Rebuttal Report to the D.C. Department of Insurance, Securities and Banking

Group Hospitalization and Medical Services Inc.

MIEAA Surplus Review

November 7, 2014

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United Health Actuarial Services, Inc.

Mark Shaw Rebuttal

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Introduction

One point of agreement for all the testifying actuaries at the June 25th hearing is that the validity of any model used in this proceeding is dependent upon the soundness of the model's assumptions. There also seems to be agreement that the basis for the assumptions is important, and the individual assumptions validated, in order for their soundness to be determined.

In my GHMSI surplus evaluation, I have identified and explained the specific data underlying my assumptions as well as my methodology for deriving the assumptions from the data. I have also shown how my assumptions were validated.

In my view, as I further address in this rebuttal statement, neither Rector nor Milliman has met these basic requirements. As a result, the outputs they produced from the model are of unknown reliability and do not provide a sound actuarial basis for estimating GHMSI's surplus needs. In contrast, I believe the estimates I have provided are actuarially sound, not only because they have been explained and validated, but because they are grounded in historical data and are designed to predict reasonably probable outcomes – including reasonably probable adverse outcomes.

To support these views and in an effort to provide useful information for the Commissioner, in this rebuttal statement I address four issues. First, I show that Rector has still not explained or validated the assumptions it used in the Modified Milliman Model, even though the Commissioner expressly asked Rector to do so in his follow-up questions after the June 25 hearing. Second, I address the criticism Milliman and Rector have directed at my analysis. I do not address comments made by GHMSI's response simply because there are no unique points made by them – they simply repeat some of Milliman's comments. Third, I comment on the unreliability of Milliman's work due to their unexplained and ever changing recommendations. Fourth, I provide additional analysis on the allocation issue and respond to recent information submitted by Rector and GHMSI on that issue. Finally, I provide a table illustrating the impact on required surplus of various confidence levels, premium growth and other corrected assumptions.

Rector's Failure to Explain or Validate its Assumptions

When considered together, Rector's report and its responses to the Commissioner's questions, simply list certain general information they considered and the probability distributions they used in the modified model. But nowhere do they detail the specific information they relied on; nor do they explain the stepping stones between that specific information and the probability distributions they actually used. This is true with regard to all 13 factors used in the model, including the three that have the biggest impact on Rector's proposed surplus – equity portfolio asset values, premium growth rate, and rating adequacy and fluctuation.

Equity Portfolio Asset Values

Rector's response indicates that based on 1957 to 2012 data that equity values have increased at an average rate of 7.3%[1]. But Rector makes no reference to how it used that information to validate the particular probability distributions it relied on from Milliman; and it nowhere addresses the Commissioner's request that it explain how that probability distribution constitutes a middle of the fairway assumption. Milliman's probability distribution for this factor predicted that the most likely result for this factor was a negative 3% return, and Rector simply adopted that prediction in its use of the Modified Milliman Model. It is impossible to square this prediction with Rector's own determination that equity returns over a recent 55 year period have averaged a positive 7.3%.

The Commissioner asked Rector to "describe in detail the data underlying the equity portfolio distribution as used in the Milliman Model." Rector does not provide any data, much less describe in detail, but instead simply restates what their assumption is.

In part a) of question #7 the Commissioner asks Rector if the underlying assumptions changed from those in the original Milliman model. Rector acknowledges that Milliman changed its approach in the 2011 review to include the pension plan's equity portfolio in the assumption.

In part b) of his question #7, the Commissioner asks Rector if the equity portfolio factor, as used in the Modified Milliman Model, has an overall negative return and if not, to address the argument in Appleseed's hearing testimony that the probability factor in the Modified Milliman Model has an overall negative return.

In response, Rector does not address the projected negative return from the stochastic model, but says that the Pro Forma model investment return is not negative. Rector does not dispute Appleseed's testimony which accurately stated the overall impact of the Equity Portfolio Asset Value on the results of the stochastic modeling: both in the percentage of cases having a negative return (53%) and in the overall average weighted result being negative (-1.1%). Moreover, Rector makes no effort to reconcile its own research that shows an average equity portfolio _annual_ return of 7.3% with the baseline Pro Forma portfolio (all investments including bonds) return assumption of 3.75%. Nor do they explain how the -1.1% average 3-year deviation coming out of the stochastic model from the _EPAV factor that applies to all non-FEP premium revenue_ (which is much larger than the amount invested in equities) affects the average return on equities in the Pro Forma model.

In part b) ii) of question #7 the Commissioner asks Rector how much the negative equity returns impacted the calculation of the surplus target. Rector does not have the data to answer this question and answers "N/A". However, as detailed on pages 31-31 of the Shaw Report, the

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[1] It should be noted that the weighted average return for equities as provided in the recommended probability distribution in Chart 12 of the Shaw Report is 7.3% which equals Rector's stated 55-year market average return on equities of 7.3%.

actual answer is that the Milliman probability distribution on the Equity Portfolio Asset Values in the stochastic modeling increased the required surplus coming out of the Modified Milliman Model by $215 million. Indeed, my replication of the stochastic model indicates that the RAAF factor has the largest loss impact, but *the EPAV factor's loss impact is larger than all other risk factors combined* – and this is true at every confidence level. And it should be noted that the losses coming out of the stochastic model from the EPAV factor are not somehow applied to the investment returns in the Pro Forma model, but are applied to all non-FEP premium.

In part c) of question #7 the Commissioner asks Rector how did the post-2011 actual results compare to the assumptions underlying the equity portfolio. In response, Rector appears to calculate GHMSI's total investment portfolio average earnings rates for 2012 and 2013 (which portfolio investments consist of 85% bonds) and fails to isolate or calculate the equity portfolio return as asked.

However, actual equity returns for 2012 and 2013 can be readily determined from information in the GHMSI and CF BlueChoice statutory annual statements and were as follows:

Chart 1

	GHMSI		CF Blue Choice		GHMSI + 50% of CFBC	
	2012	**2013**	**2012**	**2013**	**2012**	**2013**
Beg Year Stock Invest	171,563,388	179,646,805	157,400,048	180,498,934	250,263,412	269,896,272
End Year Stock Invest	179,646,805	121,819,719	180,511,651	137,438,765	269,902,631	190,539,102
Average Invested:	175,605,097	150,733,262	168,955,850	158,968,850	260,083,021	230,217,687
Stock Invest Income	4,452,066	2,260,335	4,361,896	2,441,604	6,633,014	3,481,137
Realized Cap Gains	16,153,044	23,085,779	13,597,999	20,311,442	22,952,044	33,241,500
Chg in Unrealized Cap Gains	8,805,163	(6,105,448)	9,665,209	(2,949,467)	13,637,768	(7,580,182)
Stock Invest Income:	29,410,273	19,240,666	27,625,104	19,803,579	43,222,825	29,142,456
Estimated Stock Return:	**16.7%**	**12.8%**	**16.4%**	**12.5%**	**16.6%**	**12.7%**

These actual 2012 and 2013 equity returns are obviously significantly higher than the 3.75% overall portfolio investment returns assumed in the Pro Forma model. Given that Rector says that the overall portfolio returns were less in 2012 and 2013 than the 3.75% expected return that comprises the assumption in the Pro Forma model, Rector's overall return must mean that the bond portfolio returns were less than expected. It should be noted that there are two separate factors in the modified Milliman model for risks related to bond returns and the EPAV factor is not intended to address risks related to bond investments.

Premium Growth Rate

Although Rector stated in its December 2013 report (p. 28) that "to determine [the] appropriate premium growth level assumptions to include in the model… it is important to take into account GHMSI's historical premium growth experience," in practice Rector did not rely on GHMSI's historical experience in selecting the growth rates for the model.

The Commissioner also asked Rector to explain how its "premium growth assumptions were right down the middle of the fairway given GHMSI's actual historical premium growth." Rector does not address this in their response at all.

In part a) of question #6 the Commissioner asked Rector to assess its premium growth assumptions in light of the fact that GHMSI's premium growth over the last five years has averaged 2.8% with a maximum of 6.8% and the fact that the Modified Milliman Model used a 12.5% midpoint assumption.

Rector says that Appleseed's testimony is incomplete on this point; however, my submitted report included complete premium growth information including the fact that non-FEP premium has *only* averaged a **2.3**% growth rate over the last 5 years. Rector also says they looked at 2003-2012 rather than 2009- 2013 to calculate its averages when in fact, as explained by Rector in their premium growth documentation, the assumptions Rector used in the Modified Milliman Model were not based on historical experience at all[2].

Moreover Rector provides no explanation for the appropriateness of their selected years to review for historical experience. For example, it is well known that *percentage* growth rates in revenue become harder to achieve as a company's revenue basis grows larger. In 2003 GHMSI's revenues were around $2 billion while in 2012 they were $4.5 billion (including their 50% share of BlueChoice). Why is it more appropriate to use older data than the most recent 5 years of experience? What not give more weight to what has happened recently? Does Rector believe that the premium growth rate of 2003 is just as predictive of 2014 as the 2012 or 2013 growth rate?

In part b) of question #6 the Commissioner asked Rector to explain how it concluded that their assumptions were "middle of the fairway" given GHMSI's actual historical premium growth. Rector's explanation cites a few general factors and cites previous documentation where the premium growth assumptions they actually used do not rely on historical experience at all. That they would try and justify not using any historical data is quite surprising given Rector's response to question #8 c) where they state:

> "Excluding the [1980s and early 1990s] data entirely… has the practical effect of giving zero probability to the chance that health care cost trends could in the future be as they were during the 1980s and early 1990s. We believe the better approach is to consider that data, but to give more weight to what had happened recently."

As the Shaw Report pointed out on page 20, in establishing their premium growth assumptions Rector's assumptions give zero probability to the chance that either FEP or non-FEP future growth rates will be as low as the highest annual premium growth rate (5.5%) over the preceding

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[2] See May 16, 2013 memo from Jim Toole of FTI Consulting.

five calendar years (2008 – 2012). Is it better to ignore the most recent 5 years of results or results that occurred more than 20 years ago?

In part f) of question #8 the Commissioner asks Rector whether they overstated the likely increase in GHMSI enrollment. Rector's response is that based on the information available at the time of their review they don't believe they overstated the likely increases. Obviously, 2012 and 2013 results (actual non-FEP premium growth in 2012 = 2.1% and in 2013 = 2.3%) show that their modeled increases in GHMSI enrollment were vastly overstated. Moreover, as noted above, they certainly had recent historical information available to them when they put their report together. Assuming as their model does that 100% of annual non-FEP premium growth-rate possibilities are above the highest actual annual growth rate of the last five years is not reasonable.

In part c) of question #6 the Commissioner asked Rector to state how GHMSI's post 2011 actual results compare to the assumed premium growth rates. Rector acknowledges that non-FEP premiums (which drive the model) were substantially below their assumptions in 2012 and 2013; and, based on early data, it appears that modest growth rates (i.e., lower than the lower end of the Rector range) have occurred in the 3-year period ending in 2014[3].

