



Milliman Response to
Actuarial Risk Management Report
of August 31, 2009
Titled "Excessive Surplus Assessment
Report of GHMSI, Inc. Surplus Position"

November 2, 2009

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Background

Milliman issued a December 4, 2008 report to CareFirst, Inc. titled “Group Hospitalization and Medical Services, Inc.; Need for Statutory Surplus and Development of Optimal Surplus Target Range.” The purpose of the report was to address the need for statutory surplus for GHMSI (including its proportionate share of CareFirst BlueChoice) and to quantify an optimal surplus target range within which we believe GHMSI should strive to operate, under normal circumstances.

Milliman’s report was submitted by CareFirst to the Commissioner of the DC Department of Insurance, Securities and Banking (DISB). The report, along with other materials, was submitted in response to the requirement established by the DISB in the emergency and proposed regulations promulgated on July 10, 2009. That ruling defines the procedures for the September 10, 2009 hearing to review the reserves of Group Hospitalization and Medical Services, Inc. (GHMSI), and to determine whether the portion of the surplus attributable to the District is excessive.

Milliman’s report and the other materials submitted by CareFirst were made public by the DISB in advance of the September 10 hearing, and a number of parties submitted pre-hearing reports commenting on the CareFirst submission. DC Appleseed submitted such a report, which in turn included exhibits containing reports from other parties. One such exhibit contained a report by Actuarial Risk Management (ARM), commenting upon their review of Milliman’s December 4, 2008 surplus report.

The report prepared by ARM was highly critical of Milliman’s analysis and report. The authors insinuated that Milliman’s report contained a number of flaws and errors, which they replaced with their own “prudent assumptions” in order to adjust Milliman’s findings and develop their own conclusions regarding a target surplus range for GHMSI.

We assert that virtually all of the criticisms, assumptions, and conclusions made by ARM regarding Milliman’s analysis and report are inaccurate and without foundation. Their report is grossly misleading, and does a disservice to the Commissioner as well as to Milliman and CareFirst.

Appleseed, in its own report, repeated many of the erroneous assertions made by ARM, as did Deborah Chollet of Mathematica Policy Research in another report incorporated as an exhibit to the Appleseed report.

Milliman has chosen to issue this report in order to respond to the ARM report. Our purpose in preparing this response is to correct some of the misinformation regarding Milliman's analysis and report that was presented in Appleseed's reports and its exhibits, and to rebut the conclusions presented by ARM.

This response was prepared for CareFirst for the reason stated above. It can be shared with the DISB so long as it is shared in its entirety. In agreeing to allow the distribution of this report, Milliman does not intend to benefit any third party.

Discussion

We have prepared the following discussion in order to document our concerns regarding the report produced by ARM. It summarizes some of the major assertions and conclusions made by ARM with respect to Milliman's analysis, and explains our objections.

Milliman's analysis of a target surplus range for GHMSI was based on a modeling approach that we have used in the past with a number of nonprofit Blue Cross / Blue Shield Plan organizations. We have refined the approach over time, and we stand behind it as a reasonable and actuarially sound methodology for evaluation of health plan surplus requirements. At the same time, we recognize that there is room for professional differences of opinion with regard to any modeling technique of this type, as well as with the underlying assumptions that must be incorporated in the modeling and that affect the results.

Our objections to ARM's report, however, do not relate to differences of professional opinion. Rather, our concerns lie in the many false assertions that are made regarding Milliman's analysis, and the adjustments to Milliman's results which supposedly reflect corrections based on these assertions. We outline a number of these instances below.

A. Overall Conclusions

Milliman presents the following conclusion in our report:

"We believe that targeting GHMSI's overall surplus level in the range of 750% to 1050% of RBC-ACL is reasonable and appropriate under normal operating circumstances, to

ensure financial viability for the company and to provide security in the health coverage provided to its over one million members.”¹

The Summary of Findings of ARM’s report includes the following statement:

“We incorporate prudent assumptions into our analysis and conclude that a reasonable range to ensure GHMSI’s financial soundness is an RBC ratio of 400 to 525% (or equivalent of a range of \$260 million to \$534 million in redundant surplus from GHMSI’s actual 12/31/2008 surplus position).”²

ARM concluded that a surplus range of 400% to 525% was reasonable, compared to Milliman’s range of 750% to 1050%.

