Preneed Insurance
Mortality Study

by the Deloitte-UConn Actuarial Center

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Introduction

The Society of Actuaries (SOA) sponsored a new experience study examining preneed life insurance mortality. Preneed life insurance is a specialized form of life insurance or annuity used to fund the predetermined expenses of a funeral, cremation or burial. The study was conducted by the Deloitte-UConn Actuarial Center.

The purpose of this report is to provide the details of this study and the construction of the preneed life insurance mortality table. The report describes the data analysis and methods used to determine the table.

The mortality experience data was collected by the SOA for the years 2000-2004 from ten participating companies which are active in the preneed market. The study was based on a total adjusted exposure of 1,708,924 and total adjusted deaths of 143,422.

The preneed mortality table was constructed based on the final dataset which was cleansed and formatted to serve the purpose of the study.   Based on the analysis of the final dataset, the SOA's Preneed Experience Team, whose role is discussed in the Background section of this report, agreed that it was appropriate to develop the mortality table using a 5 year select and ultimate table separately for male and female lives. Interpolation and trend techniques were used for younger and older ages where the experience data was sparse. The preneed mortality table was graduated to provide a smooth table.

The mortality experience results and mortality tables were given to the American Academy of Actuaries' Preneed Mortality Work Group for consideration in developing a preneed valuation table recommendation for the NAIC.

1. Background and Collection of Data

Reason for the Study

The purpose of this study was to conduct an experience review examining preneed life insurance mortality. The study consisted of an analysis of mortality by age, sex, duration, policy payment type and underwriting category. The end product would be the basis for a mortality table intended for statutory and tax valuation, minimum non-forfeiture, and 7702 calculations.

The need for a preneed mortality table arose due to the unique mortality characteristics of preneed life insurance. Preneed insurance policies may have limited underwriting, and are commonly issued on a guaranteed basis. The policies are issued at high ages, such as ages 75 to 90. Generally, policies have low face amounts with limited period premium payments. Those policies issued on a limited underwriting or guaranteed issue basis exhibit mortality with a reverse select and ultimate pattern which shows high mortality in early durations.

Role of Society of Actuaries and the SOA's Preneed Experience Team

The members of the Society of Actuaries' Preneed Experience Team are content experts responsible for overseeing the study including defining the study scope, providing guidance to the Deloitte-UConn Actuarial Center on an as needed basis, and reviewing results for reasonableness and appropriateness. The results of the study would be used by the American Academy of Actuaries (AAA) in developing a new valuation table.

Role of the Deloitte-UConn Actuarial Center

The project was awarded to the Deloitte-UConn Actuarial Center with Jay Vadiveloo as the head of the project. The roles of the Deloitte–UConn Actuarial Center (the research team) included the following:
- Performing a complete mortality data analysis
- Creating a mortality table based on the analysis

All data related to this engagement was secured and processed within Deloitte's Advanced Quantitative Services Data Center in Hartford Connecticut.

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Preneed Experience Team Members

Dan Durow	Dave Burt	Mark Birdsall
Mark France	Mark Solverud	Matt Nemcek
Michael Villa	Mike Tucker	Roger Annin
Tomasz Serbinowski		

Deloitte-UConn Actuarial Center

Jay Vadiveloo	Sandeep Patil	Soyeon Kim

SOA

Jack Luff	Ronora Stryker	Korrel Crawford

Data Requests

The SOA solicited a data request on preneed insurance policies from various preneed companies. The SOA provided each company with a standard column delimited format which all contributing companies used to provide their data to the SOA. Various fields were defined; the length, type and expected values were specified. The data contribution form is shown in Appendix A.

The data were first received by the SOA then forwarded to the research team to review, format, cleanse, and summarize.

Data Contributors

Citizens Security
Funeral Directors Life Insurance Company
Great Western Insurance Company
Homesteaders Life Company
Investors Heritage Life Company
Lincoln Heritage Life Insurance Company
National Guardian Life Insurance Company
Pekin Life Insurance Company
Security National Life Insurance Company
Southland National

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2. Validation of Data and Final Data Set

The data received from all companies was forwarded to the research team for further analysis. The data was then formatted, cleaned and loaded for general data analysis using internal data scrubbing best practices. Once the data was formatted, a SAS data set was created and general statistical analysis of the underlying data and their attendant variables commenced.

Additional reasonability checks were done including making sure the termination date was on or after the issue date.

The data was further analyzed to obtain the frequency of policies according to sex, age at issue, premium option, policy status, and underwriting category. The frequency analysis was sent back to the data contributors to verify the accuracy and completeness of the processed data.

Data received from each company was sorted according to its year of exposure since the original source data was not split out by exposure period and this information needed to be calculated. For example, total number of policies for exposure year 2000 equals total policies less number of policies terminated before year 2000 and policies issued after year 2000. Furthermore, the attained age and duration for each policy holder was calculated using issue age and year of exposure. The data was analyzed for males and females separately and on a combined basis for males and females for each defined variable.

The exposures and deaths by company and policy year were then combined to create the raw experience mortality table for preneed insurance. Company data was scaled back so that no one company dominated results and confidentiality of the data could be protected.

3. Methodology & Assumptions

The final data set was analyzed based on a policy year approach for the experience period January 2000 to January 2005. The assumptions used are the following:

- All policies are issued at the beginning of the month.
- All terminations including death occur at the beginning of the month.
- Death during a policy year contributes a full year of exposure in the year of death.
- A termination other than death during a policy year contributes a pro-rated exposure.
- Deaths from extended term and reduced paid-up policies are excluded from the study in order to avoid the misstatement of mortality patterns.

<u>Method to Calculate the Net Exposure</u>

1. <u>Sample Policy 1:</u>

	Actual	Assumed
Issue Date	08/20/1999	08/01/1999
Termination Date	05/03/2005	05/01/2005

- o Because the experience period assumed is 1/1/00 to 1/1/05, the policy will contribute exposure in the policy's first 6 durations over the period. This policy will contribute an exposure of 7 months in the first policy duration (01/2000 to 08/2000).
- o For policy durations 2, 3, 4, and 5, the policy contributes a full year of exposure in each policy year duration (08/2000 to 08/2004).
- o This policy will contribute an exposure of 5 months in duration 6 (08/2004 to 01/2005).

Net Exposure:

Dur 1	Dur 2	Dur 3	Dur 4	Dur 5	Dur 6
0.583	1	1	1	1	0.4167

2. <u>Sample Policy 2:</u>

	Actual	Assumed
Issue Date	08/20/1999	08/01/1999
Termination Date	05/03/2002	05/01/2002

- o If this policyholder dies on 05/01/2002 then the death will be counted as 1 death in duration 3 and will contribute a full year of exposure in duration 3.

Net Exposure:

Dur 1	Dur 2	Dur 3	Dur 4	Dur 5	Dur 6
0.583	1	1	0	0	0

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o If this policyholder lapses on 05/01/2002 then it will contribute an exposure of 9 months in duration 3 (08/2001 to 05/2002).

Net Exposure:

Dur 1	Dur 2	Dur 3	Dur 4	Dur 5	Dur 6
0.583	1	0.75	0	0	0

3. Sample Policy 3:

	Actual	Assumed
Issue Date	08/20/1999	08/01/1999
Termination Date	10/15/2004	10/01/2004

o If this policyholder dies on 10/01/2004 then the death will be counted in duration 6 and will contribute a full year of exposure in this duration.

Net Exposure:

Dur 1	Dur 2	Dur 3	Dur 4	Dur 5	Dur 6
0.583	1	1	1	1	1

o If this policyholder lapses on 10/01/2004 then it will contribute an exposure of 2 months in duration 6 (08/2004 to 10/2004).

