a payment pattern. The model in this paper attempts to quantify the impact of the law change on the various ratemaking data. The results of the model can be used by ratemakers as a guide when confronted with ratemaking data that is impacted by a law change.

## 4. Collision - Mandatory Deductible roll

The same techniques used to evaluate the BI law change are used for collision coverage. The mandatory deductible roll for collision coverage eliminates the first \$250 of each payment. Since, the payments for collision coverage are made relatively quickly after the accident occurs, the underlying payment pattern

remains similar after the law change except that each payment is reduced by the amount of the deductible.

#### <u>Base Data</u>

The general conclusions in the BI section hold true for collision coverage under a deductible roll.

### Trend Data

The impact of a deductible roll on trend data is significant. Based on the results of the model, failure to account for the impact of the law change on trend data could result in an error of up to 11.1% on a 12 point basis and 19.6% on a 6 point basis depending on the length of time between the end point of the trend data and the effective date of the law change. A significant influence from the law change remains for about three and a half years after the law change (see Exhibit 2, page 2).

Using the assumed pre-law and post-law change distributions, the trend is biased upward after a certain point because of larger subrogation recoveries under the prior law occur with a lower amount of claim payments under the new law.

#### Loss Development Data

The impact is minimal, because claims are paid quickly.

#### Investment Income Data

Again, the impact is minimal because claims are paid quickly.

#### Conclusion

The major influences of a deductible roll on ratemaking data for collision coverage are for base data and trend. Loss development and investment income are not significantly impacted because

payments are generally made very quickly for this coverage.

## 5. PIP - Mandatory Deductible roll

The reason this type of law change was chosen was to contrast the impact of a deductible roll between short and long tail coverages. For a long tail coverage (PIP), the deductible roll impacts loss development and investment income data in addition to the base data and trend data.

#### Base Data

The general conclusions in the BI section hold true for PIP coverage under a deductible roll.

#### Trend Data

The impact of a deductible roll on trend data is significant. Failure to account for the impact of the law change on trend data can result in an error of up to 7.5% on a 12 point basis and 12.6% on a 6 point basis depending on the length of time between the end point of the trend data and the effective date of the law change. A significant influence from the law change remains for about three and a half years after the law change.

### Loss Development Data

The impact is significant. The paid loss development factors change from 2.45 to 3.82 and from 1.58 to 1.76 for the 5 and 9 quarter evaluations, respectively.

#### Investment Income Data

The reserve to incurred ratios move from 2.18 to 2.59 within a year after the law change. The measurement of investment income

from the discounted value of the policy transaction increases from 14.4% to 16.1%. This difference is significant enough that is must be considered by the ratemaker.

## Conclusion

A deductible roll for a longer tail line also impacts paid loss development data and investment income data.

### DESCRIPTION OF NOTATION

The data and model will be presented for Bodily Injury Liability ("BI") coverage in Appendix 2. The model was also used for Collision coverage and Personal Injury Protection ("PIP") coverage. Accident year paid loss patterns are presented for BI coverage in Appendix 2 on Exhibit 1, page 1. The "Amount Paid" (P) data has been derived from actual Allstate data.<sup>1</sup> The sum of the accident year payments pre-law change through 40 quarters of evaluation is \$100, which is assumed to be the ultimate incurred loss for each accident year. For simplicity of analysis, the following assumptions hold throughout this paper:

- There is no change in the volume of business. For simplicity of the trend data calculations it is further assumed that there is always only one exposure each year.
- 2. There is no frequency or severity trend.
- Effective dates of policies are equally distributed throughout the year.
- Accident occurrence is also equally distributed throughout the year.

With Allstate's permission, actual accident year paid loss patterns at quarterly evaluations were used to create column 1 of Exhibit 1, page 1 of each Appendix. The selected amounts as a percent of ultimate paid loss for each quarter were based on three year averages of actual data and applied to \$100 to produce a payment pattern in dollars.

- Payments made in each quarter occur such that the average payment date (based on dollars) is mid-way through the quarter.
- 6. All policies have an annual term.
- All expenses vary directly with premium and are 20% of premium.

Various ratemaking data can be derived from these assumptions and the accident year payment patterns. The "Cumulative Amount Paid" (CP) is the sum of all amounts paid up to and including the end of the evaluation quarter. "Loss Reserves" (R) is 100 minus the cumulative amount paid.<sup>2</sup>

For purposes of this paper, let:

### Subscripts:

- i represent an accident year.
- j represent an evaluation date in quarters of a year,
  where j=0 at the beginning of the accident year.
- k,1 represent an actual evaluation date, where k is the quarter and 1 is the year. For example, 3,96 is the 9/30/96 evaluation.

 $<sup>^{2}</sup>$ At the 1, 2, and 3 quarter evaluations 1/4, 1/2 and 3/4 of the ultimate incurred loss are used in lieu of the ultimate incurred loss. For collision coverage the anticipated salvage and subrogation for the accident year is added to the equation for determining R, otherwise the reserves would be negative.

## <u>Variables:</u>

## 1. Basic Model

- $P_{i,j}$  = the payments from accident year i made during the quarter ending at the j evaluation.
- ${\rm CP}_{i,j}$  = the sum of all accident year i paid losses through the j quarter evaluation.
- $R_{\rm i,j}$  = the reserves from accident year i evaluated at the end of quarter j.
- U = Ultimate accident year loss

Then,

$$CP_{i,j} = \sum_{n=1}^{j} P_{i,n}, \text{ and}$$
  
$$R_{i,j} = U - C_{i,j}.$$

## 2. Trend

 $CYP_{k,1} = payments made during the 4 quarter moving$ period ending k quarter of year 1.Then,  $CYP_{4,94} = P_{94,1} + P_{94,2} + P_{94,3} + P_{94,4} + P_{93,5} + P_{93,6} + P_{93,7} + P_{93,8} + P_{92,9} + \dots + P_{85,49} + P_{85,40}.$ 

 $<sup>^3</sup>$  This equation only holds for j > 3. For j = 1, 2 and 3, 1/4, 1/2, 3/4 of U are substituted for U. Also, for collision coverage anticipated salvage and subrogation needs to be added to U, otherwise the reserves would be negative.

Since there is no change in the volume of business or losses, it follows that  $P_{94,j}=P_{93,j}=P_{92,j}=\ldots=P_{85,j}$  , for each j.

Therefore, 
$$CYP_{k,1} = \sum_{j=1}^{40} P_{i,j} = CP_{i,40} = 100$$
,

for all years (i) prior to the law change.

However, after the law change this is no longer true. The underlying assumptions make  $P_{95,j} = P_{96,j} = P_{97,j} = \dots$ , but  $P_{94,j}$  does not equal  $P_{95,j}$ .

Let V represent accident years under the verbal threshold, and T represent accident years under the tort threshold.

Then, 
$$CYP_{k,l} = \sum_{n=1}^{j} P_{V,n} + \sum_{n=j}^{40} P_{T,n}$$
, where j is the number of

quarters between the evaluation date k,l and 1,95.

#### 3. Loss Development

Let,  $PLDF_{j,k}$  be the paid loss development factor (also referred to as a link factor when k-j = 1) between j and k quarters of evaluation.

Then, 
$$PLDF_{j,k} = CP_{i,k} / CP_{i,j}$$

For example,  $PLDF_{5,40} = CP_{94,40} / CP_{94,5}$ .

## 4. Investment Income

Total Reserves are derived by:

$$TR_{k,l} = \sum_{\substack{n=1 \\ n=1}}^{10} R_{l+1-n, k+4(n-1)}$$

### APPENDIX 2 EXHIBIT 1 PAGE 1

#### PRE-LAW CHANGE BODILY INJURY PAYMENT PATTERNS ACCIDENT YEAR

(j)	(P)	(CP)	(R)
	(1)	(2)	(3)
QUARTERS OF	AMOUNT	CUMULATIVE	LOSS
EVALUATION	PAID	AMOUNT PAID	RESERVES
1	0.3	0.3	24.7
2	1.9	2.2	47.8
3	4.0	6.2	68.8
4	6.0	12.2	87.8
5	6.6	18.8	81.2
6	7.4	26.2	73.8
7	7.7	33.9	66.1
8	8.2	42.1	57.9
9	6.9	49.0	51.0
10	6.9	55.9	44.1
11	6.7	62.6	37.4
12	6.4	69.0	31.0
13	5.9	74.9	25.1
14	4.9	79.8	20.2
15	4.3	84.1	15.9
16	3.2	87.3	12.7
17	3.0	90.3	9.7
18	2.3	92.6	7.4
19	1.5	94.1	5.9
20	1.2	95.3	4.7
21	0.7	96.0	4.0
22	0.5	96.5	3.5
23	0.5	97.0	3.0
24	0.5	97.5	2.5
25	0.5	98.0	2.0
26	0.3	98.3	1.7
27	0.2	98.5	1.5
28	0.2	98.7	1.3
29	0.1	98.8	1.2
30	0.1	98.9	1.1
31	0.2	99.1	0.9
32	0.1	99.2	0.8
33	0.1	99.3	0.7
34	0.2	99.5	0.5
35	0.1	99.6	0.4
36	0.1	99.7	0.3
37	0.1	99.8	0.2
38	0.0	99.8	0.2
39	0.1	99.9	0.1
40	0.1	100.0	0.0

