



April 30, 2010

Stephen Schumacher
Chief Financial Officer
West Virginia Board of Risk & Insurance Management
90 MacCorkle Avenue S.W., Suite 203
South Charleston, WV 25303

Dear Steve:

Scope

We have been asked to provide indemnity loss estimates for the Board of Education’s (BOE) excess layers for the period 7/1/10 – 6/30/11. Specifically, we have been asked to review the auto liability and general liability indemnity costs to the \$2mln excess of \$1mln layer and the \$3mln excess of \$3mln layer. The loss data used in our analysis included two large sexual abuse and molestation claims. Those losses have been excluded from our review.

Results

The results of our review are summarized in the following table. The estimates included in this table are for indemnity only and do not include a provision for expense.

Indemnity Only Loss Forecast		
	Indemnity Layer	
	<u>\$2mln xs \$1mln</u>	<u>\$3mln xs \$3mln</u>
Mean	1,075,807	202,390
<u>Percentiles</u>		
70th	1,574,724	0
80th	2,000,000	0
90th	2,779,675	641,422
95th	3,597,652	1,564,760

The distribution of forecast values reflects variability in both the frequency and severity of losses. The frequency and severity components of the mean estimates are as follow:

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- The expected number of claims to the \$2mln xs \$1mln layer is approximately 1.2 per year with an average severity to the layer of approximately \$900K.
- The expected number of claims to the \$3mln xs \$3mln layer is approximately .18 per year or one loss every 5.5 years. The average severity to the layer when a loss occurs is estimated to be approximately \$1.1mln.

Data

We were provided with the following auto liability and general liability loss data:

- BRIM Board of Education detailed loss data valued as of 3/31/2010.
- Insurance carrier data – GenStar detailed BOE loss run valued as of 4/20/10

The BRIM data is limited to their \$1mln retention. The GenStar data is for losses to the layer \$2mln xs \$1mln.

In addition to the datasets listed above, we have considered the assumptions and results in Aon Global Risk Consulting's 3/31/10 review "State of West Virginia, Board of Risk and Insurance Management Interim Analysis" (BRIM 3/31/10 Interim Review).

Actuarial Methodology

The modeling approach used in our analysis is a frequency/severity methodology.

For frequency, ground-up reported indemnity losses are trended to the forecast period at 5% per annum. An annual frequency count for claims exceeding \$500K is selected for the forecast period based on a review of the claim counts by period. The selection serves as the mean of a Poisson frequency distribution which is used to model claim frequency.

For severity, a loss distribution (mixed lognormal) is parameterized based on the trended loss data. Only claims with trended reported indemnity greater than \$250K are modeled. The threshold was selected based on both credibility considerations and the predictive value for the excess layers.

A simulation model is then used to simulate the number of claims based on the frequency model, simulate the size of each loss based on the severity model, and then calculate the indemnity loss to each excess layer. The iterations of the simulation model represent possible outcomes for the coverage period. The results of our analysis are based on statistics computed across 10,000 iterations of the simulation model.

In addition to the frequency/severity approach, we have also validated our results against the results in the BRIM 3/31/10 Interim Review. Specifically, applying increased limits factors

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to the retained loss estimates in the BRIM 3/31/10 Interim Review provides results consistent with the estimates based on our frequency/severity approach.

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Please feel free to contact us if you should have any further questions or comments.

Sincerely,



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