Net Exposure:

Dur 1	Dur 2	Dur 3	Dur 4	Dur 5	Dur 6
0.583	1	1	1	1	0.1667

4. Sample Policy 4:

	Actual	Assumed
Issue Date	08/20/1999	08/01/1999
Termination Date	08/10/2004	08/01/2004

o If this policyholder dies on 08/01/2004 then the death will be counted in duration 5 and will contribute a full year of exposure in policy duration 5.

Net Exposure:

Dur 1	Dur 2	Dur 3	Dur 4	Dur 5	Dur 6
0.583	1	1	1	1	0

o If this policyholder lapses on 08/01/2004 then it will contribute a full year of exposure in duration 5 (08/2003 to 08/2004).

Net Exposure:

Dur 1	Dur 2	Dur 3	Dur 4	Dur 5	Dur 6
0.583	1	1	1	1	0

<u>Method to Calculate the Expected Deaths</u>

5. <u>Sample Policy 1:</u>

Duration	Dur 1	Dur 2	Dur 3	Dur 4	Dur 5	Dur 6
Net Exposure	0.583	1	1	1	1	0.4167
1980CSO Mortality	0.0098	0.01054	0.01149	0.01263	0.01392	0.01529
Expected Deaths	0.00571	0.01054	0.01149	0.01263	0.01392	0.00637

- o This table shows the expected deaths calculations for the sample policy 1 for a female issue age 60.
- o Expected Deaths = Net Exposure times the mortality from the 1980 CSO Ultimate ALB table.

<u>Method for Extended Term Insurance (ETI) and Reduced Paid-up (RPU) policies</u>

Exposure for these policies was included in the analysis up to the date the policy changed to ETI or RPU status. If the date occurred before 1/1/2000, the policy is not included. If it occurred after 12/31/04, 5 full years of exposure was included in the analysis. The reason for including ETI and PRU policies in the exposure calculation is similar to why lapsed policies are in the calculation. It is a balance for those polices in which an individual died during the experience period but would have lapsed or become ETI or RPU had the individual remained alive.

Some companies were unable to provide the date when the policy changed status to ETI or RPU. Since mortality is not that much different on RPU than premium paying, these policies were treated the same as regular premium paying inforce policies in the analysis. Since mortality is different on ETI policies than premium paying policies, policies with an ETI status and no date were removed from the study. If these policies were a large percentage of the total records for a company, we followed-up with the submitting company to try to obtain the dates when status changed to ETI and RPU.

It was discovered that some companies also included deaths for ETI and RPU policies in their data submission. In such cases, the companies were notified to identify these policies in order for the deaths to be removed from the analysis.

<u>Aggregation of Data</u>

In aggregating the data, some contributors' exposure and deaths were scaled back by a factor so that the analysis was more representative of all the submitting companies.

4. Differences in Mortality Rates by Category

Using the aggregated data set, mortality rates were developed and compared by different categories - sex, premium type, and underwriting category. The following summarizes the actual to expected mortality ratios comparison based on the 1980 CSO and 2001 CSO Ultimate ALB tables. Actual and expected mortality rates are derived for issue age groups 51-60, 71-80 (represents largest exposure), and for issue ages greater than 85.

Figure 4-1
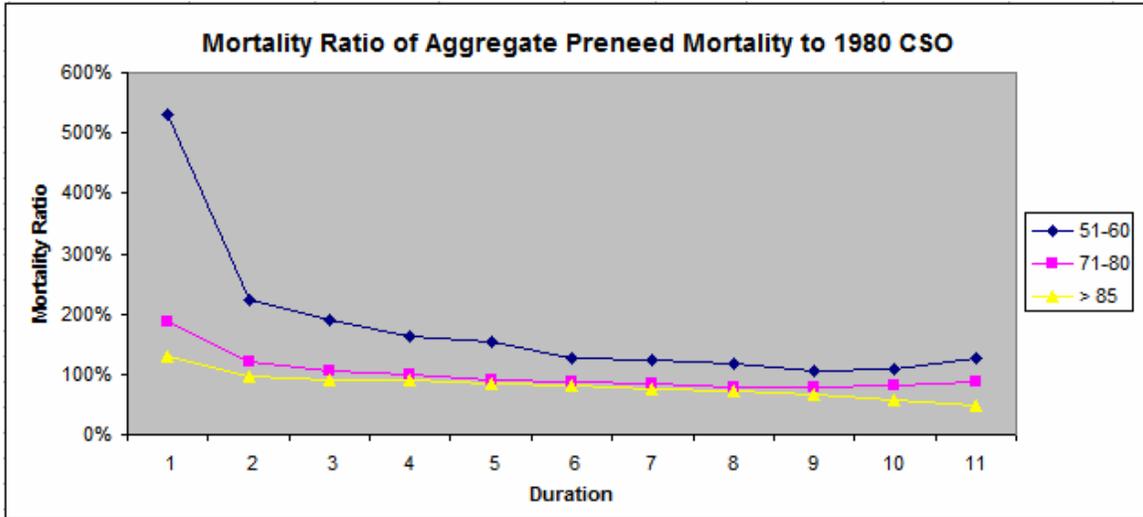
Figure 4-2
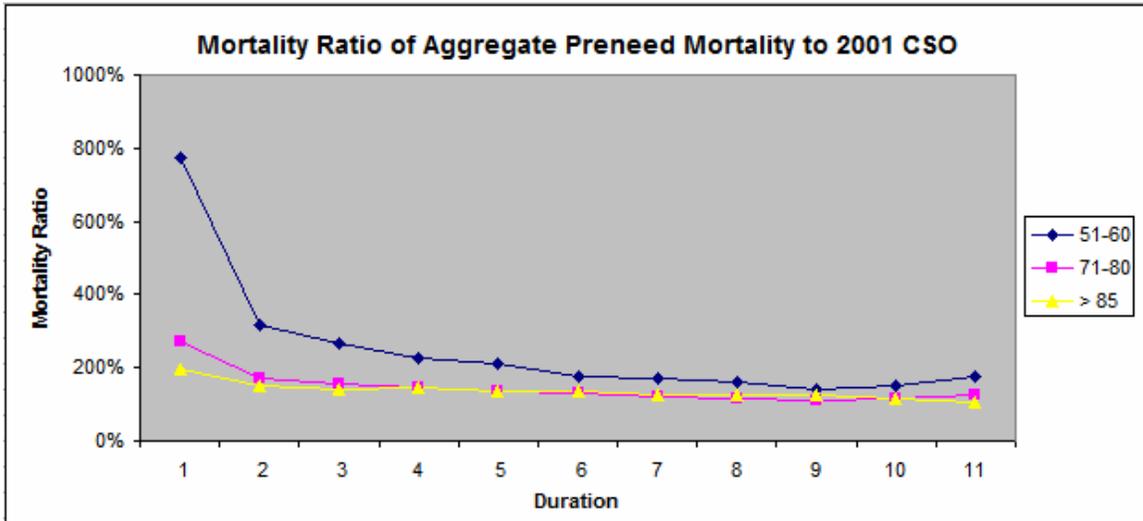
* note: the graphs are in different scale.

The mortality rates were compared using three different categories – sex, payment type, and underwriting category.