### POST-LAW CHANGE - USING MODEL BODILY INJURY PAYMENT PATTERNS ACCIDENT YEAR

(i)	(P) (1)	(CP) (2)	(R) (3)
OUARTERS OF			1055
EVALUATION	PAID		RESERVES
1	0.1	0.1	17.4
2	0.9	1.0	34.0
3	1.5	2.5	50.0
4	2.7	5.2	64.8
5	3.4	8.6	61.4
6	4.5	13.1	56.9
7	5.1	18.2	51.8
8	5.5	23.7	46.3
9	4.9	28.6	41.4
10	5.3	33.9	36.1
11	5.3	39.2	30.8
12	4.9	44.1	25.9
13	4.5	48.6	21.4
14	4.0	52.6	17.4
15	3.5	56.1	13.9
16	2.7	58.8	11.2
17	2.7	61.5	8.5
18	2.0	63.5	6.5
19	1.3	64.8	5.2
20	1.1	65.9	4.1
21	0.6	66.5	3.5
22	0.3	66.8	3.2
23	0.4	67.2	2.8
24	0.4	67.6	2.4
25	0.4	68.0	2.0
26	0.3	68.3	1.7
27	0.2	68.5	1.5
28	0.2	68.7	1.3
29	0.1	68.8	1.2
30	0.1	68.9	1.1
31	0.2	69.1	0.9
32	0.1	69.2	0.8
33	0.1	69.3	0.7
34	0.2	69.5	0.5
35	0.1	69.6	0.4
36	0.1	69.7	0.3
37	0.1	69.8	0.2
38	0.0	69.8	0.2
39	0.1	69.9	0.1
40	0.1	70.0	0.0

#### APPENDIX 2 EXHIBIT 2 PAGE 1

### LAW CHANGE - APPLIED TO ALL OUTSTANDING POLICIES 1/1/95 BODILY INJURY PAID PURE PREMIUMS 12 MONTH MOVING

		(CYP)
12 M(	нтис	PAID PURE
MOVING	ENDING	PREMIUM
MARCH	1992	100.0
JUNE	1992	100.0
SEPTEMBER	1992	100.0
DECEMBER	1992	100.0
MARCH	1993	100.0
JUNE	1993	100.0
SEPTEMBER	1993	100.0
DECEMBER	1993	100.0
MARCH	1994	100.0
JUNE	1994	100.0
SEPTEMBER	1994	100.0
DECEMBER	1994	100.0
MABCH	1995	99.8
JUNE	1995	98.8
SEPTEMBER	1995	96.3
DECEMBER	1995	93.0
MARCH	1996	8 98
ILINE	1996	86.9
SEPTEMBER	1996	84 3
DECEMBER	1996	81.6
MARCH	1997	79.6
ILINE	1997	79.0
SEPTEMBER	1007	76.0
DECEMBER	1007	76.1
MAADOU	1009	73.1
	1000	73.7
SCOTEMPER	1009	72.0
DECEMBED	1009	72.0
	1000	71.5
	1999	71.2
JUNE	1999	70.9
SEFTEWBER	1999	70,7
DECEMBER	1999	70.6
MARCH	2000	70.5
JUNE	2000	70.3
SEPTEMBER	2000	70.2
DECEMBER	2000	70.1
MARCH	2001	70.0
JUNE	2001	70.0
SEPTEMBER	2001	70.0
DECEMBER	2001	70.0
MARCH	2002	70.0
JUNE	2002	70.0
SEPTEMBER	2002	70.0
DECEMBER	2002	70.0
MARCH	2003	70.0
JUNE	2003	70.0
SEPTEMBER	2003	70.0
DECEMBER	2003	70.0

APPENDIX 2 EXHIBIT 2 PAGE 2

#### LAW CHANGE TREND ANALYSIS Bodily Injury Liability Paid Pure Pramium 12 Month Moving

			12 pt.	6 pt.
12 MO	NTH	actual	curve of	curve of
_ MOVING EN	DING	data	best fit	best fit
DECEMBER	1992	100.0	100.604	
MARCH	1993	100.0	100.415	
JUNE	1993	100.0	100.226	
SEPTEMBER	1993	100.0	100.038	
DECEMBER	1993	100.0	99.850	
MARCH	1994	100.0	99.663	
JUNE	1994	100.0	99.476	100.759
SEPTEMBER	1994	100.0	99.289	100.109
DECEMBER	1994	100.0	99.103	99.462
MARCH	1995	99.8	98.917	98.820
JUNE	1995	98.8	98.731	98.182
SEPTEMBER	1995	96.3	98.546	97.548
		Average Annual % Change	·0. <b>75%</b>	-2.56%

			12 pt.	6 pt.
12 MO	лтн	actual	curve of	curve of
MOVING EN	DING	dele	best fit	best fit
SEPTEMBER	1994	100.0	103.986	
DECEMBER	1994	100.0	101.354	
MARCH	1995	99.8	98.788	
JUNE	1995	98.8	96.288	
SEPTEMBER	1995	96.3	93,851	
DECEMBER	1995	93.0	91.475	
MARCH	1996	89.8	89,159	89.433
JUNE	1996	8 <b>6.9</b>	86.903	86.913
SEPTEMBER	1996	84.3	84.703	84.465
DECEMBER	1996	81.6	82.559	82.085
MARCH	1997	79.6	80,469	79.773
JUNE	1997	78.0	78.432	77.525
		Average Annual % Change	-9.75%	-10.80%

			12 pt.	6 pt.
12 MO	NTH	actual	curve of	curve of
MOVING EN	DING	data	best fit	best fit
SEPTEMBER	1996	84.3	82.243	
DECEMBER	1996	81.6	80,972	
MARCH	1997	79.6	79.720	
JUNE	1997	78.0	78,488	
SEPTEMBER	1997	76.6	77.276	
DECEMBER	1997	75.1	76.081	
MARCH	1998	73.7	74.906	73.398
JUNE	1998	72.8	73.748	72.840
SEPTEMBER	1998	72.0	72.608	72.286
DECEMBER	1998	71.5	71.486	71.736
MARCH	1999	71.2	70.382	71.190
JUNE	1999	70.9	69.294	70.648

Average Annual % Change -6.04%

-3.01%

#### APPENDEX 2 EXHIBIT 2 PAGE 3

#### LAW CHANGE - APPLIED TO ALL OUTSTANDING POLICIES 1/1/95 BODILY INJURY PAID PURE PREMIUMS SUMMARY OF 12 MONTH MOVING TRENDS

TRENDS E	NDING	12 POINT	_6 POINT_
DECEMBER	1994	-0.0%	0.0%
MARCH	1995	-0.0%	-0.1%
JUNE	1995	-0.2%	-0.8%
SEPTEMBER	1995	-0.7%	-2.6%
DECEMBER	1995	-1.7%	-5.4%
MARCH	1996	-3.0%	-8.5%
JUNE	1996	-4.4%	-10.9%
SEPTEMBER	1996	-5.9%	-12.2%
DECEMBER	1996	-7.4%	-12.4%
MARCH	1997	-8.8%	-11.8%
JUNE	1997	-9.7%	-10.8%
SEPTEMBER	1997	-10.4%	-9.7%
DECEMBER	1997	-10.6%	-8.6%
MARCH	1998	-10.4%	-7.7%
JUNE	1998	-9.7%	-7.0%
SEPTEMBER	1998	-8.9%	-6.3%
DECEMBER	1998	-8.0%	-5.4%
MARCH	1999	-7.0%	-4.1%
JUNE	1999	-6.0%	-3.0%
SEPTEMBER	1999	-5.1%	-2.2%
DECEMBER	1999	-4.3%	-1.5%
MARCH	2000	-3.5%	-1.1%
JUNE	2000	-2.8%	-0.9%
SEPTEMBER	2000	-2.1%	-0.8%
DECEMBER	2000	-1.6%	-0.7%
MARCH	2001	-1.2%	-0.7%
JUNE	2001	-0.9%	-0.6%
SEPTEMBER	2001	-0.7%	-0.4%
DECEMBER	2001	-0.6%	-0.2%
MARCH	2002	-0.5%	-0.1%
JUNE	2002	-0.4%	0.0%
SEPTEMBER	2002	-0.3%	0.0%
DECEMBER	2002	-0.2%	0.0%
MARCH	2003	-0.1%	0.0%
JUNE	2003	-0.1%	0.0%
SEPTEMBER	2003	-0.0%	0.0%
DECEMBER	2003	0.0%	0.0%

#### APPENDIX 2 EXHIBIT 3

## PAID LOSS DEVELOPMENT PRE-LAW CHANGE BODILY INJURY LIABILITY

ACCIDENT	EVALUATIO	N								
YEAR	5	9	13	17	21	25	29	33	37	40
1983	18.8	49	74.9	90.3	96	98	98.8	99.3	99.8	100
1984	18.8	49	74.9	90.3	96	98	98.8	99.3	99.8	100
1985	16.9	49	74.9	90.3	96	98	98.8	99.3	99.8	100
1986	16.8	49	74.9	90.3	96	98	98.6	99.3	99.B	
1987	18.8	49	74.9	90.3	96	98	98.8	99.3		
1988	18.8	49	74.9	90.3	96	98	98.6			
1989	18.8	49	74.9	90.3	96	98				
1990	18.8	49	74.9	90.3	96					
1991	18.8	49	74.9	90.3						
1992	18.8	49	74.9							
1993	18.8	49								
1994	18.6									