B. Discussion of Assertions Underlying ARM’s Conclusion

It would appear that the ARM analysis consists of starting with the target surplus range developed by Milliman. They then make a number of adjustments, summarized below, to incorporate factors that they assert were omitted by Milliman or to reflect assumptions differing from those used by Milliman. It should be noted, however, that there is not sufficient explanation or detail to gain a full understanding of exactly how they reached their conclusions.

In Chapter 4 of their report³, ARM describes three adjustments to Milliman’s estimated target surplus range, and presents their estimated range of 400% to 525% of RBC-ACL, indicating that it results from their “necessary and prudent adjustments to the Milliman approach”. Following is an outline of the three adjustments that they have identified, along with our response to each.

- (1) FEP and Other Non-Comprehensive Product Lines** – ARM states that they “. . .correct for Milliman’s . . . omission of FEP and non-recognition of other non-comprehensive product lines”, and elaborates as follows:

¹ Milliman, "Group Hospitalization and Medical Services, Inc.; Need for Statutory Surplus and Development of Optimal Surplus Target Range" reported dated December 10, 2008, available at http://disb.dc.gov/distr/frames.asp?doc=/distr/lib/distr/pdf/miliman_report.pdf, Page 7.

² ARM “Excessive Surplus Assessment Report of GHMSI, Inc. Surplus Position” report dated August 31, 2009, available at http://disb.dc.gov/distr/frames.asp?doc=/distr/lib/distr/pdf/dcac_filing_exhibit_b_8_31_09.pdf (hereinafter “ARM”), Page 5.

³ ARM, Page 26.

“We recognize that non-FEP insured premium represents only about 45% of the revenues for GHMSI and that other product lines – FEP, Medicare Supplement, Dental and Other – are consistent profit generators that can reasonably be expected to offset losses of approximately 2% of non-FEP insured comprehensive medical premiums per year during an insured medical Operating Loss Cycle. This equates to reducing our cumulative cycle losses to 9% to 13% versus the 15-19% Milliman standard.”⁴

This adjustment is based on the assertion that Milliman ignored the profits generated by the FEP business, and that we also ignored profits generated by the other product lines listed. Both of these assertions are false. Our pro forma projection model includes a separate component for the FEP business, which is handled separately from the non-FEP business, and projects a gain from this line in every year. The projected gains from FEP business are used to directly offset the losses that are modeled for the non-FEP business.

The profits from the other product lines are also directly reflected, in the form of the pricing margins that serve to offset the underwriting losses generated by our monte carlo simulations. These profit margins are consistent with actual historical underwriting results for GHMSI and CFMI on a consolidated basis, and directly incorporate profit levels that include those generated by the Medicare Supplement, Dental and other product lines.

(2) Interest Rate and Asset Valuation Risks – ARM next indicates that they “correct for Milliman’s . . . exclusion of interest rate and asset valuation risks”, with the following explanation:

“Milliman does not explicitly show the impact of the interest rate and asset valuation risks in their 750% to 1050% recommendation other than have a footnote. We believe that it is imperative to include these types of risks as part of the analysis. If we were to exclude these same risks, akin to Milliman, our resulting range would have been even lower.”⁵

Thus, ARM inaccurately asserts that Milliman did not include the impact of the interest rate and asset valuation risks in our target surplus evaluation. This may be due to a mis-interpretation of the footnote to Chart 7 on page 56 of our report, which was intended to communicate that the referenced loss cycle values that were displayed in the chart excluded the interest rate and asset values, for display purposes, in order to allow comparison with historical loss cycle amounts which do not include such values. In any case, our evaluation did directly include the interest rate and asset valuation risks.

⁴ ARM, Page 26.

⁵ ARM, Page 26.

It is unclear why this item was included in ARM's list of adjustments made to Milliman's assumptions. If this item had, in fact, been excluded it would have understated our target surplus range, and thereby would have called for an upward adjustment if ARM were intending to include it. Instead, they simply indicate that if they were to exclude these risks their range would have been even lower.