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Figure 4-3

Figure 4-3

Preneed Mortality By SEX - Age 71 to 80
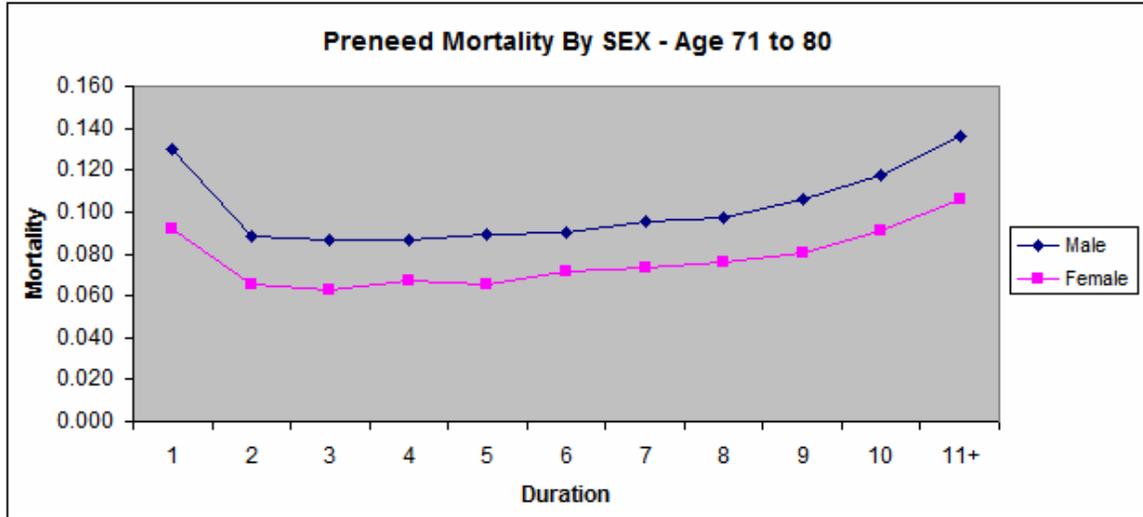
- Female preneed mortality is lower than male mortality for all durations.

- Female mortality is 71% of male mortality in duration 1 and is approximately 76% of male mortality in remaining durations.

Figure 4-4

Preneed Mortality By Payment Type - Age 71 to 80
Male and Female Combined
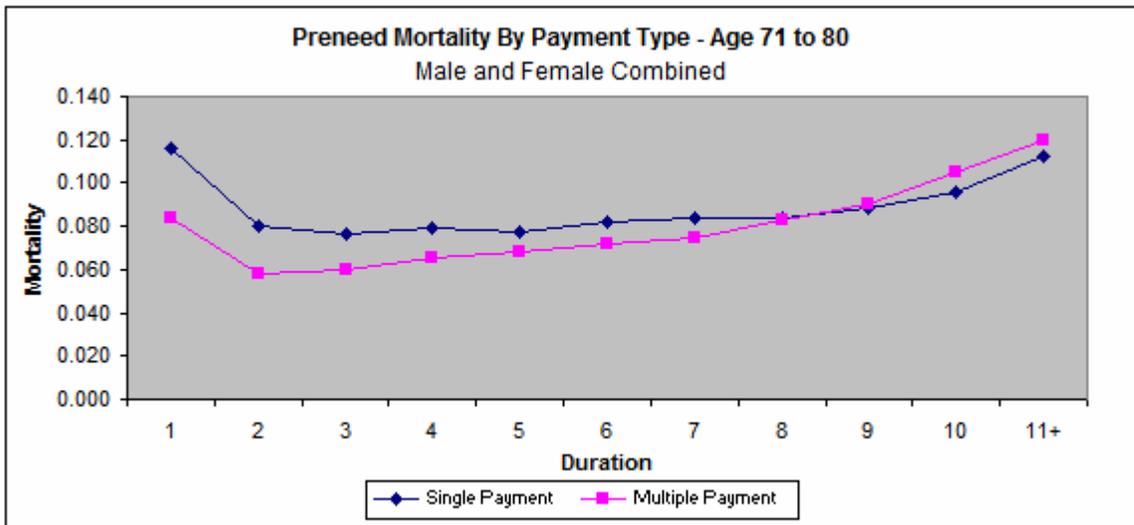
- Single payment preneed mortality is 139% of multiple payment mortality in duration 1.
- The difference starts to shrink after duration 1 and both mortalities converge from duration 5 onwards.

Figure 4-5
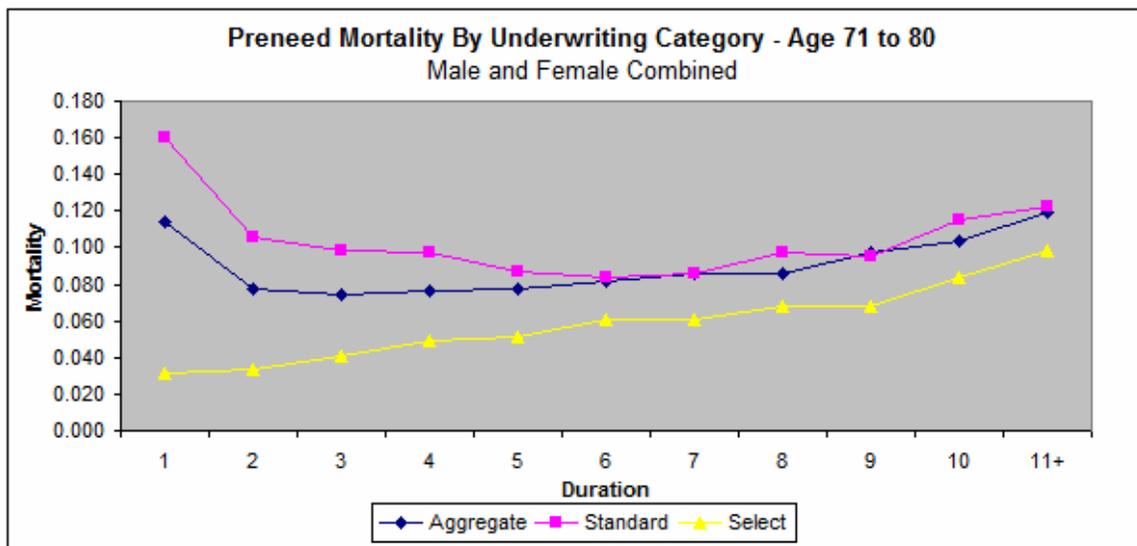
- There are three underwriting categories: Aggregate, Standard, and Select. The definitions for each category are provided in Appendix A.
- In general, Select underwriting has the lowest mortality followed by Aggregate, and the highest mortality is seen in Standard underwriting. This reflects the fact that Standard underwriting represents policies which do not qualify for Select rates while Aggregate underwriting is blend of Select and Standard mortality.
- Policies with Select underwriting do not follow the reverse select and ultimate pattern. This is true for both male and female.
- Mortality patterns for Aggregate and Standard underwriting mortality are similar to the overall mortality. They exhibit high first year mortality, which declines rapidly in year 2 and gradually thereafter. This is true for both male and female.

Summary

The results of our analysis of the raw experience data confirm the unusual mortality patterns of the preneed insurance industry relative to fully underwritten policies.

- Reverse select and ultimate mortality which results in high first year mortality, dropping down significantly in year two, and gradually thereafter. This results in experience mortality being higher than 80 CSO mortality in the first few durations.
- Variation in mortality by type of premium payment with multiple payments generally exhibiting lower mortality compared to single premium.
- Policies with Select underwriting show the mortality similar to regular life insurance contracts with lower mortality in select durations.
- In general, the Select underwriting category had the best mortality followed by the Aggregate underwriting category and the Standard underwriting category. The Standard underwriting category had the highest mortality of the three underwriting types.

