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Current Issues in Property and Casualty

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## Developments on Med Mal Tort Reform

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I don't often work on topics of immediate interest to the general public. Currently, however, I am involved with medical malpractice (med mal) insurance. Here, doctors are protesting the high cost of med mal insurance and are lobbying for tort reforms. In February, for example, thousands of New Jersey doctors staged a work stoppage to protest rising med mal insurance rates. Emotions run high as doctors' incomes are squeezed between high med mal rates and fee limitations imposed by managed care organizations and federal/state Medicare/Medicaid programs. A March 10 *NY Times* article described doctors as blaming trial lawyers for a lot of their problems.

Sharply rising med mal rates in 2002 and 2003 in many large states including New Jersey recently brought the problem to a head. This market has become very "hard." Some med mal insurers (e.g., PHICO) have become insolvent. Others (e.g., St. Paul) have voluntarily left the market. Given the instability, doctors are now looking for new insurers. What they are finding are sharply increased premiums, which sharply increase their expenses and reduce their incomes.

In the *NY Times* article, NJ doctors are blaming lawyers for medical malpractice problems. HMOs and patients were also blamed for expecting top quality healthcare at cut-rate prices. Further, doctors refusing to unite and participate in a strike were also blamed. There is plenty of blame to go around and I suspect that strong feelings are felt, with some justification, on all sides.

In their job action, NJ doctors are demanding tort reform. They seek a cap for pain and suffering equal to \$250,000 per claim. This is being sought, for caps in other states such as California have led to slower growth or even reductions in med mal premiums. Since California's cap of \$250,000 was set in 1975, med mal premiums only rose 175%, as opposed to the national average of 500%! This drove down California's national ranking from 3rd highest to 35th highest.

In doing a number of analyses on the effects of tort reforms, I tend to agree that, if done right, a \$250,000 cap on non-economic damages (i.e., pain and suffering) would significantly reduce the cost of medical malpractice claims. Further, it would make the medical malprac-

tice system more predictable and stable over time. Currently in many states, medical malpractice awards attributable to pain and suffering are large—often more than 50% of total awards. Unlike awards for economic damages, awards for pain and suffering are impossible to quantify objectively and often are based upon subjective judgments of juries. Furthermore, as new precedents are set, which increase award levels for specific types of cases, all future cases of that type will be settled at that new higher level until a still higher precedent is set. This effect tends to drive up awards for pain and suffering at rates exceeding inflation in an uncontrolled manner.

Increasing awards for pain and suffering cases settled by juries also impacts the larger number of cases settled before trial or before a verdict is reached. Settlement amounts are reached by negotiation between the parties, and are based on expected cost of the claim if it were to go to a verdict. Therefore, if the portion of verdicts for pain and suffering increases, settlements on similar cases will also increase.

There is ample historical evidence that state caps on non-economic damages tend to incur lower medical malpractice costs than states without caps. The best example is California, alluded to above, where the cost of medical malpractice claims per physician has averaged less than 50% of the nationwide average over the 1990s. Other examples of states with caps are Colorado (69% of countrywide average), Indiana (86% of countrywide average), and Maryland (64% of countrywide average).

In the other direction, some states without caps are DC (144% of countrywide average), Florida (136% of countrywide average), Illinois (144% of countrywide average), New Jersey (131% of countrywide average), New York (156% of countrywide average), and Pennsylvania (171% of countrywide average).

Clearly, there are other differences between these states besides either having or not having caps. There are also differences in size and application of the caps in the states that have them. However, the pattern is still clear, caps on non-economic damages are highly correlated to medical malpractice costs.

In New Jersey, in response to the doctors' strike, state senate is proposing a bill which would provide a \$300,000 limit on the amounts insurers would pay for non-economic damages, but amounts in excess of the \$300,000 cap would be paid out of a special state fund. This fund would be financed through a payroll surcharge imposed on workers in the medical, legal, and accounting professions.

In my opinion, this idea will not significantly reduce medical malpractice insurance costs to doctors in New Jersey. First, to the extent non-economic damages exceed the cap, doctors would be paying part of the cost through the payroll surcharge. Second, it is unclear what the effect of the bill will have on settlements, which are more numerous and where economic and non-economic damages are not usually itemized. If the non-economic damages are not capped in the settlements, there will be little total saving. Furthermore, if the settlements are not capped, insurance companies would have an incentive to hold out for verdicts, which would be capped. This would delay the process and perhaps increase costs, because verdicts tend to cost more than settlements.

The doctors' strike in New Jersey is past, and the legislature is still contemplating tort reform at this time. President Bush has spoken in favor of tort reform, and specifically a cap on pain and suffering. I understand the Bush Administration will present a specific proposal to Congress in the near future. At the state level, several other states are considering the issue. In particular, those states where medical malpractice costs are very high or have risen greatly within the past two years. It is a controversial subject, with recriminations leveled back and forth between doctors, patients, HMOs, med mal insurers, and lawyers. It is probably impossible to design a system always fair to everyone in all circumstances. I hope, given all of the confusion and all of the emotion, meaningful reforms will be enacted that will at least improve the existing system.