ACCIDENT	LINK	FACTORS									
YEAR	5 TO 9	9 TO 13	13 TO 17	17 TO 21	21 TO 25	25 TO 29	29 TO 33	33 TO 37	37 10 40		
1983	2.606	1.529	1.206	1.063	1.021	1.008	1.005	1.005	1.002		
1984	2.606	1.529	1.206	1.063	1.021	1.008	1.005	1.005	1.002		
1985	2.606	1.529	1.206	1.083	1.021	1.008	1.005	1.005	1.002		
1986	2.606	1.529	1.208	1.083	1.021	1.009	1.005	1.005			
1 <del>9</del> 87	2.608	1.529	1.206	1.063	1.021	1.008	1.005				
1968	2.606	1.529	1.206	1.063	1.021	1.008					
1989	2.606	1.529	1.206	1.063	1.021						
1990	2.606	1.529	1.206	1.063							
1991	2.606	1.529	1.206								
1992	2.606	1.529									
1993	2.606										
1994	N/A										
3 YEAR											
AVERAGE	2.6064	1.5286	1.2056	1.0631	1.0208	1.0082	1.0051	1.0050	1.0020		
CUMMULATIVE											
FROM:		5	9	13	17	21	25	29	33	37	40
TO ULTIMATE		5.3191	2.0408	1.3351	1.1074	1.0417	1.0204	1.0121	1.0070	1.0020	1.0000

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APPENDIX 2 EXHIBIT 3 PAGE 2

#### PAID LOSS DEVELOPMENT POST-LAW CHANGE BODILY INJURY LIABILITY

ACCIDENT	EVALUAT	ION								
YEAR	5	9	13	17	21	25	29	33	37	40
1995	8.6	28.6	48.6	61.5	66.5	68	68.8	69.3	69.8	70
1996	8.6	28.6	48.6	61.5	66.5	68	68.8	69.3	69.8	70
1997	8.6	28.6	48.6	61.5	66.5	68	68.8	69.3	69.8	70
1998	8.6	28.6	48.6	61.5	66.5	68	68.8	69.3	69.8	
1999	8.6	28.6	48.6	61.5	66.5	68	68.8	69,3		
2000	8.6	28.6	48.6	61.5	66.5	68	68.8			
2001	8.6	28.6	48.6	61.5	66.5	68				
2002	8.6	28.6	48.6	61.5	66.5					
2003	8.6	28.6	48.6	61.5						
2004	8.6	28.6	48.6							
2005	8.6	28.6								
2006	8.6									

ACCIDENT	LINK	FACTORS									
YEAR	5 TO 9	9 TO 13	13 TO 17	17 TO 21	21 TO 25	25 TO 29	29 TO 33	33 TO 37	37 TO 40		
1995	3.326	1.699	1.265	1.081	1.023	1.012	1.007	1.007	1.003		
1996	3.326	1.699	1.265	1.081	1.023	1.012	1.007	1.007	1.003		
1997	3.326	1.699	1.265	1.081	1.023	1.012	1.007	1.007	1.003		
1998	3.326	1.699	1.265	1.081	1.023	1.012	1.007	1.007			
1999	3.326	1.699	1.265	1.081	1.023	1.012	1.007				
2000	3.326	1.699	1.266	1.081	1.023	1.012					
2001	3.326	1.699	1.265	1.081	1.023						
2002	3.326	1.699	1.265	1.081							
2003	3,326	1.699	1.265								
2004	3.326	1.699									
2005	3.326										
2006	N/A										
3 YEAR											
AVERAGE	3.3256	1.6993	1.2654	1.0813	1.0226	1.0118	1.0073	1.0072	1.0029		
CUMMULATIVE											
FROM:		Б	9	13	17	21	25	29	33	37	40
TO ULTIMATE		8.1395	2.4476	1.4403	1.1382	1.0526	1,0294	1.0174	1.0101	1.0029	1.0000

APPENDIX 2 EXHIBIT 3

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#### PAID LOSS DEVELOPMENT MIX OF PRE-LAW AND POST-LAW CHANGE BODILY INJURY LIABILITY

ACCIDENT	EVALUATI	ÓN								
YEAR	5	9	13	17	21	25	29	33	37	40
1986	18.8	49	74.9	90.3	96	98	96.6	99.3	99.8	100
1987	18.8	49	74.9	90.3	96	98	98.8	99.3	99.8	100
1988	18.8	49	74.9	90.3	96	98	98.8	99.3	99.8	100
1989	18.8	49	74.9	90.3	96	98	98.8	99.3	99.8	
1990	18.6	49	74.9	90.3	96	98	98.8	99.3		
1991	18.8	49	74.9	90.3	96	98	98.6			
1992	18.8	49	74.9	90.3	96	98				
1993	18,0	49	74.9	90.3	96					
1994	18.8	49	74.9	90.3						
1995	8.6	28.6	48.6							
1996	8.6	28.6								
1997	8.6									

ACCIDENT	LINK FAC	TORS									
YEAR	5 TO 9	9 TO 13	13 TO 17	17 TO 21	21 TO 25	25 TO 29	29 TO 33	33 TO 37	37 TO 40		
1986	2.606	1.529	1.206	1.063	1.021	1.008	1.005	1.005	1.002		
1987	2.606	1.529	1.208	1.063	1.021	1.008	1.005	1.005	1.002		
1988	2.606	1.529	1.206	1.083	1.021	1.008	1.005	1.005	1.002		
1989	2.808	1.529	1.206	1.063	1.021	1.008	1.005	1.005			
1990	2.606	1.529	1.206	1.063	1.021	1.008	1.005				
1991	2.606	1.529	1.206	1.063	1.021	1.008					
1992	2.606	1.529	1.206	1.063	1.021						
1993	2.608	1.529	1.206	1.053							
1994	2.608	1.529	1.206								
1995	3.326	1.699									
1996	3.326										
1997	N/A										
3 YEAR											
AVERAGE	3.0858	1.5855	1.2056	1.0631	1.0208	1.0082	1.0051	1.0050	1.0020		
CUMMULATIVE											
FROM:		5	9	13	17	21	25	29	33	37	40
TO ULTIMATE		6.5321	2,1168	1.3351	1.1074	1.0417	1.0204	1.0121	1.0070	1.0020	1.0000

#### APPENDIX 2 EXHIBIT 3 PAGE 4

## PAID LOSS DEVELOPMENT BODILY INJURY COVERAGE ACCIDENT YEAR

15 months to ultimate	LDF(5,40)	<u>Qld Law</u> 5.319	<u>New Law</u> 8.140	Example 6.532
27 months to ultimate	LDF(9,40)	2.041	2.448	2.117
39 months to ultimate	LDF(13,40)	1.335	1.440	1.335

#### BODILY INJURY COVERAGE DEVELOPMENT OF RESERVE TO INCURRED PATIOS

APPENDIX 2 EXHIBIT 4 PAGE 1

ACCIDENT	AS OF																
YEAB	12/93	3/94	6/94	9/94	12/94	3/95	6.95	2/95	12:95	3/95	6/90	9/96	12/96	3:97	6/97	9/97	12/97
1984	0.0	0.0	0.0	0.0	00	0.0	0.0	00	0.0	0.0	0.0	0.0	0.0	00	0.0	0.0	0.0
1985	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.8	0.7	0.5	0.4	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	1.3	1.2	1.1	0.9	0.8	0.7	0.5	0.4	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0
1988	25	2.0	1.7	15	1.3	1.2	1.1	0.9	0.6	07	0.5	0.4	0.3	0.2	0.2	0.1	0.0
1969	4.7	4.0	3.5	3.0	Z.5	2.0	1.7	15	1.3	12	1.1	09	0.8	0.7	0.5	0.4	0.3
1990	127	9.7	7.4	5.9	47	4.0	3.5	3.0	2 5	2.0	1.7	1.5	1.5	1.2	1.1	0.9	0.B
1991	31.0	25.1	20.2	15.9	12.7	9.7	7.4	5.9	47	4 0	3.5	30	2.5	20	1.7	1.5	1.3
1992	57.9	51.0	44 1	37.4	31.0	25.1	20.2	15 9	12.7	97	7.4	59	4.7	40	3.5	3.0	2.5
1993	87.8	81.2	73.8	66.1	57.9	510	44.1	37.4	31 0	25 1	20.2	15.9	12.7	97	7.4	5.9	4.7
1994		24.7	47.8	68.8	87.8	81.2	73.8	66.1	57.9	51.0	44.1	37.4	31.0	25.1	20.2	15.9	12.7
1995						174	34 0	50 O	64 8	61.4	56.9	51.8	46.3	414	36.1	30.8	25.9
1996										17.4	34.0	500	64.8	614	56.9	51.8	46.3
1997														17.4	34 0	50.0	64.8
RESERVES: INCURRED	198 7	109.6	200.1	199 9	199.0	1925	166.5	181.2	176.0	1727	169.6	166.9	164.4	163.1	161.6	160.3	159.3
LOSSES:	100 0	100 0	100.0	100.0	100.0	92.5	85.0	77.5	70.0	70.D	70.0	70.0	70.0	700	70.0	70.0	70.0
RESERVE TO																	
INCURRED RATIO.	1.99	2 00	2 00	2.00	1.99	2.08	219	2.34	2 51	2 47	2.42	2.38	2 35	2.33	2 31	2.29	2.28

