



AMERICAN ACADEMY *of* ACTUARIES

**AMERICAN ACADEMY OF ACTUARIES
MEDICARE SUPPLEMENT WORK GROUP SUBTEAM**

**REPORT ON LOSS RATIO CURVES FOR
REDETERMINATION OF REFUND BENCHMARKS**

March 10, 2004

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**American Academy of Actuaries
Medicare Supplement Work Group Subteam
Report on Loss Ratio Curves for
Redetermination of Refund Benchmarks**

I. EXECUTIVE SUMMARY

The Medicare Supplement Subteam of the National Association of Insurance Commissioners' Accident and Health Work Group (A&HWG) requested the American Academy of Actuaries (AAA) to develop a "...broad range of composite loss ratio curves (separately for issue age- and attained age-rated products) which the Subteam can compare to the composite generated one based on Florida experience." Further, it was "requested that the curves be based on experience without consideration of margins which will be added later."

The conclusions of our analyses are that:

- A.** There is a large range of values for the loss ratio curves developed based on the Academy report (the scenarios we have tested so far). The curves developed based on assumptions from the Academy study are more consistent with the curves from the Reden & Anders report than those curves based on Florida experience.
- B.** A single benchmark does not appear to reflect the variances in curves by rating methodology and/or plan.
- C.** A 15-year benchmark period is inconsistent with a 65% lifetime loss ratio pricing standard (especially for issue age rated products).
- D.** A 65% third policy year loss ratio requirement is inconsistent with a 65% lifetime loss ratio pricing standard.

Other observations are:

- E.** Further work on this issue requires agreement that the refund benchmark provisions and related areas of the Model Regulation (e.g., Section 14 – Loss Ratio Standards and Refund or Credit of Premium) be changed. (See Section V - "Next Steps").
- F.** The investigation so far has indicated that there are reasonable variations in the underlying assumptions that need to be understood in establishing the bases for the benchmark. Loss ratio curves generated on these assumptions showed significant differences. Accordingly, the benchmarks need to recognize these variations either: (1) implicitly in the benchmark(s); or (2)

explicitly as a source of margin. Other sources of margin would also need to be investigated, which include variations in experience from year to year, and those due to random fluctuations, at the very least.

- G.** If the decision is made to revise the benchmarks, the Academy will need some direction regarding key parameters of the benchmark calculations:
1. the length of the benchmark period consistent with a lifetime pricing horizon;
 2. aggregation of plans within a state, or other aggregation;
 3. number and nature of benchmark scales;
 4. plans covering prescription drugs; and
 5. impact of market disruption due to legislation/regulation on benchmark assumptions.

II. INTRODUCTION

A. NAIC Charge

This Report is in response to the A&HWG's Medicare Supplement Subteam's request to the American Academy of Actuaries to develop a "...broad range of composite loss ratio curves (separately for issue age and attained age rated products) which the Subteam can compare to the composite generated one based on Florida experience." Further, it was "requested that the curves be based on experience without consideration of margins which will be added later."

B. Academy Work Group

The American Academy of Actuaries activated a subteam of the Medicare Supplement Insurance Work Group (Work Group) to respond to the NAIC request for the report. This report is the final work product of the subteam. Attachment A lists members of the subteam.

The Academy wishes to thank the members of the Work Group for the significant time and effort provided on this project, especially those who volunteered to work on the model.

In addition, the Academy appreciates the assistance provided by Joanna Ossinger. Her able assistance was invaluable in the preparation of this report.

III. DESCRIPTION OF THE MODEL

An Excel-based model was developed that generates a wide variety of cumulative policy year loss ratios over a 30-year time horizon, on both an attained age and an issue age basis. Model results are based on assumptions from 3 sources:

1. AAA Study - The AAA “Report on Medicare Supplement Experience, Years 1996 – 2000” presented to the NAIC;
2. R&A Study - “Study of Alternatives for the Medicare Supplement Refund Formula” by Reden & Anders for the Center for Medicare and Medicaid Services; and
3. Florida Experience - Frank Dino’s e-mail included in the Life & Health Actuarial Subscription, dated June 2003, pages 223-231.

A. Parameters

The following represents model parameters:

Age: Annual aging factors were established for the following attained age groups: 65 – 69, 70 – 74, 75 – 79, 80 – 84 and 85+.

Duration: Duration factors were established individually for durations one through four, with one factor used for durations five and above. Factors vary by: (1) age category and plan; (2) all ages within a plan; and (3) a blend of all ages and all plans.

Lapse: Lapse assumptions (for this report the lapse is a total termination rate including voluntary withdrawals and deaths) were established individually for durations one through seven, with one assumption used for durations eight and above. Assumptions vary based on rating method and plan, in addition to a blend of all rating methods and all plans (indicated by Low, Medium and High).

Trend: Trend assumptions varied by plan or a blend of all plans (indicated by Low, Medium and High).

Interest: An interest assumption of 5% was used for all scenarios, consistent with the interest assumption used on both the Reden & Anders study and Florida’s experience. This was done to remove interest as a source of variation for ease of comparison of loss ratio curves, although the model allows for other interest rates.

Details on the above parameters follow.

B. AAA Study – Assumption Details

Age: Claims cost factors by age group, separately for Plans A, C and F, were derived from Chapter XIII, Table XIII-2, page 56. Duration 3 only claims cost changes by age group were used. For Plan A, the small positive and negative changes in the upper age groups were assumed to be zero. For Plan C, claims cost changes for the upper age groups were modified to assume decreasing rates of change with advancing age. Plan F claims cost changes were used directly from the table. No change in claims cost was assumed for the 85+ age group.

Duration: Durational factors were calculated separately for Plans A, C and F for three age groups: 64 – 69, 70+ and all ages. Factors were calculated directly from the data contained in Attachment G (pages G-3, G-8 and G-9), with the factors for the 70+ age group derived by subtracting the data for 64 – 69 from the data for ages 64 and older. The factors were made relative to duration 2+ experience.

Lapse: Lapse rates for durations 1 through 7 and 8+ were derived from Chapter XII, pages 52 and 53. Rates for all plans and rating methods combined (contained in Table XII-4, page 52) were used as base lapse rates, with some smoothing and rounding employed. Then tables of lapse rate increments were developed for issue and attained age, and Plans A, C and F separately from Tables XII-3, page 52 and XII-5, page 53. Smoothing and rounding were employed for these tables as well.

Trend: Four-year annualized trend factors for Plans A, C and F were used directly from Table III-A-2 on page 13.

C. R & A Study – Assumption Details

Age: Change in claims cost by age group were derived from the factors displayed in Exhibit B, page 23. Factors between two consecutive quinquennial ages, beginning with age 65, were annualized. No variation by plan was recognized in the study.

Duration: Three sets of factors were derived from those contained in Exhibit B, page 21 (labeled “Underwriting Deterioration”). The two sets shown, for issue age 65 and issue ages 66+, were used directly. An additional set (R & A Blend) was calculated as a weighted average of the two sets shown.

Lapse: Lapse rates, with some smoothing, were used from Exhibit B, page 21 (labeled “Termination Scenarios”). Specifically, the three scenarios shown were entered into the model as increments to the base lapse rates described above under “AAA Study.” No variation by plan or rating method was recognized in the study.

Trend: A trend factor of 7.5% was used based on page 6.

D. Florida Experience – Assumption Details

Two sets of cumulative loss ratios (one each on an issue and attained age basis) were generated based on the durational loss ratios shown in the attachment to Mr. Dino’s letter. The underlying experience and assumptions used were based on Florida experience.

We used the durational loss ratios from the Florida experience study along with some simplifying lapse assumptions to develop cumulative loss ratios.

IV. REPORT GRAPHS

A. Introduction

Expected loss ratios were developed by first using the assumptions to create unique sets of policy year claim costs corresponding to each age at issue. Issue age and attained age¹ premium scales were then separately developed using the policy year claims costs to produce a 65% lifetime loss ratio over a thirty year pricing horizon (a 15-year pricing horizon is also modeled). The same assumptions were then used to develop policy year loss ratios. Durational and cumulative loss ratios were determined based on a mid-year issue date and lapses at the end of the policy year (this assumption is similar to that used in the current benchmark development). This section presents a series of graphs comparing the loss ratios on various bases. In addition to loss ratios based on the current benchmark,² the graphs show other patterns of expected loss ratios determined from the AAA Study, the R&A Study and Florida Experience. (These sources are described in Section III.)

The AAA Medicare Supplement Work Group Subteam has discussed several potential technical adjustments to the model which may reduce or eliminate certain anomalies we see in the results. Some of the adjustments include:

1. Revising the lapse rates to have decreasing rates with increasing duration;
2. Adjusting the ultimate lapse rate to reflect an increase due to mortality;
3. Graduating the duration 5+ adjustment factors to smooth with factors for duration 4;
4. Incorporating varying claims cost changes by individual age, as opposed to the five year level factors used;
5. Develop a composite attained age premium scale based on a weighted average.

¹ The model, at this time, develops slightly different attained age scales based on issue age since some assumptions vary by issue age.

