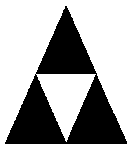

AMERICAN ACADEMY of ACTUARIES

Report of the American Academy of Actuaries' Commissioner's Standard Ordinary (CSO) Task Force

Presented to the National Association of Insurance Commissioners' Life and Health Actuarial Task Force (LHATF) June 2001 – New Orleans, LA

The American Academy of Actuaries is the public policy organization for actuaries practicing in all specialties within the United States. A major purpose of the Academy is to act as the public information organization for the profession. The Academy is non-partisan and assists the public policy process through the presentation of clear and objective actuarial analysis. The Academy regularly prepares testimony for Congress, provides information to federal elected officials, comments on proposed federal regulations, and works closely with state officials on issues related to insurance. The Academy also develops and upholds actuarial standards of conduct, qualification and practice and the Code of Professional Conduct for all actuaries practicing in the United States.

The following report was prepared by the Academy's CSO Task Force and Loading Subcommittee. The following individuals were involved in its development.

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Executive Summary

At the request of the National Association of Insurance Commissioners (NAIC), the Society of Actuaries (SOA) and the American Academy of Actuaries (Academy) have worked together to produce a proposal for a new Commissioners Standard Ordinary (CSO) mortality table. It is intended that the final report will be a joint report. The Academy's Life Practice Council takes the position that a move to a valuation system that provides more actuarial flexibility and responsibility to set reserves that reflect individual company characteristics is desirable. However, we recognize that a new table is both appropriate and necessary in the current valuation system.

The proposed table is based on recent mortality experience and is intended to replace the 1980 CSO Table in the current valuation system. The impact of the proposed table for other uses has not been reviewed. The SOA was responsible for developing an underlying basic table that both represented current experience and was smooth enough to be the basis for a valuation table. The Academy was responsible for developing appropriate loads for use in a valuation table and for testing the resulting table.

The SOA Task Force's basic table is based on the 1990-1995 Basic Table that was developed by the SOA's Mortality Experience Committee. This table is based on the experience of 1990-1995. Additional data from other sources was used to supplement the experience data at young and old ages where the experience data was sparse. The mortality level was projected out to the year 2001 using recent mortality trends. Finally, the table was graduated to provide the smoothness necessary for a valuation table. The resulting table is called the Valuation Basic Table (VBT).

The Academy Task Force took the VBT and, under the direction of the NAIC Life and Health Actuarial Task Force (LHATF), developed an appropriate loading formula. It is important to note that the use of terms such as "load", "loaded", "loading", and "margin" in this report refer to the amount of mortality added to the VBT to account for the variability of the mortality risk both over time and among the companies that will use the proposed 2001 CSO Table. The terms do not refer to redundancy or profit.

The loading formula used is similar to that used in loading the 1980 CSO Table. The loading is an inverse function of the expectation of life. This provides an absolute loading that increases as age increases but a percentage loading that generally decreases with age. This assured that the criteria for loading that were established by the Academy task force were met.

The proposed table was then examined for consistency. First and second differences were examined to judge the smoothness of the table. Many reserve values were calculated and examined for appropriate relationships. Statutory reserves produced by the table were compared to check reserves to ensure that the proposed table would provide statutory reserves sufficient for most companies. We did not consider deficiency reserves because we did not have gross premium assumptions upon which to base them. Excluding deficiency reserves is conservative.

We recommend that the resulting table (the proposed 2001 CSO Table) be exposed as a replacement for the 1980 CSO Table, pursuant to the request from the NAIC. The new table is much more consistent with current experience and will result in reserves that overall are about 20% lower than those produced by the 1980 CSO Table. Moving to the new table better reflects current mortality experience and promotes more appropriate reserve levels and increased policyholder value.

Introduction

The current valuation standard, the 1980 CSO Table, is almost 20 years old and mortality improvements have been evident each year since it was adopted. As is shown in this report, current mortality levels, represented by the Valuation Basic Table are considerably lower than the mortality levels underlying the 1980 CSO Table. As a result the current valuation mortality standard produces reserves that overall are substantially higher than both those indicated by current experience and those produced by the proposed 2001 CSO Table.

At the request of the National Association of Insurance Commissioners' (NAIC) Life and Health Actuarial Task Force (LHATF), both the Society of Actuaries (SOA) and the American Academy of Actuaries (Academy) have been working to develop a proposed mortality table intended to replace the 1980 CSO Table in the current valuation structure. While the Academy's Life Practice Council takes the position that a move to a valuation system that provides more actuarial flexibility and responsibility to set reserves that reflect individual company characteristics is desirable, we recognize that a new table is both appropriate and necessary in the current valuation system.

The SOA and Academy divided this work into two pieces: the construction of a basic experience table that was ready for loading, and the development of an appropriate loaded valuation table. The first part of this work was completed by the SOA's Individual Life Insurance Valuation Mortality Research Task Force (SOA Task Force). This group developed the Valuation Basic Table, an experience table that has been enhanced and graduated such that it is suitable for use as the basis for a valuation table. The second part was done by the Academy's CSO Task Force, with the development of the loads and the review of reserves described in this report done by the Loading Subcommittee of the Academy's CSO Task Force (Academy Task Force).

As of the date of this report, these two groups have developed a proposed CSO Table that we believe is appropriate for valuation in the current valuation system. This proposed table, to be referred to in the remainder of this report as the proposed 2001 CSO Table, is shown in Appendix A. Separate nonsmoker, smoker, and composite nonsmoker/smoker tables were developed for both males and females for a total of six tables. Each table has values for a 25-year select period and for ultimate ages. Either the select and ultimate values or the ultimate values may be used for valuation.

The reader is reminded that a mortality table intended to provide a minimum basis for the valuation of individual ordinary insurance has company solvency as its prime concern. Generally, the use of such a table would be inappropriate for pricing of individual ordinary insurance. Most major life

insurance companies would rely on their own recent experience mortality for determining guaranteed gross premiums on nonparticipating life insurance or for the setting of dividend scales on participating life insurance.

This report describes the work performed by the two groups in developing this table. Additional details, various results of the proposed table, and the testing of that table can be found in the appendices.

The Academy Task Force would like to recognize and thank those members of the SOA who developed the Valuation Basic Table:

SOA Individual Life Insurance Valuation Mortality Task Force

Michael S. Taht, Chairperson

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In addition, the Academy Task Force would like to thank the following organizations for providing data used in the development of the proposed 2001 CSO Table:

Jack Bragg and Associates
LIMRA International
Veterans' Administration

The Academy Task Force also would like to thank the following individuals who peer reviewed this report:

Thomas A. Campbell
Donna R. Claire
Stephen J. Preston

Construction of the Valuation Basic Table

The SOA Task Force created the VBT as a first step toward development of a proposed mortality table to replace the 1980 CSO Table. In constructing the VBT, the following basic premises were set by the SOA Task Force:

- The SOA Task Force would utilize the SOA 1990-95 experience study as the primary source of experience.

- The SOA Task Force would develop six separate age nearest birthday VBT: nonsmoker male, smoker male, composite nonsmoker/smoker male, nonsmoker female, smoker female, and composite nonsmoker/smoker female.

- The SOA Task Force would supplement the SOA experience with experience from other sources where the SOA experience was limited or not available. Mortality experience above issue age 75 and attained age 90 were specifically noted as areas where experience should be supplemented.

- The SOA Task Force would consider such issues as preferred risk underwriting, the impact of AIDS and mortality improvement in the construction of the VBT.

A draft VBT was published by the SOA Task Force in March 2001. These tables were used by the Academy Task Force in its initial development of the proposed 2001 CSO Table. The work of the Academy Task Force demonstrated that the draft VBT required subsequent revisions, which have been completed by the SOA Task Force. The remainder of this section highlights the development of the VBT.

SOA 1990-95 Experience Tables

In April 2000, the SOA Individual Life Insurance Experience Committee released the 1990-95 Basic Mortality Tables. The tables were based on ordinary life insurance experience for policy anniversaries between 1990 and 1995 for 21 companies. The total dollar amount of exposures was $4.1 trillion for males and $1.6 trillion for females and the tables represent experience for medical, nonmedical and paramedical issues combined. Male composite (smoker, nonsmoker and smoking status unknown experience combined) and female composite tables in age nearest birthday and age last birthday formats were released. The 1990-95 Basic Mortality Tables fulfilled the ongoing work of the Individual Life Insurance Experience Committee's charge of reporting on insured lives mortality experience over successive five-year periods. The raw insured life

data was graduated with an extrapolation for issue ages over 72. The 1990-95 Basic Mortality Tables were designed primarily as experience tables, and as such, had a good fit to the underlying experience data. No effort was made by the Individual Life Insurance Experience Committee to adjust the table for large claims or other features inherent in the experience data.

Male/Female Composite Tables

In developing the draft VBT utilizing the 1990-95 Basic Mortality Tables, the actuarial issues relevant to the creation of male and female tables for the SOA Task Force included:

- *Separate male and female mortality*: The SOA has been reporting experience separately for males and females for many years. Consistent with this practice, separate male and female mortality tables have been created as part of the 1990-95 Basic Mortality Tables. Based on current experience, the SOA Task Force believes it prudent to also create separate VBT for males and females. This is also consistent with the 1980 CSO Tables and current industry practice of having separate premium scales for males and females.

- *Select period*: The 1990-95 Basic Mortality Tables were created using a 25-year select period format. However, at younger and older issue ages, the actual select period is less. In these instances, the remainder of the select period mortality rates consists of the ultimate mortality rates for the corresponding attained age. The select period is consistent with the SOA 1985-90 Basic Mortality Tables and reflects insured lives experience from the study period. The 25-year select period reflects the long-term impact of selection on mortality rates. The SOA Task Force has utilized a 25-year select period format in the creation of the VBT, as the SOA Task Force believes a 25-year select period is the best representation of current experience. It should be noted that the 1980 CSO Tables were created with no select period, and subsequently 10-year select factors (and 19-year select factors with the adoption of Regulation XXX) were developed.

- *Smoothness*: The 1990-95 Basic Mortality Tables emphasized fit of the underlying data. However, the SOA Task Force believes that a valuation mortality table should emphasize smoothness over fit. If a valuation mortality table is not smooth, there is a risk that on an age-by-age or duration-by-duration basis the table could produce inappropriate values.

  The SOA Task Force utilized a two-dimensional Whittaker-Henderson Type B graduation method to ensure smoothness of the VBT. This graduation method is different from the Jenkins fifth-difference interpolation used in the development of the 1980 CSO Table. The Jenkins graduation worked well for

the 1980 CSO one-dimensional graduation (ultimate mortality only), but does not work well for the VBT two-dimensional graduation (select and ultimate mortality).

Also, after application of the graduation techniques, the SOA Task Force utilized certain tests that were designed to ensure that the VBT met certain goals as described below:

1. *Duration within issue age row test*: With a few possible exceptions where the experience clearly justifies, such as mortality at very young ages (less than 5), mortality for any given issue age should increase with duration since issue. That is,
$$q_{[x]} \leq q_{[x]+1} \leq q_{[x]+2} \leq \ldots$$

2. *Issue age within column test*: With a few possible exceptions where the experience clearly justifies, such as mortality at very young ages (less than 5), mortality for any given duration since issue should increase with issue age. That is,
$$q_{[x]+t} \leq q_{[x+1]+t} \leq q_{[x+2]+t} \leq \ldots$$

3. *Attained age test*: Mortality for any given attained age should increase with duration since issue. That is,
$$q_{[x]} \leq q_{[x-1]+1} \leq q_{[x-2]+2} \leq \ldots$$

- *Older and younger issue age mortality*: The 1990-95 SOA mortality experience database had no experience data above central issue age 72, limited data for attained ages over 85 and limited data for juveniles for use in the creation of the 1990-95 Basic Mortality Tables. The SOA Task Force utilized data from other sources to supplement its experience data at these ages. A special mortality study was prepared for the SOA Task Force by Jack Bragg and Associates, with results split by nonsmoker, smoker, and smoking status unknown; by male and female; and by select and ultimate periods. Male ultimate, composite mortality was also obtained from the Veterans' Administration (specifically, the National Service Life Insurance program that covered millions of servicemen from World War II). In addition, female ultimate, composite mortality was obtained from the 1995 Railroad Retirement Board Mortality Table for Widows.[*]

- *AIDS claims*: For males at issue ages in the 20's and 30's, there is a sharp mortality increase at later durations. It is the SOA Task Force's belief that this increase is a result of both identifiable and non-identifiable AIDS claims.

