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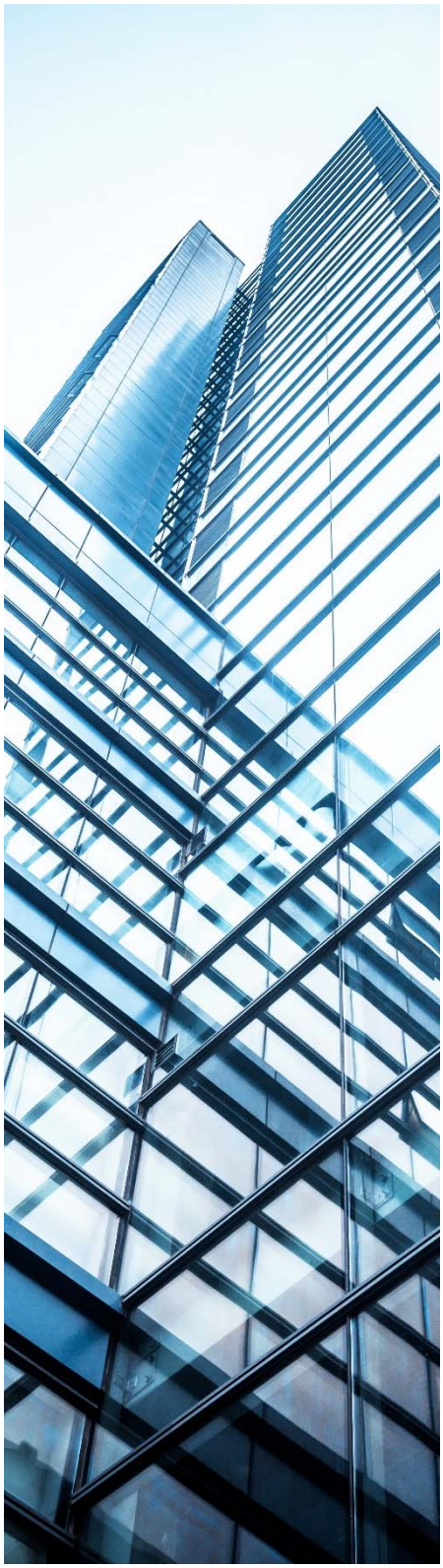

2014 Credit Disability Study Report – An Update of the 2004 Study

August 2015

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2014 Credit Disability Study Report – An Update of the 2004 Study

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2014 Credit Disability Study Report – An Update of the 2004 Study

SECTION 1: ACKNOWLEDGEMENTS

The SOA would like to extend its thanks to all participating companies for making this project a success. Without your support, such research projects would not be possible.

A list of the participating companies is included in Section 4.

We would also like to thank the SOA Credit Insurance Experience Committee for its support, guidance, direction and feedback throughout the project.

The members of the Credit Insurance Experience Committee are:

- Christopher H. Hause (Chair)
- Mark A. Frie
- Lester Garcia-Casariego
- Jay M. Jaffe
- Gary S. Lange
- David V. McKay
- Elaine N. Pelletier
- Candace F. Richter

The Committee would like to thank Cynthia MacDonald and Korrel Rosenberg from the SOA for their leadership and coordination of the project.

SECTION 2. BACKGROUND AND SCOPE

In 1998, the Actuarial Committee of the Consumer Credit Insurance Association (CCIA) decided the industry needed a credit disability morbidity table, one that could be used for valuation and pricing.

The existing tables at the time were the NAIC's (National Association of Insurance Commissioners) 1968 and 1974 credit disability tables. Both tables were created with all ages and both genders combined. A subcommittee consisting of Robert Butler (Chairman), Christopher Hause, Steve Ostlund and Craig Squier was formed to develop the new table.

The end result of the effort was a recommendation to the NAIC to adopt a modified and aggregated version of the 1985 CIDA table as a valuation standard for single premium credit disability active life reserves. The NAIC adopted changes to SSAP 59, the Model A&H Valuation Regulation and Appendix A-010 to the Accounting Practices and Procedures Manual in order to implement the new standard.

The use of the modified 1985 CIDA table as a tool for pricing of basic, full benefit, and prima facie equivalency demonstrations of alternative disability benefits has taken hold on an ad hoc basis only.

Updated Study in 2004

In 2004, the Credit Insurance Experience Committee, consisting of Jeanne Meeker Daharsh, Lawrence Fisher, Chris Hause (Chairperson), Jay Jaffe, Jonathan Jannarone, Gerard Lunemann, Steven Ostlund, Barry Owens, Elaine Pelletier, and Harvey Waite, released an updated study.

Some states had existing specific laws and regulations pertaining to credit disability that generally required a gross unearned premium reserve. As states began to adopt the new morbidity-based standard via law or regulation, concern was expressed whether the table remained adequate.

In addition, the enactment in 2001 of the Home Owner's Equity Protection Act (HOEPA) curtailed the writing of single premium credit disability insurance on loans secured by real estate. The Committee took advantage of the opportunity to examine the shift in the distribution of sales by term between contracts issued in 2000 and contracts issued in 2003.

Reasons for an Updated Study

As a part of the Principle-Based Reserve (PBR) effort by the NAIC, the section of the Valuation Manual dealing with credit insurance reserves (VM-26) contains a standard that single premium credit disability reserves will be based on a modified version of the 1985 CIDA table. With the potential adoption date of PBR within the next few years, it is important to ensure the standard remains appropriate. The study results do show a considerable amount of conservatism in the current NAIC standard as demonstrated by the section "Adequacy of the Valuation Table."

In addition, there is a perceived movement in the markets and term distribution of single premium credit products. The Committee took advantage of the opportunity to examine the shift in the distribution of sales by term between contracts issued in previous studies to 2008 and 2013. A table comparing the various exposures by term is shown in the "Comparison of Term Distribution" table.

SECTION 3. HOW THE STUDY WAS CARRIED OUT

The basic approach to the study was the same as the 2004 study. An actual-to-expected ratio was determined as follows.

The "actual" claim cost for each plan is derived by calculating a loss cost for each state based on the prima facie loss ratio, for each year 2008 - 2013 during the study period. The "expected" claim cost is based on the 1985 CIDA table, weighted by age and term for each plan. The age and term weightings came from the data submitted by the participating companies. We used the company data from calendar year 2008 because this is the midpoint of the "actual" data collected.