If the non-FEP growth rate of the 1st 6 months of 2014 is assumed to continue throughout 2014, the average actual annual non-FEP growth rate for the 3-year period of 2012 through 2014 is 5.4%. See Chart 2 below for the actual annual non-FEP growth rate for each of the 3-year periods ending in 2011, 2012, 2013 and 2014:

Chart 2

		GHMSI + 50% CF BlueChoice			
		Total Prem		Non-FEP	Avg non-FEP
	Total Prem	**Growth Rate**	**Non-FEP**	**Growth Rate**	**3-yr Growth**
2008	3,617,151,941		2,097,292,042		
2009	3,815,192,752	5.5%	2,240,546,402	6.8%	
2010	3,900,167,236	2.2%	2,296,725,154	2.5%	
2011	4,050,944,322	3.9%	2,306,298,507	0.4%	**3.2%**
2012	4,231,099,348	4.4%	2,355,471,292	2.1%	**1.7%**
2013	4,341,411,308	2.6%	2,410,557,173	2.3%	**1.6%**
6 mos 2014 (annualized)	4,719,287,468	8.7%	2,703,991,570	12.2%	**5.4%**

Thus, even accounting for the one time surge in enrollment that was expected in 2014 due to removal of individual underwriting and the exchange subsidies, GHMSI's 3-year average annual non-FEP growth rate including the surge year of 2014 is only 5.4%. This confirms that the growth rates Rector used were neither reasonably probable nor middle of the fairway. It also suggests that the alternative non-FEP premium growth rates suggested by the commissioner in

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[3] The premium growth rate is an annual assumption for each year of a 3-year period. If the non-FEP growth rate of the 1st 6 months of 2014 is assumed to continue throughout 2014, the average actual annual non-FEP growth rate for 2012 through 2014 is 5.4%.

order number 14-MIE-008 are also too high as those rates have 8% as the most likely result, with the possible range being 4.5% to 12.2%. As shown above, the 3-year average annual non-FEP growth rates for the years ending in 2011, 2012, 2013 and 2014 are 3.2%, 1.7%, 1.6% and 5.4% respectively.

Rating Adequacy and Fluctuation

Rector asserts that it considered a number of input variables and that its probability distributions are reasonable and down the middle of the fairway without any description of the specific data Rector relies on or the process they used to develop the probability distribution. Indeed, nowhere in its answers to the Commissioner's questions does Rector anywhere even mention the actual probability distributions it used for the critical RAAF factor or any specifics on data or the methodology of how the probability distribution was derived.

In part c) of question #8 the Commissioner asks Rector about the use of data from the 1980s and early 1990s in connection with the rating adequacy and fluctuation factor. Rector states that they agree that health care cost trends variability has decreased in recent years.

What Rector does not state and seems to miss entirely by looking at health care cost trends rather than actual underwriting results is that whether or not health care cost trends are less variable today, the key issue is that a health company's ability to forecast their health care costs (i.e., have adequate rates) is far easier and much more accurate than in the environment that existed in the 1980s and early 1990s. Advances in data management, quicker reporting and processing of claims, network and provider contracts and a myriad of other factors make forecasting the company's health care costs (and required rates) substantially easier than the environment that existed over 20 years ago. Moreover, looking at rating adequacy before risk based capital requirements existed in the mid-1990's is not appropriate; it is like trying to incorporate Model T era experience into predicting twenty-first century automobile reliability.

In part e) of question #8 the Commissioner asks Rector about the risk-mitigating elements of the ACA (i.e., the three R's). This could be an important consideration in projecting possible outcomes for the rating and adequacy factor. Rector's response in effect is that they thought of those elements, but decided to ignore them since their impacts would not take place until 2014-2015 and should be considered in future surplus reviews. If Rector had similarly ignored the risk elements of the ACA that didn't begin to take place until 2014 (i.e., the exchanges and guaranteed issue underwriting of individuals) then it might have been appropriate to ignore the three R's, but given that they took into account the full ACA risk impacts it is unreasonable to not also take into account the ACA risk mitigation tools.

Changes in Interest/Discount Rate

As with other factors Rector makes some very general statements about data it considered relative to this factor but does not detail any specific data relied upon or any methodology used to develop the probability distribution used.

Rector responds to a point I made on page 39 of my report that their derived probability distribution assumes that 90% of the time that interest rates will increase and have a negative impact on the company's bond portfolio. They state that 35% of the time the negative impact will be immaterial on stochastic model results and that their probability distribution only increases interest *materially* 55% of the time. It should be noted that despite their expressed exception, my report does not overstate the probability of loss and Rector confirms my statement by reprinting their probability distribution showing that they do expect a loss (of some magnitude) from this factor 90% of the time.

Significantly, as noted below in Chart 3, contrary to Rector's assertion[4] that "it is more likely that interest rates will increase than decrease in coming years", interest rates have not gone up from where they were at on January 1, 2011 and over the last 3 and a half years they have actually decreased from the prior year in both 2011 and 2012 and again thus far in 2014.

Chart 3

	U.S. Treasury Bond Interest Rates				
	1/1/2011	1/1/2012	1/1/2013	1/1/2014	9/30/2014
10 year	3.30%	1.89%	1.78%	3.04%	2.52%
20 year	4.13%	2.57%	2.54%	3.72%	2.98%
30 year	4.34%	2.89%	2.95%	3.96%	3.21%

Bond Portfolio Impairment

As with many other factors, Rector's response to the Commissioner simply lists certain general information they considered. Nowhere do they detail the specific information they relied on nor do they explain the stepping stones between that specific information and the probability distribution they used. They dismiss the relevance of this factor by saying that there is an 83% probability that this factor would have no impact on the required surplus.

However, this underestimates the impact of this factor due to the fact that the model results are driven by the tail results rather that the entire distribution. Based on my reproducing the stochastic modeling in the Modified Milliman Model, I calculate that the Bond Portfolio Impairment probability distribution is responsible for approximately 1.6% of the required surplus above 200% RBC , even at the 95% confidence level. This may seem somewhat insignificant, but accepting Rector's other assumptions in the model, this factor requires nearly an additional $10 million of surplus.

Catastrophic Events

Rector fails to cite any data that it used or even considered to develop this probability distribution. Instead, Rector attempts to minimize the impact of this factor by saying negative results only impact one in every ten 3-year periods. However, this again ignores the fact that the

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[4] See page 8 of Rector's responses to the Commissioner's questions.

model results are driven by the tail results rather that the entire distribution. Based on my reproducing the stochastic modeling of the Modified Milliman Model, I calculate that the Catastrophic Event probability distribution is responsible for approximately 6% of the required surplus above 200% RBC at the 95% confidence level. This is not insignificant and could require an additional $36 million of surplus.

Unidentified Growth and Development

Rector cites some data on the increase in non-admitted assets for GHMSI over 1998-2012 and suggests a resulting charge of 1.7% per year as the factor for this. However, they do not explain why this is an appropriate basis for *unidentified* growth and development (are they suggesting that all growth in non-admitted assets is unidentified?); nor do they explain their derivation of the probability distribution and, among other things, the 10% probability that the *unidentified* growth and development will be at least 4% of non-FEP premiums. As stated in my June report, I have already accounted for this factor in the way I have developed my RAAF factors.

Based on my reproducing the stochastic modeling Modified Milliman Model, I calculate that the Unidentified Growth and Development probability distribution is responsible for approximately 9% of the required surplus above 200% RBC at the 95% confidence level and nearly 15% of the required surplus above 200% RBC at the 90% confidence level. This is not insignificant and could require an additional $67 million of surplus depending on confidence level.

Other Factors

Rector provides no specific data it considered or methodology it used in evaluating the reasonability of the remaining five factors. Rather, they simply assert that any one of these factors would have little or no impact on surplus.

However, based on my reproducing the stochastic modeling of the Modified Milliman Model, I calculate that the probability distributions for the remaining five factors are responsible for approximately 6% of the required surplus above 200% RBC at the 95% confidence level. This is not insignificant and could require an additional $36 million of surplus.

Assumptions in the Pro Forma Model

The Commissioner asked Rector (Question 5(a)) to provide a brief description of how they arrived at the conclusion that assumptions used in the Pro Forma model were reasonable and "middle of the fairway". Rather than doing so, Rector merely lists a number of the assumptions (some assumptions such as expense assumptions continue to be omitted from their disclosed assumptions) used and the general data they looked at. But they do not explain what data they used, how those data were used to develop the assumptions, or why they should be considered middle of the fairway.

Part b) of question #5 asks for the specific data relied upon. Again, specific data are not cited, but a general description of approach is given. For example, Rector stated this with regard to answering the specific data question relative to "Pricing Margin for non-FEP insured business":

We determined that this assumption is consistent with GHMSI's recent historical experience. We noted that GHMSI's pricing margins for non-FEP business vary, by year, but found the selected baseline assumption to be reasonable and "middle of the fairway".

This is not a recitation of specific data. It is merely a conclusory statement. Unaddressed questions include:

- What years were included in the examination of historical experience and why?
- How was the BlueChoice experience factored in?
- How was the historical experience adjusted for the years that GHMSI intentionally lowered its pricing margin?
- Have margins historically varied by product (MedSupp, Individual, Small Group, Larger Group, Dental, etc..) and what is the projected future mix of products?
- What assumptions were subsidiary to the expected pricing margin? For example,
  - What medical loss ratio is projected going forward?
  - What level of expense is assumed?
- What is the projected impact of the three R's?
- Etc…

The Pro Forma model evidently projects a loss on ASC business based on 2009 and 2010 losses. This raises questions such as: What were the ASC results in 2011, 2012 and 2013? How long does GHMSI plan to continue to do business on a product line that they expect to lose money on – especially at the 8.3% annual growth rate that they cite? These and other questions should be answered before the pro forma assumptions being used in the model are accepted as sound.

Failure to Validate Assumptions

In order for a model to be reliable there must be a validation of the model results against historical results. None of the reports drafted by Milliman contains any information indicating that their assumptions or models validate to historical experience. Ms. Doran's testimony contained no mention of any attempt to validate the Milliman approach, nor in the Milliman reports in this proceeding there any mention, let alone demonstration, of validation. Rector acknowledges that validation is critical and criticized the Milliman approach with the following statement in its 2009 report:

"[T]he Milliman methodology does not validate GHMSI historical results over the last 13 years. Based on a statistical analysis of the Milliman loss curve, it seems highly improbable that GHMSI's actual results could have been generated using the Milliman approach, a critical test for the validity of any modeling approach." [5]

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[5] Page 5 of Rector & Assocs., Inc., *Report to the D.C. Department of Insurance, Securities and Banking: Group Hospitalization and Medical Services, Inc.* (July 21 2010).