[*] For more details, see the SOA's "Report of the Individual Life Insurance Valuation Mortality Task Force" released March, 2001.

As the 1990-95 Basic Mortality Tables were created based on experience from 1990-95, the impact of AIDS in the 1990-95 Basic Mortality Tables is overstated as compared to the impact of AIDS today. Current mortality due to AIDS is less than that experienced in 1990-95 as a result of the advancement in the treatment of AIDS and the implementation of AIDS testing for most insurance. The SOA Task Force considered explicitly removing identifiable AIDS claims from the 1990-95 Basic Mortality Tables prior to smoothing the tables (an examination of identifiable AIDS claims in the 1990-95 experience table and current trends in AIDS mortality indicated that the adjustment would be at most 5% at certain issue age/durations and would be less than 1% at most issue age/durations.) However, later duration mortality for males at issue ages 20 through 30 were well-above 100% of the 1975-80 Basic Mortality Table (at other nearby durations, the ratios were around 85% of the 1975-80 mortality table). As such, the SOA Task Force believed that a 1%-5% adjustment was not sufficient to adjust for the increase in mortality due to AIDS. Instead, it was agreed that an upper bound for mortality at these durations would be set at 85% of the SOA 1975-80 mortality table.

As noted above, the draft VBT was used by the Academy Task Force in its initial work on the development of the proposed 2001 CSO Table. Initial testing of the proposed 2001 CSO Table indicated that the relationship between reserves calculated using ultimate mortality and reserves calculated using select and ultimate mortality was not as expected for both the male and female tables. Analysis by the Academy Task Force and the SOA Task Force indicated that this was primarily due to select mortality in the VBT from durations 10 through 25. The SOA Task Force was asked by the AAA Task Force to modify the draft VBT to address this issue. The VBT was modified to reflect a smoother pattern of mortality between durations 10 and ultimate mortality, utilizing the pattern at issue age 45, while maintaining the level of mortality at durations 1 through 10 and ultimate durations. Also, female ultimate mortality was reduced at certain ages (45 through 80) to a level consistent with the 1990-95 experience tables. The modified VBT was utilized by the Academy Task Force in the development of the proposed 2001 CSO Tables.

Smoker/Nonsmoker Tables

The SOA Task Force was charged with developing a VBT that provided separate tables for smokers and nonsmokers. This is consistent with the 1980 CSO Tables that have smoker distinct versions. In developing smoker/nonsmoker distinct tables, the SOA Task Force explored experience data on a smoking status distinct basis for both insured and non-insured lives. Insured experience data was obtained from several sources, including the SOA 1990-95 basic mortality tables and Bragg and Associates. Non-insured

experience data was also obtained from various sources, including "An Assessment of US and Canadian Smoking Reduction Objectives for the Year 2000" (Pechmann, Dixon, Layne) from the American Journal of Public Health.

It should be noted that there are many challenges in developing smoker distinct mortality. First, the long-term relationship of insured lives mortality rates by smoking status is unknown. Separate smoking distinct classes have not been utilized in insurance products long enough to produce ultimate duration smoker distinct mortality. Second, the definition of smoking status has changed over time. For example, smoking status was initially defined as cigarette smoking. More recently, the use of cigars, pipes or smokeless tobacco products constitute "tobacco" usage for insurance purposes. Finally, the largest obstacle to overcome is isolating the effect of smoking. In general, smokers are more prevalent in lower socio-economic classes and purchase smaller policies. These smaller policies are screened with relatively fewer underwriting requirements. Care must be exercised so as to avoid attributing mortality differences to smoking status when other contributing factors may be present as well.

The SOA Task Force developed relative risk and prevalence factors for smokers and nonsmokers that were used to develop smoker/nonsmoker factors. These in turn were applied to the composite VBT for males and females respectively to get separate smoker/nonsmoker VBT.

Prevalence estimates were derived from two different sources of data, insurance and population, and indicate a decline in smoking with age and duration. The rate of decline in the insurance data is somewhat lower than for the general population. Trending of the SOA 1990-95 data experience resulted in lower smoking prevalence estimates in middle aged and elderly females compared to similarly aged males at later durations. The final prevalence estimates were converted to a 25-year select and ultimate format.

The preliminary composite VBT for males and females were then multiplied by the nonsmoker/smoker factors and projected using the same mortality improvement assumptions as for the composite table. The resulting mortality rates were not uniformly smooth based on the rules established, and therefore a separate two-dimensional Whittaker-Henderson Type B graduation was conducted.

Mortality Improvement

In developing the VBT, the SOA Task Force explored mortality improvement in both insured and non-insured populations and recommended how the mortality experience underlying the 1990-95 Basic Mortality Tables could

be projected to 2001, the projected date at which the proposed valuation table will be released.

Mortality improvement up to the start date of the VBT was considered by the SOA Task Force for the following reasons:

- The experience underlying the table has a central year of 1992.

- Mortality improvement has been experienced in both insured and population mortality in recent years.*

- The SOA Task Force does not know of any recent major event that would result in a material increase in mortality in emerging experience.

It is the SOA Task Force's opinion that best actuarial practice is to assume some mortality improvement up to the start date of the VBT in its construction.

The SOA Task Force examined improvement in insured lives mortality from the 1985-90 Basic Mortality Tables to the 1990-95 Basic Mortality Tables. It also considered mortality improvement from various non-life insurance sources (general U.S. population over the period 1987-97, RP-2000 Study data, Social Security data for the period 1990-94, Federal Civil Service data for the period 1988-96, and SOA Group Annuitant Mortality for the period 1988-94). Based on these sources, the following observations were made:

- Mortality improvement has tended to be larger for males than females.
- Mortality improvement has tended to be smaller at attained ages under 45 and at attained ages above 85.
- Annual mortality improvement for males aged 55-80 is in the range of 1.0% for Social Security and Federal Civil Service data. Insured experience is somewhat higher.
- Annual mortality improvement for females aged 55-80 is in the range of 0.5%.
- In some studies, female mortality has deteriorated in recent years.

As a result, the projection of annual male mortality improvement in the VBT is 0.0% at attained ages 0-45, grading to 1.0% at attained ages 55-80, and grading back to 0.0% at attained ages 90+. The VBT annual female mortality

* See the SOA's "Report of the Individual Life Insurance Valuation Mortality Task Force" released March, 2001.

improvement is 0.0% at attained ages 0-45, grading to 0.5% at attained ages 55-85, and grading back to 0.0% at attained ages 90+.*

Consideration was also given to projecting mortality improvement past the projected start date of the VBT. However, it is the opinion of the SOA Task Force that the VBT should not reflect mortality improvement past its start date. Although some companies may anticipate mortality improvement past the start date of VBT, life insurance mortality tables used in the current regulatory environment (model illustration regulation, XXX) have not allowed the use of mortality improvement. A future event could have a significant negative or positive impact on mortality; this cannot be predicted. Therefore, no mortality improvement past the start date of the VBT was utilized.

Given the significant change in mortality experience, particularly in insured mortality experience, over the past twenty years, it would seem that mortality experience should be reviewed more frequently in the future. If future emerging experience proves to be significantly different from current valuation mortality standards, then consideration should be given to developing new valuation basic tables and CSO tables.

Preferred Risk

Throughout the 1990's, there has been an increased use of preferred risk classes. Preferred risk classes have been primarily used with term insurance products, however, preferred risk classes can also be found on universal life, variable universal life and other permanent life insurance products.

The SOA Task Force considered varying the basic mortality table by preferred risk class. However, since there is no clear definition of preferred risk in the industry, no experience data has been compiled. Therefore, the SOA Task Force did not construct separate mortality tables for preferred risks.

Extended Term Insurance

The SOA Task Force also considered development of a separate table for extended term insurance (ETI). The SOA Task Force obtained information from only one company; this information indicated that there was not a material difference between ETI mortality and ordinary insured mortality. The SOA Task Force believes that the increasing prevalence of universal life and variable universal life has reduced the importance of ETI as a nonforfeiture option and therefore the amount of ETI exposures. Given the ETI experience collected and

* For more details, see the SOA's "Report of the Individual Life Insurance Valuation Mortality Task Force" released March, 2001.

the limited amount of ETI exposures, it was determined that a separate ETI table was not warranted.

Valuation Basic Tables

The VBT was created in nonsmoker, smoker, and composite nonsmoker/smoker forms for both males and females and has served as the base for the proposed 2001 CSO Tables.

Loading the Valuation Basic Table

The Academy Task Force first developed considerations that it would take into account in the development of the VBT loads. As noted earlier in this report, terms such as “load”, “loaded”, “loading”, and “margin” refer to the amount of mortality added to the VBT to account for the variability of the mortality risk both over time and among the companies that will use the proposed 2001 CSO Table. The terms do not refer to redundancy or profit.

The Academy Task Force then examined two possible approaches to determine the appropriate load and presented samples of these two different loads to the LHATF. After receiving advice from the LHATF, the Academy Task Force developed the VBT mortality loads presented in this report. The Academy Task Force also performed various tests of consistency and sufficiency on the proposed 2001 CSO Tables before recommending that it be exposed.

Loading Considerations

The Academy Task Force took the following considerations into account in the development of the proposed 2001 CSO Table.

- Statutory reserves on the proposed 2001 CSO Table should not be materially less than statutory reserves developed using the underlying VBT select and ultimate mortality. These reserve comparisons should be based on CRVM one year preliminary term methodology using statutory interest rates and no lapses. Comparisons should be done for both terminal and mean reserves.

- The proposed 2001 CSO Table should make reasonable provision for possible future adverse mortality experience.

- Terminal reserves based on the proposed 2001 CSO Table should not be significantly distorted when compared with terminal reserves on the VBT.

- The loading should be consistent in providing margins for males and females; for smokers, nonsmokers, and smokers and nonsmokers combined; and during the select and ultimate periods.

- The proposed 2001 CSO Table should not result in unreasonable statutory premium deficiencies on term insurance plans.

- Reserves and net premiums on the proposed 2001 CSO Table should not be excessive.

Loading Approach, Form and Level

Two possible loading approaches were considered – "Mortality Margin" and "Reserve Margin".

The "Mortality Margin" approach is that each margin should stand on its own. In other words, the mortality load needed is that which is sufficient to ensure that the loaded table will cover the mortality experience of most companies. This approach is consistent with one of the constraints used in the development of the 1980 CSO Table – that "loaded mortality rates should encompass the standard mortality experience ... of most companies writing ordinary insurance with normal underwriting standards."[*]

The "Reserve Margin" approach is that the loaded tables should produce reserves that are adequate for most companies that will use the table. This requires that other factors besides mortality be considered in the determination of the loaded table. These factors may be those that go into the statutory reserve calculation (such as interest) as well as those that do not go into the statutory reserve calculation (such as lapse).

The Academy Task Force, under the direction received from the LHATF at their March 22, 2001, meeting in Nashville:

- followed the Mortality Margin approach in determining the proposed 2001 CSO Table and included in this report a sufficiency test based on the Reserve Margin approach,
- developed the load in the form of a function of the reciprocal of the expectation of life, and
- targeted a load level that overall was 15% of the VBT.

[*] TSA XXXIII, page 643.

Using a load that is a function of the reciprocal of the expectation of life is consistent with how the 1980 CSO loads were determined, provides for an absolute load that is monotonically increasing with age, and provides for a percentage load that generally decreases with age.

The overall load level of 15% will ensure that the loaded table will produce expected tabular deaths that exceed the number of actual deaths in the 1990-95 study period for most of the companies (in this case 15 of 21, or 71%) that contributed data to the 1990-95 SOA mortality study. Preliminary results of a study by Bragg and Associates that compared the VBT to the experience of 17 companies for the period 1990-94 were consistent with the 1990-95 SOA mortality study.

Determination of Loading Formula

The loading formula used in the development of the proposed 2001 CSO Table is the following:

$$\text{Load} = \frac{0.0056 - 0.00016x + 0.000008x^2}{e_x}$$

where e_x is the curtate expectation of life based on the VBT. The constant term in the numerator (+0.0056) was set to produce a 15% load at age 0. The negative term involving x (-0.00016x) was necessary to keep the loading at appropriate levels at younger ages. The positive term involving x^2 ($+0.000008x^2$) was chosen to maintain desirable reserve levels above age 50.