The decision was made to use the years 2008 – 2013 for the study period after carefully examining the loss costs from 2003 – 2013. Ultimately, the decision to use 2008 – 2013 was based on both the fact that it was the most recent data available, and that the selected time period included all of the recessionary years. Below is a table comparing the calculated claim cost for each plan based on three separate grouped time periods.

	Claim Cost by Experience Years		
Plan	**2003 - 2007**	**2008 - 2013**	**2003 - 2013**
7-day retroactive	1.76	1.82	1.79
14-day retroactive	1.70	1.59	1.66
14-day elimination	1.84	1.80	1.83
30-day retroactive	1.98	1.86	1.93
30-day elimination	1.45	1.80	1.57
Total	1.72	1.67	1.70

The 1985 CIDA table is separated by gender, so a gender mix was sought. However, since the gender mix has been demonstrated to have limited effect on the Actual to Expected (A/E) ratio, we used the gender mix from the 2004 study. Also, since the 1985 CIDA is separated by four occupation classes, as in the 2004 study, the proportions were determined using Department of Labor statistics.

Gathering the Plan/Age/Term Company Data

In 2014, the Credit Insurance Experience Committee (CIEC) asked companies to submit their new credit disability single premium business written in 2008 and 2013 gross of any refunds. The data was collected for each of the elimination periods, original term of coverage in months, age last birthday at issue (or date of birth and issue date) and, where available, gender.

Collected premiums and original amount of insurance (insured monthly indemnity times the number of months insured) were provided. Business that is summary processed was to be excluded. Copies of the survey form and instructions are provided in Appendix A.

Companies representing approximately 70% of the single premium credit disability market contributed their data. The names of companies contributing data are in Section 4. Many companies use a default age when the certificate is received without age. The data submitted for each company was reviewed by term, age and plan. Where the data was heaped at a particular age, the data was smoothed out by comparing it to the exposure at surrounding ages. The data was then grouped by the original terms in months (6, 12, 18, 24, 30, 36, 48, 60, 72, 84, 96, 108, and 120). The resulting distribution of 2008 new business is given in Appendix B. A description of the process used to collect and compile data is contained in Appendix C.

The following chart shows the average weighted age and term by plan from the survey for issue year 2008.

Plan	Average Term in Months	Average Age
7-day retroactive	52.2	43.7
14-day retroactive	53.5	42.9
14-day elimination	52.4	42.0
30-day retroactive	56.1	43.1
30-day elimination	55.2	42.6
Unknown	12.2	41.5
Total	52.9	43.0

As in the 2004 study, there does not appear to be a significant difference in the age distribution by plan so, again, only the total age distribution was used throughout the study. There are more pronounced differences in the distribution of original term in months by plan so each plan's unique distribution by term was used throughout the study.

Gathering the "Actual" Loss Costs from the Credit Insurance Experience Exhibit

Each year, all companies writing credit insurance complete the Credit Insurance Experience Exhibit as part of their annual statement filing. This exhibit is prepared for each state's own experience. The data is provided for credit life, disability, unemployment and property. The experience is also separated between single premium and monthly business. The credit disability business experience is further split into six elimination periods; 7-day retroactive, 14-day retroactive, 14-day elimination, 30-day retroactive, 30-day elimination and all other. Earned premiums and incurred losses are reported. Actual earned premiums are reported, as well as what the earned premiums for the state would be if all business were written at the state's prima facie rates in force at the end of the year. The data for all states is submitted electronically to the NAIC.

The single premium data for years 2008 through 2013 was selected for development of the actual loss costs. The primary purpose of the study is the validation of the use of the 1985 CIDA as a valuation table for single premium plans. For this reason, the experience on monthly business was ignored. Prima facie rates in force at each year end by state, plan and for the selected original terms of coverage in months (6, 12, 18, 24, 30, 36, 48, 60, 72, 84, 96, 108, and 120) was gathered and recorded.

Most states' prima facie rates allow a company to exclude pre-existing condition during the first 6 months of coverage if the condition resulted in treatment or medical advice during the 6 months prior to the effective date of coverage (6/6 pre-existing condition exclusion). A few states also allow the coverage to be written at higher rates if there is no exclusion of pre-existing conditions. Where this alternative exists, the rates for the 6/6 pre-existing exclusion coverage were selected. It is assumed that the rate differential for the two forms of pre-existing coverages is appropriate. The study, therefore, represents the net single premiums for credit disability insurance written with a 6/6 pre-existing exclusion.

Weighted single premium rates per $100 of initial insured indebtedness were determined for the USA and Puerto Rico combined for each of the 11 experience years in the study. This was done separately for each of the 5 elimination periods and 13 original terms in months. The total earned premium at prima facie rates for each plan by state was used for the weighting.

Concern has been expressed in the past that not all companies properly adjust their actual earned premium to what the earned premium would be if prima facie rates were charged. This has been seen on the credit life business where rate changes have been frequent in the past years. For credit disability, the prima facie rates have been very stable as can be seen. This is not considered a significant source of error in this or the previous studies. The following summarizes the experience for the five plans. Shown is the weighted prima facie rate for all terms

combined and the implied weighted claim cost. The distribution of the companies' 2008 new business by term within plan was used to get the weighted single rate.