In Rector's most recent report[6] it expands upon this theme:

> "[W]e performed various tests to validate the general accuracy and completeness of the Milliman model and assumptions, as revised to take into account our findings and conclusions. The validation tests included tests both as to specific assumptions and as to the model as a whole."

Despite this assertion about their validation efforts, when asked for all documentation performed, Rector provided a single memo from FTI Consulting that stated that its validation efforts were comprised of the following:

> "FTI reviewed the actual surplus changes for one year periods 2001 through 2012 and compared these to the median one-year change estimated based upon assumptions from the Milliman model. A comparison would indicate that the median one-year estimated surplus growth for Milliman is 2% lower as a percent of Non-FEP premium than the median surplus growth of the actual experience during this period. However, the Milliman growth assumption is within one standard deviation of the actual one-year surplus changes."

This lack of clear validation by Rector led to follow-up questions from the Commissioner to Rector.

Part c) of question #5 asks Rector for any validation tests run for specific assumption in the pro forma model and the outcomes of those tests. It is important to note that they did not run any validation tests specifically for the baseline assumptions (i.e., those cited in question #5a). They say that they validated the stochastic model variations instead. But it is important that the assumptions in both the stochastic model and the pro forma model be validated. Yet Rector actually did neither.

In part a) of question #8 the Commissioner asks Rector whether they validated key assumptions in the Modified Milliman Model. Rector asserts that they validated baseline assumptions and potential deviations in their responses to questions 4 c) and 5 b). However, as noted earlier, Rector actually answers those specific questions this way:

- In answering question #4 c) Rector asserts they did validation, but fails to cite any specific data used to validate the assumptions. Nor do they cite the outcome of those tests as the Commissioner asks.
- In answering question #5 b) Rector restates the assumptions they used, but fails to cite any specific data or step-by-step methodology used to validate the Pro Forma assumptions.

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[6] See page 34 of Rector & Associates, Inc., *Report to the D.C. Department of Insurance, Securities and Banking*, (December 9, 2013).

In part b) of question #8 the Commissioner asks Rector to comment on whether FTI's validation of the model accounted for the dispersion of results. Rector again makes only a conclusory statement with no supporting data or methodology stating "[we considered] dispersion of results on an assumption by assumption basis as part of our evaluation of the reasonableness of the specific probability distribution inputs selected for each assumption…".

 As noted, FTI Consulting wrote a memo dated February 7, 2014 to explain their validation approach. In their memo they stated they validated Pro Forma results to one standard deviation below the historical median surplus change. Nowhere in the memo do they even once mention evaluating the dispersion of results. The Rector response to the Commissioner does not shed much additional light on the now claimed evaluation of the dispersion of results. For the median results, FTI's memo stated they validated to a standard deviation below the median historical experience[7]. How does the variance of model results compare to historical experience's underwriting gain variability? Rector does not address this question. In any case, as discussed on pages 44 – 51 of the Shaw Report, validating only to the median cannot provide sufficient validation. Further, the current response talks specifically about validating to the 1991-2010 time period vs. the Feb. 7, 2014 FTI memo which addresses the 1996-2010 time period. In the end, the Commissioner's request that Rector explain and validate its assumptions has not been met.

Moreover at the macro level it seems clear that the results of the modified Milliman model are unreasonable and could not possibly validate. GHMSI has never seen a reduction in surplus of $100 million over any 3-year period in the company's history. Milliman and Rector, however, would have us believe that there is at least a 2% probability that GHMSI's surplus could drop from over $900 million to less than $200 million over a future 3-year period. Using GHMSI's historical data from 1995 to the present and extracting from the 5 year historical data from GHMSI's annual statutory financial statements we can make the following summary of historic surplus and changes thereto:

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[7] As discussed on page 47 of the Shaw Report the ramification of validating to one standard deviation below the historic median result is that the Modified Milliman model was actually tested at a confidence level of 99.8% rather than the intended 98%.

Chart 4

Year	Year End Surplus	Change in Surplus	3-Yr Chg in Surplus	3-Yr Chg as % of begin Surplus
		from 5 Year Historical Data		
1995	100,455,579			
1996	132,878,059	32,422,480		
1997	149,815,926	16,937,867		
1998	158,715,529	8,899,603	58,259,950	58.0%
1999	186,845,537	28,130,008	53,967,478	40.6%
2000	248,002,255	61,156,718	98,186,329	65.5%
2001	273,984,510	25,982,255	115,268,981	72.6%
2002	290,773,025	16,788,515	103,927,488	55.6%
2003	392,008,160	101,235,135	144,005,905	58.1%
2004	501,014,465	109,006,305	227,029,955	82.9%
2005	560,967,145	59,952,680	270,194,120	92.9%
2006	663,006,406	102,039,261	270,998,246	69.1%
2007	753,558,921	90,552,515	252,544,456	50.4%
2008	686,779,718	(66,779,203)	125,812,573	22.4%
2009	761,458,437	74,678,719	98,452,031	14.8%
2010	969,499,374	208,040,937	215,940,453	28.7%
2011	963,581,310	(5,918,064)	276,801,592	40.3%
2012	941,070,954	(22,510,356)	179,612,517	23.6%
2013	934,751,475	(6,319,479)	(34,747,899)	-3.6%
		Average 3-Year Change in Beginning Surplus:		48.3%
		Standard Deviation in 3-year Surplus:		26.3%

The above is a summary of actual historical data. There are no assumptions in this chart, simply reported data of what actually occurred over the last 19 years and calculation of surplus changes that occurred over each 3-year period. The year-to-year surplus changes reflect the impact of all items that impact surplus on a year by year basis – changes in non-admitted assets, investment gains or losses, underwriting losses or gains, company strategies, management interventions and market pressures.

If we use this actual data[8] as a statistical basis for predicting the possibility of surplus losses in the future, we get the following results:

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[8] This actuarial analysis of changes in the company's surplus accepts the historical experience of surplus losses at face value, which may in fact be overstating risk, because some of the losses were intentional, and some of the gains may have been intentionally limited.

Chart 5

3-Year Beginning Surplus	3-year Surplus Loss Size	Loss= # of Std Dev	Occurrence Probability	Confidence Level	X, where Occurs 1 in X 3-Yr Periods
$900,000,000	$25,000,000	1.942	2.60%	97.40%	27
$900,000,000	$50,000,000	2.048	2.03%	97.97%	34
$900,000,000	$100,000,000	2.259	1.19%	98.81%	58
$900,000,000	$150,000,000	2.471	0.68%	99.32%	102
$900,000,000	$200,000,000	2.682	0.37%	99.63%	190
$900,000,000	$300,000,000	3.105	0.09514%	99.90487%	729
$900,000,000	$400,000,000	3.528	0.02095%	99.97905%	3,310
$900,000,000	$500,000,000	3.951	0.00390%	99.99610%	17,762
$900,000,000	$600,000,000	4.374	0.00062%	99.99938%	112,358
$900,000,000	$700,000,000	4.797	0.00008%	99.99992%	835,238

Chart 5 indicates that the probability of a $50 million reduction in surplus over a 3-year period is approximately 2% or 1 in every 102 years (thirty-four 3-year periods). Similarly, the probability of a $300 million loss in a 3-year period occurring is approximately 0.095% or 1 in every 2187 years (or 1 in every 729 3-year periods). It should be noted that based solely on historical changes in GHMSI surplus, this statistical analysis is consistent with the final analysis in the Shaw Report which showed that if various factors were corrected to be consistent with historical data then the beginning surplus needed to protect against losses in surplus does not have to be very high to be protective.

Based solely on GHMSI's own actual experience data and standard statistical calculations, the probability of a loss of $700 million of surplus in a 3-year period – the level of surplus reduction that would need to occur for GHMSI to drop below 200% RBC based on its current level of ACL-RBC - is almost non-existent and would only have a likelihood of occurring once in every 2.5 million years.

Questions Raised by Milliman and Rector About My Analysis

At the June 25 hearing, Mr. Doran representing Milliman raised a number of questions about my proposed adjustments to the Modified Milliman Model. And Rector in its August 27 filing raised a question about my treatment of the confidence level. Below I address first the confidence level and then the assumptions in the model.

A. The Confidence Level

Ms. Doran says[9] that I have agreed with the use of a 98% confidence level vs. the 200% RBC-ACL threshold. But this is not correct. My January 18, 2013 letter on this issue that she cites states:

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[9] See page 2 of the June 25, 2014 submitted written testimony of Phyllis Doran.

Milliman has proposed a "near certainty" threshold of 98% relative to the 200% RBC, which is itself twice the level at which regulatory intervention is authorized. I concur as to the reasonability of that threshold ***as long as*** the "loss cycle" that determines 98% is appropriately constructed.

As noted extensively elsewhere in my testimony, my reports and this rebuttal, Milliman and Ms. Doran have yet to disclose the basis for their key stochastic model assumptions much less validate their model or demonstrate that the probabilities of loss and loss amounts were appropriately constructed. In any case, we believe that Milliman's unexplained probability distributions are skewed, and we adopt different ones based on actual data, and documented judgments.

Ms. Doran goes on to say[10] that, with a 90% confidence level, "one could expect that GHMSI's surplus would fall below 200% RBC-ACL, triggering regulatory supervision and potential loss of the Blue Cross Blue Shield trademarks, once every ten years." This assertion is not correct, as the modeling method, regardless of confidence level selected, is based on 3-year time periods and not 1-year time periods. Moreover, this assertion assumes that neither GHMSI nor the DISB would take counter action if a significant loss emerged in the first year or two of a 3-year loss period.

Significantly both Ms. Doran and Rector make this mistake and they make it with regard to both a 90% confidence level and a 98% level. In the last full paragraph of page 25 of their August 27 response Rector states that a 10% probability of breaching the 200% RBC threshold would be an expectation of a breach occurring once every 10 years. This is not an accurate statement.

The way the model is set up is to look at 3-year periods. So a 90% confidence level with accurate assumptions would have a 10% likelihood of a breach occurring once every ten 3-year periods or once every 30 years, not once every 10 years. Similarly, Rector goes on to say it would require a 98% confidence level to avoid a breach every 50 years; Ms. Doran says this in her testimony as well [cite]. But again, because the model is based on 3-year periods, this simplistic calculation # of years = (1 / (1 – Confidence Level)) used by Ms. Doran and Rector would actually equate to the likelihood of a breach once every 50 3-year periods or a likelihood of once every 150 years.

Again using the simplistic approach of Ms. Doran and Rector, but adjusting their approach to one based on a 3-year model the confidence level to have a statistical expectation of a breach occurring only once in every 50 years would be a 94% confidence level (# of years = 50 = (3 x 1) / (1 – 94%)). And if a 90% confidence level is used then the result of the corrected simplistic formula would equal 30 years ((3 x 1) / (1 – 90%)).

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[10] Ibid.