The determination of the factors in the loading formula shown above was done using composite, ultimate mortality. Since the level of the load was established at approximately 15%, the coefficients in the numerator of the loading formula were determined such that the expected number of extra deaths that the composite, ultimate loaded table produced over the composite, ultimate unloaded table would be 15%. To measure this, the AAA Task Force considered the percentage of extra deaths produced by the formula in 25 different cells (policy years 1-10, 1-20, 1-30, 1-40 and 1-50 for issue ages 25, 35, 45, 55 and 65). Survivorship was based on the composite, ultimate VBT, and a constraint was set on the loading formula such that the percentage of extra deaths in each cell could not be less than 10%.

As anticipated, the percentage of extra deaths produced by the loading formula varied by cell. The table below shows the increase in the number of deaths produced by the loading formula for each of the 25 cells considered, as well as a weighted average by age for each of the policy year groupings.

Table 1
Increase in Number of Deaths Produced by the VBT Loading Formula
For Composite, Ultimate, Male Mortality

Policy	Issue Age					Weighted
Years	25	35	45	55	65	Average
1-10	17%	22%	18%	14%	11%	18%
1-20	20%	19%	15%	12%	10%	17%
1-30	19%	16%	12%	10%	10%	14%
1-40	16%	13%	11%	10%	10%	12%
1-50	13%	11%	10%	10%	10%	11%

While perhaps a more common method of measuring extra mortality may be to simply compare the mortality rates for any given issue age and duration, the above method of measuring extra mortality was used because it takes into account the cumulative extra mortality over a given number of policy durations. This seems like a logical way to view extra mortality for valuation purposes since current statutory valuation rules call for life insurance reserves to be determined under the assumption that, as long as the insured survives, the policy will remain in force until the policy expires.

Note that the percentages in Table 1 generally decrease as the number of policy years considered increases. This is because, while the absolute load added to the VBT increases with age, the percentage load generally decreases with age (see the comparison of the proposed 2001 CSO Table to the VBT in Appendix B). As the number of policy years considered in Table 1 increases, so does the attained age of the insured. Thus, as more policy durations are considered, more older ages are also considered. Since the percentage loads decrease with age, one would also expect the percentages in Table 1 to decrease as the number of policy years considered increases.

Grading Loads to Zero at Age 120

The loads generated by the loading formula, when added to the VBT, produce mortality rates greater than one at the very high attained ages (approximately 115 and above). To resolve this situation, the loads above age 100 were modified so that the load produced by the formula at age 100 was linearly graded to zero at age 120. The resulting mortality rates in the proposed 2001 CSO Table equal one only at age 120 and never exceed one at any age.

Valuation Basic Tables and Proposed 2001 CSO Tables

Appendix A contains 12 select and ultimate mortality tables – the VBT and the proposed 2001 CSO Table; for males and females; and for composite, nonsmokers and smokers. (Note: Ultimate rates for attained ages less than 25 are obtained by using the age 0 select and ultimate rates.)

The Academy Task Force also performed consistency tests on the mortality. The following mortality relationships were desired:

- $q_{[x+1]+t} > q_{[x]+t}$, with reasonable exceptions (e.g., ages 0-5 and males in their 20's).
- $q_{[x]+t+1} > q_{[x]+t}$, with reasonable exceptions.
- $q_{[x]+t+1} > q_{[x+1]+t}$, with reasonable exceptions.
- 1^{st} Differences: $(q_{[x]+t+2} - q_{[x]+t+1})$ generally greater than $(q_{[x]+t+1} - q_{[x]+t})$.
- 2^{nd} Differences: Pattern of 2^{nd} differences should be smooth.
- $q^{Smoker} > q^{Composite} > q^{Nonsmoker}$
- $q^{Male} > q^{Female}$
- Any significant variation by age in the ratio of $q^{2001\ CSO}$ to q^{VBT} should be explainable.

In general, these relationships are present in both the VBT and the proposed 2001 CSO Tables. There are a few isolated 2^{nd} difference patterns that are not as smooth as the Academy Task Force would prefer. However, since these patterns appear to have no significant impact on statutory reserve levels and are also very difficult to smooth, no changes were made to the proposed table to try to correct these patterns.

Comparisons of Mortality Rates

Various comparisons of the mortality rates are shown in Appendix B. Specifically, the following comparisons are made:

- *1975-80 Basic Table versus 1990-95 Basic Table on an ultimate, composite basis.* The large increase in the ratio of 1990-95 to 1975-80 mortality from about age 25 to age 50, particularly for males, is due to AIDS.

- *1990-95 Basic Table versus VBT on an ultimate, composite basis.* The dip in the ratio of the VBT to 1990-95 mortality from about age 25 to 50,

particularly for males, is due to the fact that some of the impact of AIDS has been removed through the smoothing process in the development of the VBT. For female mortality at younger ages, the combined effect of graduation and a lack of mortality improvement at ages less than 45 resulted in the VBT being greater than 100% of 1990-95 mortality.

- *VBT versus Proposed 2001 CSO Table on an ultimate, composite basis.* The ratio of the proposed 2001 CSO table to the VBT shows the load added to the VBT. As was desired, the percentage load generally decreases with age. The discontinuity at age 100 is a result of the load being graded from its calculated value at age 100 to 0 at age 120.

- *1980 CSO versus Proposed 2001 CSO Table on an ultimate, composite basis.* For most of the commonly insured ages (from about age 25 to age 75), the proposed 2001 CSO Table mortality rates are in the range of 50% to 80% of the 1980 CSO Table. In addition, this ratio is generally increasing with age, which means that the slope of the ultimate proposed 2001 CSO Table is generally greater than the slope of the ultimate 1980 CSO Table.

- *1980 CSO Table versus Proposed 2001 CSO Table on an ultimate, nonsmoker basis.* Since nonsmokers comprise most of the composite mortality (over 75% of the composite 1990-95 mortality), the relationship between the nonsmoker versions of the 1980 CSO Table and the proposed 2001 CSO Table is very similar to the relationship between the composite versions of the 1980 CSO Table and the proposed 2001 CSO Table.

- *1980 CSO Table versus Proposed 2001 CSO Table on an ultimate, smoker basis.* The general shape of the graph of the ratio of the proposed 2001 CSO Table to the 1980 CSO Table for smoker mortality is similar to composite and nonsmoker mortality. However, the proposed 2001 CSO Table female ultimate smoker mortality is higher than the 1980 CSO Table female ultimate smoker mortality from age 57 to age 73.

Proposed 2001 CSO Table Impact on Statutory Reserves by Cell

The Academy Task Force calculated statutory reserves for three plans of insurance – whole life, 20 year level premium term, and universal life with level premiums at set so that the cash value is positive at all ages prior to 100 and is near zero at age 100 (hereinafter referred to as “Level Premium to zero UL”). Both mean and terminal statutory reserves were calculated for whole life and 20

year level premium term; mean statutory reserves were calculated for universal life. The reserves were calculated according to current NAIC valuation rules on a CRVM one-year preliminary term continuous basis. The following reserve relationships were desired and attained:

- Reserves based on ultimate mortality should generally be less than reserves based on select and ultimate mortality.

- Reserves based on the VBT should generally be less than reserves based on the proposed 2001 CSO Table.

- Terminal reserves based on the proposed 2001 CSO Table should not be significantly distorted compared to terminal reserves based on the VBT.

- A weighted average of the proposed 2001 CSO Table smoker reserves and the proposed 2001 CSO Table nonsmoker reserves, with the weights based on the underlying distribution of smokers and nonsmokers in the 1990-95 mortality, should approximate the reserves based on the proposed 2001 CSO Table composite mortality.

- Reserves on an age and duration basis should be smooth and follow the expected patterns (i.e., increasing with duration for whole life and UL; "humpback" for level premium term).

Appendix C compares one-year preliminary term reserve values at 4.50% interest on a cell by cell basis for various plans of insurance, issue ages, policy durations, and mortality tables (ultimate/select and ultimate, composite/nonsmoker/smoker, 1980 CSO Table/proposed 2001 CSO Table/VBT). All reserve comparisons involving the 1980 CSO Table were done on an ultimate basis and thus did not include select factors (neither the 10-year 1980 CSO Table select factor nor the Regulation XXX 19-year 1980 CSO Table select factors). In practice, reserves are usually determined using ultimate mortality rather than select and ultimate mortality since reserves based on ultimate mortality are generally less than those based on select and ultimate mortality.

For whole life, with the exception of the first duration when the reserve is a one year preliminary term reserve, reserves based on the proposed 2001 CSO Table are generally 80% to 90% of reserves based on the 1980 CSO Table during the first 25 durations or so. (The proposed 2001 CSO Table terminal reserves gradually grade to $1,000 per $1,000 at age 120, while the 1980 CSO Table terminal reserves grade to $1,000 per $1,000 at age 99.) This relationship holds for both nonsmoker and composite mortality.

For whole life reserves using smoker mortality, the same general relationship holds for males. However, for female smokers, the reserves based on the proposed 2001 CSO Table are higher than the reserves based on the 1980 CSO Table at some ages and durations. This is because the slope of the proposed 2001 CSO Table female mortality from around age 50 to age 70 is much steeper than the corresponding 1980 CSO Table female mortality.

The whole life reserves based on the proposed 2001 CSO Table are generally greater than the reserves based on the VBT by a few percentage points. For the age 45 example shown in Appendix C, renewal year proposed 2001 CSO Table reserves are about 2% to 4% higher than VBT reserves depending on duration.

For 20 year level premium term, male reserves based on the proposed 2001 CSO Table are generally 55% to 70% of reserves based on the 1980 CSO Table for issue ages 35, 45 and 55. This reserve ratio drops down to close to 40% at some durations for issue age 25, and increases to nearly 80% for issue age 65. These same general relationships hold for smoker, nonsmoker and composite mortality.

For female 20 year level premium term, the ratio of the proposed 2001 CSO Table reserves to the 1980 CSO Table reserves varies by issue age and duration more than for males, but is generally less than 100%. The ratio exceeds 100% for female smokers at some issue ages because the slope of the female smoker mortality is much steeper for the proposed 2001 CSO Table than the 1980 CSO Table between ages 50 and 70.

The 20 year level premium term reserves based on the proposed 2001 CSO Table are greater than the reserves based on the VBT by percentage amounts that vary by issue age. For the age 45 example shown in Appendix C, renewal year proposed 2001 CSO Table reserves are about 11% to 14% higher than VBT reserves depending on duration. Other ages were also looked at but are not shown in Appendix C. In general, the ratio of 20 year level premium term reserves based on the proposed 2001 CSO Table to those based on the VBT decreases as the issue age increases.

For Level Premium to Zero UL, reserves based on the proposed 2001 CSO Table range from about 60% (depending on issue age, gender and smoking status) to 100% of reserves based on the 1980 CSO Table. Generally, by the sixth or seventh policy duration, the policy's cash value takes over as the reserve. From this duration forward, the underlying valuation mortality table does not affect the reserve, so the statutory reserves based on the proposed 2001 CSO Table equal the statutory reserves based on the 1980 CSO Table.

Overall Effect of the Proposed 2001 CSO Table on Reserves

Once the proposed 2001 CSO Table was developed, its effect on overall reserves was examined. This analysis compared reserves calculated using the proposed ultimate 2001 CSO Table to those calculated using the ultimate 1980 CSO Table. CRVM reserves for individual cells were weighted using a relatively simple model office, consisting of three plans, five ages and both genders, based on industry business distributions obtained from LIMRA International (see Appendix F for a description of the model office). To produce a single number for comparison we assumed that sales levels increased at 5% per year and focused our analysis on results after 10 and 20 years. Additional detail on this analysis is given in Appendix E.

Results of this analysis are shown in the table below:

Table 2
Comparison of Reserves on the Proposed 2001 CSO Table to Reserves on the 1980 CSO Table (aggregated results)

	After 10 years	After 20 years
Overall	78.0%	81.4%
Gender		
Male	75.5%	79.3%
Female	84.6%	86.5%
Plan		
Whole Life	84.8%	86.0%
20 Year Level Premium Term	67.1%	67.5%
UL – Level Premium to Zero	94.3%	98.1%
Age		
25	80.2%	84.1%
35	74.2%	79.1%
45	76.9%	80.5%
55	78.3%	81.1%
65	81.9%	84.2%

This shows that overall reserves will be lower under the proposed table by about 20%. The reduction will be larger for males than for females, reflecting the larger reduction in mortality rates for males. Term insurance will see the largest reductions, followed by whole life. The level premium to zero UL plan shows the smallest reductions because reserves cannot be less than cash values and the cash value takes over the reserve, typically by the 6th to 8th duration under both the old and new tables. When the cash value takes over, reserves are the same under either table. Age 35 will see the biggest reductions while ages 25 and 65 will see the smallest.