7-Day Retroactive

Year	Earned Premium @ Prima Facie	Incurred Claims	Loss Ratio	Per $100 Of Initial Insured Indebtedness: Weighted Rate	Per $100 Of Initial Insured Indebtedness: Implied Claim Cost
2008	108,729,525	36,142,080	33.2%	5.16	1.71
2009	94,864,868	34,859,046	36.7%	5.22	1.92
2010	84,489,245	32,677,199	38.7%	5.20	2.01
2011	81,701,428	29,923,154	36.6%	5.24	1.92
2012	81,735,270	29,108,332	35.6%	5.27	1.88
2013	85,372,406	24,843,815	29.1%	5.29	1.54
Total	536,892,742	187,553,626	34.9%	5.22	1.82

14-Day Retroactive

Year	Earned Premium @ Prima Facie	Incurred Claims	Loss Ratio	Per $100 Of Initial Insured Indebtedness: Weighted Rate	Per $100 Of Initial Insured Indebtedness: Implied Claim Cost
2008	402,073,634	162,623,038	40.4%	3.96	1.60
2009	351,790,214	136,427,590	38.8%	3.97	1.54
2010	288,181,091	121,749,406	42.2%	3.96	1.67
2011	252,164,981	107,459,284	42.6%	4.00	1.70
2012	237,284,487	97,431,070	41.1%	4.02	1.65
2013	225,416,801	75,664,048	33.6%	4.06	1.36
Total	1,756,911,208	701,354,436	39.9%	3.99	1.59

14-Day Elimination

Year	Earned Premium @ Prima Facie	Incurred Claims	Loss Ratio	Per $100 Of Initial Insured Indebtedness: Weighted Rate	Per $100 Of Initial Insured Indebtedness: Implied Claim Cost
2008	20,813,659	9,786,679	47.0%	3.42	1.61
2009	17,669,567	9,596,427	54.3%	3.29	1.79
2010	13,115,378	6,886,379	52.5%	3.31	1.74
2011	8,284,719	5,161,159	62.3%	3.29	2.05
2012	6,937,099	4,364,504	62.9%	3.13	1.97
2013	5,438,644	3,486,610	64.1%	3.08	1.97
Total	72,259,066	39,281,758	54.4%	3.30	1.80

30-Day Retroactive

Year	Earned Premium @ Prima Facie	Incurred Claims	Loss Ratio	Per $100 Of Initial Insured Indebtedness: Weighted Rate	Per $100 Of Initial Insured Indebtedness: Implied Claim Cost
2008	35,135,532	17,360,944	49.4%	3.66	1.81
2009	27,676,527	16,141,315	58.3%	3.66	2.13
2010	24,846,964	13,582,619	54.7%	3.64	1.99
2011	22,756,910	11,671,941	51.3%	3.65	1.87
2012	21,205,122	9,695,730	45.7%	3.65	1.67
2013	20,830,271	9,219,689	44.3%	3.64	1.61
Total	152,451,326	77,672,238	50.9%	3.65	1.86

30-Day Elimination

Year	Earned Premium @ Prima Facie	Incurred Claims	Loss Ratio	Per $100 Of Initial Insured Indebtedness: Weighted Rate	Per $100 Of Initial Insured Indebtedness: Implied Claim Cost
2008	27,115,680	14,791,033	54.5%	2.84	1.55
2009	21,638,546	14,931,962	69.0%	2.86	1.97
2010	16,884,630	11,084,658	65.6%	2.87	1.88
2011	13,575,613	9,176,242	67.6%	2.87	1.94
2012	11,908,816	7,716,452	64.8%	2.90	1.88
2013	10,674,836	6,252,533	58.6%	2.90	1.70
Total	101,798,121	63,952,880	62.8%	2.87	1.80

As in both the 1997 and 2004 studies, there were anomalies in the actual experience. It was decided in the previous study not to pursue analyzing these anomalies since this is the nature of the business. For additional information on the explanation for these anomalies, refer to the write-up in the 1997 study. However, the fact that the 30-day plans exhibit a higher than expected claim level prompted the NAIC to adopt the use of the 14-day table for use in valuing 30-day plans. While some of this is due to the higher average term (see the table above), it cannot be entirely explained by term alone.

Derivation of the "Expected" Claim Costs

The 1985 CIDA has separate tables (incidence and termination rates) for males and females and four occupation groups. There are separate tables for 7-day elimination, 14-day elimination, 30-day elimination and 90+ elimination (plus 0 day accident). Three disability tables were constructed for the 7-day elimination, 14-day elimination and 30-day elimination periods. The published data was used to create these tables. Disabled lives by claim duration were computed for ages 22, 27, 32, 37, 42, 47, 52, 57, 62 and 67. The 5-point LaGrange formula that was recommended in the 1985 Transactions of the Society of Actuaries was used to compute the values for these ages. The 7-day elimination table was used to compute rates for the 7-day retroactive period plans. The 14-day elimination table was used for 14-day elimination and 14-day retroactive period plans and, likewise, for the 30-day elimination table.

For each table, there are 8 sub-tables; one each for the 4 occupation classes and 2 genders. A few of the companies captured gender in their databases. Most companies did not. For those that reported gender in 1997, 65% of their new business was males by count and 69% was males by exposure. Many of those that do not capture gender in their databases did run samplings of their new business by name to determine gender. The results of these samplings were very similar to the other data. It was decided in building the aggregate 1985 table to assume the in force credit disability business is 70% male.

No company recorded occupation in the data provided. This data is not routinely kept by the credit insurance industry. The distribution of the USA workforce by occupation was determined from the July 1998 Bureau of Labor Statistics published by the U.S. Department of Labor. The distribution is as follows:

Occupation	Male	Female
Class 1	26.8%	30.7%
Class 2	19.5%	40.8%
Class 3	29.1%	19.6%
Class 4	24.7%	8.8%

The data was updated to 2002. That table appears below.

Occupation	Male	Female
Class 1	32.4%	37.1%
Class 2	17.6%	35.5%
Class 3	22.5%	24.3%
Class 4	27.6%	3.1%

Finally, the data was updated to 2013. That table appears below.

Occupation	Male	Female
Class 1	34.8%	41.6%
Class 2	16.6%	30.4%
Class 3	22.6%	25.1%
Class 4	26.0%	2.9%

It is expected that the credit insurance distribution by occupation mirrors the workforce. It has been argued that the lower occupation risks are more likely to purchase credit insurance. It can also be argued that the better occupation risks take out larger loans and that when they do purchase credit insurance, the larger loan offsets this bias.

For each elimination period, there are 8 tables containing number of disabled lives by age at disablement and duration of claim through 20 years. Using each distribution by occupation above and assuming 70% male, a composite table was produced. From this composite table, net single premiums were computed for each of the 5 elimination period plans of insurance. Net single premiums were computed for each age at disablement. Under this calculation, the resulting net single premiums assume the insured remains the same age throughout the period of coverage. From these net single premiums, a second set of net single premiums was created where the insured age increases throughout the period of coverage. The cost for each yearly advance in age was linearly interpolated between the central ages in each 5-year age bracket.