B. Assumptions in the Model

Ms. Doran questioned a number of my proposed adjustments to assumptions in the Modified Milliman Model. Because those assumptions affect hundreds of millions of dollars that the model calculates are needed for surplus, I address each of the questions she raises.

Rating Adequacy and Fluctuation (RAAF) factor

Ms. Doran first addresses my development of a RAAF factor. This is ironic because, despite producing multiple reports that rely on such a factor, Milliman has not disclosed how it derived the probabilities and loss amounts in the RAAF factors used in its reports.

Ms. Doran questions[11] the mix of companies I used[12] reflect various corporate structures, which conduct business in different markets, offer a differing mix of products, and operate under widely varying practices and circumstances. But this is in fact a strength, not a weakness of my approach. In contrast Ms. Doran appears[13] to take nationwide health expenditures over an inappropriate time period (1986-2010)[14] and in an undisclosed way apply "GHMSI's rating approach" to that nationwide health expenditure data to generate "a diverse range of potential circumstances".

The approach she suggests would require, at the least, an extraordinary amount of judgment and, more probably, significant speculation, as to what GHMSI would do in various circumstances. Moreover, even if Milliman had perfect knowledge of what changes GHMSI would make in the face of various health care cost-changes, it cannot construct GHMSI's historical changes to RAAF by applying its simulations of GHMSI's ratings to nationwide data.

If for example, nationwide health expenditures increase 6% in a given year, of what relevance is that to GHMSI? GHMSI is only affected by changes in health expenditures in its service area, which may or may not correlate to nationwide changes. Moreover, due to provider contracts, the vast majority of GHMSI provider reimbursement schedules likely do not change in any given year and GHMSI can anticipate their actual reimbursement costs to a high degree of accuracy that does not apply to national health expenditures.

In contrast, the approach to RAAF that I have used reflects what GHMSI and comparable Blue plans actually did in 195 different circumstances over a time period that is consistent with the time period that Rector stated is the time period during which current RBC standards have been

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[11] See page 5 of the June 25, 2014 submitted written testimony of Phyllis Doran.

[12] Ibid. Ms. Doran immediately errs by asserting that only the results of 10 companies were used for 12 years. While there were 10 comparable companies used, she ignores the fact that 15 years of results for GHMSI were also included in the analysis.

[13] Ibid.

[14] Explanation of this inappropriate long time period comment is provided later in this report as I quote John Cookson of Milliman on why rating practices and underwriting results have materially changed for the mid-1990's to the present from what has existed prior to the mid-1990's.

effective; Milliman acknowledges[15] that this more recent period differs from older time periods due to Blue Cross Blue Shield plans operating on a more sophisticated actuarial basis, a reduction in the lag time between claim occurrence and payment, a lack of severe inflation and RBC standards adoption.   Thus, my approach does not speculate on how the company and peer competitors might have reacted to changes in health costs. Instead, it uses actual results that occurred in response to real-life issues and how management changed premiums to address them.

Ms. Doran goes on to assert, but without any supporting facts or demonstration, that Milliman's modeling approach is robust, sound and superior. She makes this assertion even though she acknowledges that Milliman's approach does not consider actual historical underwriting results from GHMSI or any peer companies[16]. Given these facts, the Milliman approach seems to be the very embodiment of what Ms. Doran describes as "an approach that is indirect, and potentially biased"[17].

Even though Mr. Doran and Milliman did not base their own analysis on actual historical underwriting results of comparable companies, they question the companies used in my model. For example, Ms. Doran asserts[18] that there was no consideration of ownership interests in subsidiaries and owned affiliates.   But she does not demonstrate or explain why such non-consideration would have changed the underwriting results of the companies examined.

The purpose of the analysis of the Blues competitors was not to perform a detailed assessment of the appropriateness of the surplus at the various companies, but to use their underwriting results as data points in the range of results that a Blues plan actually incurred over a historical period of time. Those actual underwriting gains and losses are not hypothetical in any sense, but reflect real world results with all the variables associated with profitability including competitive pricing practices, regulatory restrictions, networks, expenses, mix of products, etc…and management actions in response.

Another question raised is the omission of two companies identified by Invotex. Ms. Doran does not name the specific companies she asserts were omitted or provide any factual data on how their inclusion would have affected results. However, in response I have evaluated how adding additional Blues plans to the analysis would have affected the results. I have continued to omit Capital Blue Cross since it is clearly not a reasonable GHMSI comparison due to its non-FEP premium having been below $300 million annually for each of the last 10 years (2004-2013), but I have added to my previous data the data from five additional companies (NAIC Identification numbers show in parenthesis) whose names have come up (including one of the companies to which Ms. Doran alludes) as potential peers during the years associated with this surplus review.

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[15] See Milliman's Healthcare Reform Briefing Paper dated May 2011 by John Cookson, FSA, MAAA.
[16] See page 8 of the June 25, 2014 submitted written testimony of Phyllis Doran.
[17] See page 3 of June 25, 2014 submitted written testimony of Phyllis Doran.
[18] See page 6 of June 25, 2014 submitted written testimony of Phyllis Doran.

- BCBS of MA (53228)
- BCBS of SC (38520)
- Health Now of NY (55204)
- LA Health Servs. (81200)
- CFMD (47058)

Including the results from these five Blues companies brings our actual historical underwriting gain/loss observations up from 135 to 195[19]. Here are the derived RAAF factors excluding and including these additional companies:

Chart 6

GHMSI + 10 Comparable Blues					GHMSI + 15 Comparable Blues			
Historical					Historical			
	2-year		3-year			2-year		3-year
Prob.	Gain/Loss	Prob.	Gain/Loss		Prob.	Gain/Loss	Prob.	Gain/Loss
4.1%	24.5%	9.8%	31.3%		4.0%	24.7%	8.7%	31.1%
5.7%	18.3%	12.5%	16.4%		4.5%	18.3%	8.1%	16.9%
10.6%	11.9%	11.6%	11.3%		8.5%	11.9%	14.3%	12.0%
34.1%	7.0%	27.7%	8.1%		32.2%	7.2%	26.7%	8.0%
13.0%	3.8%	11.6%	3.9%		13.6%	3.9%	9.3%	4.0%
10.6%	1.3%	8.0%	1.5%		14.1%	1.2%	11.8%	1.4%
11.4%	-1.5%	7.1%	-1.6%		12.4%	-1.1%	9.9%	-1.3%
6.5%	-3.2%	6.3%	-3.7%		7.9%	-3.3%	6.2%	-3.7%
3.3%	-5.5%	5.4%	-6.9%		2.3%	-5.8%	5.0%	-7.1%
0.8%	-11.8%	0.0%	N/A		0.6%	-11.9%	0.0%	N/A

As can be seen in Chart 6, while there are minor differences in probabilities and loss results between the "GHMSI plus 10 Comparable Blues" and the "GHMSI plus 15 Comparable Blues", there are no material differences in the probabilities and magnitude of the loss results – especially the negative loss results (see yellow high-lighted rows). It is the negative results that drive the stochastic model results.

This demonstration that my RAAF factors are essentially unchanged with the addition of five additional Comparable Blues plans directly contradicts Ms. Doran's assertions that my RAAF factors are "infinitely malleable" based on which Blues plans are selected.

Ms. Doran also alleges that results for many of the Comparable Blues plans results in the 3 to 5 year period prior to 2002 would show losses, and she cites statistics about companies having a

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[19] Note that these 195 actual results compare to 25 hypothetical results using Ms. Doran's approach.

single year of loss during such period, but provides no such data relative to the frequency of loss in 2 and 3 year periods (which are the time periods upon which the RAAF factors are built). Indeed, as the chart above shows, almost 20% of 2-year periods in the years included (2002 – 2013) for the companies studied resulted in loss.

I have reviewed the data for a number of the Comparable Blues plans[20] prior to 2002 and do not see any indication that the preceding 5 years (1997 – 2001) has any greater percentage of loss over 2 and 3 year periods. Here is a summary of net income and surplus results for 6 of the 10 original Comparable Blue plans for the period 1997-2001:

Chart 7

	Net Income By Year				
	2001	2000	1999	1998	1997
Premera	38,504,621	31,156,593	32,767,337	5,509,566	4,175,211
Regence BlueShield	39,498,362	20,336,355	21,899,681	13,115,027	27,243,619
Regence BCBS of UT	19,645,304	21,199,460	2,069,832	(5,659,776)	3,620,760
BCBS of GA	111,761,949	51,853,652	33,158,696	15,131,962	1,936,149
Regence BCBS of OR	(12,807,328)	9,364,219	15,688,862	17,784,071	32,967,937
BCBSM, Inc	(39,331,209)	42,131,471	12,711,607	47,578,742	33,841,865
Average:	26,211,950	29,340,292	19,716,003	15,576,599	17,297,590
	Net Income By Year as % of Revenues				
	2001	2000	1999	1998	1997
Premera	1.9%	1.8%	2.5%	0.5%	0.4%
Regence BlueShield	2.7%	1.3%	1.6%	1.2%	2.5%
Regence BCBS of UT	4.3%	5.7%	0.6%	-2.0%	1.4%
BCBS of GA	9.6%	5.4%	4.1%	2.2%	0.3%
Regence BCBS of OR	-1.2%	0.9%	1.7%	2.1%	4.7%
BCBSM, Inc	-2.8%	3.4%	1.2%	6.3%	4.6%
Average:	2.4%	3.1%	2.0%	1.7%	2.3%
	Surplus By Year				
	2001	2000	1999	1998	1997
Premera	329,104,494	272,548,644	248,588,754	209,799,932	216,774,312
Regence BlueShield	411,644,252	390,069,840	390,942,728	394,554,550	397,099,787
Regence BCBS of UT	99,892,123	85,944,197	71,077,118	71,068,913	88,277,233
BCBS of GA	252,110,314	173,115,348	161,510,819	155,721,970	142,465,847
Regence BCBS of OR	267,701,184	207,817,907	228,182,062	234,706,708	256,645,493
BCBSM, Inc	404,723,828	422,140,508	390,000,098	309,255,665	241,708,987
Average:	294,196,033	258,606,074	248,383,597	229,184,623	223,828,610

This actual historical data shows that in the preceding 5 years (1997 – 2001) that on average the Comparable Blues plans in question had mostly positive net income, relatively flat net income as a percentage of revenues and steadily increasing surplus. Ms. Doran's criticism is simply unsubstantiated.

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[20] I would have reviewed data for all plans, but such data for all plans was not readily available to me.

Equity Portfolio Asset Value (EPAV) factor

As noted, Milliman and Rector have not explained the probability distributions they use in the model for the EPAV factor. However, Ms. Doran challenges my probability distributions on two grounds:

1) She states that my analysis is flawed because it includes returns on pension assets; and
2) She states that I overstate the impact of expected asset returns (and EPAV) on GHMSI's surplus due to not including Blue Choice investments in stocks and GHMSI's 50% share of Blue Choice's non-FEP premium.