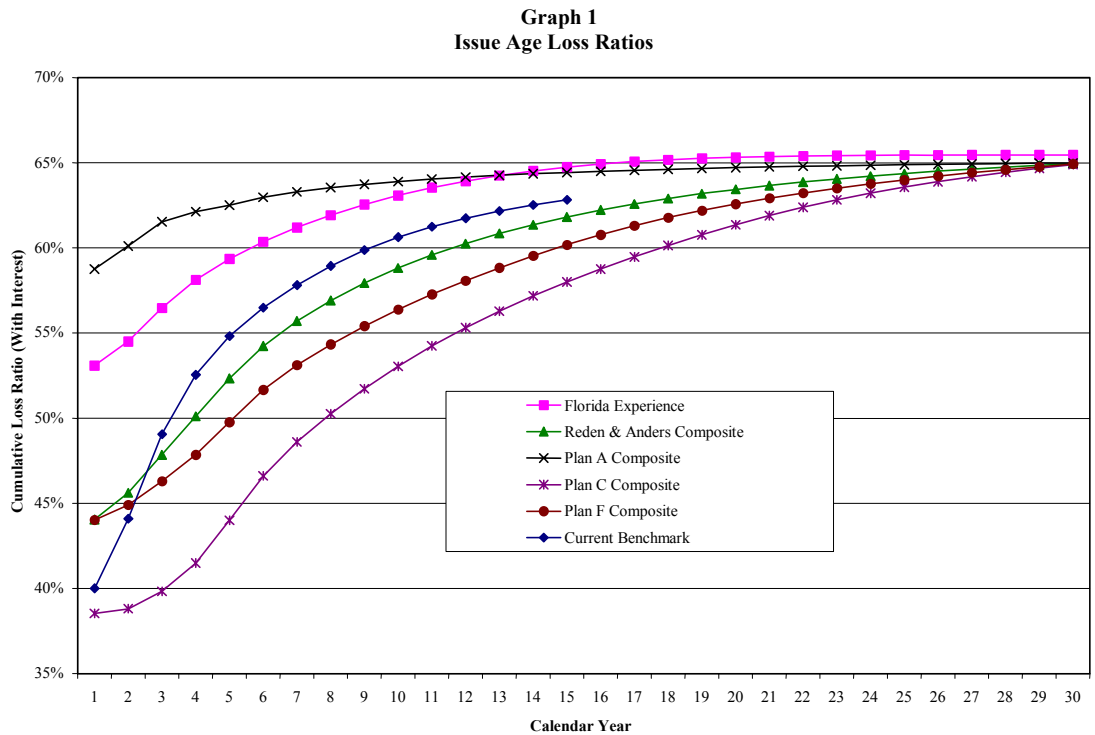
² The existing benchmark values shown in the graphs include margins from the use of low loss ratio assumptions at the early durations. The experience-based values do not contain any such margin. The graphs of cumulative loss ratios reflect the time value of money. To be consistent, the current benchmark values are adjusted to reflect it as well; this is why the graph of the current benchmark does not reach 65% in the 15th year.

B. Cumulative Loss Ratios for Issue Age Rated Policies

Graph 1 shows cumulative loss ratios for issue age rated policies on five bases along with the current benchmark loss ratios.

1. All Plans – Florida Experience
2. All Plans – Composite Industry Experience based on R&A Study
3. Plan A Composite Industry Experience based on AAA Study
4. Plan C Composite Industry Experience based on AAA Study
5. Plan F Composite Industry Experience based on AAA Study

The range of industry experience and normalized assumptions (as demonstrated by the Reden & Anders loss ratios) shows that pricing loss ratios, for issue age rated policies, based on current industry results would (absent tolerances) produce refunds using the current benchmark.

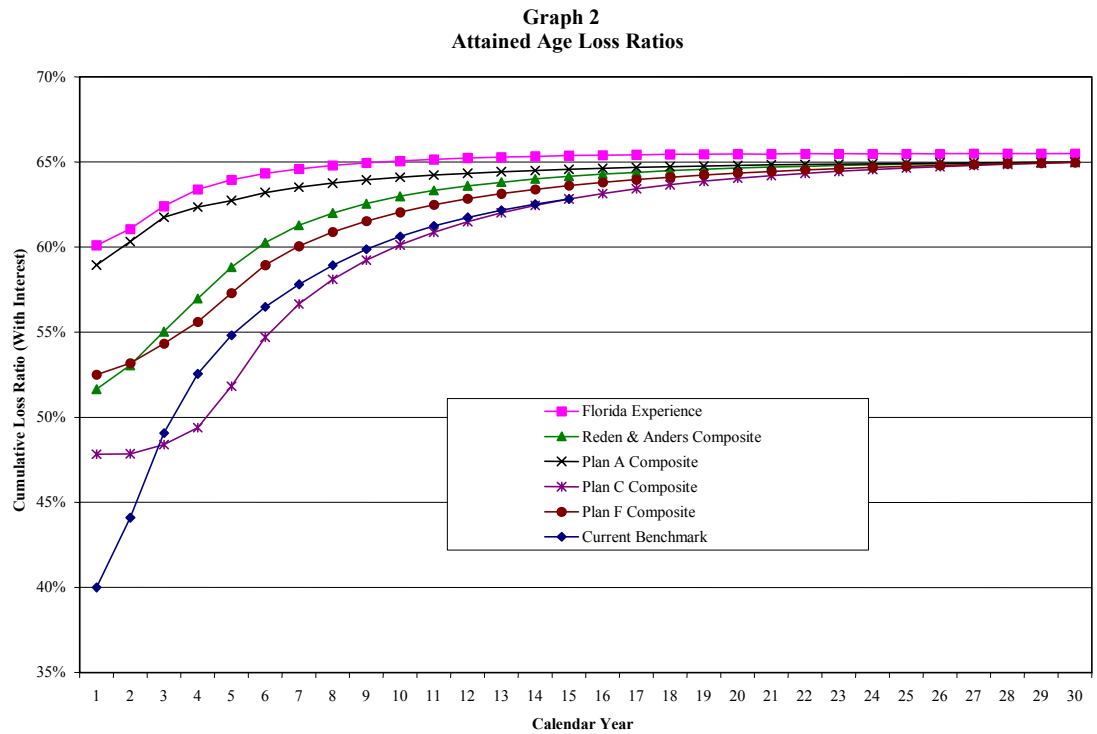


C. Cumulative Loss Ratios for Attained Age Rated Policies

Graph 2 shows cumulative loss ratios for attained age rated policies on five bases along with the current benchmark loss ratios.

1. All Plans – Florida Experience
2. All Plans – Composite Industry Experience based on R&A Study
3. Plan A Composite Industry Experience based on AAA Study
4. Plan C Composite Industry Experience based on AAA Study
5. Plan F Composite Industry Experience based on AAA Study

The cumulative loss ratios based on Reden & Anders is in the center of the range of cumulative loss ratios based on AAA 2003. The vast majority of experience-based curves are less steep than the current benchmark curve.



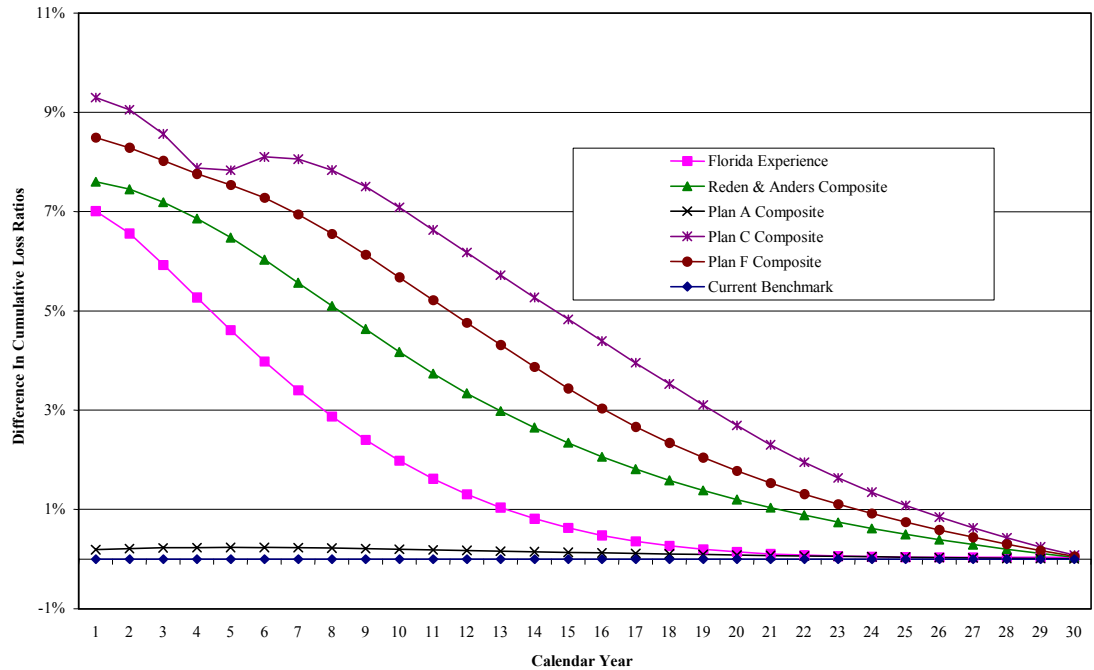
D. Differences in Cumulative Loss Ratios due to Rating Method

Graph 3 shows the difference in cumulative loss ratios from attained age rated policies to issue age rated policies on the same five bases as graphs 1 & 2:

1. All Plans – Florida Experience
2. All Plans – Composite Industry Experience based on R&A Study
3. Plan A Composite Industry Experience based on AAA Study
4. Plan C Composite Industry Experience based on AAA Study
5. Plan F Composite Industry Experience based on AAA Study

With the differences of the cumulative target loss ratios demonstrated in the first two graphs, it is clear that the current single benchmark is not representative of industry experience. If a new set of benchmarks is created, it appears from this graph that the difference between cumulative target loss ratios of attained age versus issue age rated policies would warrant special consideration.

