

# Private Passenger Auto

## What Mom Never Told You

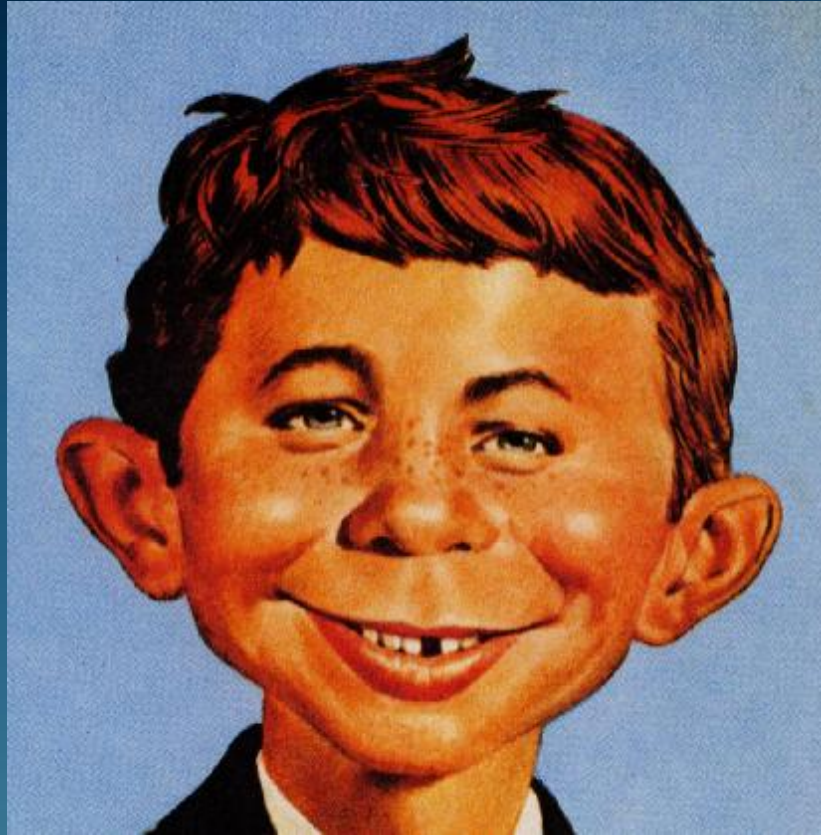
Presented by  
Roger M. Hayne, FCAS, MAAA  
Consulting Actuary

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# First A Short Survey

- § How many here involved in private passenger auto reserving?
- § Of you how many wrote in Michigan, New Jersey, or Pennsylvania?
- § Of you how many have pre-1978 accidents?
- § Of you how many have reinsurance with some sort of limit or no reinsurance at all?
- § Of you how many can still sleep at night?

# What, me worry?



# Maybe There's Cause

§ PIP should be easy:

- First party so reported quickly
- No litigation so settled quickly
- Benefits set forth in the law so no disputes

§ The reality is yes and no

§ Unlimited benefits (MI, NJ, PA) really are unlimited

# An Example

§ Costs can be substantial

§ MCCA has paid more than \$1 million on more than 2,300 claims and more than \$5 million on more than 80 and more than \$10 million on 4

§ Consider some costs for a quadriplegic

- Wheel chairs
- Home and transport modifications
- Attendant or institutional care
- Medical attention for complications resulting from injury

§ Not unusual for costs to be more than \$100,000 per year for life

# Not Really A Problem

- § This is now an accident that happened 30+ years ago
- § The claimant is now 50 years old
- § Probably will not live too much longer
- § Even normal life expectancy is 27 years
- § This means \$2.7 million in reserves
- § Not even close to our \$7 million available protection

# Wrong!

§ Problems with that analysis on at least two counts

- Ignores inflation
- Does not recognize what life expectancy really is

§ True expected cost (5% inflation, standard mortality) is \$6.7 million

§ Still under retentions – No problem

# Wrong Again

- § Does not reflect true nature of “expected value”
- § True the expected loss is \$6.7 million
- § If the claimant lives to 80 (about a 42% chance of that) the inflated total will exceed \$7 million
- § True impact is \$1.7 million (i.e. you can expect \$1.7 million in losses after the \$7 million coverage)



# Why Is This So?

- § Life expectancy is really an average
- § Considers all future ages and the chance of attaining those ages
- § Says that the average age of death for a large group of 50-year-olds is 77 (in our example)
- § Some die sooner, others later

# How To Estimate Expected Losses

- § One way would be to use life tables to model future payments
- § Our life actuary brethren call these annuities
- § Set reserves using results of these models
- § Expected value? Some other probability level (say 80%)?
- § Example will show expected value

# A Simple Annuity Calculation

	(1)	(2)	(3)	(4)	(5)
Attained		Average	Percent	Cost per	Population
<u>Age</u>	<u>Population</u>	<u>at Age</u>	<u>Surviving</u>	<u>Survivor</u>	<u>Costs</u>
			<u>(2)/89,966</u>		<u>(3) x (4)</u>
50	89,966	89,690	0.9969	102,470	102,155
51	89,413	89,115	0.9905	107,593	106,575
52	88,817	88,497	0.9837	112,973	111,127
109	11	5	0.0001	1,822,902	109
110	0				
Total			26.94		6,717,343

# Calculation for Excess

	(1)	(2)	(3)	(4)	(5)	(6)
Attained		Average	Percent	Cumulative	Cost per	Expected
<u>Age</u>	<u>Population</u>	<u>at Age</u>	<u>Surviving</u>	<u>Costs</u>	<u>Survivor</u>	<u>Costs</u>
			<u>(2)/89,966</u>			<u>(3) x (5)</u>
79	42,458	40,980	0.4555	6,807,956	0	0
80	39,502	37,998	0.4224	7,250,823	250,823	105,938
81	36,494	34,970	0.3887	7,715,834	465,011	180,748
109	11	5	0.0001	36,231,549	1,822,902	109
110	0					
Total			26.94			1,688,372

# Some Practical Issues

## § Selection of mortality table

- Standard life tables readily available
- PIP claimants may not have “standard” mortality
- Mortality likely to vary by injury type

## § May need to modify table

- Judgment
- Analysis

## § Even then some claims may still be worse

# Some Practical Issues

- § The result is effectively a case reserve
- § It is a point estimate at one point in time
- § Can develop upward or downward
- § IBNR also possible, more likely though are known claims that continue to develop
- § Time value of money

# Conclusion

- § Unlimited PIP claims can give you a surprise
- § Proper planning can recognize liabilities and get better reserve estimates
- § As always estimates are that, estimates and not certainty