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## Avoiding Year End Reserve Surprises

*Paul Struzziari, FCAS, MAAA*

**Over the past two years, property and casualty insurance** companies experienced more than their usual share of large reserve increases, rating agency downgrades, and high-profile failures and insolvencies. Some may blame the state of the economy, where higher unemployment rates and surging medical costs may be linked to increases in the frequency and severity of claims. Others may argue that absence of meaningful tort reform coupled with runaway jury verdicts has been a contributing factor.

Whatever the underlying reasons behind these unfavorable trends, insurance companies can reduce the chance of a year-end "surprise" by monitoring and adjusting reserves on a quarterly—or even monthly—basis.

### Beyond the Annual Statement

Insurance companies spend a lot of time and effort determining the amount of loss and loss adjustment expense reserves to book in the statutory annual statement. There are several good reasons for this level of energy, including:

- the desire to present as accurate a picture of financial health as possible,
- the hope that the appointed actuary will be able to offer an unqualified statement of actuarial opinion (SAO),
- the hope that the company's auditors will be able to sign off on the reserves, and
- the scrutiny that insurance regulators and rating agencies will bring to their review of the annual numbers.

It is true that significantly less effort is required in the preparation of quarterly statements. For example, there is no requirement for

the appointed actuary to provide an SAO. In addition, quarterly statements do not contain a Schedule P; so there is no need to record loss and LAE reserves in line of business or accident year detail. However, it should not be any less important to an insurer to record an accurate reserve estimate as of March 31 than it is as of December 31.

In practice, the quarterly reserve-setting process is often less precise than the process as of December 31. The imprecision at each quarter-end can accumulate throughout the year and lead to large reserve changes at year-end. Before we illustrate how this can happen, it is useful to examine a typical quarterly reserving approach used by many companies.

For the remainder of this article, the terms "loss," "losses," or "loss ratio" are used to refer to both losses and LAE combined.

### The Ultimate Loss Ratio Approach

At the end of each quarter, many companies will book the same ultimate loss ratios that they booked as of the previous December 31. Take the example of accident year 2002 for annual statement year 2002. Suppose the company recorded the following amounts as of December 31, 2002 for a liability line of business.

Earned premium	=	\$100
Paid Losses	=	\$10
Case Reserve	=	\$25
Incurred Losses		
(i.e., paid plus case)	=	\$35
IBNR Reserve	=	\$40

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The accident year 2002 booked loss ratio is 75%, since earned premium equals \$100 and ultimate losses total \$75 (= \$10 + \$25 + \$40). We refer to the losses as “ultimate” because they are intended to provide for all claims that will arise from accidents occurring during 2002. In this example, paid losses largely correspond to closed claims; case reserves correspond to claims reported, but not yet closed; and the IBNR reserve corresponds to claims that have been incurred, but not reported as of December 31.<sup>1</sup>

Now, suppose that, as of March 31, 2003, paid losses and LAE have increased from \$10 to \$15 and case reserves have increased from \$25 to \$35. Incurred losses, therefore, have increased from \$35 to \$50. An insurance company booking the same ultimate loss ratio would back into an IBNR reserve of \$25 as of March 31, 2003, so that the ultimate losses remain at \$75 and the 75% loss ratio is maintained. Table 1, below, provides a numerical example of this approach at each of the quarter-end evaluation points in 2003.

TABLE 1

ULTIMATE LOSS RATIO APPROACH					
	12/31/02	3/31/03	6/30/03	9/30/03	12/31/03
Paid	10	15	20	25	35
Case	25	35	40	45	40
Incurred	35	50	60	70	75
IBNR	40	25	15	5	0
<b>Ult. Loss</b>	<b>75</b>	<b>75</b>	<b>75</b>	<b>75</b>	<b>75</b>
Premium	100	100	100	100	100
Loss Ratio	75%	75%	75%	75%	75%

Table 1 illustrates a problem with this approach. As of December 31, 2003, the accident year 2002 incurred loss equals \$75. A strict application of the ultimate loss ratio method would imply that the IBNR reserve should be \$0. However, it is unlikely that the IBNR reserve for a liability line of business at 24 months of maturity would be \$0 because there would likely be additional claims reported after 24 months as well as further possible development on known cases.

### So What Can Insurance Companies Do?

Some large insurance companies with considerable actuarial resources perform complete actuarial reserve analyses each quarter. However, this level of analysis may be impractical on a quarterly basis for most companies, due to time or cost constraints.

Many detailed actuarial analyses rely on Bornhuetter-Ferguson or Cape Cod methods. An actuarial estimate of ultimate losses based on these methods consists of three main inputs:

Incurred losses  
Expected losses  
Loss reporting patterns

<sup>1</sup> IBNR reserves also include a provision for development on open claims. Also, paid losses could include partial payments on open claims.

Expected losses are typically calculated by multiplying an expected loss ratio by earned premium. Loss reporting patterns are derived from historical company (or industry) loss development triangles. IBNR reserves are estimated directly from these two values as follows:

$$IBNR = (\text{Expected Losses}) \times (\text{Percentage Unreported})$$

As defined above, ultimate losses are then set equal to the sum of incurred losses and the IBNR reserve.