Graph 3
Attained Age Less Issue Age Loss Ratios

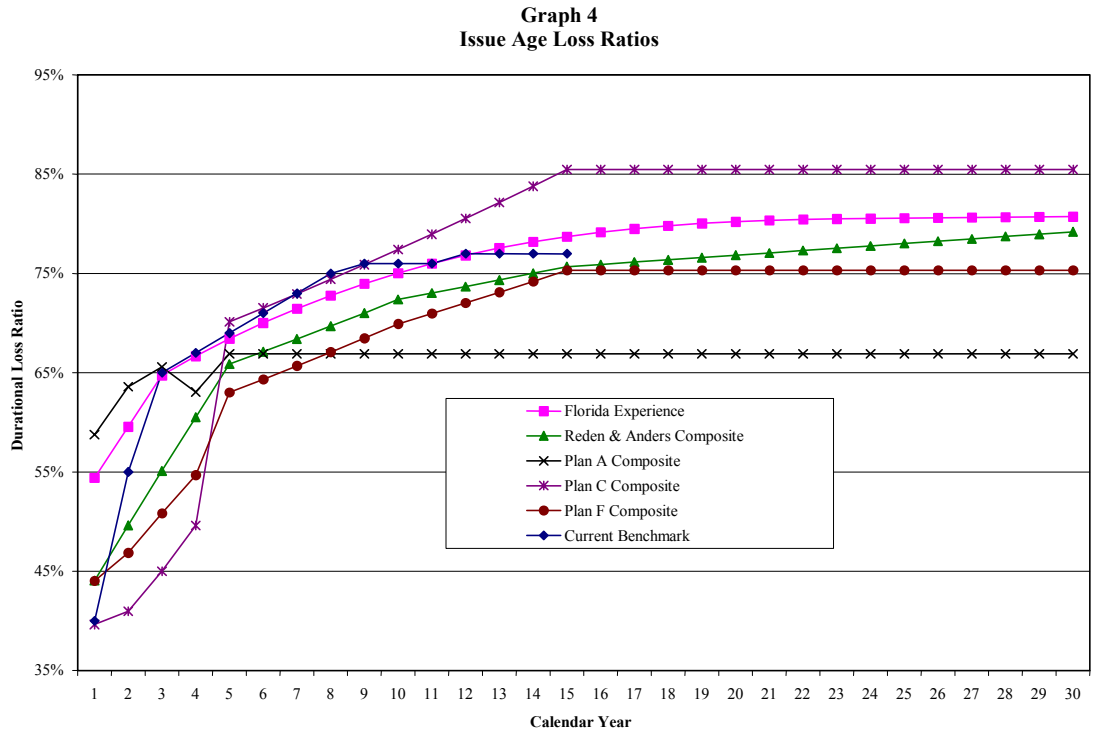


E. Durational Loss Ratios for Issue Age Rated Policies

Graph 4 shows durational loss ratios for issue age rated policies on five bases along with the durational loss ratios underlying the current benchmark loss ratios.

1. All Plans – Florida Experience
2. All Plans – Composite Industry Experience based on R&A Study
3. Plan A Composite Industry Experience based on AAA Study
4. Plan C Composite Industry Experience based on AAA Study
5. Plan F Composite Industry Experience based on AAA Study

This graph shows a range of durations at which the annual loss ratio is expected to first exceed the policy’s 65% lifetime loss ratio.

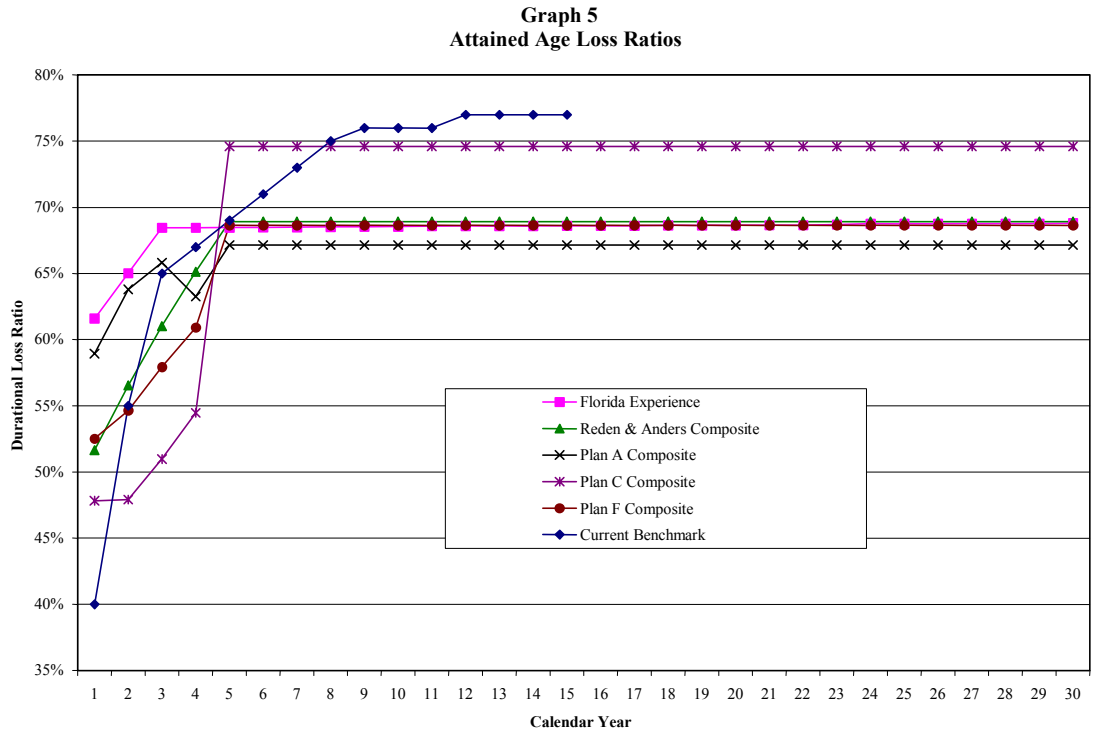


F. Durational Loss Ratios for Attained Age Rated Policies

Graph 5 shows cumulative loss ratios for attained age-rated policies on five bases along with the durational loss ratios underlying the current benchmark loss ratios.

1. All Plans – Florida Experience
2. All Plans – Composite Industry Experience based on R&A Study
3. Plan A Composite Industry Experience based on AAA Study
4. Plan C Composite Industry Experience based on AAA Study
5. Plan F Composite Industry Experience based on AAA Study

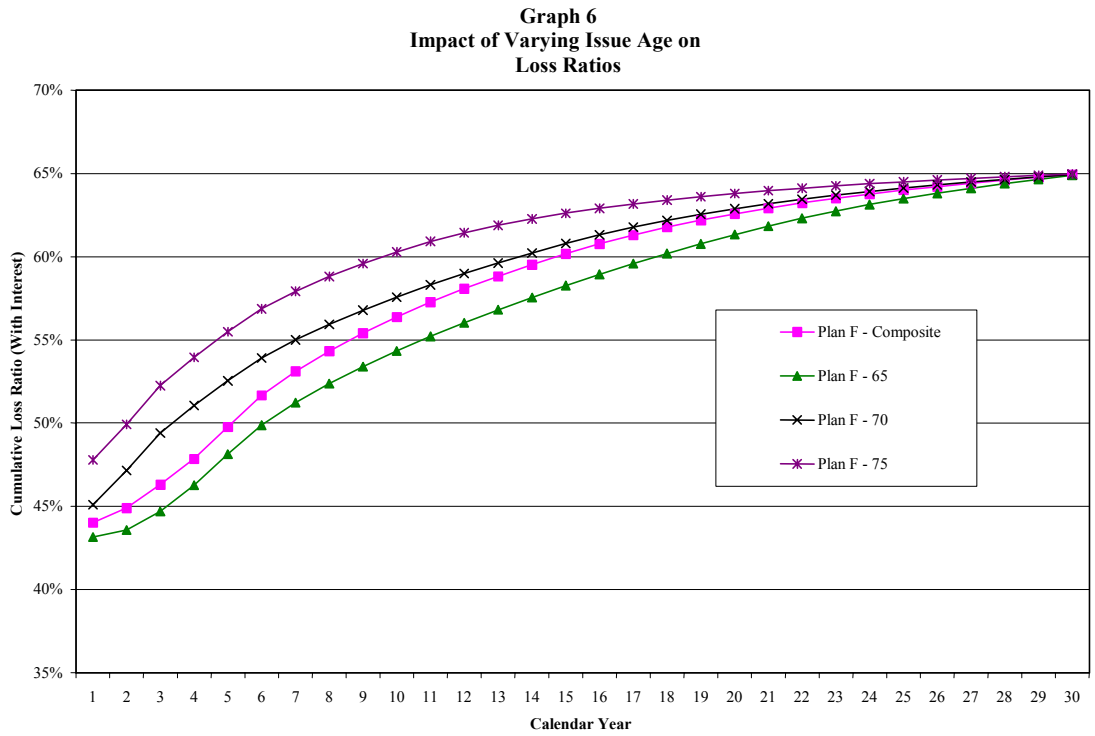
This graph shows a range of durations at which the annual loss ratio is expected to first exceed the policy’s 65% lifetime loss ratio.



G. Effect of Varying Issue Age on Cumulative Loss Ratios for Issue Age-Rated Policies

Graph 6 illustrates how cumulative loss ratios for issue age-rated policies vary with issue age. It shows cumulative loss ratios for issue age-rated policies on four bases.