Comparison to the Blended 1985 CIDA

Using the net single premiums computed above, a net single premium was determined by weighting all ages and all terms using the distribution from the survey. We then compared this to the weighted claim cost of the industry experience for the calendar years 2008 through 2013 combined.

Comparison Based on 2013 Occupation Class Distribution

Plan	Prima Facie Premium Distribution	1985 CIDA Net Single Premiums Assuming No Aging	1985 CIDA Net Single Premiums Assuming Aging	2008 - 2013 Experience Claim Cost	Actual to Expected w/Aging
7-day retroactive	20.5%	3.05	3.20	1.82	56.9%
14-day retroactive	67.0%	2.72	2.87	1.59	55.4%
14-day elimination	2.8%	2.38	2.52	1.80	71.4%
30-day retroactive	5.8%	1.98	2.13	1.86	87.3%
30-day elimination	3.9%	1.61	1.73	1.80	104.0%
Total	100.0%	2.69	2.84	1.67	58.7%

Comparison Based on 2002 Occupation Class Distribution

Plan	Prima Facie Premium Distribution	1985 CIDA Net Single Premiums Assuming No Aging	1985 CIDA Net Single Premiums Assuming Aging	2008 - 2013 Experience Claim Cost	Actual to Expected w/Aging
7-day retroactive	20.5%	3.09	3.24	1.82	56.2%
14-day retroactive	67.0%	2.76	2.91	1.59	54.6%
14-day elimination	2.8%	2.42	2.56	1.80	70.3%
30-day retroactive	5.8%	2.02	2.17	1.86	85.7%
30-day elimination	3.9%	1.64	1.76	1.80	102.3%
Total	100.0%	2.73	2.88	1.67	57.9%

Comparison Based on 1998 Occupation Class Distribution

Plan	Prima Facie Premium Distribution	1985 CIDA Net Single Premiums Assuming No Aging	1985 CIDA Net Single Premiums Assuming Aging	2008 - 2013 Experience Claim Cost	Actual to Expected w/Aging
7-day retroactive	20.5%	3.16	3.32	1.82	54.8%
14-day retroactive	67.0%	2.83	2.99	1.59	53.2%
14-day elimination	2.8%	2.48	2.62	1.80	68.7%
30-day retroactive	5.8%	2.09	2.24	1.86	83.0%
30-day elimination	3.9%	1.69	1.82	1.80	98.9%
Total	100.0%	2.80	2.96	1.67	56.3%

Adequacy of the Valuation Table

In order to confirm the appropriateness of the use of the 1985 CIDA Table as modified "Valuation Table" (112% of incidence rates and using the 14-day table for 30-day elimination and retroactive plans), we compare the table with aging to this new valuation basis.

Comparison Based on 2013 Occupation Class Distribution

Plan	Prima Facie Premium Distribution	Val. Table Net Single Premiums Assuming No Aging	Val. Table Net Single Premiums Assuming Aging	2008 - 2013 Experience Claim Cost	Actual to Expected w/Aging
7-day retroactive	20.5%	3.42	3.58	1.82	50.8%
14-day retroactive	67.0%	3.05	3.21	1.59	49.5%
14-day elimination	2.8%	2.67	2.82	1.80	63.8%
30-day retroactive	5.8%	3.00	3.19	1.86	58.3%
30-day elimination	3.9%	2.36	2.53	1.80	71.1%
Total	100.0%	3.09	3.25	1.67	51.3%

Comparison Based on 2002 Occupation Class Distribution

Plan	Prima Facie Premium Distribution	Val. Table Net Single Premiums Assuming No Aging	Val. Table Net Single Premiums Assuming Aging	2008 - 2013 Experience Claim Cost	Actual to Expected w/Aging
7-day retroactive	20.5%	3.46	3.63	1.82	50.1%
14-day retroactive	67.0%	3.09	3.26	1.59	48.8%
14-day elimination	2.8%	2.71	2.87	1.80	62.7%
30-day retroactive	5.8%	3.05	3.24	1.86	57.4%
30-day elimination	3.9%	2.41	2.56	1.80	70.3%
Total	100.0%	3.13	3.30	1.67	50.5%

Comparison Based on 1998 Occupation Class Distribution

Plan	Prima Facie Premium Distribution	Val. Table Net Single Premiums Assuming No Aging	Aging	2008 - 2013 Experience Claim Cost	Actual to Expected w/Aging
7-day retroactive	20.5%	3.54	3.72	1.82	48.9%
14-day retroactive	67.0%	3.17	3.35	1.59	47.5%
14-day elimination	2.8%	2.78	2.93	1.80	61.4%
30-day retroactive	5.8%	3.12	3.32	1.86	56.0%
30-day elimination	3.9%	2.46	2.63	1.80	68.4%
Total	100.0%	3.20	3.38	1.67	49.3%

The overall Actual to Expected ratios of 51.3%, 50.5% and 49.3% confirm the adequacy in aggregate of the current table, based on all the occupation class distributions used. The fact that each individual plan A/E ratio is less than 100% reinforces the adequacy by plan as well. The Committee recognizes that these A/E ratios suggest the valuation standard, while generally generating reserves less than unearned premiums, still contains a significant amount of redundancy. This will be monitored in future studies.

Comparison of Term Distribution – 2003 to 2008 to 2013

Term in Months	2003 Distribution	2008 Distribution	2013 Distribution
6	0.3	0.6	1.0
12	1.5	1.4	1.7
18	1.6	1.8	2.0
24	4.9	4.7	6.0
30	2.0	2.5	3.7
36	15.0	12.9	22.7
48	16.9	13.0	13.9
60	44.5	51.6	34.8
72	10.5	8.8	13.0
84	1.1	2.2	1.4
96	0.2	0.1	0.0
108	0.1	0.0	0.0
120	1.3	0.2	0.0
Total	100.0	100.0	100.0
Average	52.8	52.9	49.4

From the table above, two things are noteworthy. First, the accumulation focused at the 60-month term in both 2003 and 2008 began to disburse in 2013. Secondly, the 36-month term nearly doubled from 2008 to 2013.