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- In duration 1, Select mortality is 27% of Aggregate mortality and Aggregate mortality is 71% of Standard mortality.
- The difference between Aggregate and Standard mortality starts to shrink after duration 1 and the two mortalities converge from duration 5 onwards.
- Select underwriting mortality is always lower than Standard and Aggregate mortality for all durations
  - The difference is the greatest in duration 1, reduces significantly in duration 2. For remaining durations, it is approximately 20% to 30% lower than Standard and Aggregate mortality.
  - Select underwriting mortality shows the normal pattern of mortality increasing by duration, with the lowest mortality in duration 1 and increasing each year thereafter.
  - This is in contrast to the preneed mortality pattern in general which shows the highest mortality in duration 1, a sharp drop in duration 2, and gradually increasing thereafter.
- The mortality patterns of male and female are similar except male mortality is generally higher than female. The mortality pattern is similar for each age grouping but the reverse select and utimate pattern is more obvious for issue age 75+.

5. Construction of the Preneed Mortality Table

A preneed insurance mortality table was created using the aggregated mortality data for all premium payment types and underwriting categories. During the study, the first ten durations were chosen for the select period and ultimate mortality was grouped into a single 11+ duration category. For the purpose of creating a mortality table, the database for each age at issue and select durations were first constructed. After reviewing actual to expected analysis of mortality rates for 5, 10, and 15 year select periods with the SOA's Preneed Experience Team, it was concluded that a 5 year select and ultimate table would be a good representation of preneed mortality experience since the effect of selection appears to wear off after 5 years. In Appendix B, mortality comparisons are shown for 5, 10, and 15 year select periods for most representative issue age groupings. The comparisons clearly indicate the selection effect wearing off after 5 years.

The select and ultimate preneed experience mortality table was created using a moving average method to initially smooth the raw data, and then the resultant table was graduated to create the final mortality table. The graduation and moving average methodology is described in the "Mortality Table" section below.

The select and ultimate preneed experience mortality table is sex distinct but does not vary by premium payment type or underwriting categories. The SOA's Preneed Experience Team concluded that there was not sufficient experience data from the contributing companies to produce mortality tables by these other categories and decided to focus on capturing the key mortality differences by select period and sex.

Mortality Table

The mortality table was created using a moving weighted average method for issue ages 50 and greater. For issue ages below 50, due to limited exposure (less than 7.2% of total exposure), interpolation and trending techniques were adopted to derive smooth and consistent select and ultimate mortality rates. For issue ages 50 to 99, each mortality rate at select periods represents the weighted average of five issue ages for each duration. For issue ages below 50, simple linear interpolation was performed using the mortality rates for the next five issue ages. Some examples are shown below:

Issue Age	Duration 1	Duration 2
48	Linear interpolation using mortality rates from issue ages 49 to 53 in duration 1	Linear interpolation using mortality rates from issue ages 49 to 53 in duration 2
50	(total deaths for issue ages 48 to 52 in duration 1) / (total exposures for issue ages 48 to 52 in duration 1)	(total deaths for issue ages 48 to 52 in duration 2) / (total exposures for issue ages 48 to 52 in duration 2)
51	(total deaths for issue ages 49 to 53 in duration 1) / (total exposures for issue ages 49 to 53 in duration 1)	(total deaths for issue ages 49 to 53 in duration 2) / (total exposures for issue ages 49 to 53 in duration 2)

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The ultimate rate was created in a similar manner using the deaths and exposures in the ultimate duration. For ultimate ages below 50, the same methodology was followed as issue ages below 50. For example, the rate for issue age 50 in the ultimate duration (attained age 55) was calculated using deaths and exposures of ultimate ages 53 to 57. The rate for issue age 48 in the ultimate duration (attained age 53) was calculated using linear interpolation based on ultimate mortality rates between attained ages 51 to 55

Graduation Process

After creating the 5 year select and ultimate table, the graduated number of deaths was compared to the actual number of deaths for each issue age in select and ultimate periods. Several iterative processes of refining and smoothing the graduated table to mimic the true pattern of mortality experience data were performed.   As a part of the graduation process, the following was checked:

- Total number of graduated deaths equal total number of actual deaths at the starting point.
- Total number of graduated deaths equal total number of actual deaths for select and ultimate durations with significant exposures.
- The ultimate mortality increases as attained age increases
- Select mortality increases by issue age for each select duration.

A summary of the graduation analysis is shown in the table below:

Table 5-1

Exposure Base	Exposures	Total		
		Actual Deaths	Graduated Deaths	Ratio A/E
Total	1,708,878	143,398	143,398	100%
age 65-85	1,089,109	91,985	91,689	100%
age 50-64	333,605	9,380	9,408	100%
age < 50	122,979	2,187	2,175	101%
age > 85	163,185	39,845	40,126	99%

* 1) Exposures are adjusted to eliminate the impact of any dominating company. Policies with issues age 100+ (45 exposures in total) were not considered in graduation analysis.
  2) Data for issue ages 100 + (total 24 deaths) were excluded in smoothing process.

Summary

The graduated table demonstrates the unique reverse select & ultimate nature of preneed mortality relative to fully underwritten insurance policies.

- For each issue age, mortality is the highest in the first duration and it declines in duration 2.
- For issue ages between 50 and 75, the effect of the first year anti-selection continues for at least 5 durations.
- For issue ages greater than 75, the effect of the first year anti-selection continues for two or three durations only and then mortality increases by attained age.
- For younger ages below 50, the effect of the first year anti-selection is not consistent between males and females. In general, males show a longer impact of anti-selection compared to females. However, due to the low exposure for this issue age block, this result may not be credible.

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6. Comparison of Preneed Mortality Table to the 80 CSO

Mortality Comparison

Figure 6-1
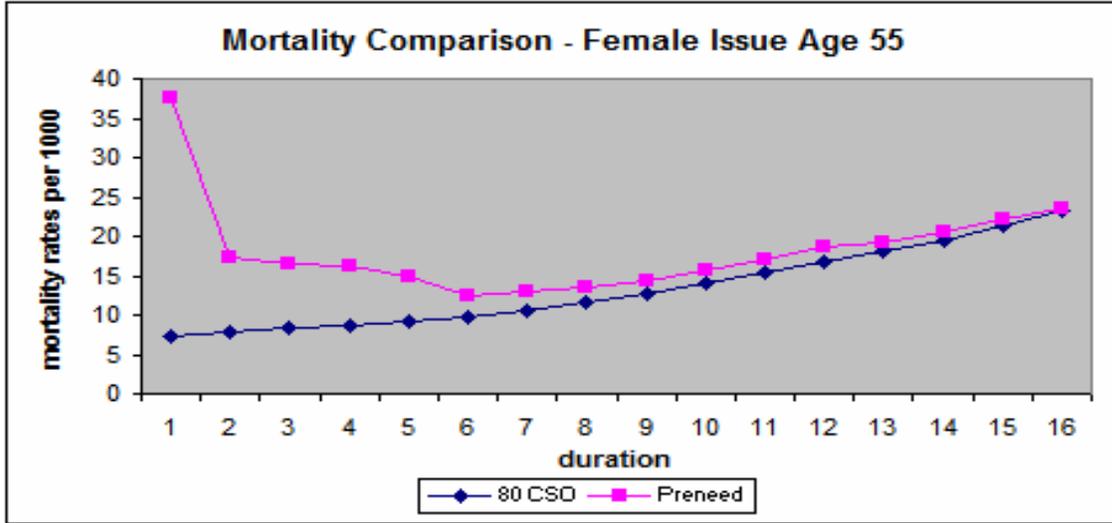
- Preneed mortality rates exceed 80 CSO rates for 5 durations, are slightly greater than 80 CSO until duration 15, and then go below 80 CSO for durations 16 and greater.
- Impact of first year anti-selection extends for 6 durations from issue

Figure 6-2

- Preneed mortality rates exceed 80 CSO rates for 5 durations and gets lower than 80 CSO in later durations.