1. Composite Industry Experience based on AAA Study – Plan F
2. Issue Age 65 - Industry Experience based on AAA Study – Plan F
3. Issue Age 70 - Industry Experience based on AAA Study – Plan F
4. Issue Age 75 - Industry Experience based on AAA Study – Plan F

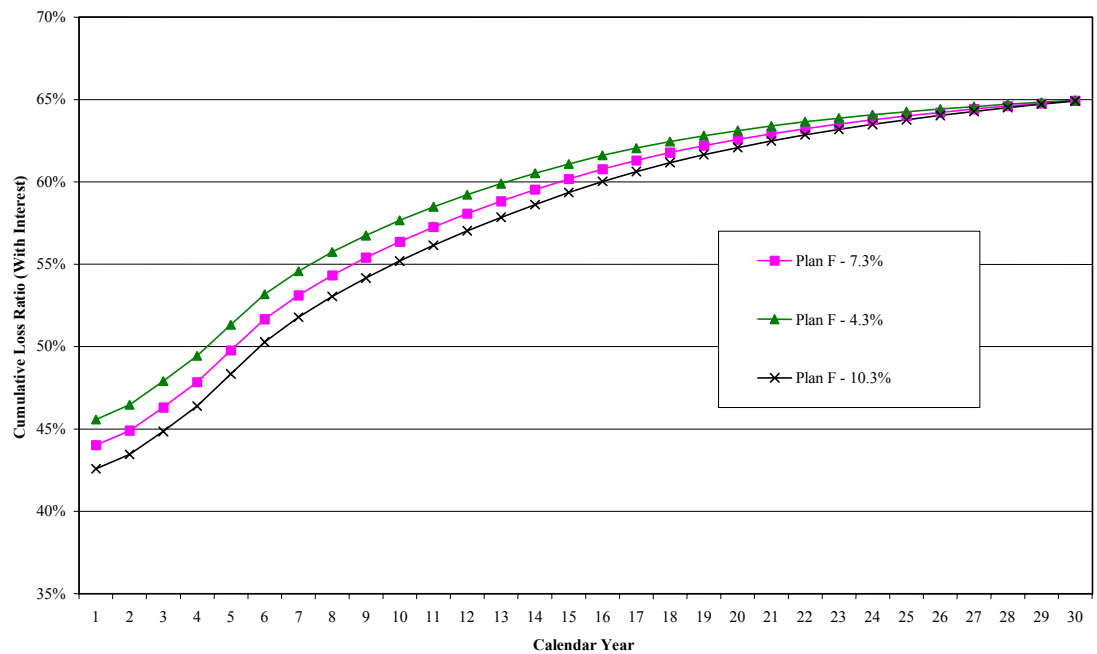


H. Effect of Trend on Cumulative Loss Ratios for Issue Age-Rated Policies

Graph 7 illustrates how cumulative loss ratios for issue age-rated policies vary with trend. It shows cumulative loss ratios for issue age-rated policies on three bases.

1. 7.3% Trend – Composite Industry Experience based on AAA Study – Plan F
2. 4.3% Trend – Composite from (1) with trend reduced by 3.0%
3. 10.3% Trend – Composite from (1) with trend increased by 3.0%

Graph 7
Issue Age Loss Ratios
Impact of Trend on Target Loss Ratios

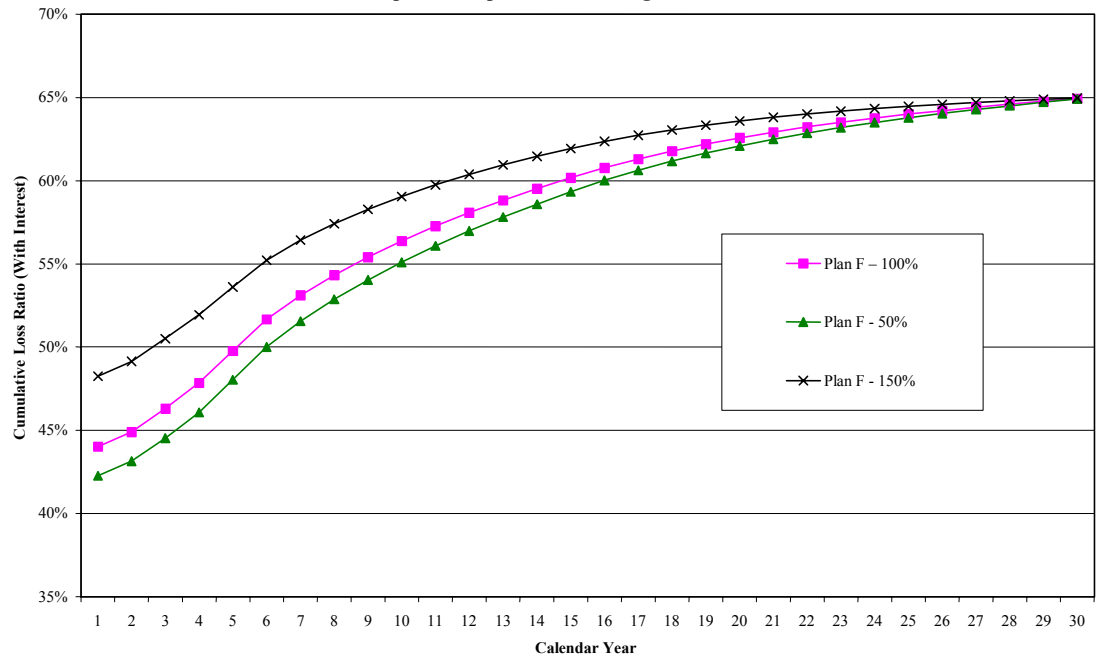


I. Effect of Lapse Rates on Cumulative Loss Ratios for Issue Age-Rated Policies

Graph 8 illustrates how cumulative loss ratios for issue age-rated policies vary with lapse rates. It shows cumulative loss ratios for issue age-rated policies on three bases.

1. 100% of Lapses – Composite Industry Experience based on AAA Study – Plan F
2. 50% of Lapses – Composite from (1) with lapses reduced by 50%
3. 150% of Lapses – Composite from (1) with lapses increased by 50%

Graph 8
Issue Age Loss Ratios
Impact of Lapse Rates on Target Loss Ratios

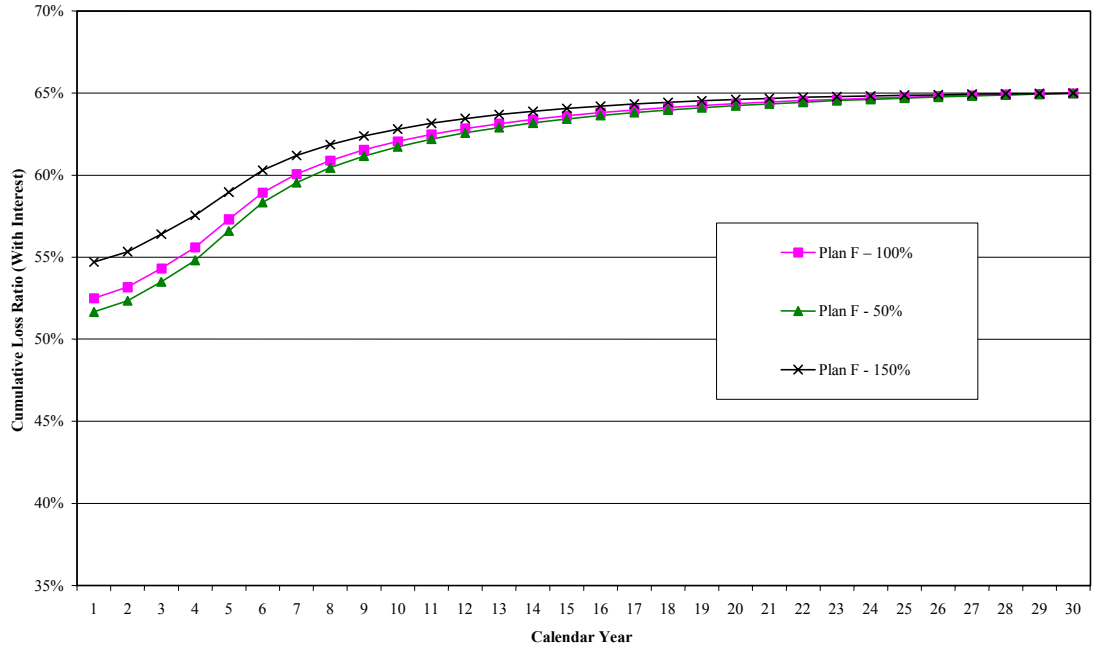


J. Effect of Lapse Rates on Cumulative Loss Ratios for Attained-Age Rated Policies

Graph 9 illustrates how cumulative loss ratios for attained age-rated policies vary with lapse rates. It shows cumulative loss ratios for attained age-rated policies on three bases.

1. 100% of Lapses – Composite Industry Experience based on AAA Study – Plan F
2. 50% of Lapses – Composite from (1) with lapses reduced by 50%
3. 150% of Lapses – Composite from (1) with lapses increased by 50%

Graph 9
Attained Age Loss Ratios
Impact of Lapse Rates on Target Loss Ratios



V. NEXT STEPS

Assuming the A&HWG wishes to pursue changes to Section 14 of the NAIC Medicare Supplement Model Regulation at this time, we believe that the following three key issues must be resolved quickly. Following that resolution, the Medicare Supplement Work Group Subteam is prepared to provide further work as outlined below.