(3) Premium Growth Assumptions – ARM goes on to say that they “. . .correct for Milliman's ... high premium growth assumptions”, described as follows:

“Consistent with GHMSI's actual experience from 2003 – 2008, we use 7 – 8% premium revenue growth as a realistic range for a 3-year operating loss cycle as opposed to the unrealistic 12-14% used by Milliman. Using these revised growth rates in pro forma projections adds \$50 million to \$100 million to the previous 12/31/08 needed surplus total to create a final needed surplus range of \$325 to \$427 million to offset both operating loss cycle and interest rate and portfolio asset value risks.”⁶

Contrary to ARM's assertion that the 12-14% growth rate assumptions made by Milliman are unrealistic, we find that these assumptions are reasonable in view of actual recent experience. This can be seen in the attached chart, which summarizes historical premium amounts by year, as well as average growth rates on a 3-year, 5-year, and 10-year moving average basis. Note that these average premium growth rates reflect the combined premium of GHMSI and its ownership share in its subsidiaries (i.e. CareFirst BlueChoice and its predecessor), consistent with the manner in which the assumptions have been applied in our modeling.

ARM also stated in its report that “GHMSI's premiums have actually grown at a fairly consistent average compound growth rate of 7-8% per year since 2003.”⁷ We do not know where these numbers came from; they are very different from what we have observed, as can be seen from Chart 1.

(4) Summary – On pages 27 and 28 of their report, ARM summarizes the results of their adjustments to Milliman's approach, and presents this conclusion on page 27:

“Using the wholly defensible standard of avoiding the Loss of Trademark with 98% certainty leads to a conclusion that a more reasonable and appropriate level of surplus for GHMSI falls into the range of 400% to 525% RBC (or a total of \$325 to \$427 million or the equivalent reduction of \$260 to \$362 million from their 12/31/08 reported surplus number).”

⁶ ARM, Page 26.

⁷ ARM, Page 13.

As described above, this conclusion, which is repeated by both Appleseed⁸ and by Deborah Chollet of Mathematica Policy Research⁹ in their pre-hearing reports, is based on a series of inaccurate assertions. We dispute these assertions, and we strongly disagree with the conclusion summarized above.

C. Other Assertions Made by ARM

There are numerous additional false assertions made by ARM in their report. While the discussion that follows includes only a subset of the additional ARM comments which we dispute, we would be happy to provide CareFirst or the DC Insurance Commissioner with a comprehensive set of our findings regarding the ARM report as well as the other reports submitted by Appleseed.

- (1) **Historical Underwriting Cycle Results** – ARM asserts that Milliman has used historical underwriting cycle results in our analysis, and that we should revise our analysis to use only more recent data. Their report states the following:

“Milliman notes that they have quantified adverse cycle results based on 1980-2007 data at the 75th, 80th, 85th and 90th percentiles. Given both the significant change in industry approach as a result of the adoption of RBC requirements and the significant changes in the way GHMSI has been regulated since 1993, Milliman should revise their analysis using only data for 1992 and later with respect to all insurers, and for 1994 and later with respect to GHMSI specifically (the first full year in which it operated as a regulated entity).”¹⁰

In fact, the historical underwriting cycle results that are presented in Milliman’s report have not been used to directly affect our analysis. They are included merely to provide a context for the underwriting losses produced by our monte carlo modeling, and to demonstrate the reasonableness of those results. If we had directly used the historical underwriting results our cumulative loss scenarios would have been higher, resulting in a higher surplus target range.

ARM later continues:

⁸ DC Appleseed “Excessive Surplus Review Hearing of Group Hospitalization and Medical Services, Inc.” report dated August 31, 2009, available at http://disb.dc.gov/disr/frames.asp?doc=/disr/lib/disr/pdf/dcac_filing_memo_8_31_09.pdf, Page 11.

⁹ Statement of Deborah Chollet, Ph.D., Senior Fellow Mathematica Policy Research, Inc. dated August 31, 2009, available at http://disb.dc.gov/disr/frames.asp?doc=/disr/lib/disr/pdf/dcac_filing_exhibit_c_8_31_09.pdf, Page 6.