Average Age – 2003 to 2008 to 2013

The overall average age continues to increase. In 1997, the average age was 39.1. For the 2008 data, the average grew to 43.0, and for the 2013 data, the average was 44.6.

Year	Average Age
1997	39.1
2000	40.7
2003	41.5
2008	43.0
2013	44.6

SECTION 4. PARTICIPATING COMPANIES

American Bankers Life Assurance Company
American Health and Life Insurance Company
Caribbean American Life Assurance Company
Central States Health & Life Company of Omaha
CMFG Life Insurance Company (CUNA)
Fortegra
Merit
Minnesota Life Insurance Company
Securian Life Insurance Company
Union Security Life Insurance Company
Wichita National Life Insurance Company

APPENDIX A

SOCIETY OF ACTUARIES
475 N. MARTINGALE RD., SUITE 800, SCHAUMBURG, IL 60173-2226 847/706-3500

Date: June 24, 2014

To: All Insurers Issuing Single Premium Credit Disability Insurance

From: Christopher H. Hause, Chair
Credit Insurance Experience Committee

CC: **Korrel Rosenberg**
Research Administrator, SoA

RE: Credit Disability Study

In 1997, the Consumer Credit Insurance Association initiated a credit disability study. The eventual result of that study was NAIC adoption of a valuation standard for credit disability based on the 1985 CIDA table. In 2005 the Credit Insurance Experience Committee updated the 1997 study. Now the CIEC is planning another update to evaluate trends and continued adequacy of the NAIC model reserving standard. I am asking for your company's participation by submitting information on Single Premium Credit Disability Insurance issued during 2008 and 2013. I have attached the specifications for the data call. Please note that we need an extract from your certificate file for every certificate that was issued to be effective in 2008 and 2013. Contracts issued but subsequently cancelled prior to expiration date are to be included.

Hause Actuarial Solutions has been contracted to perform the data collection and can be contacted if you have any questions. They have agreed that this data will only be used for the purpose of this study, and that the identity of the company will not be associated with its experience after it has been collected, preserving confidentiality. If the agreement between Hause Actuarial Solutions and the Society of Actuaries does not meet your needs, you may either send your experience to Korrel Rosenberg at the Society of Actuaries or create a direct confidentiality agreement with Hause Actuarial Solutions.

In order to be included in the study the data must be received by August 31, 2014. If you are unable to meet the August 31 deadline, please let us know and we will try to accommodate later submissions. If you choose not to participate in this study, I ask that you consider developing the necessary programs to participate in the future. If it is more convenient to provide the data in a different format, please feel free to submit it in your format, and we will convert it. The fields that are absolutely required in order for the data to be used are indicated with an asterisk.

If you are not the appropriate person to receive this data call, please forward it to the responsible party. I strongly encourage that you participate in this study to maintain a valuation standard that

truly represents all companies in the Credit Insurance Industry. On behalf of the Credit Insurance Experience Committee, I thank you in advance for your participation.

Form A

Credit Disability Data Request
New Business Writings Only (Refunds Excluded)

Company Name _____

Company's 2008 Credit Disability Single Premium Direct Writings _____

Company's 2013 Credit Disability Single Premium Direct Writings _____

Amount and Percentage of Direct Business On Which Detail Data Provided _____(2008)

_____(2013)

Period Covered by Detail Data:	2008 Data	2013 Data
Beginning Month and Year	_____	_____
Ending Month and Year	_____	_____

Contact: Name _____
Address: _____
_____
Phone # _____
Fax # _____

Can we release name and company to Chris Hause? _____ YES

_____ NO

Form B

Record Layout of Disk File (ASCII) Containing Input Data

Description		Field Position	Comments
Company Name or ID (if confidential)*		1 to 20	
Age Last Birthday Low*		21 to 23	
Age Last Birthday High		24 to 26	Can be same as low
Original Term in Months*		27 to 29	Insert 000's if not available
Elimination Period:*	1 = 7 retro 2 = 14 retro 3 = 14 elim 4 = 30 retro 5 = 30 elim 6 = other 0 = not available	30	
Sex:	1 = male 2 = female 0 = not available	31	
Original Single Premium		32 to 43	dollars and cents
Original Amount of Insurance Issued (Note: this equals monthly indemnity times term in months)		44 to 50	dollars only
Monthly Indemnity*		51 to 57	dollars and cents
Source of Business	1 = Auto 2 = Financial Institution 3 = Finance Company 4 = Other 0 = Not Available	58	
Underwritten	1 = yes 2 = no 0 = Not available	59	
Joint/Single	1 = Single 2 = Joint 0 = Not Available	60	
Pre-ex Indicator	1 = Pre-ex applies 2 = No Pre-ex 0 = Not available	61	
Critical Period Indicator	1 = Full Benefit 2 = Critical Period 0 = Not Available	62	
Real Estate Backed Loan	1 = Yes 2 = No	63	

	0 = Not Available	
Year of Issue*	08=2008, 13=2013	64 to 65

APPENDIX B

Distribution Of Credit Disability Exposure By Issue Age, Term in Months and Plan

Exposure Is Gross Insured Indebtedness Issued In 2008 (in '000)

I. 7 Day Retroactive Elimination Period

Term	Age 22	Age 27	Age 32	Age 37	Age 42	Age 47	Age 52	Age 57	Age 62	Age 67	Total	Distribution
6	599	536	485	532	604	539	392	310	126	18	4,141	0.2%
12	3,432	3,553	3,810	4,279	4,355	4,212	3,557	2,310	1,204	142	30,854	1.3%
18	3,629	4,925	5,257	6,267	6,459	6,278	5,285	3,756	1,811	173	43,840	1.8%
24	9,483	11,984	14,060	17,012	17,317	18,109	16,365	11,168	5,507	361	121,366	4.9%
30	3,770	6,338	8,129	10,342	10,627	11,515	10,274	6,820	3,760	338	71,913	2.9%
36	18,564	28,552	34,321	44,609	50,331	54,722	48,865	36,654	17,855	1,322	335,795	13.6%
48	22,869	24,825	27,861	34,132	38,648	45,664	39,506	29,710	16,404	2,055	281,674	11.4%
60	64,540	101,902	125,995	162,334	200,880	236,423	235,777	181,214	95,334	12,049	1,416,448	57.6%
72	9,721	10,200	10,551	12,492	14,654	18,142	17,377	15,286	8,232	915	117,570	4.8%
84	1,543	2,185	2,333	3,685	4,287	7,104	6,071	6,076	3,374	88	36,746	1.5%
96	0	28	33	0	0	0	0	42	48	0	151	0.0%
108	0	0	0	0	0	0	0	0	0	0	0	0.0%
120	0	0	0	0	0	41	0	38	0	0	79	0.0%
Total	138,150	195,028	232,835	295,684	348,162	402,749	383,469	293,384	153,655	17,461	2,460,577	100.0%
Distribution	5.6%	7.9%	9.5%	12.0%	14.1%	16.4%	15.6%	11.9%	6.2%	0.7%	100.0%	