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#### BODILY INJURY COVERAGE DEVELOPMENT OF RESERVE TO INCURRED RATIOS

ACCIDENT	AS OF:															
YEAR	3/9B	6/98	-9/98	12/98	3,99	6(99	9/99	12/99	3/00	5/00	9-05	12/00	3/01	6/01	9/01	12/01
1987	0.0	0.0	0.0	00	0.0	0.0	0.0	0.0	0.0	0.0	00	0.0	00	0.0	60	0.0
1988	0.0	00	0.0	0.0	00	0.0	0.0	0.0	0.0	00	0.0	0.0	00	0.0	0.0	00
1969	02	0.2	0.1	0.0	0.0	0.0	0.0	00	0.0	0.0	00	0.0	0.0	0.0	00	0.0
1990	07	0.5	0.4	0.3	0.2	0.2	01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	1.2	11	0.9	0.8	0.7	0.5	0.4	0.3	0.2	0.2	0.1	0.0	0.0	00	0.0	0.0
1992	20	17	1.5	1.3	1.2	1.1	0.9	08	0.7	0.5	04	0.3	0 5	0.2	01	00
1993	4.0	35	30	25	2.0	1.7	1.5	1.3	1.2	1.1	0.9	0.8	0.7	05	0.4	03
1994	9.7	7.4	5.9	47	4.0	3.5	3.0	2.5	20	1.7	1.5	1.3	1.2	11	0.9	0.8
1995	21.4	17.4	13.9	11.2	85	65	5.2	4.1	35	32	2.8	24	2.0	1.7	1.5	1.3
1996	414	36.1	30.8	25.9	21.4	17.4	139	11.2	B.5	6.5	5.2	4.1	35	3.2	2.B	2.4
1997	514	56.9	51.8	46.3	41.4	36.1	30 B	25.9	21.4	17.4	13.9	11.2	8.5	6.5	5.2	4.1
1908	17.4	34.0	50.0	64.8	61.4	56.9	51.8	46.3	41.4	36.1	30.B	25.9	21.4	17.4	13.9	11.2
1999					174	34 0	50.0	64 8	61.4	56.9	51.8	46 3	41.4	36.1	30.8	25.9
2000									17.4	34.0	50 O	64.8	61.4	56 9	51.8	45.3
2001													17.4	34.0	50.0	64.8
RESERVES: INCURRED	159.4	158.8	158.3	157.8	158.2	157.9	157.6	157.2	157.7	157.6	157.4	157.1	157.7	157.6	157.4	157.1
LOSSES:	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70 0	70.0	70.0	70.0	70.0	70.0
RESERVE TO																
INCURRED RATIO:	2,28	2 27	2.26	z.25	2.26	2.26	2.25	2.25	2.25	2.25	2.25	2.24	2.25	2.25	2.25	2.24

APPENDIX 2 EXHIBIT 4 PAGE 2

#### BODILY INJURY LIABILITY INVESTMENT INCOME MEASUREMENT DISCOUNTED CASH FLOW OF THE POLICY TRANSACTION

	OLD LAW	DISCOUNTED	NEW LAW	DISCOUNTED	i = 6%
	AMOUNT	AMOUNT	AMOUNT	AMOUNT	DISCOUNT
EVALUATION	PAID	PAID	PAID	PAID	FACTOR
1	0.3	0.296	0.1	0.099	0.98554
2	1.9	1.845	0.9	0.874	0.97129
3	4.0	3.829	1.5	1.436	0.95724
4	6.0	5.660	2.7	2.547	0.94340
5	6.6	6.136	3.4	3.161	0.92975
6	7.4	6.781	4.5	4.123	0.91631
7	7.7	6.954	5.1	4.606	0.90306
8	8.2	7.298	5.5	4.895	0.89000
9	6.9	6.052	4.9	4.298	0.87713
10	6.9	5.965	5.3	4.582	0.86444
11	6.7	5.708	5.3	4.515	0.85194
12	6.4	5.374	4.9	4.114	0.83962
13	5.9	4.882	4.5	3.724	0.82748
14	4.9	3.996	4.0	3.262	0.81551
15	4.3	3.456	3.5	2.813	0.80372
16	3.2	2.535	2.7	2.139	0.79209
17	3.0	2.342	2.7	2.108	0.78064
18	2.3	1.770	2.0	1.539	0.76935
19	1.5	1.137	1.3	0.986	0.75822
20	1.2	0.897	1.1	0.822	0.74726
21	0.7	0.516	0.6	0.442	0.73645
22	0.5	0.363	0.3	0.218	0.72580
23	0.5	0.358	0.4	0.286	0.71531
24	0.5	0.352	0.4	0.282	0.70496
25	0.5	0.347	0.4	0.278	0.69477
26	0.3	0.205	0.3	0.205	0.68472
27	0.2	0.135	0.2	0.135	0.67482
28	0.2	0.133	0.2	0.133	0.66506
29	0.1	0.066	0.1	0.066	0.65544
30	0.1	0.065	0.1	0.065	0.64596
31	0.2	0.127	0.2	0.127	0.63662
32	0.1	0.063	0.1	0.063	0.62741
33	0.1	0.062	0.1	0.062	0.61834
34	0.2	0.122	0.2	0.122	0.60940
35	0.1	0.060	0.1	0.060	0.60058
36	0.1	0.059	0.1	0.059	0.59190
37	0.1	0.058	0.1	0.058	0.58334
38	0.0	0.000	0.0	0.000	0.57490
39	0.1	0.057	0.1	0.057	0.56659
40	0.1	0.056	0.1	0.056	0.55839
TOTAL	100	86.11	70	59.41	
PERCENT OF PREMIU	M	13,89%		15.12%	

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Time Until	Size of	Loss												
Paymont	Lower	0	100	250	500	750	1 000	1 500	1 000	0.500	0 500	5 000	7 5 6 6	
in Months	Linner	100	250	250	750	1 000	1,000	1,500	2,000	2,500	3,500	5,000	7,500	10,000
0. 3	Opper	0.0000	0.0000	0.0001	0.0001	0.0001	0,0003	2,000	2,500	3,500	5,000	7,500	10,000	15,000
3.6		0.0000	0.0000	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0004
6. 9		0.0000	0.0000	0.0001	0.0000	0.0001	0.0002	0.0002	0.0003	0.0011	0.0017	0.0024	0.0022	0.0017
0.12		0.0000	0.0000	0.0000	0.0000	0.0001	0.0002	0.0002	0.0003	0.0011	0.0038	0.0090	0.0055	0.0067
12 15		0.0000	0.0000	0.0000	0.0000	0.0000	0.0002	0.0003	0.0003	0.0013	0.0032	0.0116	0.0089	0.0098
16 10		0.0000	0.0000	0.0000	0.0000	0.0001	0.0003	0.0002	0.0003	0.0008	0.0030	0.0094	0.0091	0.0113
10 11		0.0000	0.0000	0.0000	0.0000	0.0001	0.0002	0.0002	0.0003	0.0008	0.0031	0.0084	0.0085	0.0096
10 - 21		0.0000	0.0000	0.0000	0.0000	0.0001	0.0002	0.0002	0.0002	0.0006	0.0022	0.0056	0.0078	0.0114
21 - 24		0.0000	0.0000	0.0000	0.0000	0.0001	0.0002	0.0002	0.0004	0.0010	0.0030	0.0061	0.0076	0.0113
24 - 27		0.0000	0.0000	0.0000	0.0000	0.0001	0.0002	0.0002	0.0001	0.0006	0.0018	0.0049	0.0053	0.0085
27 - 30		0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0002	0.0003	0.0006	0.0010	0.0034	0.0037	0.0086
30 - 33		0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0002	0.0004	0.0017	0.0034	0.0032	0.0058
33 - 36		0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0002	0.0005	0.0010	0.0031	0.0043	0.0073
36 - 39		0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0003	0.0008	0.0028	0.0041	0.0067
39-42		0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0002	0.0002	0.0008	0.0020	0.0021	0.0043
42 · 45		0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0004	0.0007	0.0017	0.0021	0.0038
45 - 48		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0002	0.0005	0.0010	0.0016	0.0024
48 - 51		0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	0.0001	0.0001	0.0002	0.0009	0.0007	0.0013
51-54		0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	0.0000	0.0001	0.0002	0.0004	0.0003	0.0028
54·57		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0003	0.0004	0.0003	0.0010
57· 60		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0002	0.0002	0.0006
60· 63		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0002	0.0003	0.0003	0.0005
63· 66		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002	0.0001	0.0005	0.0009
66 - 69		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	0.0000	0.0001	0.0001	0.0004	0.0003
69·72		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0000	0.0001	0.0004
72 - 75		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001
75 - 78		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0000	0.0001
78 · 81		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	0.0001
81 - 84		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0,0000	0.0000	0.0001	0.0002	0.0001
84 - 87		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0,0000	0.0000	0.0001	0.0002	0.0001
87 - 90		0.0000	0.0000	0.0000	0.0000	0,0000	0.0000	0,0000	0.0000	0,0000	0.0000	0.0001	0.0001	0.0000
90 93		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0,0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0003
93 96		0.0000	0.0000	0,0000	0.0000	0.0000	0.0000	0,0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
96 - 99		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	0.0000
								2.4440		2.0000	2.0000	0.0001	0.0000	0.0000