A. Key Issues

1. Obtaining agreement that changes to Section 14 are consistent with the requirements of H.R.1 that the NAIC is to review and revise the standards for benefit packages ...and *to otherwise update standards to reflect other changes in law...* An update of the standards, consistent with the recommendations of the Reden & Anders study, done in 2002 for CMS would entail the development of multiple benchmark loss ratio sets and the aggregation of Medigap Plans.
2. Resolving the extent to which changes should be made to the rules requiring benchmark cumulative loss ratios over 15 years and the third year pricing loss ratio to both equal 65% for Individual policy forms. Based on our analysis, for Issue Age coverage, the cumulative loss ratio from true lifetime (30 years) pricing is around 60% after 15 years and the first duration expected to equal 65% may be as late as the sixth or seventh policy year. Changes could lead to more appropriate lifetime pricing and lower rate increases.
3. Plan aggregation – Reden & Anders proposes to aggregate all Plans in a State using the same rating method. Alternative aggregation methods (less aggregation, more aggregation or different combinations) will produce different likely patterns of loss ratios.

B. Further Work

1. Develop patterns of cumulative loss ratios consistent with proposed resolutions of above issues (number of scales, period and slope constraints and level of aggregation).

2. Test patterns of cumulative loss ratios for variations in pricing and in actual, cumulative experience versus pricing (e.g., most pricing assumes a constant trend whereas actual is likely to vary around pricing trend) and the impact of immediate versus delayed company adjustments to premiums (especially lower trends).
3. Develop suggested margins (including any recognition of interest) to 'no-margin' benchmarks based on testing and the actual resolution of the key issues (versus the proposed in 1 above).
4. Review other key elements of the benchmark formulas including credibility.
5. Address specific issues relating to Plans with Drug coverage.
 - a. Current benchmarks, which apply a factor to the earned premium from the year of issue, do not allow any recognition that cumulative actual premiums and claims could be significantly changed by a federal law requiring an across the board reduction in all future premiums.
 - b. Plans H, I and J have the potential for two different subsets with very different overall trend values (with and without continued drug coverage) but the current Section 14 wording will require combining experience.
 - c. Academy reports have not studied the drug Plans extensively. We would not have as solid a basis for assumptions for these Plans.
 - d. While the proportion of all Medigap standardized Plans that are H, I or J is not large, it is not inconsequential for many, may be critical for some companies with high proportions of these Plans and will have no impact on those companies which have little or no in-force Plans H, I or J.
6. Address other transition issues, which may be significant.
7. Develop proposed language to implement changes to Section 14 of the Model Regulation.

**American Academy of Actuaries
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Attachment B
AAA Medicare Supplement Work Group
Medicare Supplement Refund Formula
Listing of Assumptions

Age Adjustment - Derived From Chapter XIII and Reden & Anders Report					
	65	70	75	80	85
A	3.70%	0.00%	0.00%	0.00%	0.00%
C	3.50%	3.20%	2.00%	2.00%	0.00%
F	3.40%	2.30%	2.10%	1.50%	0.00%
R&A	3.51%	2.89%	1.90%	0.90%	0.30%

Duration Adjustment - Derived From Attachment G and Reden & Anders Report					
	1	2	3	4	5
A-all	90%	97%	101%	97%	103%
A-64-69	94%	95%	104%	99%	104%
A-70+	76%	92%	97%	100%	104%
C-all	76%	76%	81%	86%	118%
C-64-69	83%	82%	89%	99%	123%
C-70+	72%	77%	81%	84%	112%
F-all	84%	87%	93%	97%	110%
F-64-69	91%	91%	97%	103%	111%
F-70+	82%	92%	96%	98%	103%
R&A 65	88%	93%	97%	101%	104%
R&A 66+	82%	91%	99%	107%	114%
R&A Blend	84%	92%	99%	106%	112%

Attachment B (Continued)
AAA Medicare Supplement Work Group
Medicare Supplement Refund Formula
Listing of Assumptions

Lapse Adjustment - Derived From Chapter XII and Reden & Anders Report											
Duration	Base	Rate Basis Adjustment		A	C	F	Plan Variation Factors				
		Attained Age	Issue Age				R&A - Low	R&A - Med	R&A - High	Low F	High F
1	16.6%	0.90%	1.90%	10.00%	3.00%	-4.00%	-3.00%	7.00%	12.00%	-7.00%	7.00%
2	15.8%	0.70%	1.40%	10.00%	3.00%	-4.00%	-6.85%	-1.85%	8.15%	-6.43%	6.43%
3	15.3%	0.95%	1.90%	7.00%	3.00%	-3.00%	-8.73%	-4.73%	3.28%	-6.86%	6.86%
4	13.8%	2.20%	1.80%	7.00%	3.00%	-3.00%	-7.80%	-3.80%	4.20%	-6.40%	6.40%
5	12.9%	2.60%	1.30%	7.00%	3.00%	-2.00%	-6.85%	-2.85%	5.15%	-6.43%	6.43%
6	11.9%	2.60%	0.60%	6.00%	3.00%	-1.00%	-5.50%	-1.50%	6.50%	-6.25%	6.25%
7	10.0%	0.75%	-0.50%	5.00%	3.00%	-1.00%	-2.13%	1.88%	9.88%	-4.56%	4.56%
8+	9.0%	1.00%	-1.50%	4.00%	3.00%	-1.00%	-0.75%	3.25%	11.25%	-3.88%	3.88%

Trend - Four-year averages from Table III-A-2 and Other Select Values	
Description	Trend
4Yr A - 11.2%	11.2%
4Yr C - 8.5%	8.5%
4Yr F - 7.3%	7.3%
Level 4.3%	4.3%
Level 7.5%	7.5%*
Level 10.3%	10.3%
Level 12.5%	12.5%

Trend: Annual change in claim costs and the annual change in premium scales assumed in pricing.

* 7.5% was the value used in the Reden & Anders Report.

Attachment C
AAA Medicare Supplement Work Group
Model Outputs

<u>Issue Age</u>	<u>Discount Rate</u>	<u>Age Adjustment</u>	<u>Selection Adjustment</u>	<u>Rating Method</u>	<u>Lapse Variation</u>	<u>Trend</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
All	5%	Florida	Florida	Issue Age	Florida	Level 4.3%	53%	55%	57%	59%	60%	61%	62%	62%	63%	63%
All	5%	Florida	Florida	Attained Age	Florida	Level 4.3%	60%	62%	63%	64%	64%	64%	65%	65%	65%	65%
65	5%	Study - A	A-64-69	Attained Age	Study - A	4Yr A - 11.2%	60%	61%	62%	62%	63%	63%	64%	64%	64%	64%
65	5%	Study - A	A-64-69	Issue Age	Study - A	4Yr A - 11.2%	54%	55%	57%	58%	59%	60%	61%	62%	62%	63%
70	5%	Study - A	A-70+	Attained Age	Study - A	4Yr A - 11.2%	51%	54%	57%	59%	60%	61%	62%	62%	63%	63%
70	5%	Study - A	A-70+	Issue Age	Study - A	4Yr A - 11.2%	51%	54%	57%	59%	60%	61%	61%	62%	62%	63%
70	5%	Study - A	A-all	Attained Age	Study - A	4Yr A - 11.2%	59%	60%	62%	62%	63%	63%	64%	64%	64%	64%
70	5%	Study - A	A-all	Issue Age	Study - A	4Yr A - 11.2%	59%	60%	62%	62%	63%	63%	63%	64%	64%	64%
75	5%	Study - A	A-70+	Attained Age	Study - A	4Yr A - 11.2%	51%	54%	57%	59%	60%	61%	62%	62%	63%	63%
75	5%	Study - A	A-70+	Issue Age	Study - A	4Yr A - 11.2%	51%	54%	57%	59%	60%	61%	61%	62%	62%	63%
65	5%	Study - C	C-64-69	Attained Age	Study - C	4Yr C - 8.5%	49%	49%	50%	51%	53%	56%	58%	59%	60%	61%
65	5%	Study - C	C-64-69	Issue Age	Study - C	4Yr C - 8.5%	39%	39%	40%	41%	44%	47%	49%	50%	52%	53%
70	5%	Study - C	C-70+	Attained Age	Study - C	4Yr C - 8.5%	47%	48%	50%	51%	53%	56%	57%	59%	60%	61%
70	5%	Study - C	C-70+	Issue Age	Study - C	4Yr C - 8.5%	39%	41%	42%	44%	46%	49%	51%	53%	54%	55%
70	5%	Study - C	C-all	Attained Age	Study - C	4Yr C - 8.5%	48%	48%	48%	49%	52%	55%	57%	58%	59%	60%
70	5%	Study - C	C-all	Issue Age	Study - C	4Yr C - 8.5%	40%	40%	41%	42%	45%	48%	50%	52%	53%	55%
75	5%	Study - C	C-70+	Attained Age	Study - C	4Yr C - 8.5%	48%	49%	50%	51%	53%	56%	58%	59%	60%	61%
75	5%	Study - C	C-70+	Issue Age	Study - C	4Yr C - 8.5%	42%	43%	45%	46%	49%	51%	53%	55%	56%	58%
65	5%	Study - F	F-64-69	Attained Age	Study - F	4Yr F - 7.3%	56%	55%	56%	57%	59%	60%	61%	62%	62%	63%
65	5%	Study - F	F-64-69	Issue Age	Study - F	4Yr F - 7.3%	43%	44%	45%	46%	48%	50%	51%	52%	53%	54%
70	5%	Study - F	F-70+	Attained Age	Study - F	4Yr F - 7.3%	54%	56%	58%	59%	60%	61%	62%	62%	63%	63%
70	5%	Study - F	F-70+	Issue Age	Study - F	4Yr F - 7.3%	45%	47%	49%	51%	53%	54%	55%	56%	57%	58%
70	5%	Study - F	F-all	Attained Age	Study - F	4Yr F - 7.3%	53%	53%	54%	56%	57%	59%	60%	61%	62%	62%
70	5%	Study - F	F-all	Issue Age	Study - F	4Yr F - 7.3%	44%	45%	46%	48%	50%	52%	53%	54%	55%	56%
75	5%	Study - F	F-70+	Attained Age	Study - F	4Yr F - 7.3%	54%	56%	58%	59%	60%	61%	62%	63%	63%	63%
75	5%	Study - F	F-70+	Issue Age	Study - F	4Yr F - 7.3%	48%	50%	52%	54%	55%	57%	58%	59%	60%	60%
65	5%	R&A	R&A 65	Attained Age	R&A - Low	Level 7.5%	56%	57%	58%	60%	61%	62%	62%	63%	63%	64%
70	5%	R&A	R&A 66+	Attained Age	R&A - Low	Level 7.5%	49%	50%	53%	55%	57%	59%	60%	61%	62%	62%
70	5%	R&A	R&A Blend	Attained Age	R&A - Low	Level 7.5%	51%	52%	54%	56%	58%	60%	61%	62%	62%	63%
65	5%	R&A	R&A 65	Attained Age	R&A - Med	Level 7.5%	57%	58%	59%	60%	61%	62%	63%	63%	63%	64%
70	5%	R&A	R&A 66+	Attained Age	R&A - Med	Level 7.5%	50%	51%	54%	56%	58%	60%	61%	62%	62%	63%
70	5%	R&A	R&A Blend	Attained Age	R&A - Med	Level 7.5%	52%	53%	55%	57%	59%	60%	61%	62%	63%	63%
65	5%	R&A	R&A 65	Attained Age	R&A - High	Level 7.5%	58%	59%	60%	61%	62%	63%	63%	64%	64%	64%
70	5%	R&A	R&A 66+	Attained Age	R&A - High	Level 7.5%	52%	54%	56%	58%	60%	61%	62%	63%	63%	64%
70	5%	R&A	R&A Blend	Attained Age	R&A - High	Level 7.5%	54%	55%	57%	59%	60%	62%	62%	63%	64%	64%
65	5%	R&A	R&A 65	Issue Age	R&A - Low	Level 7.5%	43%	44%	46%	47%	49%	50%	52%	53%	54%	55%
70	5%	R&A	R&A 66+	Issue Age	R&A - Low	Level 7.5%	40%	42%	44%	47%	49%	52%	53%	55%	56%	57%
70	5%	R&A	R&A Blend	Issue Age	R&A - Low	Level 7.5%	42%	43%	46%	48%	50%	52%	54%	55%	56%	57%
65	5%	R&A	R&A 65	Issue Age	R&A - Med	Level 7.5%	45%	47%	48%	50%	52%	53%	54%	55%	56%	57%
70	5%	R&A	R&A 66+	Issue Age	R&A - Med	Level 7.5%	42%	44%	47%	49%	51%	54%	55%	56%	58%	58%
70	5%	R&A	R&A Blend	Issue Age	R&A - Med	Level 7.5%	44%	46%	48%	50%	52%	54%	56%	57%	58%	59%
65	5%	R&A	R&A 65	Issue Age	R&A - High	Level 7.5%	50%	52%	53%	55%	57%	58%	59%	60%	61%	61%
70	5%	R&A	R&A 66+	Issue Age	R&A - High	Level 7.5%	47%	49%	51%	53%	56%	58%	59%	60%	61%	62%
70	5%	R&A	R&A Blend	Issue Age	R&A - High	Level 7.5%	48%	50%	52%	54%	56%	58%	59%	60%	61%	62%