Testing the Proposed 2001 CSO Table for Sufficiency

The table was constructed in a way that assured the number of expected tabular deaths exceeds the number of actual deaths during the 1990-95 study period for 71% of the companies that participated in the study. However, to verify that reserves produced by the proposed table are sufficient in most situations the AAA Task Force did a considerable amount of sufficiency testing. The testing that was done is covered in detail in Appendix D.

Note that while the terms “adequacy” and “sufficiency” are synonyms, “adequacy” carries some historical valuation meaning relating to the status of a particular company’s reserve levels. The term “sufficiency” is similar, but different, and will be used here in conjunction with the measurement of reserve levels for companies in general.

For this analysis, check reserves for individual cells were based on a reserve calculation that involves interest, mortality and, for term insurance, lapse. Assumptions are based on industry statistics but the tests are done to simulate the experience of companies that are at approximately the 85th percentile in terms of needed reserve level. In other words, according to our assumptions, only 15% of companies would need higher reserves. Sufficiency testing was only done using the ultimate table. We did not consider deficiency reserves because we did not have gross premium assumptions upon which to base them. Excluding deficiency reserves is conservative.

Two forms of sufficiency testing were done. The first compared the check reserves to statutory reserves produced by the proposed table for individual cells. The second determined how far experience needed to change on one assumption, holding the others at the 85th percentile level, to produce check reserves that were equal to the statutory reserves produced by the proposed table. This second test was done at the plan of insurance level but only for term and whole life.

Our intent was to consider both variation in experience by company and variation in experience over time in setting assumptions. However, we were unable to do so for the mortality and lapse assumptions because we did not have good data on the variation in experience over time. To set the interest assumption, we started with a value that represented the environment that might be expected to exist at the 85th percentile of all possible futures. Then we determined where the 85th percentile company would fall relative to that overall environment. For the other assumptions, we made a conservative assumption as to the environment using our collective judgment and then used our data to find where the 85th percentile company would be relative to that environment.

Information on assumptions came from a number of sources. Mortality assumptions were based on the spread of experience between the companies that contributed experience to the 1990-95 Basic Table. The interest rate used was based on variations in interest earnings by company over the past 5 years as exhibited in the NAIC database and on an analysis of projected rates produced by the interest rate model used for C3 testing. Data on variation in lapse rates by company was obtained from the LIMRA, International study, 1993-94 UNITED STATES LAPSES BY DURATION AND PRODUCT LINE: LONG-TERM ORDINARY LAPSE SURVEY*.

Based on the model office described in Appendix F, the testing showed that the proposed 2001 CSO Table produces statutory reserves that are greater than the check reserves for term insurance and slightly under the check reserves for whole life. For UL with a level premium to zero (a premium that produces an accumulation value near zero at age 100) the new table produces reserves slightly over the check reserves. The following table summarizes these results:

Table 3
Comparison of Statutory Reserves Using the Proposed 2001 CSO Table to Check Reserves
All Ages, Both Genders

	After 10 years	After 20 years
Whole Life*	96.5%	96.6%
Term	105.3%	101.0%
UL – Level Premium to Zero	111.2%	103.4%
All Plans	102.2%	99.3%

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* Changing the lapse assumption from 0% per year to 4% per year, and determining cash values based on a reserve calculation with an interest rate 1% higher than the valuation rate, results in 100% after both 10 and 20 years.

The Academy Task Force also considered other forms of UL including higher and lower premium forms of basic UL and forms with "no lapse" guarantees. Under any of these forms, statutory reserves produced by the proposed 2001 CSO Table should be greater than or equal to their check reserves, at least when aggregated at the plan level using the model office outlined in Appendix F.

The testing also showed how experience for individual factors could vary and still produce check reserves that are less than statutory reserves. This test is summarized in the following tables:

Table 4
Percentiles of Individual Assumptions Necessary, with Others Kept at the 85 Percentile Level, to Produce Check Reserves Equal to Statutory Reserves After 20 Years

	Mortality		Interest		Lapse	
	Value	Pct'ile	Value	Pct'ile	Value	Pct'ile
Whole Life	109%	67.4%	4.80%	81.4%	4.00%	84.1%
20 Year Level Premium Term	121%	85.3%	0.00%	99.5%	3.60%	86.7%

As an example, consider whole life. As shown in Table 3, the ratio of statutory reserves to check reserves for whole life is about 96.5%. In order to increase this ratio to 100% while holding the interest and lapse check reserve assumptions constant (4.50% interest and no lapses), the check reserve mortality assumption must be reduced from 120% VBT (the 85th percentile) to 109% VBT (the 67th percentile). Likewise, holding the mortality and lapse check reserve assumptions constant (120% VBT and no lapses), the check reserve interest assumption needs to be increased from 4.50% (the 85th percentile) to 4.80% (the 81st percentile) in order for the statutory reserves to equal or exceed the check reserves. Finally, holding mortality at 120% VBT and interest at 4.50% requires a lapse rate assumption of 4% (that used for term insurance) for the statutory reserves to be at least as big as the check reserves.

For term, the proposed 2001 CSO Table produces reserves that can handle a small increase in mortality or decrease in lapse rates. In this analysis, term reserves are relatively insensitive to changes in interest rates.

Recommendation

The American Academy of Actuaries' CSO Task Force believes that this report is responsive to the NAIC request for a new valuation table to be used in the current valuation system. We recommend that the proposed 2001 CSO Table shown in this report be exposed for use as a valuation table to replace the 1980 CSO Table in the current valuation system. The new table is much more consistent with current experience and will result in reserves that overall are about 20% lower than those produced by the 1980 CSO Table. Moving to the new table better reflects current mortality experience and promotes more appropriate reserve levels and increased policyholder value.

Appendices

Appendix A – Valuation Basic Table and Proposed 2001 CSO Table
Appendix B – Mortality Comparisons
Appendix C – Statutory Reserve Comparisons
Appendix D – Sufficiency Testing
Appendix E – Analysis of Impact on Overall Reserves
Appendix F – Model Office