Private Passenger Auto BODILY INJURY COVERAGE Percent of Total Payments by Size of Loss and Time Until Payment

	Size of Loss												
Time Until	Limits												
Payment	Lower	0 100	250	500	750	1,000	1,500	2,000	2,500	3,500	5,000	7,500	10,000
in Months	Upper <u>10</u>	<u>0 250</u>	<u>500</u>	<u>750</u>	<u>1,000</u>	<u>1,500</u>	2,000	<u>2,500</u>	<u>3,500</u>	<u>5,000</u>	7,500	10,000	<u>15,000</u>
99 · 102	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
102 - 105	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
105 - 108	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
108 • 111	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001
111 • 114	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
114 - 117	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	0.0000
117 • 120	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
120 - 123	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000
123 - 126	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
126 · 129	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
129 - 132	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
132 - 135	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
135 - 138	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
138 - 141	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
141 - 144	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
144 - 147	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
147 - 150	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
∞ 150 - 153	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2 153 - 156	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
156 - <b>159</b>	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000
159 - 162	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
162 • 165	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
165 - <b>1</b> 68	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
168 - 171	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
171 - 174	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
174 - 177	0.000	0.0000 0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
177 - 180	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180 · 183	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
183 - 186	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
186 • 189	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
189 · 192	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
192 - 195	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
195 - 198	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
198 - 201	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
201 - 204	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
204 - 207	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
207 - 210	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
210 - 213	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
213 - 216	0.000	0 0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
TOTAL	0.000	0.0001	0.0005	0.0005	0.0011	0.0025	0.0026	0.0037	0.0106	0.0301	0.0782	0.0795	0.1186

#### APPENDIX 4 EXHIBIT 1 PAGE 1

### POST-LAW CHANGE - TEST USING OTHER STATE BODILY INJURY PAYMENT PATTERNS ACCIDENT YEAR

(j)	(P)	(CP)	(R)
	(1)	(2)	(3)
QUARTERS OF	AMOUNT	CUMULATIVE	LOSS
EVALUATION	PAID	AMOUNT PAID	RESERVES
1	0.0	0.0	17.5
2	0.3	0.3	34.7
3	0.8	1.1	51.4
4	1.6	2.7	67.3
5	3.0	5.7	64.3
6	4.0	9.7	60.3
7	5.3	15.0	55.0
8	5.5	20.5	49.5
9	5.2	25.7	44.3
10	5.2	30.9	39.1
11	5.0	35.9	34.1
12	4.8	40.7	29.3
13	4.6	45.3	24.7
14	4.5	49.8	20.2
15	4.3	54.1	15.9
16	3.2	57.3	12.7
17	3.0	60.3	9.7
18	2.3	62.6	7.4
19	1,5	64.1	5.9
20	1.2	65.3	4.7
21	0.7	66.0	4.0
22	0.5	66.5	3.5
23	0.5	67.0	3.0
24	0.5	67.5	2.5
25	0.5	68.0	2.0
26	0.3	68.3	1.7
27	0.2	68.5	1.5
28	0.2	68.7	1.3
29	0.1	68.8	1.2
30	0.1	68.9	1.1
31	0.2	69.1	0.9
32	0.1	69.2	0.8
33	0.1	69.3	0.7
34	0.2	69.5	0.5
35	0.1	69.6	0.4
36	0.1	69.7	0.3
37	0.1	69.8	0.2
38	0.0	69.8	0.2
39	0.1	69.9	0.1
40	0.1	70.0	0.0

#### APPENDIX 4 EXHIBIT 2 PAGE 1

#### LAW CHANGE - APPLIED TO ALL OUTSTANDING POLICIES 1/1/95 BODILY INJURY PAID PURE PREMIUMS - TEST STATE 12 MONTH MOVING

		(CYP)
12 MON	тн	PAID PURE
MOVING EN	IDING	PREMIUM
MARCH	1992	100.0
JUNE	1992	100.0
SEPTEMBER	1992	100.0
DECEMBER	1992	100.0
MARCH	1993	100.0
JUNE	1993	100.0
SEPTEMBER	1993	100.0
DECEMBER	1993	100.0
MARCH	1994	100.0
JUNE	1994	100.0
SEPTEMBER	1994	100.0
DECEMBER	1994	100.0
MARCH	1995	99.7
JUNE	1995	98.1
SEPTEMBER	1995	94.9
DECEMBER	1995	90.5
MARCH	1996	86.9
JUNE	1996	83.5
SEPTEMBER	1996	81.1
DECEMBER	1996	78.4
MARCH	1997	76.7
JUNE	1997	75.0
SEPTEMBER	1997	73.3
DECEMBER	1997	71.7
MARCH	1998	70.4
JUNE	1998	70.0
SEPTEMBER	1998	70.0
DECEMBER	1998	70.0
MARCH	1999	70.0
JUNE	1999	70.0
SEPTEMBER	1999	70.0
DECEMBER	1999	70.0
MARCH	2000	70.0
JUNE	2000	70.0
SEPTEMBER	2000	70.0
DECEMBER	2000	70.0
MARCH	2001	70.0
JUNE	2001	70.0
SEPTEMBER	2001	70.0
DECEMBER	2001	70.0
MARCH	2002	70.0
JUNE	2002	70.0
SEPTEMBER	2002	70.0
DECEMBER	2002	70.0
MARCH	2003	70.0
JUNE	2003	70.0
SEPTEMBER	2003	70.0
DECEMBER	2003	70.0

## LAW CHANGE - APPLIED TO ALL OUTSTANDING POLICIES 1/1/95 BODILY INJURY PAID PURE PREMIUMS - TEST STATE SUMMARY OF 12 MONTH MOVING TRENDS

TRENDS EN	NDING	12 POINT	6 POINT
DECEMBER	1994	-0.0%	0.0%
MARCH	1995	-0.0%	-0.2%
JUNE	1995	-0.3%	-1.2%
SEPTEMBER	1995	-1.1%	-3.6%
DECEMBER	1995	-2.4%	-7.4%
MARCH	1996	-4.0%	-11.1%
JUNE	1996	-5.8%	-13.8%
SEPTEMBER	1996	-7.5%	-14.6%
DECEMBER	1996	-9.1%	-14.0%
MARCH	1997	-10.4%	-12.5%
JUNE	1997	-11.3%	-11.1%
SEPTEMBER	1997	-11.9%	-9.9%
DECEMBER	1997	-11.9%	-9.2%
MARCH	1998	-11.4%	-8.4%
JUNE	1998	-10.4%	-7.4%
SEPTEMBER	1998	-9.1%	-5.6%
DECEMBER	1998	-7.7%	-3.5%
MARCH	1999	-6.4%	-1.6%
JUNE	199 <b>9</b>	-5.1%	-0.3%
SEPTEMBER	1999	-3.9%	0.0%
DECEMBER	1999	-2.9%	0.0%
MARCH	2000	-1.9%	0.0%
JUNE	2000	-1.1%	0.0%
SEPTEMBER	2000	-0.4%	0.0%
DECEMBER	2000	-0.1%	0.0%
MARCH	2001	0.0%	0.0%
JUNE	2001	0.0%	0.0%
SEPTEMBER	2001	0.0%	0.0%
DECEMBER	2001	0.0%	0.0%
MARCH	2002	0.0%	0.0%
JUNE	2002	0.0%	0.0%
SEPTEMBER	2002	0.0%	0.0%
DECEMBER	2002	0.0%	0.0%
MARCH	2003	0.0%	0.0%
JUNE	2003	0.0%	0.0%
SEPTEMBER	2003	0.0%	0.0%
DECEMBER	2003	0.0%	0.0%

APPENDIX 4 EXHIBIT 3

#### PAID LOSS DEVELOPMENT POST-LAW CHANGE BODILY INJURY LIABILITY - TEST STATE

ACCIDENT	EVALUAT	ION								
YEAR	5	9	13	17	21	25	29	33	37	40
1995	5.7	25.7	45.3	60,3	66	68	68.8	69.3	69.8	70
1996	Б.7	25.7	45.3	60.3	66	68	68.8	69.3	69.8	70
1997	Б.7	25.7	46.3	60.3	66	68	68.8	69.3	69.8	70
1998	5.7	25.7	45.3	60,3	66	68	68.8	69.3	69.8	
1999	5.7	25.7	45.3	60.3	66	68	68.8	69.3		
2000	5.7	25.7	45.3	60.3	66	68	68.8			
2001	5.7	25.7	45.3	60.3	66	68				
2002	5.7	25.7	45.3	60.3	66					
2003	Б.7	25.7	45.3	60,3						
2004	5.7	25.7	45.3							
2005	5.7	25.7								
2006	5.7									