- Impact of first year anti-selection extends for 6 durations from issue.

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Figure 6-3

Mortality Comparison - Female Issue Age 75
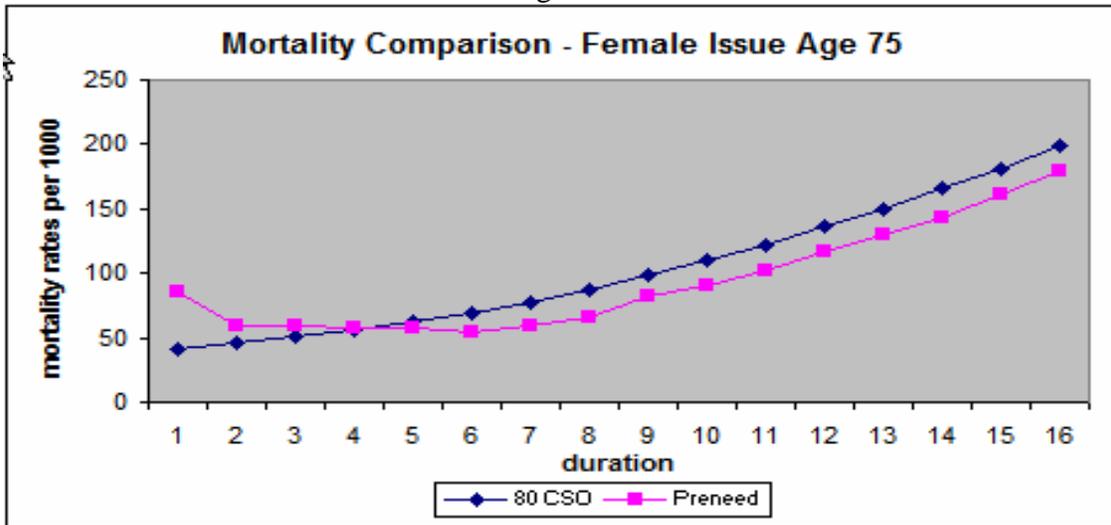
- Preneed mortality rates exceed 80 CSO rates for about 3 durations and gets lower than 80 CSO in later durations.

- Impact of first year anti-selection extends for about 3 durations from issue, levels off for the next 3 durations, and then increases by attained age.

Figure 6-4

Female Ultimate Age Mortality Comparison
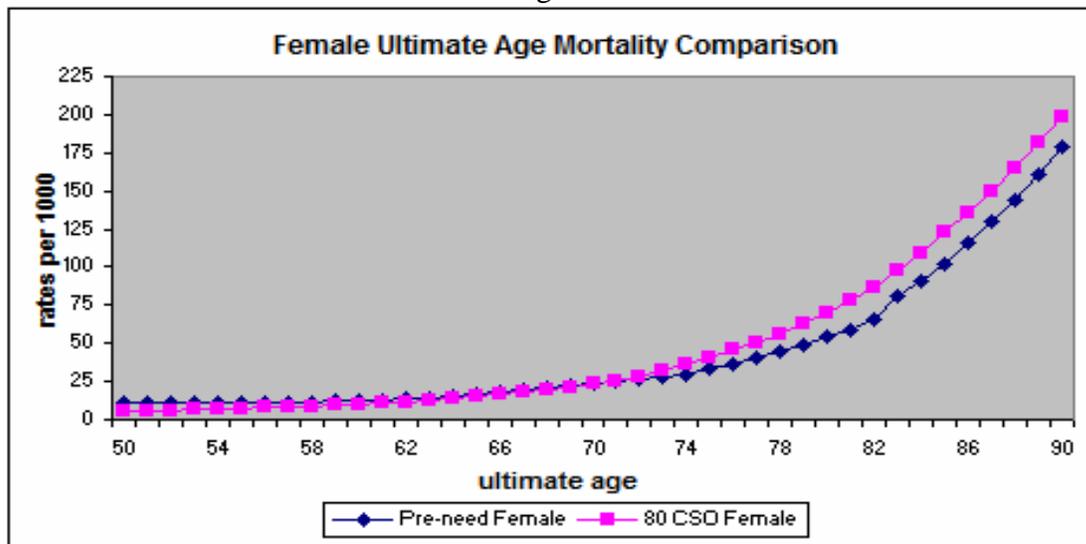
- Preneed ultimate rates are close to 80 CSO rates to attained age 70.

- Beyond attained age 70, preneed ultimate rates are lower than 80 CSO rates.

Male preneed ultimate mortality rates compared to 80 CSO rates have a similar pattern as females, except that they stay greater than or equal to 80 CSO rates beyond age 86.

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Male preneed select and ultimate mortality ratios against 80 CSO have a similar pattern as females.

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Preneed Insurance Mortality Table per 1000

