F T I CONSULTING

MEMORANDUM

TO: **Rector and Associates**

FROM: **Jim Toole**

cc: Robert Stewart

DATE: **February 7, 2014**

RE: **Milliman Pro Forma Financial Projection Model Methodology Validation**

FTI Consulting has compared GHMSI's historic financial results to those generated using Milliman's Pro Forma Financial Projection Model methodology to assess the reasonableness of the Milliman approach. While the conditions expected in future periods not are always reflected in historic results, historic results serve as a starting point for model development. Validation of historic results plays a significant role in confirming that a projection model is not unreasonable, and significant deviations from historic experience should be explainable.

Comparison of Surplus Change

FTI has performed a model validation of overall results by comparing the historic changes in actual statutory surplus to results using the Milliman pro forma projection methodology (Appendix A). Comparing change in surplus reflects the intention of the DISB exercise and captures the entire range of forces acting on the company's results including underwriting income, investment income, non-admitted assets, taxes, etc.

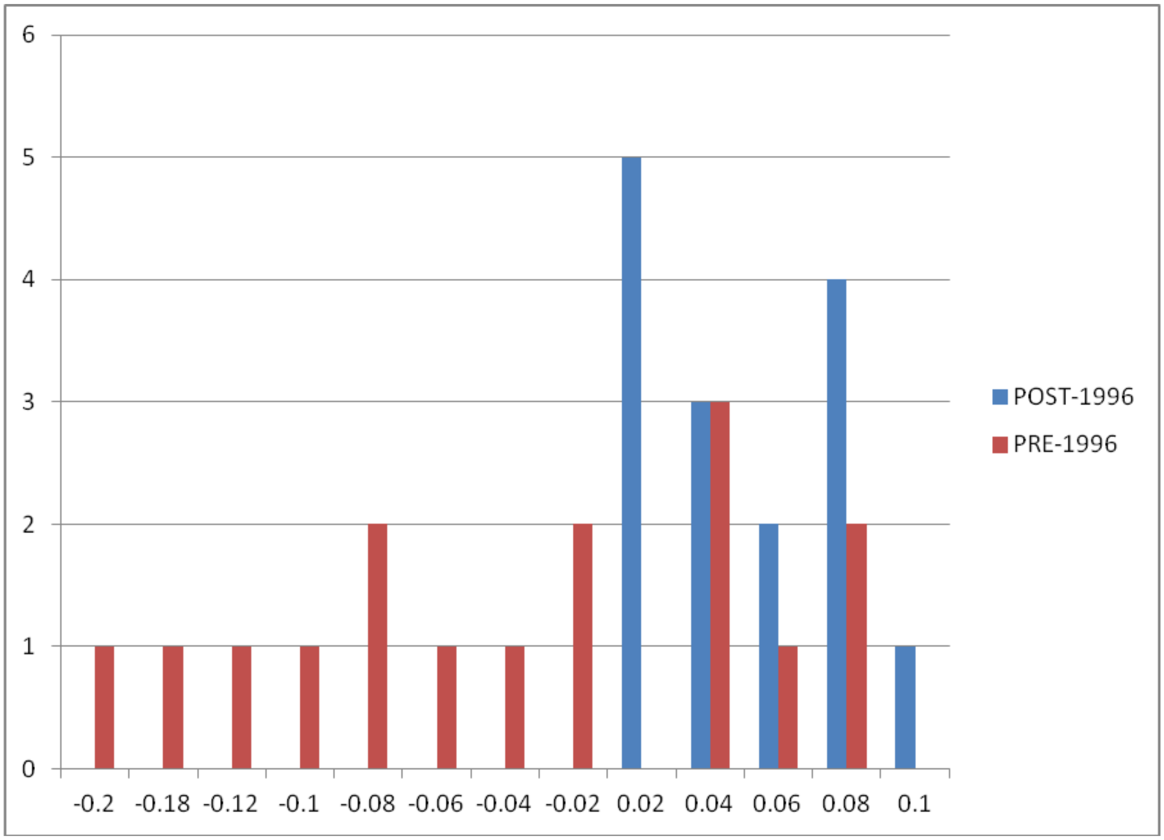
FTI reviewed the actual surplus changes for one year periods 2001 through 2012 and compared these to the median one-year change estimated based upon assumptions from the Milliman model. A comparison would indicate that the median one-year estimated surplus growth for Milliman is 2% lower as a percent 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. Given that the period from 2001 - 2012 was punctuated by a few years with unusually high underwriting results and surplus growth, the overall median output from the capital model is not unreasonable.

Variability in Underwriting Results

In validating the historical results to the model output, the question of what historical time period to choose is important. In addition to examining actual vs expected change in surplus, FTI has examined the variability of GHMSI's underwriting results for the Non-FEP book of business from 1980 to 2010. The variability of the actual underwriting results is significant for comparing to the underwriting assumptions in Milliman's stochastic model, in particular the rating adequacy component. Both the average underwriting gains and the variability of the underwriting gains has varied over time. In more recent years GHMSI's underwriting results have been less volatile and more profitable. In the period from 1996 to 2010 the company did not experience an underwriting loss on their Non-FEP business and made significant profit margins.

FTI revised the rating adequacy assumptions of the Milliman Model to more accurately reflect the lower historical underwriting variability experienced in the past 15 years (blue bars in the graph below). However, additional variability for ACA has been added prospectively which cannot be validated in the historical experience.

Count of G/L % of
Non-FEP Insured Premium



G/L % of Non-FEP Insured Premium

Milliman Pro Forma Financial Projection Model
Surplus Change Validation

(1)	(2)	(3)	(4)
Year	1 Yr Surplus Change as % of Non-FEP Premium	Comparison to Median	Above / Below Median
2001	4.1%	2.1%	Above
2002	2.5%	0.5%	Above
2003	8.5%	6.5%	Above
2004	8.4%	6.4%	Above
2005	3.9%	1.9%	Above
2006	5.9%	3.9%	Above
2007	4.5%	2.5%	Above
2008	-3.4%	-5.4%	Below
2009	3.5%	1.5%	Above
2010	9.6%	7.6%	Above
2011	-0.3%	-2.3%	Below
2012	-1.0%	-3.0%	Below
Standard Deviation	4.0%	Above	9
Mean	3.9%	Below	3
Estimated Model Median		2.0%	
Model Mean vs. Fitted Sample Points		32.1%	

Column Notes:

(2) Surplus Change excludes the impact of Changes to Surplus Notes
2011 and 2012 Non-FEP Premium Estimated based on 2010 Non-
(3) (2) minus One- Year Median
(4) (3) above or below zero