Appendix A

Valuation Basic Table and Proposed 2001 CSO Table

Valuation Basic Table -- Male -- Composite -- 1000qx																											
Issue Age	Duration																										Attained Age
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	
0	0.48	0.29	0.29	0.20	0.20	0.21	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.41	0.53	0.66	0.78	0.85	0.89	0.90	0.90	0.91	0.92	0.93	0.95	25
1	0.29	0.29	0.20	0.20	0.21	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.37	0.50	0.63	0.74	0.83	0.87	0.89	0.90	0.91	0.92	0.93	0.95	0.99	26
2	0.23	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.35	0.47	0.60	0.71	0.80	0.86	0.89	0.90	0.91	0.92	0.93	0.95	0.98	1.03	27
3	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.34	0.46	0.58	0.69	0.78	0.85	0.89	0.90	0.91	0.92	0.93	0.95	0.97	1.00	1.02	28
4	0.20	0.21	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.34	0.45	0.58	0.69	0.78	0.85	0.88	0.90	0.91	0.92	0.93	0.95	0.97	0.99	0.99	0.99	29
5	0.21	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.33	0.45	0.57	0.69	0.78	0.85	0.88	0.90	0.91	0.92	0.93	0.95	0.97	0.97	0.97	0.97	0.97	30
6	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.33	0.44	0.57	0.69	0.78	0.85	0.88	0.90	0.90	0.91	0.93	0.95	0.95	0.95	0.95	0.95	0.95	0.95	31
7	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.33	0.44	0.57	0.69	0.78	0.85	0.88	0.89	0.90	0.90	0.92	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	32
8	0.24	0.25	0.27	0.28	0.30	0.31	0.33	0.43	0.56	0.69	0.78	0.84	0.87	0.88	0.89	0.89	0.91	0.93	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.95	33
9	0.25	0.27	0.28	0.30	0.31	0.33	0.43	0.56	0.69	0.78	0.84	0.87	0.88	0.88	0.88	0.89	0.92	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.95	0.97	34
10	0.27	0.28	0.30	0.31	0.33	0.43	0.56	0.68	0.78	0.84	0.87	0.87	0.87	0.87	0.89	0.91	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.95	0.97	0.99	35
11	0.28	0.30	0.31	0.33	0.43	0.56	0.68	0.78	0.83	0.86	0.86	0.86	0.86	0.88	0.90	0.93	0.94	0.94	0.94	0.94	0.94	0.94	0.95	0.97	0.99	1.04	36
12	0.30	0.31	0.33	0.43	0.56	0.68	0.78	0.83	0.85	0.85	0.85	0.85	0.87	0.90	0.93	0.94	0.94	0.94	0.94	0.94	0.94	0.95	0.97	0.99	1.04	1.09	37
13	0.31	0.33	0.43	0.56	0.68	0.78	0.82	0.84	0.84	0.84	0.84	0.86	0.88	0.92	0.94	0.94	0.94	0.94	0.94	0.94	0.95	0.97	0.99	1.04	1.09	1.17	38
14	0.33	0.42	0.56	0.68	0.78	0.82	0.83	0.83	0.83	0.83	0.84	0.87	0.91	0.94	0.94	0.94	0.94	0.94	0.94	0.95	0.97	0.99	1.04	1.09	1.17	1.25	39
15	0.39	0.56	0.68	0.78	0.81	0.81	0.82	0.82	0.82	0.83	0.86	0.89	0.93	0.94	0.94	0.94	0.94	0.94	0.95	0.97	0.99	1.04	1.09	1.17	1.25	1.34	40
16	0.56	0.68	0.78	0.81	0.81	0.81	0.81	0.81	0.82	0.84	0.87	0.90	0.92	0.94	0.94	0.94	0.94	0.95	0.97	0.99	1.04	1.09	1.17	1.25	1.34	1.46	41
17	0.68	0.78	0.81	0.81	0.81	0.81	0.81	0.81	0.83	0.85	0.87	0.89	0.90	0.91	0.91	0.91	0.95	0.97	0.99	1.04	1.09	1.17	1.25	1.34	1.46	1.61	42
18	0.78	0.79	0.79	0.79	0.79	0.79	0.80	0.81	0.83	0.84	0.85	0.86	0.87	0.89	0.91	0.91	0.97	0.99	1.04	1.09	1.17	1.25	1.34	1.46	1.61	1.78	43
19	0.76	0.76	0.76	0.76	0.76	0.77	0.78	0.80	0.81	0.81	0.82	0.82	0.84	0.87	0.91	0.94	0.99	1.04	1.09	1.17	1.25	1.34	1.46	1.61	1.78	1.99	44
20	0.72	0.72	0.72	0.72	0.72	0.74	0.75	0.76	0.77	0.77	0.78	0.79	0.82	0.87	0.94	0.99	1.04	1.09	1.17	1.25	1.34	1.46	1.61	1.78	1.99	2.22	45
21	0.66	0.66	0.66	0.66	0.68	0.69	0.71	0.71	0.72	0.73	0.75	0.78	0.82	0.88	0.96	1.04	1.09	1.17	1.25	1.34	1.46	1.61	1.78	1.99	2.22	2.44	46
22	0.60	0.60	0.60	0.62	0.64	0.65	0.66	0.67	0.68	0.71	0.74	0.77	0.82	0.90	1.00	1.09	1.17	1.25	1.34	1.46	1.61	1.78	1.99	2.22	2.44	2.68	47
23	0.54	0.54	0.56	0.59	0.61	0.63	0.64	0.65	0.67	0.70	0.74	0.78	0.85	0.93	1.05	1.16	1.25	1.34	1.46	1.61	1.78	1.99	2.22	2.44	2.68	2.81	48
24	0.47	0.49	0.53	0.57	0.60	0.62	0.63	0.65	0.68	0.72	0.76	0.81	0.88	0.98	1.12	1.23	1.34	1.46	1.61	1.78	1.99	2.22	2.44	2.65	2.81	2.96	49
25	0.39	0.44	0.51	0.57	0.60	0.62	0.64	0.66	0.70	0.75	0.80	0.86	0.94	1.05	1.18	1.33	1.46	1.61	1.78	1.99	2.22	2.44	2.63	2.79	2.96	3.17	50
26	0.35	0.43	0.51	0.58	0.61	0.63	0.65	0.69	0.73	0.79	0.85	0.92	1.01	1.14	1.28	1.45	1.61	1.78	1.99	2.22	2.44	2.62	2.78	2.96	3.17	3.43	51
27	0.33	0.43	0.52	0.59	0.63	0.65	0.69	0.73	0.78	0.85	0.92	1.00	1.10	1.25	1.39	1.59	1.78	1.99	2.22	2.44	2.61	2.77	2.96	3.17	3.43	3.79	52
28	0.33	0.44	0.53	0.60	0.65	0.68	0.72	0.77	0.83	0.91	1.00	1.10	1.22	1.38	1.54	1.76	1.96	2.19	2.44	2.61	2.77	2.95	3.17	3.43	3.79	4.20	53
29	0.32	0.44	0.54	0.61	0.68	0.72	0.77	0.83	0.89	1.00	1.10	1.22	1.34	1.50	1.70	1.95	2.19	2.42	2.60	2.77	2.95	3.17	3.42	3.79	4.20	4.68	54
30	0.32	0.44	0.53	0.62	0.70	0.77	0.83	0.89	0.98	1.09	1.19	1.31	1.45	1.63	1.86	2.12	2.36	2.57	2.76	2.95	3.17	3.42	3.79	4.19	4.68	5.23	55
31	0.30	0.43	0.53	0.63	0.72	0.81	0.89	0.96	1.04	1.14	1.25	1.40	1.59	1.81	2.07	2.32	2.54	2.74	2.94	3.15	3.40	3.73	4.17	4.66	5.20	5.86	56
32	0.29	0.41	0.53	0.63	0.73	0.82	0.92	1.00	1.08	1.17	1.31	1.51	1.76	2.03	2.29	2.52	2.73	2.93	3.15	3.40	3.73	4.17	4.64	5.16	5.78	6.46	57
33	0.31	0.43	0.55	0.66	0.77	0.87	0.97	1.05	1.13	1.23	1.40	1.64	1.94	2.22	2.47	2.70	2.92	3.15	3.40	3.73	4.17	4.62	5.13	5.72	6.35	7.00	58
34	0.33	0.45	0.58	0.69	0.81	0.92	1.03	1.12	1.21	1.34	1.54	1.81	2.11	2.41	2.66	2.89	3.14	3.40	3.73	4.15	4.60	5.10	5.68	6.29	6.91	7.53	59
35	0.35	0.47	0.60	0.72	0.84	0.97	1.08	1.20	1.33	1.50	1.72	1.99	2.29	2.59	2.86	3.12	3.40	3.73	4.13	4.57	5.06	5.63	6.23	6.85	7.50	8.18	60
36	0.37	0.49	0.62	0.75	0.88	1.00	1.14	1.31	1.49	1.70	1.92	2.18	2.48	2.80	3.10	3.40	3.73	4.11	4.54	5.02	5.59	6.18	6.80	7.48	8.18	9.09	61
37	0.39	0.50	0.64	0.77	0.90	1.05	1.23	1.45	1.67	1.88	2.10	2.35	2.67	3.03	3.38	3.72	4.09	4.51	4.99	5.54	6.13	6.75	7.43	8.18	9.09	10.28	62
38	0.42	0.56	0.70	0.82	0.95	1.13	1.36	1.62	1.86	2.07	2.28	2.54	2.87	3.26	3.66	4.06	4.49	4.96	5.51	6.09	6.71	7.40	8.18	9.09	10.28	11.67	63
39	0.46	0.62	0.76	0.88	1.03	1.24	1.52	1.78	2.03	2.24	2.46	2.75	3.12	3.53	3.97	4.44	4.92	5.48	6.06	6.68	7.36	8.18	9.09	10.28	11.62	13.09	64
40	0.49	0.67	0.82	0.96	1.14	1.40	1.68	1.96	2.19	2.42	2.69	3.03	3.42	3.86	4.33	4.85	5.43	6.03	6.66	7.34	8.16	9.09	10.26	11.53	12.91	14.14	65
41	0.52	0.72	0.91	1.08	1.29	1.57	1.87	2.13	2.38	2.65	2.98	3.36	3.79	4.26	4.81	5.39	5.98	6.62	7.33	8.14	9.09	10.24	11.48	12.91	14.14	15.19	66
42	0.55	0.80	1.02	1.22	1.45	1.73	2.03	2.31	2.60	2.93	3.31	3.73	4.21	4.76	5.39	5.94	6.56	7.29	8.13	9.09	10.22	11.45	12.83	14.14	15.19	16.60	67
43	0.58	0.84	1.09	1.31	1.55	1.83	2.16	2.48	2.82	3.20	3.62	4.12	4.71	5.33	5.94	6.46	7.22	8.08	9.07	10.19	11.41	12.70	14.00	15.19	16.59	18.24	68
44	0.62	0.90	1.15	1.38	1.63	1.94	2.30	2.69	3.07	3.49	3.95	4.60	5.27	5.88	6.44	7.12	8.00	9.01	10.15	11.37	12.63	13.92	15.19	16.47	18.06	20.19	69
45	0.69	0.96	1.21	1.45	1.74	2.08	2.50	2.93	3.38	3.82	4.39	5.16	5.81	6.37	6.99	7.88	8.92	10.07	11.30	12.57	13.84	15.10	16.34	18.06	19.99	22.60	70
46	0.75	1.01	1.26	1.52	1.86	2.27	2.73	3.23	3.72	4.24	4.92	5.68	6.30	6.85	7.74	8.80	9.97	11.22	12.49	13.76	15.00	16.22	17.88	19.99	22.37	25.40	71

Valuation Basic Table -- Male -- Composite -- 1000qx																										
Issue	Duration																									Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
47	0.82	1.06	1.31	1.62	2.02	2.47	2.99	3.55	4.09	4.75	5.43	6.16	6.78	7.53	8.63	9.85	11.14	12.43	13.69	14.93	16.08	17.69	19.79	22.37	25.15	28.38	72
48	0.89	1.14	1.43	1.77	2.18	2.66	3.23	3.85	4.47	5.23	5.88	6.63	7.36	8.35	9.66	11.04	12.39	13.67	14.87	15.99	17.51	19.58	22.15	25.15	28.10	31.43	73
49	0.94	1.25	1.58	1.95	2.37	2.87	3.48	4.18	4.83	5.58	6.33	7.20	8.18	9.35	10.80	12.30	13.60	14.81	15.91	17.33	19.38	21.92	24.89	28.10	31.12	34.61	74

Valuation Basic Table -- Male -- Composite -- 1000qx

Issue	Duration																									Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
50	1.03	1.38	1.75	2.14	2.57	3.09	3.76	4.49	5.16	5.93	6.85	8.00	9.25	10.62	12.04	13.55	14.74	15.82	16.96	19.18	21.70	24.64	27.81	31.12	34.26	38.07	75
51	1.14	1.55	1.96	2.38	2.81	3.35	4.01	4.75	5.51	6.39	7.56	9.05	10.50	11.91	13.17	14.68	15.73	16.78	18.78	21.47	24.38	27.53	30.80	34.26	37.69	41.96	76
52	1.25	1.73	2.20	2.64	3.08	3.60	4.27	5.07	5.96	7.08	8.52	10.25	11.78	12.74	14.21	15.65	16.78	18.57	21.02	24.13	27.24	30.49	33.92	37.69	41.54	46.42	77
53	1.30	1.87	2.40	2.90	3.37	3.92	4.66	5.60	6.63	8.01	9.68	11.51	12.60	13.82	15.27	16.78	18.57	20.79	23.62	26.96	30.17	33.57	37.31	41.54	45.96	51.64	78
54	1.34	2.01	2.63	3.16	3.65	4.28	5.17	6.29	7.49	9.09	10.85	12.30	13.67	15.11	16.78	18.57	20.79	23.37	26.39	29.86	33.23	36.93	41.12	45.96	51.12	57.67	79
55	1.39	2.17	2.85	3.39	3.95	4.72	5.80	7.10	8.44	10.12	11.53	13.26	14.94	16.60	18.57	20.79	23.37	26.11	29.23	32.88	36.55	40.70	45.49	51.12	57.09	64.23	80
56	1.45	2.31	3.04	3.66	4.32	5.27	6.54	7.99	9.40	10.75	12.43	14.41	16.42	18.37	20.79	23.37	26.11	28.92	32.19	36.17	40.28	45.03	50.61	57.09	63.59	71.70	81
57	1.50	2.43	3.24	3.98	4.80	5.93	7.35	8.88	10.32	11.96	13.90	16.05	18.17	20.57	23.37	26.11	28.92	31.84	35.41	39.86	44.56	50.09	56.52	63.59	70.98	79.41	82
58	1.62	2.58	3.48	4.37	5.39	6.68	8.17	9.70	11.11	12.97	15.16	17.77	20.34	23.11	26.11	28.92	31.84	35.02	39.02	44.10	49.57	55.94	62.95	70.98	78.62	87.67	83
59	1.77	2.76	3.77	4.83	6.04	7.46	9.00	10.48	11.85	13.93	16.43	19.52	22.86	25.83	28.92	31.84	35.02	38.60	43.17	49.06	55.36	62.30	70.27	78.62	86.79	96.80	84
60	1.97	2.99	4.10	5.33	6.72	8.24	9.79	11.25	12.59	14.95	17.86	21.34	25.27	28.60	31.84	35.02	38.60	42.71	48.03	54.79	61.66	69.55	77.82	86.79	95.83	107.06	85
61	2.21	3.26	4.46	5.83	7.38	9.01	10.57	11.99	13.34	16.06	19.32	23.01	27.05	31.50	35.02	38.60	42.71	47.51	53.63	61.02	68.83	77.03	85.92	95.83	105.99	118.42	86
62	2.48	3.57	4.86	6.37	8.07	9.81	11.41	12.86	14.29	17.33	20.78	24.59	28.81	33.59	38.60	42.71	47.51	53.06	59.73	68.12	76.23	85.04	94.86	105.99	117.24	130.79	87
63	2.65	3.93	5.41	7.08	8.88	10.71	12.42	14.00	15.61	18.86	22.46	26.46	31.01	36.28	42.45	47.51	53.06	59.09	66.68	75.44	84.16	93.90	104.92	117.24	129.48	143.99	88
64	2.77	4.31	6.01	7.84	9.79	11.74	13.60	15.40	17.22	20.64	24.46	28.81	33.85	39.77	46.83	53.06	59.09	65.96	73.85	83.29	92.93	103.85	116.05	129.48	142.55	157.86	89
65	2.84	4.68	6.63	8.69	10.80	12.90	14.93	16.93	18.99	22.64	26.81	31.65	37.33	44.11	52.15	59.09	65.96	73.06	81.53	91.96	102.78	114.87	128.17	142.55	156.28	172.25	90
66	2.88	5.25	7.40	9.60	11.99	14.21	16.33	18.48	20.81	24.79	29.43	34.87	41.38	49.09	57.89	65.96	73.06	80.66	90.02	101.71	113.68	126.87	141.11	156.28	170.53	185.54	91
67	3.06	5.90	8.24	10.61	13.33	15.65	17.88	20.17	22.75	27.17	32.38	38.61	46.00	54.44	64.36	73.06	80.66	89.06	99.57	112.50	125.56	139.67	154.70	170.53	183.68	199.31	92
68	3.54	6.62	9.19	11.73	14.52	17.30	19.99	22.65	25.32	30.33	36.33	43.45	51.60	61.19	71.74	80.66	89.06	98.50	110.13	124.25	138.23	153.12	168.81	183.68	197.32	213.73	93
69	3.99	7.43	10.25	12.96	15.15	19.21	21.90	24.47	27.48	33.15	39.91	47.66	56.79	66.86	78.20	89.06	98.50	108.95	121.63	136.79	151.55	167.08	181.83	197.32	213.73	228.89	94
70	4.48	8.34	11.42	14.32	15.74	21.18	23.65	26.35	32.01	38.63	46.24	55.20	65.11	76.26	89.04	98.50	108.95	120.33	133.91	149.97	165.36	179.97	195.32	213.73	228.89	244.81	95
71	5.77	9.37	12.73	15.02	18.29	22.86	25.27	31.70	35.57	42.83	51.39	60.89	71.61	83.90	98.15	108.95	120.33	132.47	146.81	163.64	178.12	193.33	213.73	228.89	244.81	259.01	96
72	7.43	10.52	14.20	17.49	20.79	24.23	27.91	31.94	36.56	44.40	53.14	63.05	74.46	87.70	102.93	120.22	132.47	145.23	160.19	176.26	191.34	213.73	228.89	244.81	259.01	274.03	97
73	8.69	12.87	16.53	19.75	22.70	25.69	29.01	34.98	38.44	46.54	55.77	66.42	78.81	93.09	109.36	127.59	145.23	158.47	172.55	189.34	213.73	228.89	244.81	259.01	274.03	289.92	98
74	10.27	14.21	18.11	21.75	24.95	27.90	33.47	37.30	41.33	50.22	60.29	72.03	85.60	101.08	118.48	137.78	158.47	170.70	185.36	213.73	228.89	244.81	259.01	274.03	289.92	306.74	99
75	12.09	15.11	19.56	24.22	27.17	32.02	36.19	40.53	50.22	60.29	72.03	85.60	101.08	118.48	137.78	158.47	170.70	183.37	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	100
76	12.37	16.78	21.55	26.46	30.64	35.11	39.74	48.63	59.37	71.02	84.47	99.84	117.11	136.28	157.32	170.70	183.37	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	101
77	12.69	18.09	23.61	29.32	34.08	38.96	47.09	58.11	65.28	81.21	96.23	113.14	131.94	152.58	168.84	183.37	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	102
78	13.41	19.37	25.81	33.07	38.20	45.60	56.88	64.72	81.21	96.23	113.14	131.94	152.58	168.84	183.37	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	103
79	14.37	20.98	28.71	37.45	44.16	55.67	64.17	80.18	86.92	102.89	120.70	140.31	160.41	181.37	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	104
80	15.38	23.25	32.36	42.76	54.49	63.61	79.16	86.28	99.21	116.66	135.91	155.67	177.19	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	105
81	16.65	26.15	37.04	49.34	63.07	78.16	85.64	98.57	112.09	130.92	150.30	176.12	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	106
82	18.37	29.97	42.95	57.33	73.09	85.01	97.94	111.54	118.17	150.17	176.12	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	481.56	107
83	21.06	34.96	50.16	66.64	84.39	97.32	110.99	117.73	150.04	176.12	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	481.56	509.49	108
84	25.11	41.26	58.58	77.07	96.70	110.46	117.28	149.74	176.12	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	481.56	509.49	539.05	109
85	30.66	48.88	68.18	88.54	109.91	116.84	149.44	176.12	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	481.56	509.49	539.05	570.31	110
86	37.59	57.94	79.17	101.28	116.40	149.14	175.92	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	111
87	45.84	68.73	92.10	115.96	148.85	175.73	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	112
88	55.78	81.87	107.77	148.55	175.53	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	113
89	68.54	98.22	143.09	175.33	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	114
90	85.73	136.72	171.69	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	115
91	128.40	167.44	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	116
92	161.90	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	117
93	213.73	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	118
94	228.89	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	947.29	119
95	244.81	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	947.29	1000.00	120
96	259.01	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	947.29	1000.00		
97	274.03	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	947.29	1000.00			
98	289.92	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	947.29	1000.00				
99	306.74	324.53	343.35	363.27	384.34	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	947.29	1000.00					