	Female						Ult		Male						Ult
ISS								ISS							
0	11.011	6.067	6.978	7.830	8.801	9.713	5	0	10.904	6.008	6.311	7.813	8.716	9.619	5
1	11.508	6.090	6.997	7.904	8.811	9.718	6	1	11.397	6.031	6.329	7.827	8.726	9.624	6
2	12.006	6.113	7.015	7.918	8.820	9.723	7	2	11.890	6.054	6.348	7.841	8.735	9.629	7
3	12.503	6.136	7.034	7.932	8.830	9.728	8	3	12.382	6.077	6.366	7.855	8.745	9.629	8
4	13.001	6.159	7.053	7.946	8.840	9.733	9	4	12.875	6.100	6.385	7.869	8.754	9.634	9
5	13.498	6.183	7.072	7.960	8.849	9.738	10	5	13.368	6.123	7.003	7.864	8.764	9.634	10
6	13.996	6.206	7.090	7.974	8.859	9.743	11	6	13.861	6.146	7.022	7.897	8.773	9.705	11
7	14.493	6.229	7.109	7.988	8.868	9.748	12	7	14.353	6.169	7.040	7.911	8.783	9.807	12
8	14.991	6.252	7.128	8.003	8.878	9.753	13	8	14.846	6.192	7.059	7.925	8.792	9.909	13
9	15.488	6.277	7.147	8.018	8.888	9.758	14	9	15.339	6.216	7.078	7.940	8.802	10.012	14
10	15.986	6.298	7.164	8.030	8.897	9.763	15	10	15.831	6.237	7.241	7.953	8.811	10.114	15
11	16.484	6.321	7.183	8.045	8.906	9.768	16	11	16.324	6.260	7.241	7.967	8.820	10.217	16
12	16.981	6.346	7.203	8.060	8.917	9.774	17	12	16.817	6.285	7.241	7.982	8.831	10.319	17
13	17.479	6.374	7.225	8.077	8.928	9.780	18	13	17.310	6.312	7.241	7.999	8.842	10.422	18
14	17.976	6.404	7.250	8.095	8.941	9.786	19	14	17.802	6.342	7.241	8.017	8.854	10.524	19
15	18.474	6.437	7.276	8.115	8.954	9.793	20	15	18.295	6.375	7.836	8.037	8.868	10.626	20
16	18.971	6.473	7.305	8.137	8.969	9.801	21	16	18.788	6.449	7.836	8.058	8.882	10.729	21
17	19.469	6.512	7.336	8.161	8.985	9.810	22	17	19.281	7.142	7.836	8.082	8.898	10.831	22
18	19.966	6.554	7.371	8.187	9.003	9.819	23	18	19.773	8.035	8.233	8.531	8.916	10.934	23
19	20.464	6.601	7.408	8.215	9.022	9.829	24	19	20.266	8.531	8.729	8.928	9.126	11.036	24
20	20.961	6.652	7.449	8.246	9.043	9.840	25	20	20.759	9.622	9.126	9.225	9.324	11.139	25
21	21.459	6.707	7.493	8.280	9.066	9.852	26	21	21.252	10.812	9.721	9.424	9.523	11.241	26
22	21.956	6.768	7.542	8.317	9.091	9.866	27	22	21.744	11.303	10.118	9.622	9.622	11.343	27
23	22.454	6.834	7.595	8.357	9.118	9.880	28	23	23.551	15.245	11.684	10.833	9.721	11.866	28
24	22.952	6.906	7.653	8.401	9.148	9.896	29	24	24.702	15.637	12.004	11.088	10.172	11.973	29
25	23.449	6.984	7.716	8.449	9.181	9.913	30	25	25.854	16.029	12.325	11.337	10.350	12.079	30
26	23.947	7.070	7.785	8.501	9.216	9.932	31	26	27.006	16.421	12.646	11.586	10.527	12.185	31
27	24.444	7.164	7.861	8.558	9.255	9.952	32	27	28.157	16.814	12.966	11.836	10.705	12.291	32
28	24.942	7.266	7.943	8.620	9.297	9.974	33	28	29.309	17.206	13.287	12.085	10.883	12.337	33
29	25.439	7.377	8.033	8.688	9.343	9.999	34	29	30.461	17.598	13.607	12.334	11.060	12.503	34
30	25.937	7.499	8.131	8.762	9.394	10.025	35	30	31.611	17.990	13.928	12.583	11.238	12.610	35
31	26.434	7.632	8.237	8.843	9.449	10.054	36	31	32.763	18.382	14.249	12.832	11.416	12.716	36
32	26.932	7.777	8.354	8.931	9.509	10.086	37	32	33.916	18.774	14.569	13.081	11.593	12.822	37
33	27.429	7.935	8.481	9.028	9.574	10.120	38	33	35.065	19.166	14.890	13.330	11.771	12.928	38
34	27.927	8.107	8.620	9.133	9.645	10.158	39	34	36.216	19.558	15.211	13.580	11.949	13.034	39
35	28.424	8.296	8.772	9.247	9.723	10.199	40	35	37.372	19.951	15.531	13.829	12.126	13.141	40
36	28.922	8.501	8.937	9.373	9.808	10.244	41	36	38.522	20.343	15.852	14.078	12.304	13.247	41
37	29.420	8.726	9.117	9.509	9.901	10.293	42	37	39.666	20.735	16.173	14.327	12.482	13.353	42
38	29.917	8.970	9.314	9.658	10.002	10.346	43	38	40.828	21.127	16.493	14.576	12.659	13.459	43
39	30.415	9.237	9.529	9.821	10.113	10.405	44	39	41.981	21.519	16.814	14.825	12.837	13.565	44
40	30.912	9.529	9.764	9.998	10.233	10.468	45	40	43.117	21.911	17.134	15.075	13.015	13.671	45
41	31.410	9.847	10.020	10.192	10.365	10.537	46	41	44.273	22.303	17.455	15.324	13.192	13.778	46
42	31.907	10.193	10.298	10.404	10.509	10.614	47	42	45.453	22.695	17.776	15.573	13.370	13.884	47
43	32.405	10.572	10.603	10.634	10.665	10.696	48	43	46.560	23.088	18.096	15.822	13.548	13.990	48
44	32.902	10.987	10.937	10.886	10.835	10.784	49	44	47.711	23.480	18.417	16.071	13.725	14.096	49
45	33.400	11.440	11.301	11.163	11.024	10.885	50	45	48.328	23.872	18.738	16.320	13.903	14.202	50
46	33.897	11.923	11.691	11.460	11.228	10.996	51	46	50.059	24.264	19.058	16.563	13.590	14.309	51
47	34.395	12.464	12.125	11.787	11.448	11.109	52	47	51.060	24.656	19.379	16.163	14.482	14.415	52
48	34.892	13.066	12.605	12.144	11.683	11.222	53	48	52.447	25.048	18.847	16.566	15.574	14.383	53
49	34.999	13.702	13.124	12.546	11.968	11.222	54	49	53.572	25.493	19.641	17.557	16.070	15.078	54