I believe the first of her points is unjustified. My responses to her criticisms are as follows:

1) When we asked Rector to explain the material changes that Milliman made to their assumptions since 2009, FTI Consulting sent a memo dated March 6, 2014 that said in part that Milliman had made material changes to "Equity Portfolio Asset Values (**including the impact of pensions**)". P. 3. The memo goes on to say that such changes had an estimated impact on RBC requirement of 70%. Then, in a April 18, 2014 letter to DC Appleseed from Acting Commissioner Chester A. McPherson it states in part on page 8:

   > "R&A determined *that the changes that Milliman made to incorporate the effect of equity asset value changes with respect to the GHMSI pensions plan's equity portfolio into its equity portfolio asset value factor* accounted for a change of 70 basis points between Milliman's 2008 and 2011 surplus level findings…. R&A did not make any revisions in the Milliman's equity portfolio asset value factor, as employed in Milliman's 2011 modeling." (emphasis added).

2) My report proposes to *reduce* the impact of the EPAV factor from that used by Rector and Milliman. As noted in my June 2014 report, I replicated the Rector stochastic model results and quantified the impact of the EPAV factor. Before reducing the EPAV factor stated by Phyllis Doran in her February 27, 2014 letter and used by Milliman/Rector, I found that the impact of this risk assumption was larger than any other risk assumption used in Rector's stochastic model other than the RAAF factor. Indeed, using the unadjusted EPAV factors used by Milliman/Rector, I found that, excluding the RAAF factor, the impact of their EPAV factors on the stochastic model losses was greater than all other risk factors *combined*.

3) Ms. Doran states that my EPAV factors are too high because I didn't apply them to BlueChoice premiums (presumably in Chart 11 of the Shaw Report). I have rerun my

EPAV factors correcting for this oversight. Here are the restated results adding in 50% of Blue Choice's stock investments and non-FEP premium:

Chart 8

			% of Pension	Total		Stock as %
	Assets in	Pension	Assets	Invested	Non-FEP	of Non-FEP
Year	Stocks	Assets	in Stocks	in Stocks	Premium	Premium
2008	$ 321,649,099	$ 219,384,000	51%	$433,534,939	$ 2,097,292,042	21%
2009	$ 291,610,988	$ 264,791,000	63%	$458,429,318	$ 2,240,546,402	20%
2010	$ 158,027,485	$ 289,120,000	66%	$348,846,685	$ 2,296,725,154	15%
2011	$ 251,014,029	$ 304,005,000	60%	$433,417,029	$ 2,306,298,507	19%
2012	$ 269,896,272	$ 334,907,000	56%	$457,444,192	$ 2,355,472,292	19%
2013	$ 190,539,102	$ 367,650,000	59%	$407,452,602	$ 2,410,557,173	17%

GHMSI+50% of CFBC Investments in Stock as % of Non-FEP Premium

And the revised EPAV factor distribution would be as follows:

Chart 9

Revised EPAV	
	Surplus Change
	as a % of non-FEP
Probability	Insured Premium
13.5%	13.5%
13.5%	8.3%
24.3%	6.4%
21.6%	3.8%
16.2%	0.1%
10.8%	-3.3%

My independent efforts to validate the EPAV factor found that the EPAV factor's impact as used by Milliman/Rector in the stochastic modeling vastly overstates needed surplus. Accepting Ms. Doran's arguments for a modification to this factor as noted above modestly decreases the differential between the impact of the EPAV factor developed in an unsubstantiated way in the Milliman model and the impact from using an EPAV factor developed in my June Report. In the conclusion of this rebuttal I document the impact of this modeling differential.

Premium Growth Assumptions

Ms. Doran states[21] that basing premium growth assumptions on the most recent five year experience of the company produces an assumption that is "unreasonably low". She cites various *potential* reasons for growth and, without providing any basis for her chosen

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[21] See page 4 of the June 25, 2014 submitted written testimony of Phyllis Doran.

assumptions, suggests that 2012-2014 should have been projected to be very different from the historical record. But she does not support her suggestion. For example:

1) She does not vary growth assumptions between FEP and non-FEP business.
2) Even though the actual growth rates for non-FEP premium have been 2.5% or lower for the years 2010-2013, she concludes that the minimum possible growth rate for non-FEP in the near future is 7%, almost three times as high as the average actual non-FEP growth rate from 2008 to 2013.
3) She cites[22] a study that says that employment based insurance decreased 6% for the period from 2008 to 2011[23]. But she does not reconcile this *3-year decrease* to the fact that GHMSI's membership declined 5% or more in *each year* three of the last five calendar years – including 2013. This is a significant multi-year trend that is not easily changed.
4) She points out[24] that in recent years consumers have used benefit downgrades to offset the increase in medical costs. She then states that "[*w]hen* the rate of downgrades slows or reverses the growth rate will increase, all other factors being equal." (Emphasis added). But she offers no evidence showing that benefit downgrades will not continue, and or that a reversal of the trend should be expected as the most likely outcome within the relevant time horizon.
5) She notes that GHMSI's growth rates have varied substantially over time. While this is true, she gives very little or no weight to the most recent five years or experience and fails to note the industry independent phenomena that the larger a company gets the more difficult it is to achieve larger growth rates as a percentage of revenues.
6) In the end, Milliman, as is the case with Rector, the supposed middle of the fairway projections projected for premium growth have not been tied to the historical record and the deviation from that historical record has not been justified.

In my report I detail how I derived my proposed premium growth assumptions, which not only uses past experience, but also allows a reasonable possibility of higher future premium growth. I maintain that my premium growth assumption is the most reasonable. And the now actual historical record for 2012-2014 supports my position since the actual premium growth rate for 2012-2014 is 5.4%[25] - and 5.4% is below the minimum non-FEP growth rate assumed by Milliman/Rector, but is in the middle of my suggested premium growth rate range.

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[22] See page 7 of the June 25, 2014 submitted written testimony of Phyllis Doran.

[23] Ms. Doran indicates that this decline may be due to the 2008 recession, but the 2008 recession ended in 2010 http://economix.blogs.nytimes.com/2010/09/20/the-recession-has-officially-ended/?_php=true&_type=blogs&_r=0.

[24] IBID

[25] As detailed earlier in this response, this is based on the growth rates for the full year 2014 being assumed as equal to the growth rate in the first 6 months of 2014 (vs. the first 6 months of 2013).

Expenses

I showed in my June 10 statement that GHMSI is well below average in efficiency compared to other Blues and that if it were only of average efficiency, its need for additional surplus would fall.

Ms. Doran says in response[26], "If GHMSI reduced expenses those reductions would be passed on to members and GHMSI's surplus requirements would remain unchanged." She states that this would be the case either "as a matter of GHMSI policy or DISB oversight."

GHMSI management could certainly *choose* to pass reduced expenses on to members, but there is no DISB regulation that would mandate such a result. Indeed, the DISB is concerned that GHMSI return a minimum required portion of premium to members in the form of benefits and does not micro-manage the portion of premium that is allowed for commissions, administration, taxes and profits. And Ms. Doran's statement flies in the face of historical results and Chet Burrell's testimony – Mr. Burrell having testified that the company has chosen to target thin margins over the last three years rather than being mandated to do so by DISB regulation. In any case, given that the company has achieved an acceptable MLR at a time of its administrative inefficiency, and given that Mr. Burrell testified that it wishes to stay at its current MLR level, it is not at all clear that increased efficiency dollars would be passed on in the form of decreased premiums rather than being available to increase surplus.

Ms. Doran also says that the expense analysis I previously provided is skewed. She suggests adjusting my analysis to exclude companies which are part of large insurer holding companies (like GHMSI is part of CareFirst) and make other adjustments based on business characteristics.[27] In response, I have added to my previous data the data from five additional Blues plans whose names have been suggested as potential peers during the years associated with this surplus review and which have now been added to the underwriting gain/loss analysis:

- BCBS of MA (53228)
- BCBS of SC (38520)
- Health Now of NY (55204)
- LA Health Servs. (81200)
- CFMD (47058)

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[26] See page 8 of the June 25, 2014 submitted written testimony of Phyllis Doran.

[27] Ms. Doran notes that for-profit insurers have "access to capital markets." That is presumably true, but there is no evident reason why that access causes their administrative expenses to be lower than GHMSI's. See page 8 of the June 25, 2014 submitted written testimony of Phyllis Doran. She also asserts that such insurers "can spread operating efficiencies across much larger entities," (*id.*) but she offers no evidence that GHMSI is below efficient scale, nor has GHMSI ever asserted that in this proceeding. Any such assertion would be implausible in the extreme.

Including the additional results from these five companies the updated expense analysis for the years 2009 to 2013 now looks like this:

Chart 10

GHMSI & Peers Expense Efficiency

Based on 2013 Annual Statements

All Non-FEP	Total Revenue	Claims Adj Expense	Admin Expense	Total Expense	Total Exp As % of revenue
BCBS of GA	$990,123,211	$64,572,049	$93,514,153	$158,086,202	15.97%
BCBS of MN	$2,608,002,772	$228,374,365	$329,622,373	$557,996,738	21.40%
BCBS of RI	$1,439,998,976	$66,190,277	$142,961,310	$209,151,587	14.52%
BCBS of TN	$3,049,510,663	$166,995,734	$272,532,109	$439,527,843	14.41%
BCBS of UT	$686,140,043	$59,453,234	$67,275,562	$126,728,796	18.47%
Horizon	$4,115,504,355	$137,202,622	$310,389,549	$447,592,171	10.88%
Premera	$2,036,359,667	$141,967,033	$149,747,985	$291,715,018	14.33%
QCC	$2,002,178,404	$126,827,574	$267,757,953	$394,585,527	19.71%
Regence BCBS of OR	$1,571,736,591	$119,096,039	$126,140,752	$245,236,791	15.60%
Regence BS	$1,972,404,494	$142,645,698	$206,960,724	$349,606,422	17.72%
BCBS of MA	$2,287,904,520	$117,994,085	$91,909,762	$209,903,847	9.17%
BCBS of SC	$1,710,480,447	$96,279,504	$190,149,263	$286,428,767	16.75%
CFMD	$762,407,252	$57,696,506	$131,263,641	$188,960,147	24.78%
Health now of NY	$2,430,725,669	$55,502,639	$192,781,539	$248,284,178	10.21%
LA Health Serv	$1,820,906,874	$85,074,505	$227,796,415	$312,870,920	17.18%
GHMSI	$1,347,924,011	$81,862,608	$203,572,661	$285,435,269	21.18%
Average of Peers:					16.07%
GHMSI % of Avg:					**132%**
GHMSI Rank:					**3rd Highest**