¹⁰ ARM, Pages 14 and 15.

“ . . .what impact would it have had if Milliman had only used the years 1995-2008 in their model and eliminated the loss fluctuations related to the years 1980-1994, which were prior to RBC standards and GHMSI’s revised regulatory environment? . . . We do not have the benefit of reviewing Milliman’s full model to precisely understand the impacts, but our estimate is that cycle losses of 9% to 13% would cover the targeted 98th percentile – including interest rate and portfolio asset value risks. Using this reduced range of cycle losses, the RBC ratios in the Milliman model could be reduced by about 35% or 200-225 percentage points at the high end of their estimated range.”¹¹

On the contrary, we tabulated the loss cycles for the comparison set of BCBS Plan for the period of 1995 and later, and the range of 75th to 98th percentile would correspond to losses of 12% to 19%. This is higher than the 9% to 16% range that was reflected in our analysis, as shown on page 51 of Milliman’s surplus report. (Note that, for purposes of comparison, these loss amounts do not include the interest rate and portfolio asset value risks, because the historical results that we tabulated include only the underwriting losses, but those risks were also incorporated in the modeling.) Therefore, although exclusion of losses for the period from 1980 to 1994 resulted in lower historical loss amounts, the results were still more severe than those assumed in our modeling.

(2) Investment Income – On page 12 of their report, ARM claims that Milliman does not account for certain items that could offset losses:

“By focusing only on the non-FEP cycle losses, Milliman does not acknowledge that cycle losses on the non-FEP insured business may be offset in total or in part by concurrent gains on:

- *The FEP business; or*
- *non-comprehensive product lines with different risk profiles within the non-FEP insured business; or*
- *investment income.”¹²*

¹¹ ARM, Page 15.

¹² ARM, Page 12.

Earlier we clarified that the gains from the FEP business and the other product lines were, in fact, directly reflected in our analysis to offset the underwriting losses generated by our monte carlo simulations. In addition, contrary to this claim by ARM, we also directly reflected the gains from investment income on surplus and other funds.

- (3) Deferred Tax Asset** – In their report, ARM questions Milliman’s assumption that the net deferred tax asset would be eliminated, as follows:

“In a footnote to their pro forma modeling, Milliman states that they have assumed the elimination of GHMSI’s deferred tax asset with an adverse loss period. Since the Milliman report was produced on December 4, 2008 and GHSMI, as mentioned earlier in this analysis, increased its deferred tax asset from \$4 million to \$137 million at 12/31/2008, it is questionable as to whether this assumption by Milliman is now valid or appropriate.”¹³

The net deferred tax asset that is assumed to be eliminated by Milliman is the net admitted asset, which equals: (i) the gross deferred tax assets, less (ii) the deferred tax liabilities, less (iii) the non-admitted deferred tax assets. This value increased from \$7 million in the 2007 annual statement to \$9 million in 2008 (see Footnote 12 to the audited Statutory-Basis Financial Statements). The \$137 million cited by ARM is the non-admitted deferred tax asset – i.e., the third component listed above. As explained by CareFirst management in recent testimony, the large increase in the non-admitted deferred tax asset results from a change in presentation that grossed up the deferred tax asset, and at the same time increased the non-admitted portion of that asset by the same amount, and “. . . had no impact on total capital and surplus or net admitted assets for any period . . .”, according to Footnote 16 of the Audited Statutory Financial Statement.

The assumption by Milliman that the net deferred tax asset (assumed to be \$8 million initially in Milliman’s pro forma modeling) would be eliminated in future years is reasonable and appropriate under the scenario of projected multi-year losses. In such a scenario there would be no taxable gains to offset the credits represented in this asset, and it is likely that the entire asset would become non-admitted.

¹³ ARM, Page 16.

(4) Risk and Contingency Factor – ARM implies that Milliman fails to recognize the risk and contingency factor that is included in GHMSI’s premium rates, and that serves as an offset to adverse deviation in claims:

“With regard to their discussion on rating parameter adequacy, Milliman fails to note that . . . GHMSI routinely includes a specific risk and contingency factor in rate setting. The size of this factor is usually inversely proportionate in size to the number of people insured just as expected variation in results varies in inverse proportion to the number of people insured. This risk and contingency factor provides a margin that can absorb adverse deviation from the most likely or best estimate claims that are usually used in pricing.”¹⁴

Milliman does, in fact, directly recognize the premium margins that are generated by the risk and contingency factors. These premium margin amounts offset the loss amounts that are otherwise determined based on the monte carlo simulations.