Valuation Basic Table -- Male -- Nonsmoker -- 1000qx

Issue	Duration																									Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
0	0.48	0.29	0.29	0.20	0.20	0.21	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.41	0.53	0.66	0.77	0.83	0.85	0.85	0.85	0.85	0.85	0.85	0.86	25
1	0.29	0.29	0.20	0.20	0.21	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.37	0.50	0.63	0.73	0.81	0.84	0.85	0.85	0.85	0.85	0.85	0.86	0.89	26
2	0.23	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.35	0.47	0.60	0.70	0.78	0.83	0.84	0.85	0.85	0.85	0.85	0.86	0.88	0.93	27
3	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.34	0.46	0.58	0.68	0.76	0.82	0.84	0.85	0.85	0.85	0.85	0.86	0.87	0.90	0.91	28
4	0.20	0.21	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.34	0.45	0.58	0.68	0.76	0.82	0.84	0.85	0.85	0.85	0.85	0.86	0.87	0.88	0.88	0.88	29
5	0.21	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.33	0.45	0.57	0.68	0.76	0.82	0.84	0.85	0.85	0.85	0.85	0.86	0.86	0.86	0.86	0.86	0.86	30
6	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.33	0.44	0.57	0.68	0.76	0.82	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	31
7	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.33	0.44	0.57	0.68	0.76	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	32
8	0.24	0.25	0.27	0.28	0.30	0.31	0.33	0.43	0.56	0.68	0.76	0.81	0.82	0.82	0.82	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.84	33
9	0.25	0.27	0.28	0.30	0.31	0.33	0.43	0.56	0.68	0.76	0.81	0.81	0.81	0.81	0.81	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.84	0.85	34
10	0.27	0.28	0.30	0.31	0.33	0.43	0.56	0.67	0.76	0.80	0.80	0.80	0.80	0.80	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.84	0.85	0.87	35
11	0.28	0.30	0.31	0.33	0.43	0.56	0.67	0.76	0.79	0.79	0.79	0.79	0.79	0.80	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.84	0.85	0.87	0.91	36
12	0.30	0.31	0.33	0.43	0.56	0.67	0.76	0.78	0.78	0.78	0.78	0.78	0.79	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.84	0.85	0.87	0.91	0.95	37
13	0.31	0.33	0.43	0.56	0.67	0.76	0.77	0.77	0.77	0.77	0.77	0.79	0.80	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.84	0.85	0.87	0.91	0.95	1.02	38
14	0.33	0.42	0.56	0.67	0.76	0.77	0.77	0.77	0.77	0.77	0.77	0.79	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.84	0.85	0.87	0.91	0.95	1.02	1.09	39
15	0.39	0.56	0.67	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.78	0.80	0.83	0.83	0.83	0.83	0.83	0.83	0.84	0.85	0.87	0.91	0.95	1.02	1.09	1.16	40
16	0.56	0.67	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.76	0.78	0.81	0.82	0.83	0.83	0.83	0.83	0.84	0.85	0.87	0.91	0.95	1.02	1.09	1.16	1.26	41
17	0.67	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.75	0.77	0.78	0.80	0.80	0.80	0.80	0.80	0.84	0.85	0.87	0.91	0.95	1.02	1.09	1.16	1.26	1.39	42
18	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.75	0.75	0.76	0.77	0.77	0.79	0.80	0.80	0.85	0.86	0.91	0.95	1.02	1.09	1.16	1.26	1.39	1.53	43
19	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.72	0.72	0.72	0.73	0.73	0.74	0.77	0.80	0.82	0.86	0.91	0.95	1.02	1.08	1.16	1.26	1.39	1.53	1.71	44
20	0.66	0.66	0.66	0.66	0.66	0.67	0.67	0.68	0.68	0.68	0.69	0.70	0.72	0.76	0.82	0.86	0.90	0.95	1.02	1.08	1.16	1.26	1.39	1.53	1.71	1.91	45
21	0.60	0.60	0.60	0.60	0.61	0.62	0.63	0.63	0.64	0.65	0.66	0.69	0.72	0.77	0.84	0.90	0.95	1.02	1.08	1.16	1.26	1.39	1.53	1.71	1.91	2.10	46
22	0.55	0.55	0.55	0.56	0.58	0.58	0.59	0.60	0.60	0.63	0.65	0.68	0.72	0.79	0.87	0.95	1.02	1.08	1.16	1.26	1.39	1.53	1.71	1.91	2.10	2.31	47
23	0.49	0.49	0.51	0.53	0.55	0.56	0.57	0.58	0.59	0.62	0.65	0.68	0.74	0.81	0.91	1.01	1.08	1.16	1.26	1.39	1.53	1.71	1.91	2.10	2.31	2.42	48
24	0.43	0.44	0.48	0.51	0.54	0.55	0.56	0.58	0.60	0.63	0.67	0.71	0.77	0.85	0.97	1.07	1.16	1.26	1.39	1.53	1.71	1.91	2.10	2.29	2.42	2.55	49
25	0.35	0.40	0.46	0.51	0.53	0.55	0.57	0.58	0.62	0.66	0.70	0.75	0.82	0.91	1.03	1.15	1.26	1.39	1.53	1.71	1.91	2.10	2.27	2.42	2.55	2.74	50
26	0.32	0.39	0.46	0.52	0.54	0.56	0.57	0.61	0.64	0.69	0.74	0.80	0.88	0.99	1.11	1.26	1.39	1.53	1.71	1.91	2.10	2.27	2.41	2.55	2.74	2.97	51
27	0.30	0.39	0.46	0.53	0.56	0.57	0.61	0.64	0.68	0.74	0.80	0.87	0.96	1.09	1.21	1.38	1.53	1.71	1.90	2.10	2.26	2.40	2.55	2.74	2.97	3.29	52
28	0.30	0.39	0.47	0.53	0.57	0.60	0.63	0.68	0.73	0.79	0.87	0.96	1.06	1.20	1.34	1.53	1.70	1.89	2.10	2.25	2.40	2.55	2.74	2.97	3.29	3.65	53
29	0.29	0.39	0.48	0.54	0.60	0.63	0.68	0.73	0.78	0.87	0.96	1.06	1.17	1.30	1.48	1.69	1.88	2.09	2.25	2.39	2.55	2.74	2.97	3.29	3.65	4.08	54
30	0.28	0.39	0.47	0.55	0.62	0.68	0.73	0.78	0.86	0.95	1.04	1.14	1.26	1.42	1.61	1.84	2.04	2.22	2.39	2.55	2.74	2.97	3.27	3.65	4.08	4.58	55
31	0.27	0.38	0.47	0.55	0.63	0.71	0.78	0.84	0.91	0.99	1.09	1.22	1.38	1.57	1.80	2.01	2.20	2.37	2.54	2.73	2.95	3.25	3.64	4.08	4.57	5.15	56
32	0.26	0.36	0.47	0.55	0.64	0.72	0.80	0.87	0.94	1.02	1.14	1.31	1.53	1.76	1.99	2.18	2.37	2.54	2.73	2.95	3.24	3.64	4.06	4.53	5.10	5.70	57
33	0.27	0.38	0.48	0.58	0.67	0.76	0.85	0.91	0.98	1.07	1.21	1.42	1.68	1.92	2.14	2.34	2.53	2.73	2.95	3.23	3.63	4.04	4.50	5.04	5.62	6.20	58
34	0.29	0.39	0.51	0.60	0.71	0.80	0.90	0.97	1.05	1.16	1.34	1.57	1.83	2.09	2.31	2.50	2.72	2.95	3.23	3.59	4.00	4.46	4.99	5.56	6.14	6.70	59
35	0.31	0.41	0.52	0.63	0.73	0.84	0.94	1.04	1.15	1.30	1.49	1.72	1.98	2.24	2.48	2.70	2.95	3.23	3.58	3.96	4.41	4.93	5.49	6.07	6.68	7.31	60
36	0.32	0.43	0.54	0.65	0.77	0.87	0.99	1.14	1.29	1.47	1.66	1.89	2.15	2.43	2.69	2.95	3.23	3.56	3.94	4.35	4.88	5.43	6.01	6.65	7.31	8.15	61
37	0.34	0.44	0.56	0.67	0.78	0.91	1.07	1.26	1.45	1.63	1.82	2.03	2.31	2.63	2.93	3.23	3.55	3.91	4.33	4.81	5.36	5.94	6.58	7.29	8.15	9.26	62
38	0.37	0.49	0.61	0.71	0.83	0.98	1.18	1.40	1.61	1.79	1.97	2.20	2.49	2.82	3.17	3.52	3.90	4.31	4.78	5.29	5.87	6.52	7.26	8.12	9.25	10.55	63
39	0.40	0.54	0.66	0.77	0.90	1.08	1.32	1.54	1.76	1.94	2.13	2.38	2.70	3.06	3.44	3.85	4.27	4.76	5.27	5.81	6.45	7.22	8.09	9.21	10.49	11.88	64
40	0.43	0.58	0.71	0.83	0.99	1.21	1.46	1.70	1.89	2.09	2.32	2.62	2.96	3.34	3.76	4.21	4.71	5.24	5.79	6.39	7.16	8.04	9.15	10.37	11.71	12.88	65
41	0.45	0.63	0.79	0.94	1.12	1.36	1.62	1.84	2.06	2.29	2.57	2.91	3.28	3.69	4.17	4.68	5.20	5.76	6.38	7.09	7.99	9.08	10.27	11.65	12.87	13.89	66
42	0.48	0.70	0.89	1.06	1.26	1.50	1.76	2.00	2.25	2.53	2.86	3.23	3.64	4.13	4.68	5.16	5.70	6.34	7.08	7.92	8.99	10.17	11.50	12.80	13.88	15.24	67
43	0.51	0.73	0.95	1.14	1.35	1.59	1.87	2.14	2.44	2.76	3.13	3.56	4.08	4.62	5.15	5.61	6.28	7.03	7.90	8.89	10.06	11.30	12.59	13.80	15.22	16.81	68
44	0.54	0.78	1.00	1.20	1.41	1.68	1.99	2.33	2.65	3.01	3.41	3.98	4.56	5.10	5.59	6.19	6.96	7.85	8.85	9.93	11.15	12.42	13.69	15.01	16.63	18.68	69
45	0.60	0.84	1.05	1.26	1.51	1.80	2.16	2.53	2.92	3.29	3.79	4.46	5.03	5.52	6.07	6.85	7.77	8.78	9.86	10.99	12.23	13.50	14.77	16.51	18.48	21.03	70
46	0.65	0.88	1.09	1.32	1.61	1.97	2.37	2.80	3.22	3.67	4.26	4.93	5.48	5.97	6.76	7.69	8.73	9.84	10.97	12.11	13.34	14.58	16.25	18.37	20.77	23.76	71
47	0.71	0.92	1.14	1.41	1.75	2.14	2.60	3.08	3.55	4.12	4.72	5.37	5.92	6.59	7.57	8.66	9.81	10.97	12.11	13.23	14.39	16.00	18.09	20.66	23.47	26.68	72
48	0.77	0.99	1.24	1.54	1.89	2.31	2.81	3.35	3.89	4.56	5.14	5.80	6.46	7.35	8.52	9.76	10.95	12.11	13.23	14.26	15.77	17.81	20.35	23.34	26.34	29.70	73
49	0.81	1.08	1.37	1.69	2.06	2.50	3.03	3.65	4.22	4.88	5.55	6.33	7.21	8.27	9.57	10.93	12.11	13.23	14.24	15.55	17.56	20.06	22.99	26.21	29.30	32.86	74