All three inputs (incurred losses, expected losses, and loss reporting patterns) are generally updated with each complete loss reserve analysis. The incurred losses, of course, are actual data, while the expected losses and reporting patterns are assumptions that may get revised based on the updated loss data. For many insurance companies, it may not be realistic to update these assumptions quarterly because of time and expense considerations.

At the other extreme, for the ultimate loss ratio approach, none of the three inputs are updated each quarter, since the ultimate loss ratio remains unchanged from quarter to quarter. In fact, this method completely ignores the actual loss activity during the quarter by solving for the IBNR reserve that forces the loss ratio to be the same. Therefore, the revised IBNR reserve is inconsistent with the IBNR reserve estimated in the detailed year-end reserve analysis.

Fortunately, there is a simple compromise that involves relatively little work, yet still results in a revised ultimate loss estimate that is responsive to the updated loss data while maintaining consistency with the year-end IBNR reserve.

### The IBNR Schedule

After the appointed actuary has completed his or her SAO and issued the supporting year-end reserve report, he or she can provide you with a schedule of expected IBNR reserves at each future quarterly evaluation. The actuary could estimate the future emergence of the incurred but not reported losses based upon historical loss emergence patterns. The IBNR at each successive quarter-end, therefore, would be a function of the year-end IBNR reserve for each accident year. Table 2 provides an example of what such a schedule might look like for accident year 2002.

TABLE 2

AY 2002 IBNR SCHEDULE			
IBNR	Start of Quarter	Expected Loss Emergence	IBNR End of Quarter
1st Quarter 2003	40	5	35
2nd Quarter 2003	35	5	30
3rd Quarter 2003	30	5	25
4th Quarter 2003	25	5	20

The company can book this IBNR each quarter without doing any additional analysis. The revised ultimate loss at each quarter-end would equal the actual incurred loss amount plus the scheduled IBNR amount. Table 3 shows the results using the IBNR in the above schedule.

TABLE 3

IBNR SCHEDULE APPROACH					
	12/31/02	3/31/03	6/30/03	9/30/03	12/31/03
Paid	10	15	20	25	35
Case	25	35	40	45	40
Incurred	35	50	60	70	75
<b>IBNR</b>	<b>40</b>	<b>35</b>	<b>30</b>	<b>25</b>	<b>20</b>
Ult. Loss	75	85	90	95	95
Premium	100	100	100	100	100
Loss Ratio	75%	85%	90%	95%	95%

Note that the ultimate losses increase over the course of the year from \$75 to \$95. This implies that the actual loss experience during 2003 was worse than originally expected (in the year-end analysis). Specifically, actual incurred losses increased by \$40 over the course of 2003 (i.e., from \$35 to \$75), while the losses were only expected to increase by \$20 (i.e., IBNR was scheduled to be reduced from \$40 to \$20). The IBNR schedule approach, therefore, simply replaces expected loss emergence with actual loss emergence during the interim quarters. The adverse development is recognized throughout the course of the year, rather than all at once at December 31, 2003.

This method represents an improvement over the ultimate loss ratio approach, where none of the three inputs are revised. First, in the IBNR schedule approach, the actual incurred loss data through the new quarter are used. Second, the revised IBNR reserve amounts are consistent with the prior year-end IBNR reserve. Of the three inputs to the original ultimate loss estimates (incurred losses, expected losses, and loss reporting patterns), one is revised and the other two maintain consistency. Specifically, the incurred losses are revised each quarter as new loss data becomes available. In addition, the expected loss and reporting pat-

tern assumptions remain consistent with the original assumptions, since the IBNR schedule is based upon these assumptions.

**Conclusion**

Whenever possible, a detailed loss reserve analysis is the best way to accurately determine reserves, because all of the inputs get revised. However, the effort involved can be substantial and may make it impractical to perform with any frequency. In the absence of a comprehensive loss reserve analysis, the scheduled IBNR approach is worth considering. It is an improvement over the ultimate loss ratio approach and is a relatively simple way to make sure quarterly loss reserve levels are responsive to the current loss activity.

The IBNR schedule can also provide insurers with an important monitoring tool. By comparing actual and expected loss emergence each month or quarter, management can stay on top of its reserve adequacy. We caution, however, not to read too much into one month or even one quarter of loss activity. In practice, the incurred loss activity can contain "noise" that may not necessarily translate into changes in the adequacy of the carried reserves. However, if the actual loss development continues to exceed the expected loss emergence with each successive month or quarter, then it may be time to perform a comprehensive reserve study.

It is worth noting that this approach can also be adapted to paid loss actuarial methods. The actuary can provide a schedule of total loss reserves (i.e., case plus IBNR) at the end of each quarter. The revised ultimate loss estimates would then be equal to the actual paid losses to date plus the scheduled loss reserve as of the end of that quarter.

Finally, it should be mentioned that the above tables focus on accident year 2002. While a similar approach could be taken for the 2001 and prior accident years, it would not be appropriate for accident year 2003 (i.e., the current accident year). Regardless of what method is used to provide quarterly estimates of ultimate losses, the current accident year will always need to be separately addressed.

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