Distribution Of Credit Disability Exposure By Issue Age, Term in Months and Plan
Exposure Is Gross Insured Indebtedness Issued In 2008 (in '000)

II. 14 Day Retroactive Elimination Period

Term	Age 22	Age 27	Age 32	Age 37	Age 42	Age 47	Age 52	Age 57	Age 62	Age 67	Total	Distribution
6	1,802	1,652	1,596	2,035	2,331	2,197	1,847	1,312	990	184	15,946	0.3%
12	7,323	7,707	7,695	8,774	9,373	9,570	7,600	5,445	3,034	534	67,055	1.2%
18	8,296	9,846	10,450	12,704	13,232	13,863	12,652	8,948	4,063	620	94,674	1.7%
24	24,899	26,763	29,498	34,708	35,085	37,594	31,349	21,744	11,058	1,415	254,113	4.6%
30	10,856	14,317	16,687	18,767	19,749	21,017	18,494	12,651	6,244	847	139,629	2.6%
36	57,228	66,471	75,689	91,524	96,874	106,149	95,131	67,789	34,359	4,705	695,919	12.7%
48	68,467	69,760	72,169	84,734	93,977	105,379	101,361	74,396	38,970	4,193	713,406	13.1%
60	175,647	231,748	263,912	321,701	376,037	449,281	447,706	330,847	172,066	10,650	2,779,595	50.9%
72	45,444	48,443	46,979	57,088	66,169	80,690	85,758	68,491	36,443	2,316	537,821	9.8%
84	6,475	9,637	13,606	18,680	21,360	24,458	26,998	19,235	9,500	105	150,054	2.7%
96	204	176	376	557	417	825	441	566	555	0	4,117	0.1%
108	47	0	40	0	0	0	0	276	0	0	363	0.0%
120	515	412	1,283	1,175	1,601	2,504	2,414	2,352	187	0	12,443	0.2%
Total	407,203	486,932	539,980	652,447	736,205	853,527	831,751	614,052	317,469	25,569	5,465,135	100.0%
Distribution	7.5%	8.9%	9.9%	11.9%	13.5%	15.6%	15.2%	11.2%	5.8%	0.5%	100.0%	

Distribution Of Credit Disability Exposure By Issue Age, Term in Months and Plan
Exposure Is Gross Insured Indebtedness Issued In 2008 (in '000)

III. 14 Day Elimination Period

Term	Age 22	Age 27	Age 32	Age 37	Age 42	Age 47	Age 52	Age 57	Age 62	Age 67	Total	Distribution
6	67	64	73	93	94	75	68	53	35	19	641	0.1%
12	617	821	823	953	1,064	1,005	914	595	394	28	7,214	1.1%
18	704	1,074	1,128	1,279	1,255	1,390	1,135	776	417	14	9,172	1.4%
24	2,092	2,897	3,535	3,794	3,702	3,898	3,301	2,379	1,357	93	27,048	4.1%
30	864	1,786	1,682	2,100	2,015	2,092	1,922	1,225	729	14	14,429	2.2%
36	7,865	10,306	11,864	12,298	14,299	14,377	12,622	8,725	4,585	156	97,097	14.8%
48	10,032	11,844	14,236	16,510	19,592	20,123	18,187	12,025	5,841	234	128,624	19.6%
60	23,365	30,850	32,174	39,071	45,452	47,833	45,674	31,856	16,996	586	313,857	47.7%
72	4,614	3,912	5,256	4,961	5,500	6,327	6,732	5,283	2,843	160	45,588	6.9%
84	336	778	928	914	1,459	1,391	949	1,361	463	0	8,579	1.3%
96	0	33	0	0	52	0	0	0	0	0	85	0.0%
108	0	0	0	64	3	0	35	0	0	0	102	0.0%
120	72	144	269	510	574	1,048	1,290	693	316	0	4,916	0.7%
Total	50,628	64,509	71,968	82,547	95,061	99,559	92,829	64,971	33,976	1,304	657,352	100.0%
Distribution	7.7%	9.8%	10.9%	12.6%	14.5%	15.1%	14.1%	9.9%	5.2%	0.2%	100.0%	

Distribution Of Credit Disability Exposure By Issue Age, Term in Months and Plan
Exposure Is Gross Insured Indebtedness Issued In 2008 (in '000)

IV. 30 Day Retroactive Elimination Period

Term	Age 22	Age 27	Age 32	Age 37	Age 42	Age 47	Age 52	Age 57	Age 62	Age 67	Total	Distribution
6	44	17	41	44	71	82	100	67	38	17	521	0.3%
12	204	165	218	353	483	539	523	367	145	36	3,033	1.7%
18	112	106	193	328	420	378	535	248	129	36	2,485	1.4%
24	569	451	464	719	919	973	881	730	362	62	6,130	3.5%
30	141	102	136	133	186	285	298	246	119	34	1,680	1.0%
36	2,085	1,598	1,668	2,155	2,759	2,597	3,186	2,219	874	112	19,253	10.9%
48	2,279	2,224	2,314	3,138	3,695	4,102	3,974	2,323	1,210	372	25,631	14.6%
60	6,402	6,767	7,103	8,550	10,095	11,892	11,239	8,884	4,466	205	75,603	43.0%
72	3,354	2,462	2,679	3,811	4,440	6,399	5,960	5,256	2,438	154	36,953	21.0%
84	94	113	222	338	460	310	615	214	52	0	2,418	1.4%
96	0	0	48	16	15	38	101	0	0	0	218	0.1%
108	0	0	0	0	0	0	0	0	86	0	86	0.0%
120	0	151	160	178	168	484	581	248	0	0	1,970	1.1%
Total	15,284	14,156	15,246	19,763	23,711	28,079	27,993	20,802	9,919	1,028	175,981	100.0%
Distribution	8.7%	8.0%	8.7%	11.2%	13.5%	16.0%	15.9%	11.8%	5.6%	0.6%	100.0%	