Preneed Insurance Mortality Table per 1000 *(continued)*

	Female						Ult		Male						Ult
ISS								ISS							
50	35.033	13.830	13.537	13.305	12.433	11.222	55	50	54.354	25.830	20.434	17.855	17.061	16.357	55
51	35.250	14.638	14.268	13.838	13.408	11.307	56	51	57.335	27.378	22.608	20.732	18.748	17.756	56
52	35.732	15.574	14.384	14.334	13.804	11.423	57	52	60.310	29.651	22.752	20.930	20.335	18.511	57
53	36.214	16.354	16.122	15.830	14.200	11.847	58	53	63.913	30.295	24.130	22.418	21.922	19.592	58
54	36.636	16.968	16.578	16.187	14.536	11.980	59	54	64.973	30.786	26.617	23.433	22.830	21.426	59
55	37.452	17.183	16.578	16.187	14.332	12.383	60	55	65.773	31.277	27.675	24.651	24.110	23.568	60
56	38.275	17.410	16.760	16.187	15.388	13.000	61	56	66.075	31.768	28.271	25.586	24.888	24.190	61
57	39.036	17.631	17.555	17.078	15.784	13.626	62	57	68.377	32.259	29.145	26.520	25.631	24.781	62
58	40.172	17.852	17.614	17.375	16.180	14.237	63	58	72.015	32.750	29.637	27.454	26.241	25.027	63
59	43.002	18.483	18.078	17.672	16.576	15.576	64	59	73.206	33.240	30.243	28.388	26.831	25.273	64
60	44.533	19.140	18.555	17.363	16.972	16.937	65	60	73.773	33.731	30.801	29.322	27.636	25.350	65
61	45.022	21.513	20.100	19.584	18.636	18.636	66	61	73.902	35.602	33.528	31.347	29.090	26.832	66
62	45.451	22.713	20.226	19.832	19.553	19.316	67	62	76.473	38.190	35.413	32.281	29.398	27.714	67
63	45.881	24.537	21.124	20.998	20.873	20.675	68	63	79.653	40.273	38.587	36.206	32.933	29.444	68
64	46.310	26.103	22.633	22.473	22.246	22.246	69	64	84.712	45.530	42.257	39.375	37.436	32.800	69
65	48.338	27.655	24.653	24.295	23.930	23.335	70	65	78.352	43.657	39.767	37.002	35.730	34.459	70
66	50.672	28.523	27.675	27.563	26.476	24.615	71	66	82.464	47.339	42.655	38.876	37.775	36.673	71
67	52.153	31.093	30.282	29.923	29.219	26.202	72	67	87.971	50.772	44.913	40.350	40.871	40.732	72
68	54.737	33.484	33.451	33.418	32.630	27.413	73	68	91.752	54.238	47.473	44.364	43.974	42.984	73
69	57.310	35.962	35.573	35.287	35.002	29.641	74	69	95.370	56.187	52.885	48.551	47.544	46.537	74
70	62.251	39.024	38.462	38.127	37.791	32.384	75	70	99.053	58.635	56.624	51.451	50.328	50.406	75
71	66.402	41.953	40.708	40.708	39.462	36.583	76	71	100.995	62.008	59.524	56.214	55.674	55.133	76
72	71.331	45.353	42.813	41.973	41.133	40.293	77	72	106.223	67.245	64.730	61.215	60.202	59.188	77
73	75.735	50.021	47.543	46.703	45.870	44.854	78	73	111.023	71.464	69.780	67.505	65.624	65.038	78
74	81.346	53.841	53.801	53.761	53.721	49.533	79	74	116.295	77.342	74.454	74.442	72.112	70.234	79
75	85.778	59.898	59.093	58.288	57.483	53.883	80	75	121.184	83.445	82.927	82.410	81.892	76.631	80
76	91.777	65.948	65.545	65.213	64.892	58.936	81	76	129.528	89.325	89.253	89.181	89.109	81.433	81
77	97.656	73.013	71.326	71.405	70.883	65.153	82	77	137.088	96.010	95.388	94.982	94.576	88.867	82
78	105.164	78.111	76.781	79.922	80.639	81.604	83	78	145.315	104.062	101.942	105.380	107.158	108.117	83
79	114.106	87.676	85.816	87.631	90.735	90.743	84	79	156.032	110.357	107.937	114.866	121.418	123.673	84
80	124.445	92.342	92.756	96.890	99.638	101.612	85	80	168.525	120.560	118.892	125.829	131.708	134.343	85
81	135.244	99.457	101.242	108.143	112.187	116.533	86	81	177.611	128.381	126.807	138.306	142.975	147.938	86
82	147.291	107.560	112.883	120.586	123.237	129.743	87	82	189.110	135.298	140.354	152.002	160.282	168.634	87
83	160.534	117.958	127.185	132.990	136.364	143.880	88	83	205.217	152.777	154.744	168.455	170.220	178.053	88
84	173.543	126.335	136.164	147.388	150.102	160.623	89	84	219.183	165.566	170.615	185.326	191.634	201.574	89
85	186.394	141.340	151.194	161.938	168.553	178.858	90	85	230.931	173.840	179.166	199.358	209.639	222.397	90
86	202.735	156.285	166.385	177.483	183.130	193.732	91	86	296.493	193.228	194.422	211.748	212.053	230.575	91
87	218.930	163.546	178.577	195.986	202.373	215.593	92	87	350.257	215.182	218.228	229.681	230.363	237.612	92
88	233.373	188.544	194.051	216.462	227.604	241.563	93	88	287.563	223.566	225.172	248.009	256.160	268.382	93
89	247.382	203.035	209.238	231.738	243.333	257.654	94	89	303.466	242.130	247.387	256.563	267.925	275.112	94
90	264.817	215.093	221.576	248.203	248.356	264.311	95	90	326.231	265.968	267.826	277.222	277.393	283.021	95
91	277.393	232.683	236.326	267.455	273.415	290.738	96	91	342.808	284.393	283.643	305.332	312.749	323.516	96
92	297.114	252.904	259.356	278.544	290.103	302.922	97	92	360.812	295.794	305.108	313.574	326.587	335.478	97
93	319.543	263.958	276.285	299.277	328.301	345.361	98	93	383.031	316.640	332.413	360.083	395.004	416.725	98
94	332.439	277.646	286.341	320.329	341.883	363.224	99	94	414.966	331.625	352.339	394.162	420.683	451.951	99
95	353.944	295.388	304.234	340.874	357.645	380.387	100	95	419.291	341.250	377.253	422.634	443.431	484.213	100
96	364.632	303.473	315.376	350.472	371.540	395.040	101	96	423.616	350.874	411.630	457.505	485.007	538.322	101
97	369.391	310.638	340.720	360.071	379.422	404.138	102	97	438.806	369.774	414.932	472.651	521.215	572.653	102
98	378.420	329.633	352.717	399.223	420.130	454.322	103	98	446.092	381.964	418.173	487.738	557.423	610.340	103
99	403.885	334.034	394.919	458.419	460.839	523.001	104	99	453.377	395.536	431.810	526.381	620.951	686.374	104

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Appendix A

Include only US policies.
If identifiable, exclude policies issued pursuant to the conversion of an existing prepaid funeral trust.

I.A   **BASIC DATA**

COLUMN	L	DATA ELEMENT	DESCRIPTION
1-3	3	COMPANY CODE	YOUR COMPANY CODE NUMBER IS
4-23	20	POLICY NUMBER	ENTER POLICY NUMBER. FOR POLICY NUMBERS WITH LENGTH LESS THAN 20, LEFT-JUSTIFY THE NUMBER AND BLANK FILLTHE EMPTY COLUMNS. ANY OTHER IDENTIFYING NUMBER CAN BE USED INSTEAD OF POLICY NUMBER FOR PRIVACY REASONS.
24	1	SEX	0 = UNKNOWN OR UNABLE TO SUBDIVIDE 1 = MALE 2 = FEMALE
25-32	8	DATE OF BIRTH	ENTER THE NUMERIC DATE OF BIRTH IN DDMMYYYY FORMAT.
33	1	AGE BASIS	0 = AGE NEAREST BIRTHDAY 1 = AGE LAST BIRTHDAY 2 = AGE NEXT BIRTHDAY 3 = OTHER (IF OTHER, PLEASE PROVIDE AN EXPLANATION OF THE BASIS WITH YOUR SUBMISSION BASIS)
34-35	2	AGE AT ISSUE	ENTER THE INSURANCE ISSUE AGE.
36-43	8	ISSUE DATE	FOR ALL ISSUES, ENTER THE 8 DIGIT CALENDAR DATE OF ISSUE IN THE FORMAT MMDDYYYY. (IF FULL DATE IS UNKNOWN, PROVIDE THE ISSUE YEAR IN THE FORMAT 0000YYYY. IF YEAR OF ISSUE IS UNKNOWN, DO NOT SUBMIT POLICY.)
44-51	8	LEAVE BLANK	

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Include only US policies.

If identifiable, exclude policies issued pursuant to the conversion of an existing prepaid funeral trust.

I.B   TERMINATION DATA

COLUMN	L	DATA ELEMENT	DESCRIPTION
52	1	CAUSE OF TERMINATION OR POLICY STATUS	0 = VOLUNTARY (TYPE UNKNOWN), OR UNABLE TO SUBDIVIDE 1 = REDUCED PAID-UP 2 = EXTENDED TERM 3 = VOLUNTARY TERMINATION BY POLICYHOLDER 4 = DEATH 5 = INVOLUNTARY POLICYHOLDER TERMINATION (e.g. RESCISSIONS, COVERAGE EXPIRED OR CONTRACT REACHED MATURITY, etc.) 6 = IN FORCE 7 = OTHER
53-60	8	TERMINATION DATE	FOR ALL POLICIES THAT HAVE TERMINATED, ENTER THE 8 DIGIT CALENDAR DATE OF TERMINATION IN THE FORMAT MMDDYYYY. (IF FULL DATE IS UNKNOWN PROVIDE THE TERMINATION YEAR IN THE FORMAT 0000YYYY. IF YEAR OF TERMINATION IS NOT KNOWN, DO NOT SUBMIT POLICY.) FOR POLICIES THAT ARE STILL IN FORCE, LEAVE BLANK IF REDUCED PAID-UP OR EXTENDED TERM POLICIES ENTER THE 8 DIGIT CALENDAR DATE POLICY BECAME RPU OR ETI.
61-68	8	LEAVE BLANK	

Include only US policies.
If identifiable, exclude policies issued pursuant to the conversion of an existing prepaid funeral trust.