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As stated previously, our purpose in submitting this report is to respond to and correct some of the misinformation regarding Milliman’s analysis that was presented in the reports and exhibits submitted by Appleseed, and to rebut the conclusions presented by ARM. We would also be happy to provide CareFirst or the DC Insurance Commissioner with a comprehensive set of our findings regarding the ARM report as well as the other reports submitted by Appleseed.

We acknowledge that informed professionals can have differences of opinion, but uninformed allegations presented as fact do a disservice to the Commissioner, the District Council, GHMSI’s subscribers, and the citizens of the District as this important but complex matter is considered.

¹⁴ ARM, Page 19.

GHMSI

Summary of Premium for GHMSI, Subsidiaries and Affiliates
(\$ millions)

Calendar Year	Premium							Annual Premium Growth Rate					GHMSI + Subsidiaries Premium Growth Rate			
	GHMSI			CFBC and Other Subsidiaries	GHMSI Ownership Percent	GHMSI Ownership Share of Subsidiaries	GHMSI + Subsidiaries	GHMSI			GHMSI Ownership Share of Subsidiaries	GHMSI + Subsidiaries	3-Yr Moving Average	5-Yr Moving Average	10-Yr Moving Average	
	Non-FEP Insured	FEP	Total GHMSI					Non-FEP Insured	FEP	Total GHMSI						
1997	171.2	682.1	853.3	101.3	100.0%	101.3	954.6									
1998	223.5	730.8	954.3	118.6	100.0%	118.6	1,072.9	30.6%	7.1%	11.8%	17.1%	12.4%				
1999	308.8	767.8	1,076.6	141.1	100.0%	141.1	1,217.7	38.2%	5.1%	12.8%	19.0%	13.5%				
2000	428.7	815.2	1,243.9	189.4	100.0%	189.4	1,433.3	38.8%	6.2%	15.5%	34.2%	17.7%	14.5%			
2001	589.4	919.9	1,509.3	260.3	100.0%	260.3	1,769.6	37.5%	12.8%	21.3%	37.5%	23.5%	18.2%			
2002	733.5	986.3	1,719.9	707.1	40.0%	282.8	2,002.7	24.5%	7.2%	14.0%	8.6%	13.2%	18.1%	16.0%		
2003	843.1	1,048.1	1,891.2	878.8	40.0%	351.5	2,242.7	14.9%	6.3%	10.0%	24.3%	12.0%	16.2%	16.0%		
2004	870.9	1,161.9	2,032.7	1,062.3	40.0%	424.9	2,457.7	3.3%	10.9%	7.5%	20.9%	9.6%	11.6%	15.2%		
2005	1,006.5	1,250.9	2,257.4	1,303.3	40.0%	521.3	2,778.7	15.6%	7.7%	11.1%	22.7%	13.1%	11.5%	14.3%		
2006	1,161.8	1,295.8	2,457.6	1,421.8	40.0%	568.7	3,026.3	15.4%	3.6%	8.9%	9.1%	8.9%	10.5%	11.3%		
2007	1,389.0	1,439.5	2,828.5	1,591.3	40.0%	636.5	3,465.0	19.6%	11.1%	15.1%	11.9%	14.5%	12.2%	11.6%	13.8%	
2008 Direct ⁽¹⁾	1,575.2	1,493.8	3,069.0	1,747.8	40.0%	699.1	3,768.1	13.4%	3.8%	8.5%	9.8%	8.7%	10.7%	11.0%	13.5%	

Note:

(1) Direct premium was used for 2008 in order to avoid the anomaly otherwise produced by a one-time change in covered population from the initiation of a reinsurance agreement with CFMI. Non-FEP Insured value displayed is calculated from Exhibit of Premium, Enrollment and Utilization as total minus FEP (3,126.8 - 1,551.6 = 1,575.2)