Valuation Basic Table -- Male -- Nonsmoker -- 1000qx

Issue	Duration																									Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
50	0.89	1.19	1.51	1.86	2.23	2.69	3.28	3.93	4.52	5.20	6.03	7.06	8.19	9.43	10.73	12.11	13.21	14.21	15.49	17.33	19.78	22.67	25.81	29.14	32.37	36.25	75
51	0.98	1.34	1.70	2.06	2.44	2.92	3.51	4.16	4.84	5.63	6.68	8.02	9.34	10.63	11.79	13.19	14.17	15.41	17.25	19.52	22.36	25.46	28.72	32.22	35.74	40.08	76
52	1.07	1.49	1.90	2.29	2.68	3.14	3.74	4.45	5.25	6.26	7.56	9.12	10.52	11.42	12.79	14.13	15.33	17.15	19.40	22.08	25.13	28.35	31.78	35.59	39.52	44.47	77
53	1.11	1.61	2.07	2.52	2.94	3.43	4.09	4.93	5.86	7.10	8.62	10.29	11.31	12.45	13.81	15.25	17.05	19.28	21.68	24.83	27.99	31.37	35.12	39.38	43.88	49.61	78
54	1.15	1.73	2.27	2.74	3.18	3.75	4.54	5.55	6.64	8.09	9.70	11.04	12.32	13.67	15.17	16.95	19.16	21.60	24.37	27.68	31.01	34.69	38.88	43.74	48.96	55.56	79
55	1.19	1.86	2.46	2.94	3.44	4.14	5.11	6.28	7.50	9.04	10.34	11.95	13.52	15.09	16.85	19.04	21.52	24.15	27.15	30.67	34.30	38.42	43.20	48.84	54.86	62.05	80
56	1.24	1.99	2.63	3.18	3.77	4.63	5.77	7.08	8.37	9.62	11.17	13.01	14.90	16.75	18.92	21.50	24.13	26.85	30.02	33.88	37.95	42.67	48.23	54.71	61.28	69.45	81
57	1.29	2.09	2.81	3.47	4.20	5.21	6.49	7.88	9.20	10.72	12.52	14.53	16.53	18.80	21.47	24.10	26.82	29.67	33.16	37.50	42.15	47.64	54.05	61.13	68.60	77.12	82
58	1.39	2.23	3.02	3.81	4.73	5.88	7.23	8.63	9.93	11.64	13.68	16.12	18.55	21.18	24.06	26.78	29.64	32.76	36.68	41.66	47.07	53.40	60.40	68.45	76.20	85.36	83
59	1.52	2.39	3.28	4.22	5.31	6.58	7.98	9.34	10.60	12.52	14.85	17.75	20.90	23.74	26.72	29.58	32.71	36.24	40.74	46.54	52.77	59.68	67.64	76.05	84.35	94.49	84
60	1.70	2.59	3.57	4.67	5.91	7.28	8.70	10.04	11.29	13.46	16.18	19.44	23.16	26.36	29.51	32.64	36.17	40.24	45.50	52.18	58.99	66.84	75.13	84.16	93.33	104.68	85
61	1.91	2.83	3.89	5.11	6.51	7.98	9.41	10.72	11.98	14.49	17.53	21.01	24.85	29.11	32.55	36.08	40.16	44.92	50.99	58.34	66.08	74.26	83.18	93.15	103.43	115.99	86
62	2.15	3.10	4.25	5.60	7.13	8.70	10.17	11.52	12.86	15.66	18.90	22.50	26.53	31.12	35.98	40.05	44.81	50.34	57.00	65.38	73.44	82.24	92.08	103.26	114.64	128.32	87
63	2.30	3.42	4.74	6.23	7.86	9.52	11.09	12.56	14.07	17.07	20.47	24.27	28.62	33.70	39.68	44.68	50.21	56.25	63.86	72.68	81.36	91.09	102.12	114.49	126.86	141.51	88
64	2.41	3.76	5.27	6.91	8.68	10.45	12.17	13.84	15.55	18.72	22.33	26.48	31.32	37.04	43.89	50.05	56.09	63.00	70.98	80.54	90.14	101.04	113.25	126.73	139.93	155.38	89
65	2.47	4.09	5.83	7.68	9.59	11.51	13.38	15.24	17.17	20.57	24.52	29.15	34.62	41.18	49.01	55.90	62.81	70.02	78.63	89.25	100.02	112.09	125.40	139.84	153.70	169.81	90
66	2.51	4.61	6.53	8.52	10.69	12.74	14.71	16.73	18.93	22.65	27.07	32.29	38.56	46.04	54.64	62.65	69.82	77.55	87.07	98.96	110.89	124.07	138.34	153.59	167.99	183.19	91
67	2.68	5.20	7.30	9.45	11.94	14.09	16.19	18.35	20.81	24.97	29.95	35.94	43.08	51.30	61.01	69.66	77.36	85.90	96.59	109.74	122.77	136.88	151.96	167.89	181.24	197.07	92
68	3.11	5.85	8.17	10.49	13.07	15.65	18.19	20.72	23.29	28.04	33.79	40.65	48.56	57.92	68.29	77.20	85.71	95.31	107.13	121.50	135.46	150.38	166.14	181.16	195.01	211.63	93
69	3.52	6.59	9.15	11.64	13.69	17.46	20.03	22.50	25.41	30.83	37.32	44.82	53.70	63.56	74.74	85.57	95.12	105.75	118.64	134.08	148.85	164.43	179.30	194.94	211.55	226.96	94
70	3.96	7.42	10.23	12.92	14.29	19.35	21.73	24.36	29.77	36.13	43.48	52.18	61.86	72.82	85.45	94.99	105.57	117.15	130.97	147.35	162.76	177.45	192.91	211.50	226.83	242.98	95
71	5.12	8.37	11.45	13.60	16.68	20.98	23.34	29.46	33.26	40.29	48.58	57.85	68.36	80.47	94.57	105.45	116.98	129.35	143.97	161.14	175.68	190.97	211.47	226.76	242.88	257.32	96
72	6.61	9.43	12.82	15.90	19.04	22.34	25.90	29.84	34.37	42.01	50.51	60.20	71.41	84.47	99.56	116.78	129.20	142.22	157.49	173.96	189.09	211.44	226.72	242.86	257.32	272.49	97
73	7.76	11.57	14.98	18.03	20.88	23.79	27.05	32.84	36.34	44.28	53.29	63.73	75.93	90.04	106.19	124.37	142.10	155.63	170.07	187.28	211.41	226.69	242.80	257.32	272.49	288.55	98
74	9.19	12.82	16.47	19.94	23.05	25.96	31.36	35.20	39.28	48.05	57.91	69.45	82.84	98.18	115.49	134.77	155.54	168.11	183.15	211.38	226.66	242.76	257.32	272.49	288.55	305.55	99
75	10.86	13.68	17.86	22.29	25.20	29.93	34.07	38.44	47.98	57.38	68.97	82.28	97.55	114.77	133.96	155.54	168.06	181.09	211.35	226.63	242.72	257.32	272.49	288.55	305.55	323.54	100
76	11.16	15.26	19.75	24.44	28.52	32.92	37.53	46.25	56.86	68.49	81.73	96.92	114.06	133.15	154.18	167.80	180.79	211.32	226.60	242.68	257.32	272.49	288.55	305.55	323.54	342.58	101
77	11.50	16.52	21.73	27.19	31.83	36.65	44.61	55.42	62.68	78.49	93.31	110.06	128.75	149.34	165.74	180.53	211.00	226.57	242.64	257.32	272.49	288.55	305.55	323.54	342.58	362.74	102
78	12.21	17.77	23.85	30.78	35.81	43.03	54.04	61.90	78.17	93.21	109.94	128.60	149.17	165.54	180.29	210.72	226.26	242.60	257.28	272.49	288.55	305.55	323.54	342.58	362.74	384.06	103
79	13.14	19.33	26.64	34.99	41.54	52.70	61.15	76.89	83.87	99.88	117.52	137.03	157.11	178.13	210.48	225.99	242.31	256.96	272.45	288.55	305.55	323.54	342.58	362.74	384.06	406.63	104
80	14.13	21.51	30.14	40.09	51.42	60.40	75.65	82.96	95.96	113.48	132.60	152.32	173.85	210.27	225.76	242.05	256.69	272.16	288.51	305.55	323.54	342.58	362.74	384.06	406.63	430.21	105
81	15.38	24.31	34.66	46.46	59.74	74.47	82.09	95.04	108.69	127.63	146.94	172.66	210.09	225.56	241.84	256.46	271.91	288.25	305.52	323.54	342.58	362.74	384.06	406.63	430.21	455.16	106
82	17.06	28.00	40.37	54.20	69.48	81.26	94.17	107.84	114.86	146.71	172.53	209.93	225.39	241.65	256.26	271.70	288.03	305.29	323.51	342.58	362.74	384.06	406.63	430.21	455.16	481.56	107
83	19.65	32.82	47.35	63.24	80.51	93.33	107.03	114.13	146.18	172.41	209.78	225.23	241.49	256.08	271.52	287.84	305.10	323.32	342.55	362.74	384.06	406.63	430.21	455.16	481.56	509.49	108
84	23.55	38.90	55.52	73.42	92.51	106.26	113.42	145.53	171.99	209.65	225.09	241.34	255.93	271.36	287.68	304.94	323.16	342.41	362.71	384.06	406.63	430.21	455.16	481.56	509.49	539.05	109
85	28.89	46.29	64.88	84.51	105.50	112.74	144.92	171.60	209.19	224.97	241.21	255.80	271.22	287.54	304.80	323.03	342.28	362.61	384.05	406.63	430.21	455.16	481.56	509.49	539.05	570.31	110
86	35.59	54.95	75.38	97.01	112.09	144.33	171.06	208.76	224.52	241.09	255.67	271.10	287.42	304.68	322.91	342.18	362.53	384.00	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	111
87	43.42	65.29	88.02	111.44	143.79	170.55	208.38	224.11	240.66	255.57	270.99	287.30	304.57	322.81	342.08	362.45	383.95	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	112
88	52.86	78.07	103.36	143.23	170.08	208.02	223.74	240.27	255.17	270.89	287.21	304.47	322.72	342.00	362.39	383.91	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	113
89	65.22	94.02	137.72	169.60	207.71	223.40	239.92	254.80	270.53	287.12	304.38	322.63	341.93	362.33	383.88	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	114
90	81.90	131.34	165.80	207.39	223.09	239.59	254.47	270.19	286.79	304.31	322.56	341.87	362.29	383.85	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	115
91	123.13	161.42	207.08	222.79	239.30	254.17	269.89	286.49	304.02	322.50	341.81	362.24	383.82	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	116
92	155.82	206.76	222.48	239.02	253.90	269.62	286.22	303.77	322.26	341.76	362.20	383.80	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	117
93	206.45	222.18	238.73	253.64	269.37	285.98	303.53	322.05	341.57	362.17	383.78	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	118
94	221.88	238.44	253.37	269.12	285.76	303.32	321.85	341.41	362.03	383.76	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	947.29	119
95	238.15	253.10	268.88	285.54	303.12	321.67	341.25	361.92	383.70	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	947.29	1000.00	120
96	252.83	268.63	285.32	302.93	321.51	341.11	361.81	383.64	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	947.29	1000.00		
97	268.38	285.10	302.74	321.35	340.98	361.71	383.58	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	947.29	1000.00			
98	284.88	302.55	321.19	340.86	361.62	383.53	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	947.29	1000.00				
99	302.36	321.03	340.73	361.54	383.48	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	947.29	1000.00					