Distribution Of Credit Disability Exposure By Issue Age, Term in Months and Plan
Exposure Is Gross Insured Indebtedness Issued In 2008 (in '000)

V. 30 Day Elimination Period

Term	Age 22	Age 27	Age 32	Age 37	Age 42	Age 47	Age 52	Age 57	Age 62	Age 67	Total	Distribution
6	68	112	140	187	281	272	301	167	321	24	1,873	0.5%
12	374	482	551	921	1,019	1,356	1,349	1,049	622	25	7,748	2.1%
18	176	286	395	764	873	1,306	1,892	609	484	4	6,789	1.8%
24	1,142	1,150	1,262	1,587	1,861	2,349	2,574	1,734	1,072	60	14,791	4.0%
30	235	269	220	508	663	601	740	769	472	60	4,537	1.2%
36	3,037	3,125	3,560	4,563	5,306	6,484	6,531	5,159	2,511	243	40,519	11.0%
48	4,083	3,894	4,570	6,235	7,161	7,864	7,954	6,356	2,711	205	51,033	13.8%
60	14,052	15,789	15,159	17,455	23,015	25,774	24,807	16,462	6,919	349	159,781	43.2%
72	7,845	7,232	6,860	8,338	9,262	9,428	10,436	7,824	3,583	77	70,885	19.2%
84	457	576	928	732	1,051	1,519	1,362	977	387	0	7,989	2.2%
96	0	0	59	85	0	0	116	137	27	0	424	0.1%
108	0	0	0	0	17	71	2	33	0	0	123	0.0%
120	82	99	312	528	516	535	485	354	0	72	2,983	0.8%
Total	31,551	33,014	34,016	41,903	51,025	57,559	58,549	41,630	19,109	1,119	369,475	100.0%
Distribution	8.5%	8.9%	9.2%	11.3%	13.8%	15.6%	15.8%	11.3%	5.2%	0.3%	100.0%	

Distribution Of Credit Disability Exposure By Issue Age, Term in Months and Plan
Exposure Is Gross Insured Indebtedness Issued In 2008 (in '000)

VI. Plan is Unknown

Term	Age 22	Age 27	Age 32	Age 37	Age 42	Age 47	Age 52	Age 57	Age 62	Age 67	Total	Distribution
6	3,532	4,540	4,612	4,761	4,718	4,320	3,573	2,718	1,720	1,110	35,604	49.5%
12	1,082	1,649	1,876	2,182	2,312	2,258	1,933	1,484	913	493	16,182	22.5%
18	288	579	759	903	919	907	767	569	379	91	6,161	8.6%
24	557	1,073	1,327	1,792	1,683	1,729	1,312	921	525	35	10,954	15.2%
30	76	167	224	287	264	254	235	155	87	22	1,771	2.5%
36	20	82	146	133	204	234	244	105	41	0	1,209	1.7%
48	0	0	0	0	0	0	0	0	0	0	0	0.0%
60	0	0	0	0	0	0	0	0	0	0	0	0.0%
72	0	0	0	0	0	0	0	0	0	0	0	0.0%
84	0	0	0	0	0	0	0	0	0	0	0	0.0%
96	0	0	0	0	0	0	0	0	0	0	0	0.0%
108	0	0	0	0	0	0	0	0	0	0	0	0.0%
120	0	0	0	0	0	0	0	0	0	0	0	0.0%
Total	5,555	8,090	8,944	10,058	10,100	9,702	8,064	5,952	3,665	1,751	71,881	100.0%
Distribution	7.7%	11.3%	12.4%	14.0%	14.1%	13.5%	11.2%	8.3%	5.1%	2.4%	100.0%	

Distribution Of Credit Disability Exposure By Issue Age, Term in Months and Plan
Exposure Is Gross Insured Indebtedness Issued In 2008 (in '000)

VII. Grand Total of All Plans Combined

Term	Age 22	Age 27	Age 32	Age 37	Age 42	Age 47	Age 52	Age 57	Age 62	Age 67	Total	Distribution
6	6,112	6,921	6,947	7,652	8,099	7,485	6,281	4,627	3,230	1,372	58,726	0.6%
12	13,032	14,377	14,973	17,462	18,606	18,940	15,876	11,250	6,312	1,258	132,086	1.4%
18	13,205	16,816	18,182	22,245	23,158	24,122	22,266	14,906	7,283	938	163,121	1.8%
24	38,742	44,318	50,146	59,612	60,567	64,652	55,782	38,676	19,881	2,026	434,402	4.7%
30	15,942	22,979	27,078	32,137	33,504	35,764	31,963	21,866	11,411	1,315	233,959	2.5%
36	88,799	110,134	127,248	155,282	169,773	184,563	166,579	120,651	60,225	6,538	1,189,792	12.9%
48	107,730	112,547	121,150	144,749	163,073	183,132	170,982	124,810	65,136	7,059	1,200,368	13.0%
60	284,006	387,056	444,343	549,111	655,479	771,203	765,203	569,263	295,781	23,839	4,745,284	51.6%
72	70,978	72,249	72,325	86,690	100,025	120,986	126,263	102,140	53,539	3,622	808,817	8.8%
84	8,905	13,289	18,017	24,349	28,617	34,782	35,995	27,863	13,776	193	205,786	2.2%
96	204	237	516	658	484	863	658	745	630	0	4,995	0.1%
108	47	0	40	64	20	71	37	309	86	0	674	0.0%
120	669	806	2,024	2,391	2,859	4,612	4,770	3,685	503	72	22,391	0.2%
Total	648,371	801,729	902,989	1,102,402	1,264,264	1,451,175	1,402,655	1,040,791	537,793	48,232	9,200,401	100.0%
Distribution	7.0%	8.7%	9.8%	12.0%	13.7%	15.8%	15.2%	11.3%	5.8%	0.5%	100.0%	