Chart 11

GHMSI & Peers Expense Efficiency - 2012

Based on 2012 Annual Statements

All Non-FEP	Total Revenue	Claims Adj Expense	Admin Expense	Total Expense	Total Exp As % of revenue
BCBS of GA	$1,229,163,657	$55,750,624	$53,301,410	$109,052,034	8.87%
BCBS of MN	$2,623,876,588	$179,484,242	$257,180,012	$436,664,254	16.64%
BCBS of RI	$1,488,203,449	$81,418,574	$145,651,269	$227,069,843	15.26%
BCBS of TN	$2,819,116,803	$169,322,658	$277,554,926	$446,877,584	15.85%
BCBS of UT	$631,268,783	$59,369,811	$52,577,766	$111,947,577	17.73%
Horizon	$4,099,914,812	$130,012,858	$299,531,778	$429,544,636	10.48%
Premera	$2,068,577,502	$132,672,889	$129,643,420	$262,316,309	12.68%
QCC	$2,146,432,108	$125,869,447	$211,595,808	$337,465,255	15.72%
Regence BCBS of OR	$1,544,724,027	$119,713,942	$136,656,034	$256,369,976	16.60%
Regence BS	$1,953,544,110	$161,572,940	$220,041,075	$381,614,015	19.53%
BCBS of MA	$1,753,311,075	$131,679,481	$106,430,734	$238,110,215	13.58%
BCBS of SC	$1,728,286,439	$118,679,138	$176,652,719	$295,331,857	17.09%
CFMD	$811,397,827	$66,662,288	$128,927,457	$195,589,745	24.11%
Health now of NY	$2,432,962,166	$50,272,176	$187,068,354	$237,340,530	9.76%
LA Health Serv	$1,745,272,575	$73,313,089	$210,636,831	$283,949,920	16.27%
GHMSI	$1,388,170,771	$67,755,099	$188,064,115	$255,819,214	18.43%
Average of Peers:					15.34%
GHMSI % of Avg:					**120%**
GHMSI Rank:					**3rd Highest**

Chart 12

GHMSI & Peers Expense Efficiency - 2011

Based on 2011 Annual Statements

All Non-FEP	Total Revenue	Claims Adj Expense	Admin Expense	Total Expense	Total Exp As % of revenue
BCBS of GA	$1,366,537,766	$28,343,672	$87,439,110	$115,782,782	8.47%
BCBS of MN	$2,507,378,271	$134,426,034	$241,694,703	$376,120,737	15.00%
BCBS of RI	$1,466,970,205	$88,857,187	$151,791,208	$240,648,395	16.40%
BCBS of TN	$2,869,507,131	$157,621,064	$290,373,162	$447,994,226	15.61%
BCBS of UT	$648,869,627	$55,949,891	$59,315,271	$115,265,162	17.76%
Horizon	$3,460,940,087	$121,813,837	$354,858,063	$476,671,900	13.77%
Premera	$2,046,669,163	$162,975,857	$123,413,170	$286,389,027	13.99%
QCC	$2,144,656,580	$81,092,836	$200,874,749	$281,967,585	13.15%
Regence BCBS of OR	$1,556,913,551	$119,643,689	$135,799,013	$255,442,702	16.41%
Regence BS	$2,007,112,786	$153,088,552	$205,451,045	$358,539,597	17.86%
BCBS of MA	$1,724,864,133	$156,186,201	$123,131,608	$279,317,809	16.19%
BCBS of SC	$1,657,549,207	$109,669,056	$177,375,433	$287,044,489	17.32%
CFMD	$905,845,718	$60,959,133	$135,698,397	$196,657,530	21.71%
Health now of NY	$2,370,994,695	$46,114,832	$188,679,836	$234,794,668	9.90%
LA Health Serv	$1,646,039,816	$102,177,734	$164,199,040	$266,376,774	16.18%
GHMSI	$1,383,436,775	$60,744,139	$183,060,456	$243,804,595	17.62%
Average of Peers:					15.32%
GHMSI % of Avg:					**115%**
GHMSI Rank:					**4th Highest**

Chart 13

GHMSI & Peers Expense Efficiency - 2010

Based on 2010 Annual Statements

All Non-FEP	Total Revenue	Claims Adj Expense	Admin Expense	Total Expense	Total Exp As % of revenue
BCBS of GA	$1,567,476,285	$41,604,787	$119,180,562	$160,785,349	10.26%
BCBS of MN	$2,418,984,622	$154,214,323	$233,625,320	$387,839,643	16.03%
BCBS of RI	$1,530,076,996	$85,832,092	$167,663,015	$253,495,107	16.57%
BCBS of TN	$2,970,981,811	$153,142,971	$262,684,586	$415,827,557	14.00%
BCBS of UT	$714,363,731	$56,851,188	$74,255,872	$131,107,060	18.35%
Horizon	$2,932,529,921	$116,858,087	$289,972,132	$406,830,219	13.87%
Premera	$1,949,504,925	$163,858,946	$131,765,415	$295,624,361	15.16%
QCC	$2,457,878,648	$119,143,496	$170,830,938	$289,974,434	11.80%
Regence BCBS of OR	$1,607,075,992	$109,418,475	$167,636,101	$277,054,576	17.24%
Regence BS	$2,129,431,556	$130,290,524	$240,567,369	$370,857,893	17.42%
BCBS of MA	$1,682,442,781	$156,609,725	$104,813,574	$261,423,299	15.54%
BCBS of SC	$1,526,534,701	$122,054,868	$195,137,583	$317,192,451	20.78%
CFMD	$935,368,867	$57,863,576	$188,958,111	$246,821,687	26.39%
Health now of NY	$2,370,277,533	$56,314,996	$182,956,854	$239,271,850	10.09%
LA Health Serv	$1,548,480,289	$90,789,807	$174,160,398	$264,950,205	17.11%
GHMSI	$1,369,995,604	$68,957,050	$188,953,265	$257,910,315	18.83%
Avg of non-GHMSI:					16.04%
GHMSI % of Avg:					117%
GHMSI Rank:					3rd Highest

Chart 14

GHMSI & Peers Expense Efficiency - 2009

Based on 2009 Annual Statements

All Non-FEP	Total Revenue	Claims Adj Expense	Admin Expense	Total Expense	Total Exp As % of revenue
BCBS of GA	$1,692,840,890	$44,678,651	$100,819,784	$145,498,435	8.59%
BCBS of MN	$2,428,711,026	$145,404,510	$241,774,224	$387,178,734	15.94%
BCBS of RI	$1,604,998,291	$87,092,810	$167,154,423	$254,247,233	15.84%
BCBS of TN	$2,778,807,175	$136,767,475	$289,963,251	$426,730,726	15.36%
BCBS of UT	$765,477,440	$56,499,516	$85,905,126	$142,404,642	18.60%
Horizon	$2,769,426,166	$103,862,837	$261,900,835	$365,763,672	13.21%
Premera	$2,046,449,202	$146,111,405	$137,105,715	$283,217,120	13.84%
QCC	$2,851,880,040	$175,361,761	$230,063,365	$405,425,126	14.22%
Regence BCBS of OR	$2,168,828,333	$116,895,057	$181,659,366	$298,554,423	13.77%
Regence BS	$2,211,566,043	$129,252,730	$242,257,614	$371,510,344	16.80%
BCBS of MA	$1,744,818,180	$143,809,124	$94,732,785	$238,541,909	13.67%
BCBS of SC	$1,409,961,372	$122,263,586	$179,309,543	$301,573,129	21.39%
CFMD	$943,643,836	$41,865,139	$183,062,355	$224,927,494	23.84%
Health now of NY	$2,416,369,267	$63,731,492	$181,312,127	$245,043,619	10.14%
LA Health Serv	$1,480,625,526	$77,999,905	$175,265,998	$253,265,903	17.11%
GHMSI	$1,358,687,031	$58,734,526	$188,416,619	$247,151,145	18.19%
Avg of non-GHMSI:					15.49%
GHMSI % of Avg:					117%
GHMSI Rank:					3rd Highest

The only company that is consistently less expense-efficient than GHMSI in the last 5 years is their affiliate, CareFirst of Maryland. GHMSI's expenses are at least 15% higher than the competitor Blues average in administrative expenses in each of the last five years with the difference as a percentage of premiums ranging from a low of 2.3% to a high of 5.1% of premium. The addition of the five additional Blues competitors makes little difference in comparison to my initial expense study. GHMSI's ranking may shift by one, for example, from second highest of 11 companies to third highest of sixteen companies in 2013. But GHMSI's percentage excess over the average still underscores its inefficiency. For example, in my original analysis, GHMSI's expenses in 2013 were 130% of the average; in the expanded analysis, which percentage actually increases, to 132%. In 2012, in my initial study, GHMSI's expenses were 123% of the average; in the expanded analysis, they are 120%. *See* Shaw Report, 34-36.

A summary of the expenses for GHMSI vs. the fifteen competitor Blues plans over the last 5 years is as follows:

Chart 15

	GHMSI Non-FEP Premium	GHMSI Expense %	Peer Expense %	GHMSI Excess Expenses
Year				
2013	$1,347,924,011	21.18%	16.07%	$68,772,561
2012	$1,388,170,771	18.43%	15.34%	$42,811,532
2011	$1,383,436,775	17.62%	15.32%	$31,913,550
2010	$1,369,995,604	18.83%	16.04%	$38,156,270
2009	$1,358,687,031	18.19%	15.49%	$36,729,364
5-year Totals	**$6,848,214,192**	**18.84%**	**15.65%**	**$218,383,277**

GHMSI expenses are an average of 3.19% of non-FEP premium or 20.4% higher expenses on average than the 15 Blues competitors. Contrary to Ms. Doran's assertion, a number of the other Blue plans listed are not "part of large insurer holding companies" or "large for-profit families of insurers." Ms. Doran has provided no evidence to counter the conclusion that GHMSI is less expense-efficient than other Blues carriers regardless of ownership structure and that this inefficiency contributes significantly to GHMSI's need for more surplus.

Provision for Catastrophic Events

Ms. Doran begins her discussion of this factor by reiterating that Milliman's approach" did not consider historical underwriting results for any individual company." [28] In my opinion, this is a clear defect in Milliman's approach. I firmly believe that the best method for predicting

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[28] See page 8 of the June 25, 2014 submitted written testimony of Phyllis Doran. Ms. Doran's preceding sentence apparently was an error; it states that "Milliman's development of assumptions for the rating adequacy and fluctuation component of our risk assessment involved looking at historical underwriting results for GHMSI and peer companies."

GHMSI's future is through a thorough analysis of historical underwriting results for GHMSI and peer companies[29]. Ms. Doran then acknowledges[30] that "the occurrence of catastrophic events is expected to be infrequent" and "the probability distributions that have been used by Milliman… are not intended to reflect a prediction of the frequency with which such events will occur in the short term."

But she does not explain why the appropriate way to model such an "infrequent" event is to assume a significant base level[31] charge to earnings in <u>every</u> future time period. Moreover, she assumes without basis in fact that, in 10% of future years, more than a base level of protection would be needed against such catastrophic events. None of her proposed approach is supported by any industry studies or numerical analysis.