Attachment C (Continued)
AAA Medicare Supplement Work Group
Model Outputs

Issue	Discount	Age	Selection	Lapse													
<u>Age</u>	<u>Rate</u>	<u>Adjustment</u>	<u>Adjustment</u>	<u>Rating Method</u>	<u>Variation</u>	<u>Trend</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	
All	5%	Florida	Florida	Issue Age	Florida	Level 4.3%	64%	64%	64%	65%	65%	65%	65%	65%	65%	65%	
All	5%	Florida	Florida	Attained Age	Florida	Level 4.3%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	
65	5%	Study - A	A-64-69	Attained Age	Study - A	4Yr A - 11.2%	64%	64%	64%	65%	65%	65%	65%	65%	65%	65%	
65	5%	Study - A	A-64-69	Issue Age	Study - A	4Yr A - 11.2%	63%	63%	63%	64%	64%	64%	64%	64%	64%	64%	
70	5%	Study - A	A-70+	Attained Age	Study - A	4Yr A - 11.2%	63%	64%	64%	64%	64%	64%	64%	64%	65%	65%	
70	5%	Study - A	A-70+	Issue Age	Study - A	4Yr A - 11.2%	63%	63%	63%	64%	64%	64%	64%	64%	64%	64%	
70	5%	Study - A	A-all	Attained Age	Study - A	4Yr A - 11.2%	64%	64%	64%	65%	65%	65%	65%	65%	65%	65%	
70	5%	Study - A	A-all	Issue Age	Study - A	4Yr A - 11.2%	64%	64%	64%	64%	64%	65%	65%	65%	65%	65%	
75	5%	Study - A	A-70+	Attained Age	Study - A	4Yr A - 11.2%	63%	64%	64%	64%	64%	64%	64%	64%	65%	65%	
75	5%	Study - A	A-70+	Issue Age	Study - A	4Yr A - 11.2%	63%	63%	63%	64%	64%	64%	64%	64%	64%	64%	
65	5%	Study - C	C-64-69	Attained Age	Study - C	4Yr C - 8.5%	61%	62%	62%	63%	63%	63%	64%	64%	64%	64%	
65	5%	Study - C	C-64-69	Issue Age	Study - C	4Yr C - 8.5%	54%	55%	56%	57%	58%	59%	59%	60%	61%	61%	
70	5%	Study - C	C-70+	Attained Age	Study - C	4Yr C - 8.5%	61%	62%	62%	63%	63%	63%	64%	64%	64%	64%	
70	5%	Study - C	C-70+	Issue Age	Study - C	4Yr C - 8.5%	56%	57%	58%	59%	60%	60%	61%	62%	62%	62%	
70	5%	Study - C	C-all	Attained Age	Study - C	4Yr C - 8.5%	61%	61%	62%	62%	63%	63%	63%	64%	64%	64%	
70	5%	Study - C	C-all	Issue Age	Study - C	4Yr C - 8.5%	56%	57%	58%	59%	60%	60%	61%	61%	62%	62%	
75	5%	Study - C	C-70+	Attained Age	Study - C	4Yr C - 8.5%	61%	62%	62%	63%	63%	63%	64%	64%	64%	64%	
75	5%	Study - C	C-70+	Issue Age	Study - C	4Yr C - 8.5%	59%	59%	60%	61%	61%	62%	62%	63%	63%	63%	
65	5%	Study - F	F-64-69	Attained Age	Study - F	4Yr F - 7.3%	63%	63%	63%	64%	64%	64%	64%	64%	64%	64%	
65	5%	Study - F	F-64-69	Issue Age	Study - F	4Yr F - 7.3%	55%	56%	57%	58%	58%	59%	60%	60%	61%	61%	
70	5%	Study - F	F-70+	Attained Age	Study - F	4Yr F - 7.3%	63%	64%	64%	64%	64%	64%	64%	64%	65%	65%	
70	5%	Study - F	F-70+	Issue Age	Study - F	4Yr F - 7.3%	58%	59%	60%	60%	61%	61%	62%	62%	63%	63%	
70	5%	Study - F	F-all	Attained Age	Study - F	4Yr F - 7.3%	62%	63%	63%	63%	64%	64%	64%	64%	64%	64%	
70	5%	Study - F	F-all	Issue Age	Study - F	4Yr F - 7.3%	57%	58%	59%	60%	60%	61%	61%	62%	62%	63%	
75	5%	Study - F	F-70+	Attained Age	Study - F	4Yr F - 7.3%	64%	64%	64%	64%	64%	64%	64%	64%	65%	65%	
75	5%	Study - F	F-70+	Issue Age	Study - F	4Yr F - 7.3%	61%	61%	62%	62%	63%	63%	63%	63%	64%	64%	
65	5%	R&A	R&A 65	Attained Age	R&A - Low	Level 7.5%	64%	64%	64%	64%	64%	64%	65%	65%	65%	65%	
70	5%	R&A	R&A 66+	Attained Age	R&A - Low	Level 7.5%	63%	63%	63%	64%	64%	64%	64%	64%	64%	64%	
70	5%	R&A	R&A Blend	Attained Age	R&A - Low	Level 7.5%	63%	63%	64%	64%	64%	64%	64%	64%	64%	64%	
65	5%	R&A	R&A 65	Attained Age	R&A - Med	Level 7.5%	64%	64%	64%	64%	64%	65%	65%	65%	65%	65%	
70	5%	R&A	R&A 66+	Attained Age	R&A - Med	Level 7.5%	63%	63%	64%	64%	64%	64%	64%	64%	65%	65%	
70	5%	R&A	R&A Blend	Attained Age	R&A - Med	Level 7.5%	63%	64%	64%	64%	64%	64%	64%	64%	65%	65%	
65	5%	R&A	R&A 65	Attained Age	R&A - High	Level 7.5%	64%	65%	65%	65%	65%	65%	65%	65%	65%	65%	
70	5%	R&A	R&A 66+	Attained Age	R&A - High	Level 7.5%	64%	64%	64%	64%	65%	65%	65%	65%	65%	65%	
70	5%	R&A	R&A Blend	Attained Age	R&A - High	Level 7.5%	64%	64%	64%	65%	65%	65%	65%	65%	65%	65%	
65	5%	R&A	R&A 65	Issue Age	R&A - Low	Level 7.5%	56%	57%	57%	58%	59%	60%	60%	61%	61%	62%	
70	5%	R&A	R&A 66+	Issue Age	R&A - Low	Level 7.5%	58%	59%	59%	60%	60%	61%	61%	62%	62%	63%	
70	5%	R&A	R&A Blend	Issue Age	R&A - Low	Level 7.5%	58%	59%	59%	60%	61%	61%	62%	62%	62%	63%	
65	5%	R&A	R&A 65	Issue Age	R&A - Med	Level 7.5%	58%	59%	59%	60%	61%	61%	62%	62%	62%	63%	
70	5%	R&A	R&A 66+	Issue Age	R&A - Med	Level 7.5%	59%	60%	61%	61%	62%	62%	62%	63%	63%	63%	
70	5%	R&A	R&A Blend	Issue Age	R&A - Med	Level 7.5%	60%	60%	61%	61%	62%	62%	63%	63%	63%	63%	
65	5%	R&A	R&A 65	Issue Age	R&A - High	Level 7.5%	62%	62%	63%	63%	63%	64%	64%	64%	64%	64%	
70	5%	R&A	R&A 66+	Issue Age	R&A - High	Level 7.5%	62%	63%	63%	63%	64%	64%	64%	64%	64%	65%	
70	5%	R&A	R&A Blend	Issue Age	R&A - High	Level 7.5%	62%	63%	63%	64%	64%	64%	64%	64%	64%	65%	