ACCIDENT	LINK FA	CTORS									
YEAR	5 TO 9	9 TO 13	13 TO 17	17 TO 21	21 TO 25	25 TO 29	29 TO 33	33 TO 37	37 TO 40		
1995	4,509	1.763	1.331	1.095	1.030	1.012	1.007	1.007	1.003		
1996	4.509	1.763	1.331	1.095	1.030	1.012	1.007	1.007	1.003		
1997	4.509	1.763	1.331	1.095	1.030	1.012	1.007	1.007	1.003		
1998	4.609	1.763	1.331	1.095	1.030	1.012	1.007	1.007			
1999	4.509	1.763	1.331	1.095	1.030	1.012	1.007				
2000	4.509	1.763	1.331	1.095	1.030	1.012					
2001	4.609	1.763	1.331	1.095	1.030						
2002	4.509	1.763	1.331	1.095							
2003	4.509	1.763	1.331								
2004	4.509	1.763									
2005	4.509										
2006	N/A										
3 YEAR											
AVERAGE	4.5088	1,7626	1.3311	1.0945	1,0303	1.0118	1.0073	1.0072	1.0029		
CUMMULATIVE											
FROM:		5	9	13	17	21	25	29	33	37	40
TO ULTIMATE		12,2807	2.7237	1.5453	1.1609	1.0606	1.0294	1.0174	1.0101	1.0029	1.0000

#### APPENDIX 4 EXHIBIT 3 PAGE 2

## PAID LOSS DEVELOPMENT BODILY INJURY - TEST STATE ACCIDENT YEAR

15 months to ultimate	LDF(5,40)	<u>Old Law</u> 5.319	<u>New Law</u> 12.281
27 months to ultimate	LDF(9,40)	2.041	2.724
39 months to ultimate	LDF(13,40)	1.335	1.545

					DEVELOPN	ient of he	SERVE TO	INCURRED.	RAHQŞ							EXHIBIT PAGE 1	4
ACCIDENT	AS OF																
YEAB	12/93	3/94	6/94	9/94	12/94	3/95	6/95	9/95	12/95	3/96	6/96	9/96	12/96	3/97	6/97	9/97	12/97
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1985	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	0.8	0.7	0.5	0.4	0.3	02	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	1.3	1.2	1.1	0.9	0.8	0.7	05	0.4	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0
1988	2.5	2.0	1.7	1.5	1.3	12	1.1	0.9	0.8	0.7	0.5	04	0.3	0.2	0.2	0.1	0.0
1989	4.7	40	3.5	3.0	2.5	2.0	1.7	1.5	1.3	1.2	1.1	0.9	8.0	0.7	0.5	0.4	0.3
1990	12.7	9.7	74	5.9	4.7	4.0	3.5	3.0	2.5	2.0	1.7	1.5	1.3	1.2	1.1	0.9	0.8
1991	31.0	25 1	20.2	15.9	12.7	9.7	7.4	5.9	4.7	4.0	3.5	3.0	2.5	2.0	1.7	1.5	1.3
1992	57.9	51.0	44.1	37.4	31.0	25.1	20.2	15.9	127	9.7	7.4	5.9	4.7	4.0	3.5	3.0	2.5
1993	87.8	01.2	73.8	66.1	57.9	51.0	44.1	374	31.0	25.1	20.2	15.9	12.7	9.7	7.4	5.9	4.7
1994		24.7	47.8	68.8	87.8	81.2	73.8	66.1	57.9	51.0	44.1	37.4	31.0	25.1	20.2	15.9	127
1995						17.5	34.7	51.4	673	64.3	60.3	55 0	49.5	44.3	39.1	34.1	29.3
1996										17.5	34 7	514	67.3	64.3	60.3	55.0	49.5
1997														17.5	34.7	51.4	67.3
RESERVES	198.7	199.6	200.1	199.9	199 D	192.6	187.2	182.6	178.5	175.7	1737	1715	170 1	169.0	168 7	168.2	168.4
LOSSES:	100.0	100 0	100.0	100 0	100.0	92.5	85.0	77.5	70.0	70.0	70.0	70 C	70.0	70.0	70.0	70.0	70.0
RESERVE TO																	
INCURRED RATIO.	1.99	2 00	2 00	2.00	1 99	2.08	2.20	2.36	2.55	2 51	2.48	2.45	2.43	2.41	2.41	2.40	2.41

APPENDIX 4

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#### BODILY INJURY COVERAGE - TEST STATE DEVELOPMENT OF RESERVE TO INCURRED RATIOS

BODILY INJURY COVERAGE - TEST STATE

ACCIDENT	AS QE															
YEAR	3/98	6/98	9/98	12/98	3/99	6/99	9/99	12/99	3/00	6/00	9/00	12/00	3/01	6/01	9/01	1 2/01
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	00	0.0	0.0	0.0
1989	02	0.2	0.1	0.0	0.0	0.0	0.0	0.0	00	0.0	0.0	0.0	00	0.0	0.0	0.0
1990	0.7	0.5	0.4	0.3	0.2	0.2	0.1	0.0	0.0	0.0	00	0.0	0.0	0.0	0.0	0.0
1991	1.2	1.1	09	0.8	0.7	0.5	0.4	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0
1992	2.0	1.7	1.5	1.3	12	1.1	0.9	0.8	07	0.5	0.4	0.3	0.2	0.2	0.1	0.0
1993	4.0	3.5	30	2.5	2.0	1.7	15	1.3	12	1.1	0.9	08	0.7	0.5	0.4	0.3
1994	9.7	7.4	5.9	4.7	4.0	3.5	3.0	2.5	2.0	1.7	1.5	1.3	1.2	1.1	0.9	0.8
1995	24.7	20.2	15.9	12.7	9.7	7.4	5.9	4.7	4.0	3.5	3.0	2.5	2.0	1.7	1.5	1.3
1996	44.3	39.1	34.1	29.3	24.7	20.2	15.9	12.7	9.7	7.4	5.9	4.7	4.0	3.5	3.0	2.5
1997	64.3	60.3	55.0	49.5	44.3	39.1	34.1	29.3	24.7	20.2	15.9	12.7	9.7	7.4	5.9	4.7
1998	17.5	34.7	51.4	67.3	64.3	60.3	55.0	49.5	44.3	39.1	34.1	29.3	24.7	20.2	15.9	12.7
1999					17.5	34.7	51.4	67.3	64 3	60.3	55.0	49.5	44.3	39.1	34.1	29.3
2000									175	34.7	51.4	67.3	64.3	60.3	55.0	49.5
2001													17.5	34.7	51.4	67.3
RESERVES: INCURRED	168.6	168.7	168.2	1684	165.6	168 7	168.2	168.4	168.6	168.7	168 2	168.4	168.6	168.7	168.2	168.4
LOSSES:	70.0	70.0	70.0	70.0	70 0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
RESERVE TO																
INCURRED RATIO:	2.41	2.41	2.40	2.41	2.41	2.41	2.40	241	2.41	2.41	2.40	2.41	2.41	241	2.40	2.41

APPENDIX 4 EXHIBIT 4

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#### BODILY INJURY LIABILITY - TEST STATE INVESTMENT INCOME MEASUREMENT DISCOUNTED CASH FLOW OF THE POLICY TRANSACTION

EVALUATION 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	OLD LAW AMOUNT PAID 0.3 1.9 4.0 6.0 6.6 7.4 7.7 8.2 6.9 6.7 6.4 5.9 6.7 6.4 5.9 4.3 3.2 3.0 2.3	DISCOUNTED AMOUNT PAID 0.296 1.845 3.829 5.660 6.136 6.781 6.954 7.298 6.052 5.965 5.708 5.374 4.882 3.996 3.456 2.535 2.342 1.770	NEW LAW AMOUNT PAID 0.0 0.3 0.8 1.6 3.0 4.0 5.3 5.5 5.2 5.2 5.2 5.0 4.8 4.5 4.3 3.2 2 5.0 4.8 4.5 4.3 3.2 2 3.0 2.3 3.0 2.3	DISCOUNTED AMOUNT PAID 0.000 0.291 0.766 1.509 2.789 3.665 4.786 4.895 4.561 4.495 4.260 4.030 3.806 3.670 3.456 2.535 2.342 1.770	i = 6% DISCOUNT <u>FACTOR</u> 0.98554 0.97129 0.95724 0.94340 0.92975 0.91631 0.90306 0.89000 0.87713 0.86444 0.85194 0.83962 0.82748 0.81551 0.80372 0.79209 0.78064 0.76935 0.76935 0.76935 0.76935
13	5.9	4.882	4.6	3.806	0.82748
14	5.9	4.882 3.996	4.5	3.670	0.81551
15	4.3	3.456 2.535	4.3 3.2	3.456 2.535	0.80372
17	3.0	2.342	3.0	2.342	0.78064
18	2.3	1.770	2.3	1.770	0.76935
19	1.5	1.137	1.5	1,137	0.75822
20	1.2	0.897	1.2	0.897	0.74726
21	0.7	0.516	0.7	0.510	0.73645
22	0.5	0.363	0.5	0.303	0.72580
23	0.5	0.358	0.5	0.358	0.71531
24	0.5	0.352	0.5	0.332	0.70430
20	0.5	0.347	0.5	0.205	0.68472
20	0.3	0.205	0.5	0.135	0.67482
28	0.2	0 133	0.2	0 133	0 66506
29	0.1	0.066	0.1	0.066	0.65544
30	0.1	0.065	0.1	0.065	0.64596
31	0.2	0.127	0.2	0.127	0.63662
32	0.1	0.063	0.1	0.063	0.62741
33	0.1	0.062	0.1	0.062	0.61834
34	0.2	0.122	0.2	0.122	0.60940
35	0.1	0.060	0.1	0.060	0.60058
36	0.1	0.059	0.1	0.059	0.59190
37	0.1	0.058	0.1	0.058	0.58334
38	0.0	0.000	0.0	0.000	0.57490
39 40	0.1	0.057	0.1	0.057	0.55839
TOTAL	100	86.11	70	58.86	
PERCENT		13.89%		15.91%	