I.C   **RISK DATA**

COLUMN	L	DATA ELEMENT	DESCRIPTION
69	1	TYPE OF UNDERWRITING REQUIREMENTS	1 = AGGREGATE. ANY POLICY WHOSE RATES AND BENEFITS DIDN'T DEPEND ON THE ANSWERS TO ANY HEALTH QUESTIONS, MEANING THAT THE COMPANY HAS ONLY ONE UNDERWRITING CLASSIFICATION FOR THE POLICY ISSUED. 2 = STANDARD. ANY POLICY WHOSE RATES OR BENEFITS WERE LESS FAVORABLE BECAUSE FAVORABLE ANSWERS WEREN'T GIVEN ON THE HEALTH QUESTIONS. 3 = SELECT. ANY POLICY WHOSE RATES OR BENEFITS WERE MORE FAVORABLE BECAUSE FAVORABLE ANSWERS WERE GIVEN ON THE HEALTH QUESTIONS. FOR THE SELECT AND STANDARD CLASSES THE COMPANY HAS MORE THAN ONE UNDERWRITING CLASSIFICATION FOR THE POLICY ISSUED.
70	1	PREMIUM OPTION	1 = SINGLE PREMIUM. ANY POLICY ISSUED TO HAVE ALL PREMIUM PAID IN THE FIRST POLICY YEAR. 2 = MULTIPLE PREMIUM. ANY POLICY THAT DOESN'T MEET THE DEFINITION OF SINGLE PREMIUM. INCLUDES ANY POLICY ISSUED AS A MULTIPLE PREMIUM POLICY AND PAID-UP IN THE FIRST POLICY YEAR.
71-78	8	LEAVE BLANK	

DATA CONTRIBUTOR FORM

Please complete the following information and include with your data submission:

Company Name:

Company Contact Name:

Company Contact Phone Number:

Company Contact E-mail Address:

Subsidiary Company Names Included in Data Submission:

To the best of your knowledge is the data provided accurate and complete?

Please Circle one: YES No

If No, please explain:

Additional information:

Appendix B

Mortality comparisons – 80 CSO mortality to Preneed mortality
(preneed mortality shown for 5, 10, and 15 year select periods for most representative
issue age groupings)

Policy Year	80CSO	Preneed 5 Sel	Preneed 10 Sel	Preneed 15 Sel	A/E 5 Sel	A/E 10 Sel	A/E 15 Sel
		Female Age 71-75					
0	0.032	0.076	0.076	0.076	237%	237%	237%
1	0.036	0.050	0.050	0.050	139%	139%	139%
2	0.041	0.048	0.048	0.048	117%	117%	117%
3	0.045	0.055	0.055	0.055	120%	120%	120%
4	0.051	0.051	0.051	0.051	100%	100%	100%
5	0.056	0.054	0.054	0.054	96%	95%	95%
6	0.063	0.059	0.055	0.055	94%	88%	88%
7	0.070	0.065	0.056	0.056	93%	81%	81%
8	0.078	0.074	0.059	0.059	94%	76%	76%
9	0.087	0.081	0.070	0.070	93%	80%	80%
10	0.098	0.090	0.083	0.073	92%	85%	74%
11	0.110	0.101	0.091	0.087	92%	83%	80%
12	0.122	0.112	0.101	0.091	91%	83%	74%
13	0.136	0.122	0.108	0.099	90%	80%	73%
14	0.150	0.134	0.120	0.107	89%	80%	71%
15	0.165	0.147	0.131	0.128	89%	79%	77%
16	0.182	0.159	0.141	0.139	87%	77%	77%
17	0.199	0.174	0.153	0.151	88%	77%	76%
18	0.218	0.188	0.170	0.162	87%	78%	74%
19	0.239	0.207	0.187	0.182	87%	78%	76%
		Female Age 76-80					
0	0.056	0.105	0.105	0.105	187%	187%	187%
1	0.063	0.078	0.078	0.078	125%	125%	125%
2	0.070	0.077	0.077	0.077	110%	110%	110%
3	0.078	0.080	0.080	0.080	103%	103%	103%
4	0.087	0.081	0.081	0.081	92%	92%	92%
5	0.098	0.090	0.091	0.091	92%	93%	93%
6	0.110	0.101	0.093	0.093	92%	85%	85%
7	0.122	0.112	0.099	0.099	91%	81%	81%
8	0.136	0.122	0.108	0.108	90%	80%	80%
9	0.150	0.134	0.120	0.120	89%	80%	80%
10	0.165	0.147	0.131	0.122	89%	79%	74%
11	0.182	0.159	0.141	0.130	87%	77%	71%
12	0.199	0.174	0.153	0.125	88%	77%	63%
13	0.218	0.188	0.170	0.168	87%	78%	77%
14	0.239	0.207	0.187	0.161	87%	78%	67%
15	0.263	0.224	0.203	0.207	85%	77%	79%
16	0.295	0.247	0.224	0.216	84%	76%	73%
17	0.341	0.264	0.239	0.206	77%	70%	61%
18	0.414	0.285	0.248	0.215	69%	60%	52%
19	0.537	0.305	0.255	0.201	57%	47%	37%

		Male Age 71-75					
Policy		Preneed			A/E		
Year	80CSO	5 Sel	10 Sel	15 Sel	5 Sel	10 Sel	15 Sel
0	0.055	0.112	0.112	0.112	202%	202%	202%
1	0.061	0.072	0.072	0.072	118%	118%	118%
2	0.067	0.070	0.070	0.070	104%	104%	104%
3	0.074	0.068	0.068	0.068	92%	92%	92%
4	0.080	0.073	0.073	0.073	90%	90%	90%
5	0.087	0.077	0.075	0.075	88%	86%	86%
6	0.095	0.082	0.077	0.077	87%	82%	82%
7	0.103	0.089	0.077	0.077	87%	74%	74%
8	0.112	0.096	0.092	0.092	86%	82%	82%
9	0.122	0.105	0.102	0.102	86%	83%	83%
10	0.134	0.115	0.112	0.103	86%	84%	77%
11	0.146	0.127	0.124	0.125	87%	85%	86%
12	0.159	0.139	0.138	0.120	87%	87%	75%
13	0.172	0.151	0.149	0.145	88%	87%	84%
14	0.186	0.164	0.156	0.141	88%	84%	76%
15	0.200	0.177	0.166	0.177	89%	83%	89%
16	0.214	0.191	0.176	0.183	89%	82%	86%
17	0.228	0.207	0.188	0.172	91%	82%	75%
18	0.244	0.225	0.197	0.189	92%	81%	77%
19	0.261	0.240	0.216	0.215	92%	83%	82%

		Male Age 76-80					
Policy		Preneed			A/E		
Year	80CSO	5 Sel	10 Sel	15 Sel	5 Sel	10 Sel	15 Sel
0	0.087	0.146	0.146	0.146	167%	167%	167%
1	0.095	0.105	0.105	0.105	111%	111%	111%
2	0.103	0.103	0.103	0.103	100%	100%	100%
3	0.112	0.107	0.107	0.107	95%	95%	95%
4	0.122	0.108	0.108	0.108	88%	88%	88%
5	0.134	0.115	0.109	0.109	86%	82%	82%
6	0.146	0.127	0.118	0.118	87%	81%	81%
7	0.159	0.139	0.125	0.125	87%	79%	79%
8	0.172	0.151	0.127	0.127	88%	74%	74%
9	0.186	0.164	0.143	0.143	88%	77%	77%
10	0.200	0.177	0.166	0.154	89%	83%	77%
11	0.214	0.191	0.176	0.165	89%	82%	77%
12	0.228	0.207	0.188	0.169	91%	82%	74%
13	0.244	0.225	0.197	0.207	92%	81%	85%
14	0.261	0.240	0.216	0.179	92%	83%	68%
15	0.282	0.253	0.223	0.169	90%	79%	60%
16	0.310	0.274	0.247	0.208	88%	80%	67%
17	0.352	0.283	0.250	0.240	80%	71%	68%
18	0.421	0.300	0.289	0.270	71%	69%	64%
19	0.541	0.317	0.301	0.220	59%	56%	41%