Attachment C (Continued)
AAA Medicare Supplement Work Group
Model Outputs

Issue	Discount	Age	Selection	Lapse	Trend	21	22	23	24	25	26	27	28	29	30
<u>Age</u>	<u>Rate</u>	<u>Adjustment</u>	<u>Adjustment</u>	<u>Rating Method</u>	<u>Variation</u>										
All	5%	Florida	Florida	Issue Age	Florida	Level 4.3%	65%	65%	65%	65%	65%	65%	65%	65%	65%
All	5%	Florida	Florida	Attained Age	Florida	Level 4.3%	65%	65%	65%	65%	65%	65%	65%	65%	65%
65	5%	Study - A	A-64-69	Attained Age	Study - A	4Yr A - 11.2%	65%	65%	65%	65%	65%	65%	65%	65%	65%
65	5%	Study - A	A-64-69	Issue Age	Study - A	4Yr A - 11.2%	64%	65%	65%	65%	65%	65%	65%	65%	65%
70	5%	Study - A	A-70+	Attained Age	Study - A	4Yr A - 11.2%	65%	65%	65%	65%	65%	65%	65%	65%	65%
70	5%	Study - A	A-70+	Issue Age	Study - A	4Yr A - 11.2%	64%	65%	65%	65%	65%	65%	65%	65%	65%
70	5%	Study - A	A-all	Attained Age	Study - A	4Yr A - 11.2%	65%	65%	65%	65%	65%	65%	65%	65%	65%
70	5%	Study - A	A-all	Issue Age	Study - A	4Yr A - 11.2%	65%	65%	65%	65%	65%	65%	65%	65%	65%
75	5%	Study - A	A-70+	Attained Age	Study - A	4Yr A - 11.2%	65%	65%	65%	65%	65%	65%	65%	65%	65%
75	5%	Study - A	A-70+	Issue Age	Study - A	4Yr A - 11.2%	64%	65%	65%	65%	65%	65%	65%	65%	65%
65	5%	Study - C	C-64-69	Attained Age	Study - C	4Yr C - 8.5%	64%	64%	64%	65%	65%	65%	65%	65%	65%
65	5%	Study - C	C-64-69	Issue Age	Study - C	4Yr C - 8.5%	62%	62%	63%	63%	64%	64%	64%	64%	65%
70	5%	Study - C	C-70+	Attained Age	Study - C	4Yr C - 8.5%	64%	64%	65%	65%	65%	65%	65%	65%	65%
70	5%	Study - C	C-70+	Issue Age	Study - C	4Yr C - 8.5%	63%	63%	63%	64%	64%	64%	64%	65%	65%
70	5%	Study - C	C-all	Attained Age	Study - C	4Yr C - 8.5%	64%	64%	64%	65%	65%	65%	65%	65%	65%
70	5%	Study - C	C-all	Issue Age	Study - C	4Yr C - 8.5%	63%	63%	63%	64%	64%	64%	64%	65%	65%
75	5%	Study - C	C-70+	Attained Age	Study - C	4Yr C - 8.5%	64%	64%	65%	65%	65%	65%	65%	65%	65%
75	5%	Study - C	C-70+	Issue Age	Study - C	4Yr C - 8.5%	64%	64%	64%	64%	64%	65%	65%	65%	65%
65	5%	Study - F	F-64-69	Attained Age	Study - F	4Yr F - 7.3%	65%	65%	65%	65%	65%	65%	65%	65%	65%
65	5%	Study - F	F-64-69	Issue Age	Study - F	4Yr F - 7.3%	62%	62%	63%	63%	63%	64%	64%	64%	65%
70	5%	Study - F	F-70+	Attained Age	Study - F	4Yr F - 7.3%	65%	65%	65%	65%	65%	65%	65%	65%	65%
70	5%	Study - F	F-70+	Issue Age	Study - F	4Yr F - 7.3%	63%	63%	64%	64%	64%	64%	65%	65%	65%
70	5%	Study - F	F-all	Attained Age	Study - F	4Yr F - 7.3%	64%	65%	65%	65%	65%	65%	65%	65%	65%
70	5%	Study - F	F-all	Issue Age	Study - F	4Yr F - 7.3%	63%	63%	64%	64%	64%	64%	65%	65%	65%
75	5%	Study - F	F-70+	Attained Age	Study - F	4Yr F - 7.3%	65%	65%	65%	65%	65%	65%	65%	65%	65%
75	5%	Study - F	F-70+	Issue Age	Study - F	4Yr F - 7.3%	64%	64%	64%	64%	65%	65%	65%	65%	65%
65	5%	R&A	R&A 65	Attained Age	R&A - Low	Level 7.5%	65%	65%	65%	65%	65%	65%	65%	65%	65%
70	5%	R&A	R&A 66+	Attained Age	R&A - Low	Level 7.5%	65%	65%	65%	65%	65%	65%	65%	65%	65%
70	5%	R&A	R&A Blend	Attained Age	R&A - Low	Level 7.5%	65%	65%	65%	65%	65%	65%	65%	65%	65%
65	5%	R&A	R&A 65	Attained Age	R&A - Med	Level 7.5%	65%	65%	65%	65%	65%	65%	65%	65%	65%
70	5%	R&A	R&A 66+	Attained Age	R&A - Med	Level 7.5%	65%	65%	65%	65%	65%	65%	65%	65%	65%
70	5%	R&A	R&A Blend	Attained Age	R&A - Med	Level 7.5%	65%	65%	65%	65%	65%	65%	65%	65%	65%
65	5%	R&A	R&A 65	Attained Age	R&A - High	Level 7.5%	65%	65%	65%	65%	65%	65%	65%	65%	65%
70	5%	R&A	R&A 66+	Attained Age	R&A - High	Level 7.5%	65%	65%	65%	65%	65%	65%	65%	65%	65%
70	5%	R&A	R&A Blend	Attained Age	R&A - High	Level 7.5%	65%	65%	65%	65%	65%	65%	65%	65%	65%
65	5%	R&A	R&A 65	Issue Age	R&A - Low	Level 7.5%	62%	63%	63%	63%	64%	64%	64%	64%	65%
70	5%	R&A	R&A 66+	Issue Age	R&A - Low	Level 7.5%	63%	63%	63%	64%	64%	64%	64%	65%	65%
70	5%	R&A	R&A Blend	Issue Age	R&A - Low	Level 7.5%	63%	63%	64%	64%	64%	64%	64%	65%	65%
65	5%	R&A	R&A 65	Issue Age	R&A - Med	Level 7.5%	63%	63%	64%	64%	64%	64%	65%	65%	65%
70	5%	R&A	R&A 66+	Issue Age	R&A - Med	Level 7.5%	64%	64%	64%	64%	64%	64%	65%	65%	65%
70	5%	R&A	R&A Blend	Issue Age	R&A - Med	Level 7.5%	64%	64%	64%	64%	64%	65%	65%	65%	65%
65	5%	R&A	R&A 65	Issue Age	R&A - High	Level 7.5%	65%	65%	65%	65%	65%	65%	65%	65%	65%
70	5%	R&A	R&A 66+	Issue Age	R&A - High	Level 7.5%	65%	65%	65%	65%	65%	65%	65%	65%	65%
70	5%	R&A	R&A Blend	Issue Age	R&A - High	Level 7.5%	65%	65%	65%	65%	65%	65%	65%	65%	65%

Attachment D
AAA Medicare Supplement Work Group
Data Tables for Charts in Graphs/Results Section