### APPENDIX 5 EXHIBIT 1 PAGE 1

## POST-LAW CHANGE - CHOICE NO-FAULT BODILY INJURY PAYMENT PATTERNS ACCIDENT YEAR

(j)	(P)	(CP)	(R)
	(1)	(2)	(3)
QUARTERS OF	AMOUNT	CUMULATIVE	LOSS
 EVALUATION	PAID	AMOUNT PAID	RESERVES
1	0.1	0.1	18.9
2	0.6	0.7	37.3
3	1.4	2.1	54.9
4	2.5	4.6	71.4
5	3.7	8.3	67.7
6	4.7	13.0	63.0
7	5.8	18.8	57.2
8	6.0	24.8	51.2
9	5.5	30.4	45.6
10	5.5	35.9	40.1
11	5.3	41.2	34.8
12	5.1	46.4	29.6
13	4.9	51.2	24.8
14	4.6	55.8	20.2
15	4.3	60.1	15.9
16	3.2	63.3	12.7
17	3.0	66.3	9.7
18	2.3	68.6	7.4
19	1.5	70.1	5.9
20	1.2	71.3	4.7
21	0.7	72.0	4.0
22	0.5	72.5	3.5
23	0.5	73.0	3.0
24	0.5	73.5	2.5
25	0.5	74.0	2.0
26	0.3	74.3	1.7
27	0.2	74.5	1.5
28	0.2	74.7	1.3
29	0.1	74.8	1.2
30	0.1	74.9	1.1
31	0.2	75.1	0.9
32	0.1	75.2	0.8
33	0.1	75.3	0.7
34	0.2	75.5	0.5
35	0.1	75.6	0.4
36	0.1	75.7	0.3
37	0.1	75.8	0.2
38	0.0	75.8	0.2
39	0.1	75.9	0.1
40	0.1	76.0	0.0

#### APPENDIX 5 EXHIBIT 2 PAGE 1

#### LAW CHANGE - APPLIED TO ALL OUTSTANDING POLICIES 1/1/95 BODILY INJURY CHOICE NO-FAULT PAID PURE PREMIUMS 12 MONTH MOVING

12 140		(CYP)
	ENDING	PREMIUM
MOVING	1992	100.0
MANCH	1992	100.0
SEPTEMBER	1992	100.0
DECEMBER	1992	100.0
MARCH	1993	100.0
HINE	1993	100.0
SEPTEMBER	1993	100.0
DECEMBER	1993	100.0
MARCH	1994	100.0
TIME	1994	100.0
CEDTEMBER	1994	100.0
DECEMBER	1994	100.0
MARCH	1995	99.8
ILINE	1995	98.5
SEPTEMBER	1995	95.9
DECEMBER	1995	92.4
MARCH	1996	89.5
IUNE	1996	86.8
SEPTEMBER	1996	84.9
DECEMBER	1996	82.7
MARCH	1997	81.4
JUNE	1997	80.0
SEPTEMBER	1997	78.6
DECEMBER	1997	77.4
MARCH	1998	76.3
JUNE	1998	76.0
SEPTEMBER	1998	76.0
DECEMBER	1998	76.0
MARCH	19 <b>99</b>	76.0
JUNE	1999	76.0
SEPTEMBER	1999	76.0
DECEMBER	1999	76.0
MARCH	2000	76.0
JUNE	2000	76.0
SEPTEMBER	2000	76.0
DECEMBER	2000	76.0
MARCH	2001	76.0
JUNE	2001	76.0
SEPTEMBER	2001	76.0
DECEMBER	2001	76.0
MARCH	2002	76.0
JUNE	2002	76.0
SEPTEMBER	2002	76.0
DECEMBER	2002	76.0
MARCH	2003	76.0
JUNE	2003	76.0
SEPTEMBER	2003	76.0
DECEMBER	2003	76.0

#### APPENDIX 5 EXHIBIT 2 PAGE 2

### LAW CHANGE - APPLIED TO ALL OUTSTANDING POLICIES 1/1/95 BODILY INJURY CHOICE NO-FAULT PAID PURE PREMIUMS SUMMARY OF 12 MONTH MOVING TRENDS

TRENDS EN	DING	12 POINT	_ 6 POINT
DECEMBER	1994	-0.0%	0.0%
MARCH	1995	-0.0%	-0.1%
JUNE	1995	-0.3%	-1.0%
SEPTEMBER	1995	-0.9%	-2.9%
DECEMBER	1995	-1.9%	-5.9%
MARCH	1996	-3.2%	-8.8%
JUNE	1996	-4.6%	-11.0%
SEPTEMBER	1996	-5.9%	-11.6%
DECEMBER	1996	-7.2%	-11.1%
MARCH	1997	-8.2%	-9.7%
JUNE	1997	-8.9%	-8.6%
SEPTEMBER	1997	-9.3%	-7.6%
DECEMBER	1997	-9.3%	-7.0%
MARCH	1998	-8.9%	-6.3%
JUNE	1998	-8.0%	-5.5%
SEPTEMBER	1998	-7.0%	-4.2%
DECEMBER	1998	-5.9%	-2.6%
MARCH	1999	-4.8%	-1.2%
JUNE	1999	-3.9%	-0.2%
SEPTEMBER	1999	-2.9%	0.0%
DECEMBER	1999	-2.1%	0.0%
MARCH	2000	-1.4%	0.0%
JUNE	2000	-0.8%	0.0%
SEPTEMBER	2000	-0.3%	0.0%
DECEMBER	2000	-0.1%	0.0%
MARCH	2001	-0.0%	0.0%
JUNE	2001	-0.0%	0.0%
SEPTEMBER	2001	-0.0%	0.0%
DECEMBER	2001	-0.0%	0.0%
MARCH	2002	-0.0%	0.0%
JUNE	2002	-0.0%	0.0%
SEPTEMBER	2002	-0.0%	0.0%
DECEMBER	2002	-0.0%	0.0%
MARCH	2003	-0.0%	0.0%
JUNE	2003	-0.0%	0.0%
SEPTEMBER	2003	-0.0%	0.0%
DECEMBER	2003	-0.0%	0.0%

APPENDIX 5 EXHIBIT 3 PAGE 1

#### PAID LOSS DEVELOPMENT POST-LAW CHANGE BODILY INJURY LIABILITY - CHOICE NO-FAULT

ACCIDENT	EVALUAT	ION								
YEAR	5	9	13	17	21	25	29	33	37	40
1995	8.32	30.36	61.22	66.3	72	74	74.8	75.3	76.8	76
1996	8.32	30.36	51.22	66.3	72	74	74.8	75.3	75.8	76
1997	8.32	30.36	61.22	66.3	72	74	74.8	75.3	75.8	76
1998	8.32	30.36	61.22	66.3	72	74	74.8	75.3	76.8	
1999	8.32	30.36	51.22	66.3	72	74	74.8	76.3		
2000	8.32	30.36	51.22	66,3	72	74	74.8			
2001	8.32	30.36	51.22	66.3	72	74				
2002	8.32	30.36	Б1.22	66.3	72					
2003	8.32	30.36	61.22	66.3						
2004	8.32	30.36	51.22							
2005	8.32	30.36								
2006	8.32									

5	C
v	ē.

ACCIDENT	LINK FA	CTORS									
YEAR	5 TO 9	9 TO 13	13 TO 17	17 TO 21	21 TO 25	25 TO 29	29 TO 33	33 TO 37	37 TO 40		
1995	3.649	1.687	1.294	1.086	1.028	1.011	1.007	1.007	1,003		
1996	3.649	1,687	1.294	1.086	1.028	1.011	1.007	1.007	1.003		
1997	3.649	1.687	1.294	1.086	1.028	1.011	1.007	1.007	1.003		
1998	3.649	1.687	1.294	1.086	1.028	1.011	1.007	1,007			
1999	3.649	1.687	1.294	1.086	1.028	1.011	1.007				
2000	3.649	1.687	1.294	1.086	1.028	1.011					
2001	3.649	1.687	1.294	1.086	1.028						
2002	3.649	1.687	1.294	1,086							
2003	3.649	1.687	1.294								
2004	3.649	1.687									
2005	3.649										
2006	N/A										
3 YEAR											
AVERAGE	3.6490	1.6871	1.2944	1.0860	1.0278	1.0108	1.0067	1,0066	1.0026		
CUMMULATIVE											
FROM:		6	9	13	17	21	25	29	33	37	40
TO ULTIMATE		9.1346	2,5033	1.4838	1.1463	1.0556	1.0270	1.0160	1.0093	1.0026	1.0000