Significantly, Ms. Doran does not rebut in any way my position that, if there were such a significant risk of a catastrophic event, it would already be reflected in the actual underwriting losses and gains during the 12-15 year period for the 16 companies that I examined.

Changes in Interest/Discount Rates

Ms. Doran alleges that I misinterpreted the probabilities in Milliman's development which she says[32], "reflect a 55% probability of increase in bond interest rates over three years, not a 90% probability." However, Chart 3 in Attachment A of the February 27, 2014 memo from Ms. Doran clearly shows a 90% probability of loss of surplus and a 10% probability of gain in surplus due to changes in interest/discount rates. Since, according to Milliman, it is an increase in interest rates that causes a loss in surplus, this chart clearly shows a 90% probability of an increase in interest rates.

Her second assertion of error is that she assumes my position to be is that "rates would not change over three years". But that is not my position. I stated in my report that "historical results would suggest a 50% chance of an increase over any given time period." Shaw Report, 39.

Her third assertion is that "interest rates in 2011 were historically low and thus more likely to go up than down." However, it is clear from Chart 3 of this report that interest rates have not gone up from where they were at on January 1, 2011 and over the last 3 and a half years they actually went down in 2011 and 2012 and again thus far in 2014. Japan probably thought interest rates in 1994 (which then first dipped below 2%) had nowhere to go but up, but 20 years later their

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[29] See page 40 of the Shaw Report.

[30] See pages 8 and 9 of the June 25, 2014 submitted written testimony of Phyllis Doran.

[31] Ms. Doran assumes at least a 2.5% charge against non-FEP premium for catastrophic events in every scenario and assumes a greater charge in 10% of scenarios. See page 6 of Attachment A to the February 27, 2014 letter from Ms. Doran.

[32] See page 9 of the June 25, 2014 submitted written testimony of Phyllis Doran.

interest rates are still below 1%[33]. Thus, her third assertion is clearly not a reliable analysis of the likelihood of interest rate increase.

Overhead Expense Recovery and Fee Income Risks – Commercial Business

Ms. Doran's only argument relative to this factor is in essence that this would not be reflected in her RAAF factors since she did not base her RAAF factors on historical underwriting results. She does not dispute that the approach that I have used on the RAAF factors would already cover this risk. I maintain that my validated historical approach to the RAAF factors already includes this risk and no separate risk factor is needed.

Overhead Expense Recovery and Fee Income Risks – FEP Indemnity Business and FEP Operations Center

Ms. Doran's stated issue here is that the BCBSA could negotiate a reduction in the OPM reserve that is outside GHMSI's control. However, since the OPM reserve allocated to GHMSI is more than five times the annual combination of claim administration expenses and general administration expenses for this line of business[34], the BCBSA could negotiate a drastic reduction in the OPM reserve and with the remaining reserve GHMSI would still have no risk of FEP Indemnity expense and fee income recovery.

Provision for Unidentified Development and Growth

Ms. Doran's chief argument relative to this factor is again that this would not be reflected in her RAAF factors since she did not base her RAAF factors on historical underwriting results. She does not dispute that the approach that I have used on the RAAF factors would already cover this risk. So again I maintain that my validated approach to the RAAF factors already includes this risk and no separate risk factor is needed.

For this factor, as with RAAF, catastrophic events, and overhead expense recovery for commercial business, all of which I have already discussed, Milliman's failure to rely on historical experience requires it to hypothesize separate, additional probability distributions for each of these risk factors. These introduce yet greater elements of estimation, judgment, and complexity, and greater difficulty in ensuring full disclosure, all with corresponding increases in the likelihood of error. All of this underscores the superiority of according a strong presumption to historical experience, and validating outliers against that experience. (Premium Growth was the only factor for which my probability distribution was based on considerations in addition to historical experience. In that instance, I fully disclosed my sources and assumptions, in quantified detail[35].)

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[33] Source: http://www.tradingeconomics.com/japan/interest-rate
[34] See page 40 of the Shaw Report.
[35] See pages 24-26 of the Shaw Report.

Ms. Doran mischaracterizes[36] the statements in my report concerning non-admitted assets, stating as a point of disagreement with me that "a company does not charge the entire expense for such assets in the first year." Nowhere in my report do I specifically address the first year treatment of such expenses. Rather, I make a generalized statement that "Expenses for non-admitted assets, including EDP expenses, flow through each year's underwriting results." Ms. Doran expresses agreement with that concept when she goes on to state[37], "In subsequent years the company charges amortization to underwriting gain/loss…"

Downward Pressure from the Affordable Care Act on GHMSI's Surplus

As further noted in this rebuttal's section, "<u>Milliman's Surplus Recommendations are Unreliable and Ever-Changing</u>", Ms. Doran and Milliman have incorporated tremendous increases in risk factors in the stochastic model due to ACA, without any documentation or data to support it. And they do so without explaining any of the calculations or bases for such increases. Furthermore, both Milliman and Rector do so without considering the potential mitigating impact of the three R's (risk corridors, reinsurance and risk adjustment) which were built into the ACA specifically to offset increased risks to insurers.

Ms. Doran's response to this is that reinsurance is temporary, and risk corridors will have an unknown impact on any given insurer (not unlike the risks of guaranteed issue, exchanges and rating limitations). The fact that reinsurance and risk corridors are temporary was designed specifically due to the fact that the need for risk relief was only needed as insurers adjust to the new market conditions. It is unreasonable to ignore the three R's – especially when various risk factors which they are specifically designed to offset are included without such consideration in an actuarial model. And it is unreasonable to transform some arguable uncertainties about the operation of these risk-mitigation programs into a zero probability that they will provide any relief at all, which is what Milliman (and Rector) have done[38]. (Ms. Doran herself refers only to the risk that "the protections intended by [the risk adjustment program] would not be *fully* available."[39])

Ms. Doran goes on to assert[40] that I "effectively assume that every segment of GHMSI's business will achieve a gain if GHMSI achieves an overall gain." That is not so. The only place in my report that I deal with gains and the three R's is when I reduce the historical gains and losses above 3% of premium[41]. Such reductions lower the potential gains emerging from the

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[36] See page 10 of the June 25, 2014 submitted written testimony of Phyllis Doran.
[37] IBID
[38] See June 25 Transcript, 208:22-25; 209:1-7.
[39] Doran Testimony, 10.
[40] See page 11 of the June 25, 2014 submitted written testimony of Phyllis Doran.
[41] See page 15 of the Shaw Report.

stochastic model, but have ZERO impact on the stochastic model results at the 90%, 95% and 98% confidence levels that drive the model results.

Ms. Doran also states that I applied the risk corridors to all market segments even though it applies only to Qualified Health Plans sold in the individual and small group markets. While this assertion concerning what I did is actually true, such an approach by me is conservative in reducing gains and has virtually no impact on the stochastic model loss results at the 90%, 95% and 98% confidence levels that drive the model results. Indeed, I have rerun the stochastic model without any impact of the three R's (just as Ms. Doran has done) and the impact on results are as follows:

Chart 16

	Rector	Stochastic Model Loss @ Confidence Level				Est. Pro Forma vs. 200%		
Model	**Assumptions Changed**	**98%**	**95%**	**90%**		**98%**	**95%**	**90%**
UHAS	Corrected RAAF	-16.6%	-13.1%	-9.8%		766%	665%	569%
UHAS	Corrected RAAF no ACA adjust	-16.8%	-13.3%	-10.0%		772%	671%	575%

As can be seen, the impact of removing all effects of the three R's from my RAAF factors has only a 0.2% impact on the stochastic model results or an impact of an approximately 6 percentage-point increase in required RBC.

Milliman's Surplus Recommendations are Unreliable and Ever-Changing

Although the focus of this proceeding now appears to be the Modified Milliman Model, that model is derived from the initial Milliman Model. When I filed my Pre-Hearing Report on June 10, 2014, Milliman had not yet filed its June 27, 2014 Report. Accordingly, because Milliman's model and its probability distributions are central to any reliance on the Modified Milliman Model, it is useful to offer analysis of the changing results Milliman's model has produced in the three reports Milliman has filed concerning GHMSU's surplus.

Since the DISB evaluation of GHMSI surplus began in 2008, Milliman has produced three reports, each with differing surplus recommendations. A summary of the stochastic loss scenarios at the 98th percentile and Milliman's recommended RBC levels vs. the 200% threshold is as follows:

Chart 17

Summary of Milliman Reports Since 2008					
	Loss Scenario @ 98%		RBC Ratio vs. 200% Threshold		Notes
	All Risks	Excluding Asset Fluctuation Risk	Required RBC Ratio Using All Risks		
Report					
2008 Milliman	15% - 19%	12% - 16%	800% - 850%	850% - 900%	
			(12% Prem Growth)	(14% Prem Growth)	
2011 Milliman w/o ACA		19% - 23%			
2011 Milliman w/ACA	30% - 35%	27% - 32%	1200%	1300%	Plus 100% to 150% for Added ACA
			(7% Prem Growth)	(11% Prem Growth)	
2014 Milliman	33%	30%	1200%		
			(50%/50% for 7% and 11% prem growth)		

In the Milliman Reports they presented loss scenarios for "All Risks" and "Excluding Asset Fluctuation Risk". The difference between these two categories is that the All Risks loss has been equal to Excluding Asset Fluctuation Risk plus 3-4% in all reports. Accordingly my comments about differences between the reports focus on the Excluding Asset Fluctuation Risk column whose changes are detailed in every report. There are a number of important observations and inferences that can be taken from the above[42]:

1) Between Milliman's 2008 and 2011 Reports, the losses from their stochastic model when the Asset Fluctuation Risk is excluded and ACA effects are included *__more than doubled__* from 12% - 16% to 27% to 32%.

   a. The 2011 Milliman Report completely fails to explain why stochastic model losses, when ACA effects are excluded, increased 7 percentage points - from 12% - 16% to 19% - 23% - an increase in potential losses of over 50%. In addition to knowing that this 50+% increase is not due to ACA (since that change is broken out separately), we also know that the increase cannot be due to the Rating Adequacy and Fluctuation factor, as the time period through 2001 was already accounted for in the 2008 Milliman Report and Ms. Doran testified that the time period from 2002 – 2013, which of course includes the period between the 2008 and 2011 Milliman reports, "was historically unprecedented in terms of the relative stability of underwriting results."[43]

   b. The 2011 Milliman Report then adds an additional 8 percentage points to the 2008 stochastic model losses of 12% - 16%, an increase in stochastic model losses of 50% - 67%, specifically for risks associated with the ACA provisions that had been

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[42] The Milliman Reports presented both loss scenarios for "All Risks" and "Excluding Asset Fluctuation Risk". The difference between these two categories has been that All Risks in each report has been equal to Excluding Asset Fluctuation Risk plus 3-4%. Accordingly my comments about differences between the various reports focus on the Excluding Asset Fluctuation Risk column has detailed changes in every report.