Graph 1: Cumulative Loss Ratios for Issue Age-Rated Policies

<u>Description</u>	<u>Cumulative Loss Ratios</u>														
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
Florida Experience	53%	55%	56%	58%	59%	60%	61%	62%	63%	63%	64%	64%	64%	65%	65%
Reden & Anders Composite	44%	46%	48%	50%	52%	54%	56%	57%	58%	59%	60%	60%	61%	61%	62%
Plan A Composite	59%	60%	62%	62%	63%	63%	63%	64%	64%	64%	64%	64%	64%	64%	64%
Plan C Composite	39%	39%	40%	41%	44%	47%	49%	50%	52%	53%	54%	55%	56%	57%	58%
Plan F Composite	44%	45%	46%	48%	50%	52%	53%	54%	55%	56%	57%	58%	59%	60%	60%
Current Benchmark	40%	44%	49%	53%	55%	56%	58%	59%	60%	61%	61%	62%	62%	63%	63%
Florida Experience	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>
Reden & Anders Composite	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%
Plan A Composite	62%	63%	63%	63%	63%	64%	64%	64%	64%	64%	65%	65%	65%	65%	65%
Plan C Composite	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%
Plan F Composite	59%	59%	60%	61%	61%	62%	62%	63%	63%	64%	64%	64%	64%	65%	65%
Current Benchmark	61%	61%	62%	62%	63%	63%	63%	64%	64%	64%	64%	64%	65%	65%	65%

Graph 2: Cumulative Loss Ratios for Attained Age-Rated Policies

<u>Description</u>	<u>Cumulative Loss Ratios</u>														
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
Florida Experience	60%	61%	62%	63%	64%	64%	65%	65%	65%	65%	65%	65%	65%	65%	65%
Reden & Anders Composite	52%	53%	55%	57%	59%	60%	61%	62%	63%	63%	63%	64%	64%	64%	64%
Plan A Composite	59%	60%	62%	62%	63%	63%	64%	64%	64%	64%	64%	64%	64%	65%	65%
Plan C Composite	48%	48%	48%	49%	52%	55%	57%	58%	59%	60%	61%	61%	62%	62%	63%
Plan F Composite	53%	53%	54%	56%	57%	59%	60%	61%	62%	62%	62%	63%	63%	63%	64%
Current Benchmark	40%	44%	49%	53%	55%	56%	58%	59%	60%	61%	61%	62%	62%	63%	63%
Florida Experience	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>
Reden & Anders Composite	64%	64%	64%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%
Plan A Composite	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%
Plan C Composite	63%	63%	64%	64%	64%	64%	64%	64%	65%	65%	65%	65%	65%	65%	65%
Plan F Composite	64%	64%	64%	64%	64%	64%	65%	65%	65%	65%	65%	65%	65%	65%	65%

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Graph 3: Differences in Cumulative Loss Ratios Due to Rating Method

Description	Cumulative Loss Ratios														
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
Florida Experience	7%	7%	6%	5%	5%	4%	3%	3%	2%	2%	2%	1%	1%	1%	1%
Reden & Anders Composite	8%	7%	7%	7%	6%	6%	6%	5%	5%	4%	4%	3%	3%	3%	2%
Plan A Composite	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Plan C Composite	9%	9%	9%	8%	8%	8%	8%	8%	8%	7%	7%	6%	6%	5%	5%
Plan F Composite	8%	8%	8%	8%	8%	7%	7%	7%	6%	6%	5%	5%	4%	4%	3%
Current Benchmark	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>
Florida Experience	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Reden & Anders Composite	2%	2%	2%	1%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Plan A Composite	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Plan C Composite	4%	4%	4%	3%	3%	2%	2%	2%	1%	1%	1%	1%	0%	0%	0%
Plan F Composite	3%	3%	2%	2%	2%	2%	1%	1%	1%	1%	1%	0%	0%	0%	0%
Current Benchmark	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Graph 4: Durational Loss Ratios for Issue Age-Rated Policies

Description	Durational Loss Ratios														
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
Florida Experience	54%	60%	65%	67%	68%	70%	71%	73%	74%	75%	76%	77%	78%	78%	79%
Reden & Anders Composite	44%	50%	55%	61%	66%	67%	68%	70%	71%	72%	73%	74%	74%	75%	76%
Plan A Composite	59%	64%	66%	63%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%
Plan C Composite	40%	41%	45%	50%	70%	72%	73%	74%	76%	77%	79%	81%	82%	84%	85%
Plan F Composite	44%	47%	51%	55%	63%	64%	66%	67%	68%	70%	71%	72%	73%	74%	75%
Current Benchmark	40%	55%	65%	67%	69%	71%	73%	75%	76%	76%	76%	77%	77%	77%	77%
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>
Florida Experience	79%	80%	80%	80%	80%	80%	80%	80%	81%	81%	81%	81%	81%	81%	81%
Reden & Anders Composite	76%	76%	76%	77%	77%	77%	77%	78%	78%	78%	78%	78%	79%	79%	79%
Plan A Composite	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%
Plan C Composite	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Plan F Composite	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%

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Graph 5: Durational Loss Ratios for Attained Age-Rated Policies

Description	Durational Loss Ratios														
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
Florida Experience	62%	65%	68%	68%	68%	68%	69%	69%	69%	69%	69%	69%	69%	69%	69%
Reden & Anders Composite	52%	57%	61%	65%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%
Plan A Composite	59%	64%	66%	63%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%
Plan C Composite	48%	48%	51%	54%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Plan F Composite	53%	55%	58%	61%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%
Current Benchmark	40%	55%	65%	67%	69%	71%	73%	75%	76%	76%	76%	77%	77%	77%	77%
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>
Florida Experience	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%
Reden & Anders Composite	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%
Plan A Composite	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%
Plan C Composite	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Plan F Composite	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%	69%

Graph 6: Effect of Issue Age on Cumulative Loss Ratios for Issue Age-Rated Policies

Description	Cumulative Loss Ratios														
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
Plan F - Study	44%	45%	46%	48%	50%	52%	53%	54%	55%	56%	57%	58%	59%	60%	60%
Plan F - 65	43%	44%	45%	46%	48%	50%	51%	52%	53%	54%	55%	56%	57%	58%	58%
Plan F - 70	45%	47%	49%	51%	53%	54%	55%	56%	57%	58%	58%	59%	60%	60%	61%
Plan F - 75	48%	50%	52%	54%	55%	57%	58%	59%	60%	60%	61%	61%	62%	62%	63%
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>
Plan F - Study	61%	61%	62%	62%	63%	63%	63%	64%	64%	64%	64%	64%	65%	65%	65%
Plan F - 65	59%	60%	60%	61%	61%	62%	62%	63%	63%	63%	64%	64%	64%	65%	65%
Plan F - 70	61%	62%	62%	63%	63%	63%	63%	64%	64%	64%	64%	64%	65%	65%	65%
Plan F - 75	63%	63%	63%	64%	64%	64%	64%	64%	64%	65%	65%	65%	65%	65%	65%

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Graph 7: Effect of Trend on Cumulative Loss Ratios for Issue Age-Rated Policies

<u>Description</u>	<u>Cumulative Loss Ratios</u>														
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
Plan F - Study (7.3%)	44%	45%	46%	48%	50%	52%	53%	54%	55%	56%	57%	58%	59%	60%	60%
Plan F - 4.3%	46%	46%	48%	49%	51%	53%	55%	56%	57%	58%	58%	59%	60%	61%	61%
Plan F - 10.3%	43%	43%	45%	46%	48%	50%	52%	53%	54%	55%	56%	57%	58%	59%	59%
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>
Plan F - Study (7.3%)	61%	61%	62%	62%	63%	63%	63%	64%	64%	64%	64%	64%	65%	65%	65%
Plan F - 4.3%	62%	62%	62%	63%	63%	63%	64%	64%	64%	64%	64%	65%	65%	65%	65%
Plan F - 10.3%	60%	61%	61%	62%	62%	62%	63%	63%	63%	64%	64%	64%	65%	65%	65%

Graph 8: Effect of Lapse Rates on Cumulative Loss Ratios for Issue Age-Rated Policies

<u>Description</u>	<u>Cumulative Loss Ratios</u>														
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
Plan F - Study	44%	45%	46%	48%	50%	52%	53%	54%	55%	56%	57%	58%	59%	60%	60%
Plan F - 50%	42%	43%	45%	46%	48%	50%	52%	53%	54%	55%	56%	57%	58%	59%	59%
Plan F - 150%	48%	49%	51%	52%	54%	55%	56%	57%	58%	59%	60%	60%	61%	61%	62%
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>
Plan F - Study	61%	61%	62%	62%	63%	63%	63%	64%	64%	64%	64%	64%	65%	65%	65%
Plan F - 50%	60%	61%	61%	62%	62%	62%	63%	63%	63%	64%	64%	64%	65%	65%	65%
Plan F - 150%	62%	63%	63%	63%	64%	64%	64%	64%	64%	64%	65%	65%	65%	65%	65%

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Graph 9: Effect of Lapse Rates on Cumulative Loss Ratios for Attained Age-Rated Policies

<u>Description</u>	Cumulative Loss Ratios														
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
Plan F - Study	53%	53%	54%	56%	57%	59%	60%	61%	62%	62%	62%	63%	63%	63%	64%
Plan F - 50%	52%	52%	53%	55%	57%	58%	60%	60%	61%	62%	62%	63%	63%	63%	63%
Plan F - 150%	55%	55%	56%	58%	59%	60%	61%	62%	62%	63%	63%	63%	64%	64%	64%
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>
Plan F - Study	64%	64%	64%	64%	64%	64%	65%	65%	65%	65%	65%	65%	65%	65%	65%
Plan F - 50%	64%	64%	64%	64%	64%	64%	64%	65%	65%	65%	65%	65%	65%	65%	65%
Plan F - 150%	64%	64%	64%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%