### APPENDIX 5 EXHIBIT 3 PAGE 2

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#### PAID LOSS DEVELOPMENT BODILY INJURY - CHOICE NO-FAULT ACCIDENT YEAR

15 months to ultimate	LDF(5,40)	<u>Old Law</u> 5.319	<u>New Law</u> 9.135
27 months to ultimate	LDF(9,40)	2.041	2.503
39 months to ultimate	LDF(13,40)	1.335	1.484

#### BODILY INJURY COVERAGE - CHOICE NO FAULT DEVELOPMENT OF RESERVE TO INCURRED RATIOS

APPENDIX 5 EXHIBIT 4 PAGE 1

ACCIDENT YEAR 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1993 1994	AS OF: 12/93 0.0 0.3 0.8 1.3 2.5 4.7 12.7 31.0 57 9 87.8	3/94 0.0 0.7 1.2 2.0 4.0 9.7 25.1 51.0 81.2 24.7	6/94 0.0 0.2 0.5 1.1 1.7 3.5 7.4 20.2 44.1 73.8 47.8	9/94 0.0 0.1 0.4 0.9 1.5 3.0 5.9 15.9 37.4 66.1 68.8	12/94 0.0 0.3 0.8 1.3 2.5 4.7 12.7 31.0 57.9 87.8	3/95 0.0 0.2 0.7 1.2 2.0 4.0 9.7 25.1 51.0 81.2 18.9	6/95 0.0 0.2 0.5 1.1 1.7 3.5 7.4 20.2 44.1 73.6 37.3	9/95 0.0 0.1 0.4 0.9 1.5 3.0 5.9 37.4 66.1 54.9	12/95 0.0 0.0 0.3 0.8 1.3 2.5 4.7 12.7 31.0 57.9 71.4	3/96 0.0 0.0 0.2 0.7 1.2 2.0 4.0 9.7 25.1 51.0 67.7	6/96 0.0 0.2 0.5 1.1 1.7 3.5 7.4 20.2 44.1 63.0	9/96 0.0 0.0 0.1 0.4 0.9 1.5 3.0 5.9 3.7.4 5.7.2	12/96 0.0 0.0 0.3 0.8 1.3 2.5 4.7 12.7 31.0 51.2	3/97 00 00 0.0 0.2 0.7 1.2 20 4.0 9.7 25.1 45.6	6/97 0.0 0.0 0.2 0.5 1.1 1.7 3.5 7.4 20.2 40.1	9/97 0.0 0.0 0.1 0.4 0.9 1.5 3.0 5.9 15.9 34.8	12/97 0.0 0.0 0.0 0.3 0.8 1.3 2.5 4.7 12.7 29.6
1995 1996 1997						18.9	37.3	54.9	71.4	67.7 18.9	63.0 37.3	57.2 54.9	51.2 71.4	45.6 67.7 18.9	40.1 63.0 37.3	34.8 57.2 54.9	29.6 51.2 71.4
RESERVES: INCURRED LOSSES:	198 7 100.0	199.6 100.0	200.1 100.0	199.9 100.0	199.0 100.0	194.0 94.0	189.8 88.0	186.1 82.0	182.5 <b>76</b> .0	180.5 76.0	179.0 76.0	177.2 76.0	175.9 76.0	175.2 76.0	175.0 76.0	174.6 76.0	174.5 76.0
RESERVE TO INCURRED RATIO:	1.99	2.00	2 00	2.00	1.99	2.06	2.16	2.27	2.40	2.38	2.36	2.33	2.31	2.30	2.30	2.30	2.30

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#### BODILY INJURY COVERAGE - CHOICE NO-FAULT DEVELOPMENT OF RESERVE TO INCURBED BATIOS

ACCIDENT	AS OF:															
YEAR	3/98	6/98	9/98	12/98	3/99	6/99	9/99	12/99	3/00	5/00	9/00	12/00	3/01	6/01	9/01	12/01
1987	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	00	0.0	0.0	0.0	0.0	0.0
1990	0.7	0.5	0.4	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	00	00	0.0	0.0	00
1991	12	1.1	0.9	0.8	0.7	0.5	0.4	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0
1992	2.0	1.7	1.5	1.3	1.2	1.1	0.9	8.0	0.7	0.5	0.4	0.3	0.2	0.2	0.1	0.0
1993	4.0	3.5	3.0	2.5	2.0	1.7	1.5	1.3	1.2	1.1	0.9	0.8	0.7	0.5	0.4	0.3
1994	9.7	7.4	5.9	4.7	4.0	3.5	3.0	2.5	20	1.7	15	1.3	1.2	1.1	0.9	0.8
1995	24.8	20.2	15.9	12.7	9.7	7.4	5.9	4.7	4.0	3.5	3.0	2.5	2.0	۱.7	1.5	1.3
1996	45.6	40.1	34.8	29.6	24.8	20.2	15.9	12.7	97	7.4	5.9	4.7	4.0	3.5	3.0	2.5
1997	67.7	63.0	57.2	51.2	45.6	40.1	34.0	29.6	24.B	20.2	15.9	12.7	9.7	7.4	5.9	4.7
1998	18.9	37.3	54.9	71.4	67.7	63.0	57.2	51.2	45.6	40.1	34.8	29.6	24.8	20.2	15.9	12.7
1999					18.9	37.3	54.9	71.4	67.7	63.0	57.2	51.2	45.6	40.1	34.8	29.6
2000									18 9	37.3	54.9	71.4	67.7	63.0	57.2	51.2
2001													18.9	37.3	54.9	71.4
RESERVES:	174.8	175.0	174.6	174.5	174.8	175.0	174.6	174.5	174.8	175.0	174.6	174 5	174.8	175.0	174.6	174.5
LOSSES:	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0
RESERVE TO																
INCURRED RATIO:	2,30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30

APPENDIX 5 EXHIBIT 4 PAGE 2

#### BODILY INJURY LIABILITY - CHOICE NO-FAULT INVESTMENT INCOME MEASUREMENT DISCOUNTED CASH FLOW OF THE POLICY TRANSACTION

	OLD LAW	DISCOUNTED	NEW LAW	DISCOUNTED	i = 6%
	AMOUNT	AMOUNT	AMOUNT	AMOUNT	DISCOUNT
EVALUATION	PAID	PAID	PAID	PAID	FACTOR
1	0.3	0.296	0.1	0.059	0.98554
2	1.9	1.845	0.6	0.602	0.97129
3	4.0	3.829	1.4	1.378	0.95724
4	6.0	5.660	2.5	2.340	0.94340
5	6.6	6.136	3.7	3.459	0.92975
6	7.4	6.781	4.7	4.288	0.91631
7	7.7	6.954	5.8	5.220	0.90306
8	8.2	7.298	6.0	5.376	0.89000
9	6.9	6.052	5.5	4.859	0.87713
10	6.9	5.965	5.5	4.789	0.86444
11	6.7	5.708	5.3	4.549	0.85194
12	6.4	5.374	5.1	4.299	0.83962
13	5.9	4,882	4.9	4.022	0.82748
14	4.9	3.996	4.6	3.735	0.81551
15	4.3	3.456	4.3	3.456	0.80372
16	3.2	2.535	3.2	2.535	0.79209
17	3.0	2.342	3.0	2.342	0.78064
18	2.3	1.770	2.3	1.770	0.76935
19	1.5	1.137	1.5	1.137	0.75822
20	1.2	0.897	1.2	0.897	0.74726
21	0.7	0.516	0.7	0.516	0.73645
22	0.5	0.363	0.5	0.363	0.72580
23	0.5	0.358	0.5	0.358	0.71531
24	0.5	0.352	0.5	0.352	0.70496
25	0.5	0.347	0.5	0.347	0.69477
26	0.3	0.205	0.3	0.205	0.68472
27	0.2	0.135	0.2	0.135	0.67482
28	0.2	0.133	0.2	0.133	0.66506
29	0.1	0.066	0.1	0.066	0.65544
30	0.1	0.065	0.1	0.065	0.64596
31	0.2	0.127	0.2	0.127	0.63652
32	0.1	0.063	0.1	0.063	0.62741
33	0.1	0.062	0.1	0.062	0.61834
34	0.2	0.122	0.2	0.122	0.60940
35	0.1	0.060	0.1	0.060	0.60058
36	0.1	0.059	0.1	0.059	0.59190
37	0.1	0.058	0.1	0.058	0.58334
38	0.0	0.000	0.0	0.000	0.57490
39	0.1	0.057	0.1	0.057	0.56659
40	0.1	0.056	0.1	0.056	0.55839
TOTAL	100	86.11	76	64.31	
PERCENT		13.89%		15.38%	