APPENDIX C

Credit Morbidity Data Collection and Manipulation Documentation

I) Gather data from companies and import into an Access Database Table

II) Table Structure/Field Names as follows:

a. CompanyName
b. AgeLastBirthday_Low – Use this age for data manipulation
c. AgeLastBirthday_High
d. OriginalTerm_InMonths
e. EliminationPeriod (This translates to the benefit type as follows)
    i. 1 = 7 Retro
    ii. 2 = 14 Retro
    iii. 3 = 14 Elim
    iv. 4 = 30 Retro
    v. 5 = 30 Elim
    vi. 6 = Other
    vii. 0 = Not Available
f. Sex
    i. 1 = Male
    ii. 2 = Female
    iii. 0 = Not Available
g. OriginalSinglePremium
h. OriginalAmountOfInsuranceIssued (This is the field used for calculations)
i. MonthlyIndemnity
j. SourceOfBusiness
    i. 1 = Auto
    ii. 2 = Financial Institution
    iii. 3 = Finance Company
    iv. 4 = Other
    v. 0 = Not Available
k. Underwritten
    i. 1 = Yes
    ii. 2 = No
    iii. 0 = Not Available
l. Joint_Or_Single
    i. 1 = Single
    ii. 2 = Joint
    iii. 0 = Not Available
m. PreExIndicator
    i. 1 = Pre-Existing applies
    ii. 2 = No Pre-Existing
    iii. 0 = Not Available
n. CriticalPeriodIndicator
    i. 1 = Full Benefit
    ii. 2 = Critical Period
    iii. 0 = Not Available

III) Use VB utility to graph detail by Benefit to visually identify age bumps by Benefit

a. Line Graph is utilized to graphically identify spikes.
b. Each line on graph indicates an Elimination Period (7R, 14R, etc.)

c. Total line sums all Elimination Periods
d. Age Bumps are defined as default ages. Unusual spikes indicate the use of a default age.

IV) Smooth Bumps

a. For all Identified Bumps (example ages 34 and 45)

For Each Benefit Type (14R, 7R, 30R, 14E, etc.)

For Each Term (DB Field OriginalTermInMonths)

Find terms on either side of bump. In this example ages 33 and 35, and ages 44 and 46

Average amounts from age 33 and 35 and assign to age 34. Average amounts from age 44 and 46 and assign to age 45)

Next

Next

Next

b. NOTE - If either side of age to be "smoothed" is zero, no smoothing occurs.

V) After data has been smoothed. Create separate tables for each Elimination Period

VI) Compress Months Data into following categories

a. This is done by company, and by Elimination Period
b. DB Field -- Original Term In Months
   i. 6 Month = Months 1 – 9
   ii. 12 Months = Months 10 – 15
   iii. 18 Months = Months 16 – 21
   iv. 24 Months = Months 22 – 27
   v. 30 Months = Months 28 – 33
   vi. 36 Months = Months 34 – 42
   vii. 48 Months = Months 43 – 54
   viii. 60 Months = Months 55 – 66
   ix. 72 Months = Months 67 – 78
   x. 84 Months = Months 79 – 90
   xi. 96 Months = Months 91 – 102
   xii. 108 Months = Months 103 – 114
   xiii. 120 Months = Months >= 115 – 126
   xiv. Eliminate (or ignore) all terms >=127 Months

VII) Compress Age Data into following categories

a. This is done by company, and by Elimination Period
b. DB Field -- AgeLastBirthday_Low
   i. Eliminate (or ignore) all ages <=14
   ii. Age 22 = Ages 15 – 24
   iii. Age 27 = Ages 25 – 29
   iv. Age 32 = Ages 30 – 34
   v. Age 37 = Ages 35 – 39
   vi. Age 42 = Ages 40 – 44
   vii. Age 47 = Ages 45 – 49
   viii. Age 52 = Ages 50 – 54

ix. Age 57 = Ages 55 – 59
x. Age 62 = Ages 60 – 64
xi. Age 67 = Ages 65 – 69
xii. Eliminate (or ignore) all ages >=70

VIII) Combine totals of all the Companies data into a separate database containing totals tables for each elimination period. This combination process uses the "smooth" data, before age and benefit month data is compressed at the single company level.
a. 7 Day Retro Totals Table
b. 14 Day Retro Totals Table
c. 14 Day Elim Totals Table
d. 30 Day Retro Totals Table
e. 30 Day Elim Totals Table
f. Other Totals Table
g. Not Available Totals Table.

IX) Compress Totals for all companies Months Data into following categories. This combination process uses the "smooth" data, before age and benefit month data is compressed at the single company level.
a. DB Field -- Original Term In Months
i. 6 Month = Months 1 – 9
ii. 12 Months = Months 10 – 15
iii. 18 Months = Months 16 – 21
iv. 24 Months = Months 22 – 27
v. 30 Months = Months 28 – 33
vi. 36 Months = Months 34 – 42
vii. 48 Months = Months 43 – 54
viii. 60 Months = Months 55 – 66
ix. 72 Months = Months 67 – 78
x. 84 Months = Months 79 – 90
xi. 96 Months = Months 91 – 102
xii. 108 Months = Months 103 – 114
xiii. 120 Months = Months >= 115 – 126
xiv. Eliminate (or ignore) all terms >=127 Months

X) Compress Totals for all companies Age Data into following categories
a. DB Field -- AgeLastBirthday_Low
i. Eliminate (or ignore) all ages <=14
ii. Age 22 = Ages 15 – 24
iii. Age 27 = Ages 25 – 29
iv. Age 32 = Ages 30 – 34
v. Age 37 = Ages 35 – 39
vi. Age 42 = Ages 40 – 44
vii. Age 47 = Ages 45 – 49
viii. Age 52 = Ages 50 – 54
ix. Age 57 = Ages 55 – 59
x. Age 62 = Ages 60 – 64
xi. Age 67 = Ages 65 – 69
xii. Eliminate (or ignore) all ages >=70

XI) Copy grid from cross tab query created in Access into Excel for utilization in the final study documents.