[43] See page 6 of the June 25, 2014 submitted written testimony of Phyllis Doran.

implemented as of the May 31, 2011 report. The 2011 Milliman Report does not quantify the reasons or provide any details on how this remarkably large increase in risk due to ACA was determined. In fact, 1n 2011 Milliman views this 50% - 67% increase in risk as insufficient to account for risks associated with the ACA as the 2011 Milliman Report goes on to estimate that an additional 100% to 150% should be added to their otherwise determined RBC target for ACA risks associated with provisions not implemented as of their May 31, 2011 report. Among the items specifically enumerated[44] that the estimated additional 100% to 150% would address are adverse selection in how the exchanges would operate, the risk mitigation programs and "how health plans, plan sponsors, and consumers would respond.[45]"

c. The 2014 Milliman Report adopts without explanation a single point estimate of losses associated with the stochastic model.   As DC Appleseed has discussed elsewhere, a point and a range have very different consequences with respect to what is considered feasible community reinvestment. Yet, Milliman offers no explanation at all for the change. The single point estimate is approximately the midpoint of the stochastic model losses from the 2011 Milliman Report before the addition of 100% to 150% for additional ACA requirements. The recommended RBC level associated with the single point estimate in 2014 is approximately 50% lower than the 2011 recommended RBC level: the 2011 recommended levels were 1200% based on a 50% probability of a 7% premium growth level and 1300% based on a 50% probability of an 11% premium growth (i.e., an average of 1250%) whereas the 2014 recommended RBC level, based on a 50% probability of 7% premium growth and a 50% probability of 11% premium growth, is 1200%. Moreover, the 2014 Milliman Report does not recommend, as the 2011 Milliman Report did, the 100% to 150% addition to the calculated RBC level for ACA risks associated with provisions not implemented as of their May 31, 2011 report. Thus, the 2014 Milliman Report recommends a surplus level 150% to 200% lower than the 2011 Milliman Report.

Allocation

In the event the Commissioner finds that GHMSI has excess surplus under MIEAA, he will need to determine how to allocate that excess among the three jurisdictions in order to determine what amount GHMSI should include in its District spend down plan. As Rector determined in 2009, I believe that allocation should be done by premium according to situs of the contract. In the August 2010 order (p.11), the Commissioner found that:

Based on the average of premiums reflected in Schedule T of GHMSI's Annual Statements for 1999-2008, approximately 69% of GHMSI's premiums for this ten-year time

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[44] See page 24 of the May 31, 2011 Milliman Report.

[45] Note that Milliman itself apparently decided in its 2014 report that this additional 100% to 150% is not needed as it makes no mention of the additional amount in that report.

frame were attributable to policies or contracts issued in the District.

The below chart shows the premium allocation from Schedule T for 1999-2008 that was considered in the 2009 surplus review as well as updated information from 2009-2011 and the resulting updated premium allocation.

Chart 18

Year	from Schedule T			DC Prem Percentage
	Overall Premium	Other DC Premium	FEP Premium	
1999	1,097,087,058	127,920,643	780,898,696	82.8%
2000	1,321,015,378	233,032,924	815,219,501	79.4%
2001	1,509,305,621	195,062,420	919,871,579	73.9%
2002	1,719,939,194	239,806,906	986,328,220	71.3%
2003	1,891,205,236	260,644,120	1,048,085,048	69.2%
2004	2,031,825,089	277,625,753	1,161,884,273	70.8%
2005	2,258,372,386	293,858,025	1,250,938,856	68.4%
2006	2,456,518,982	321,702,051	1,295,757,388	65.8%
2007	2,706,982,213	363,896,064	1,326,978,986	62.5%
2008	3,126,829,036	415,103,408	1,551,610,700	62.9%
1999-2008	**20,119,080,193**	**2,728,652,314**	**11,137,573,247**	**68.9%**
2009	3,265,596,630	454,481,963	1,568,732,026	62.0%
2010	3,328,725,802	461,784,940	1,626,198,996	62.7%
2011	3,430,629,647	473,305,211	1,730,368,058	64.2%
1999-2011	**30,144,032,272**	**4,118,224,428**	**16,062,872,327**	**66.9%**

The above information shows that the percentage of premiums for 1999 – 2011, attributable to policies issued in the District, is only slightly less than it was in the 1999 – 2008 time period.

GHMSI submitted information on October 31, 2014 stating that the updated allocation percentage for the District based on premiums at the end of 2011 is not 66.9%, but 19.03%. It is not clear how GHMSI has calculated this percentage, or how the figure could have fallen so dramatically since the 69% figure Rector calculated --and the Commissioner credited –from. 2008. But this 19% figure clearly departs from the data reported on GHMSI's own financial statements as reflected in the table above. Without further explanation substantiating this new figure it is not reliable.

In addition, it is worth noting that all gains to surplus after 2007 have come from investment income, indicating that underwriting gains accumulated prior to 2008 would best measure the actual source of surplus (Chart 19). This means that Rector's analysis from the previous proceeding (that goes through 2008) is still controlling and should be relied on by the Commissioner to assess the source of GHMSI's surplus as of the end of 2011.

Chart 19

Year	Year End Surplus	Change in Surplus	Taxes & Non-Oper Chg in Surplus	U/W Gain	Net Inv Incom
		from 5 Year Historical Data			
1998	158,715,529				
1999	186,845,537	28,130,008	(8,250,303)	16,392,086	19,988,225
2000	248,002,255	61,156,718	3,153,258	33,133,713	24,869,747
2001	273,984,510	25,982,255	(30,779,943)	27,900,833	28,861,365
2002	290,773,025	16,788,515	(30,382,290)	32,327,567	14,843,238
2003	392,008,160	101,235,135	21,228,655	52,926,355	27,080,125
2004	501,014,465	109,006,305	(4,264,481)	78,545,969	34,724,817
2005	560,967,145	59,952,680	(6,539,266)	35,364,848	31,127,098
2006	663,006,406	102,039,261	18,837,360	49,036,805	34,165,096
2007	753,558,921	90,552,515	7,523,874	40,903,814	42,124,827
2008	686,779,718	(66,779,203)	(100,613,938)	9,515,965	24,318,770
2009	761,458,437	74,678,719	31,358,353	(1,132,531)	44,452,897
2010	969,499,374	208,040,937	105,594,134	60,798,240	41,648,563
2011	963,581,310	(5,918,064)	(58,647,284)	14,704,541	38,024,679
2012	941,070,954	(22,510,356)	(12,735,230)	(47,874,136)	38,099,010
2013	934,751,475	(6,319,479)	(4,422,112)	(35,866,029)	33,968,662
1998-2013		776,035,946	(68,939,213)	366,678,040	478,297,119

As can be seen in the above chart the increase in GHMSI surplus over this 15 year period (1998 – 2013) is $775 million. During this same period underwriting gains have totaled less than $367 million while investment income has been over $478 million.

Over the last 6 calendar years (Since the end of 2007), cumulative underwriting gains total $0.146 million while investment income has been over $220 million. Thus, all of the $181 million increase in GHMSI surplus from 2007 to 2013 can fairly be attributed to investment income (which is attributable to surplus accumulated thru 2007). Or to state the converse, surplus built from underwriting gains all came from 2007 and earlier.

Finally, it is not appropriate to consider the jurisdiction where the profits from CF Blue Choice arise from. CF Blue Choice is treated in the annual statement of GHMSI as an investment and the money to make that investment would have arisen from earlier GHMSI premiums paid. Therefore the portion of GHMSI surplus arising from their investment in CF Blue Choice should be treated the same as the gains in surplus from any other investment.

Concluding Remarks and Chart of Permissible Surplus

All the testifying actuaries at the June 25th hearing agreed that the validity of any model used in that proceeding is dependent upon the soundness of the model's assumptions. There also seemed to be agreement that the basis for the assumptions must be explained, and the assumptions validated, in order for their soundness to be determined.

I am the only actuary who has identified and explained the specific data underlying my assumptions, the methodology for deriving my assumptions from the data, and how my assumptions were validated. Because neither Rector nor Milliman has met these basic requirements, the outputs they produced are of unknown reliability and do not provide a sound actuarial basis for estimating GHMSI's surplus needs.

I have demonstrated using GHMSI historical data that the statistical chance of GHMSI losing even $100 million of surplus in a 3-year period is only 1.19%. I have also demonstrated based on the last 19 years of GHMSI actual surplus changes that to believe that GHMSI could lose $700 million as Milliman and Rector have proposed is so far beyond reasonable that it is only about a one in 2.5 million chance.

Finally, I have rerun the stochastic model for the corrected EPAV factor and present here the required surplus under various assumption corrections and premium growth rates:

Chart 20

	Permissible Surplus (Using Given Confidence Levels of Avoiding 200% RBC)											
	Stochastic Model Loss @ Confidence Level				8% DISB Prem Growth Est. Pro Forma vs. 200%				5.4% Avg Prem Growth Est. Pro Forma vs. 200%			
Rector Assum. Changed	**98%**	**95%**	**93%**	**90%**	**98%**	**95%**	**93%**	**90%**	**98%**	**95%**	**93%**	**90%**
None	-23.2%	-17.6%	-15.1%	-12.5%	880%	721%	653%	575%	818%	670%	607%	534%
RAAF	-16.6%	-13.1%	-11.6%	-9.8%	679%	576%	533%	476%	659%	554%	510%	453%
EPAV	-16.2%	-10.8%	-8.4%	-6.0%	670%	523%	461%	394%	650%	506%	445%	380%
EPAV and RAAF	-9.7%	-6.4%	-4.9%	-3.2%	513%	421%	382%	334%	503%	412%	373%	327%

I have made the case in my report and this rebuttal that the RAAF, EPAV, and premium growth factors as used by Rector are unjustifiably high and impactful. I present in Chart 21 above the impact of correcting each of these factors individually and in tandem. I also present the impact on the required surplus of doing so at each of the confidence levels being discussed relative to 200% ACL-RBC and also display the impact at two different premium growth rates – the 8% non-FEP growth rate that the Commissioner suggested in his questions and the 5.4% non-FEP growth rate I suggest in this rebuttal that corresponds to the highest 3-year GHMSI growth rate in the last 6 years. The above chart is a refinement and in some cases a restatement of the choices presented to the Commissioner in Chart 25 of my June 10 Pre-Hearing Statement. By presenting the choices above, I do not suggest that the additional corrections made in my Chart 25, with respect to the "Other" category, should not be made. I believe they should be. Chart 20 simply presents additional options with respect to my revised EPAV numbers (that include Blue

Choice), and an adjustment to premium growth that is more conservative than 8% growth, but more generous than the 3.8% rate I relied on in my earlier Chart 25.

Having made all these calculations, I continue to believe a surplus somewhere in the range of 400% to 500% would be more than adequate to protect GHMSI against reasonably foreseeable risks.