Valuation Basic Table -- Male -- Smoker -- 1000qx

Issue	Duration																									Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
0	0.48	0.29	0.29	0.20	0.20	0.21	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.41	0.53	0.70	0.88	1.01	1.11	1.17	1.22	1.28	1.34	1.41	1.49	25
1	0.29	0.29	0.20	0.20	0.21	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.37	0.50	0.67	0.84	0.99	1.08	1.15	1.22	1.28	1.34	1.41	1.49	1.57	26
2	0.23	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.35	0.47	0.64	0.80	0.95	1.07	1.15	1.22	1.28	1.34	1.41	1.49	1.56	1.66	27
3	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.34	0.46	0.62	0.78	0.93	1.06	1.15	1.22	1.28	1.34	1.41	1.49	1.54	1.61	1.66	28
4	0.20	0.21	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.34	0.45	0.62	0.78	0.93	1.06	1.14	1.22	1.28	1.34	1.41	1.49	1.54	1.59	1.61	1.64	29
5	0.21	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.33	0.45	0.61	0.78	0.93	1.06	1.14	1.22	1.28	1.34	1.41	1.49	1.54	1.56	1.58	1.60	1.62	30
6	0.22	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.33	0.44	0.61	0.78	0.93	1.06	1.14	1.22	1.27	1.33	1.41	1.49	1.51	1.53	1.55	1.57	1.59	1.61	31
7	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.33	0.44	0.61	0.78	0.93	1.06	1.14	1.20	1.27	1.31	1.39	1.47	1.49	1.51	1.53	1.55	1.57	1.59	1.61	32
8	0.24	0.25	0.27	0.28	0.30	0.31	0.33	0.43	0.60	0.78	0.93	1.05	1.13	1.19	1.25	1.30	1.38	1.46	1.49	1.51	1.53	1.55	1.57	1.59	1.61	1.65	33
9	0.25	0.27	0.28	0.30	0.31	0.33	0.43	0.60	0.78	0.93	1.05	1.13	1.19	1.24	1.29	1.35	1.44	1.49	1.51	1.53	1.55	1.57	1.59	1.61	1.65	1.71	34
10	0.27	0.28	0.30	0.31	0.33	0.43	0.60	0.77	0.93	1.05	1.13	1.18	1.22	1.27	1.35	1.42	1.49	1.51	1.53	1.55	1.57	1.59	1.61	1.65	1.71	1.75	35
11	0.28	0.30	0.31	0.33	0.43	0.60	0.77	0.93	1.03	1.11	1.16	1.21	1.26	1.33	1.41	1.48	1.51	1.53	1.55	1.57	1.59	1.61	1.65	1.71	1.75	1.85	36
12	0.30	0.31	0.33	0.43	0.60	0.77	0.93	1.03	1.10	1.15	1.20	1.24	1.32	1.41	1.48	1.51	1.53	1.55	1.57	1.59	1.61	1.65	1.71	1.75	1.85	1.95	37
13	0.31	0.33	0.43	0.60	0.77	0.93	1.02	1.09	1.14	1.18	1.23	1.30	1.38	1.46	1.51	1.53	1.55	1.57	1.59	1.61	1.65	1.71	1.75	1.85	1.95	2.10	38
14	0.33	0.42	0.60	0.77	0.93	1.02	1.08	1.12	1.17	1.21	1.27	1.36	1.44	1.51	1.53	1.55	1.57	1.59	1.61	1.65	1.71	1.75	1.85	1.95	2.10	2.25	39
15	0.39	0.60	0.77	0.93	1.01	1.05	1.11	1.15	1.20	1.26	1.35	1.41	1.50	1.53	1.55	1.57	1.59	1.61	1.65	1.71	1.75	1.85	1.95	2.10	2.25	2.43	40
16	0.60	0.77	0.93	1.01	1.05	1.09	1.14	1.18	1.24	1.31	1.38	1.45	1.50	1.55	1.57	1.59	1.61	1.65	1.70	1.75	1.85	1.95	2.10	2.25	2.43	2.66	41
17	0.77	0.93	1.01	1.04	1.08	1.14	1.18	1.22	1.30	1.35	1.40	1.45	1.48	1.52	1.54	1.56	1.65	1.70	1.75	1.84	1.94	2.10	2.25	2.43	2.66	2.94	42
18	0.93	0.99	1.03	1.07	1.11	1.15	1.21	1.27	1.32	1.35	1.38	1.42	1.45	1.50	1.56	1.57	1.70	1.74	1.84	1.94	2.10	2.25	2.43	2.66	2.94	3.27	43
19	0.95	0.99	1.03	1.07	1.11	1.16	1.22	1.27	1.30	1.32	1.35	1.37	1.42	1.49	1.57	1.64	1.74	1.84	1.94	2.09	2.25	2.42	2.66	2.94	3.27	3.67	44
20	0.93	0.97	1.01	1.05	1.09	1.16	1.19	1.22	1.25	1.27	1.30	1.33	1.40	1.50	1.64	1.74	1.84	1.94	2.09	2.25	2.42	2.65	2.94	3.27	3.67	4.09	45
21	0.89	0.93	0.96	1.00	1.06	1.09	1.14	1.15	1.19	1.22	1.27	1.33	1.42	1.54	1.69	1.84	1.94	2.09	2.25	2.42	2.65	2.94	3.27	3.67	4.09	4.48	46
22	0.84	0.88	0.91	0.97	1.01	1.04	1.07	1.10	1.13	1.20	1.26	1.33	1.43	1.58	1.77	1.94	2.09	2.25	2.42	2.65	2.94	3.27	3.67	4.09	4.48	4.91	47
23	0.79	0.82	0.88	0.94	0.98	1.03	1.05	1.08	1.13	1.20	1.28	1.37	1.50	1.65	1.87	2.08	2.25	2.42	2.65	2.94	3.27	3.67	4.06	4.48	4.91	5.13	48
24	0.71	0.77	0.84	0.92	0.98	1.02	1.05	1.10	1.16	1.25	1.33	1.43	1.56	1.75	2.01	2.22	2.42	2.65	2.94	3.27	3.66	4.06	4.48	4.87	5.13	5.39	49
25	0.61	0.70	0.82	0.93	0.99	1.04	1.08	1.13	1.21	1.31	1.41	1.52	1.68	1.88	2.13	2.41	2.65	2.94	3.27	3.65	4.06	4.48	4.84	5.13	5.39	5.77	50
26	0.56	0.69	0.83	0.96	1.02	1.06	1.11	1.19	1.27	1.39	1.51	1.64	1.81	2.06	2.32	2.64	2.94	3.27	3.64	4.06	4.48	4.84	5.13	5.39	5.77	6.24	51
27	0.53	0.70	0.86	0.98	1.06	1.11	1.19	1.27	1.37	1.51	1.64	1.80	1.98	2.27	2.53	2.91	3.27	3.63	4.06	4.48	4.83	5.13	5.39	5.77	6.24	6.88	52
28	0.54	0.73	0.89	1.01	1.11	1.17	1.25	1.35	1.47	1.63	1.80	1.98	2.21	2.51	2.82	3.23	3.62	4.06	4.48	4.82	5.13	5.39	5.77	6.24	6.88	7.62	53
29	0.53	0.74	0.91	1.04	1.17	1.25	1.35	1.47	1.59	1.80	1.98	2.21	2.44	2.75	3.13	3.60	4.06	4.48	4.81	5.13	5.39	5.77	6.24	6.88	7.62	8.48	54
30	0.54	0.75	0.91	1.07	1.22	1.35	1.47	1.59	1.76	1.98	2.17	2.40	2.66	3.00	3.44	3.93	4.39	4.80	5.13	5.39	5.77	6.24	6.88	7.62	8.48	9.40	55
31	0.51	0.74	0.92	1.10	1.27	1.44	1.59	1.73	1.89	2.08	2.29	2.58	2.93	3.35	3.84	4.32	4.74	5.13	5.39	5.77	6.24	6.88	7.62	8.48	9.38	10.44	56
32	0.50	0.71	0.93	1.11	1.30	1.47	1.66	1.82	1.97	2.15	2.42	2.79	3.27	3.78	4.27	4.71	5.12	5.39	5.77	6.24	6.88	7.62	8.48	9.38	10.44	11.41	57
33	0.54	0.76	0.97	1.18	1.38	1.57	1.76	1.92	2.08	2.28	2.60	3.05	3.62	4.15	4.63	5.07	5.39	5.77	6.24	6.88	7.62	8.48	9.37	10.44	11.41	12.25	58
34	0.58	0.80	1.04	1.24	1.47	1.68	1.89	2.07	2.25	2.50	2.88	3.39	3.96	4.53	5.01	5.39	5.77	6.24	6.88	7.62	8.48	9.37	10.44	11.41	12.25	13.06	59
35	0.63	0.85	1.09	1.31	1.54	1.79	2.00	2.23	2.49	2.82	3.24	3.75	4.32	4.90	5.39	5.77	6.24	6.88	7.62	8.48	9.37	10.44	11.41	12.25	13.06	14.06	60
36	0.67	0.89	1.13	1.37	1.62	1.85	2.12	2.45	2.80	3.21	3.63	4.13	4.70	5.32	5.77	6.24	6.88	7.62	8.48	9.37	10.44	11.41	12.25	13.06	14.06	15.47	61
37	0.71	0.91	1.17	1.42	1.67	1.95	2.30	2.73	3.16	3.57	3.99	4.47	5.09	5.77	6.24	6.88	7.62	8.48	9.37	10.44	11.41	12.25	13.06	14.06	15.47	17.33	62
38	0.76	1.02	1.29	1.52	1.77	2.11	2.56	3.06	3.53	3.95	4.36	4.86	5.49	6.24	6.88	7.62	8.48	9.37	10.44	11.41	12.25	13.06	14.06	15.47	17.33	19.48	63
39	0.84	1.14	1.40	1.63	1.92	2.33	2.87	3.38	3.88	4.30	4.72	5.28	5.99	6.78	7.62	8.48	9.37	10.44	11.41	12.25	13.06	14.06	15.47	17.33	19.48	21.62	64
40	0.90	1.23	1.52	1.79	2.14	2.64	3.19	3.74	4.20	4.67	5.19	5.85	6.60	7.45	8.35	9.36	10.44	11.41	12.25	13.06	14.06	15.47	17.33	19.48	21.62	23.01	65
41	0.96	1.33	1.70	2.02	2.43	2.98	3.57	4.09	4.59	5.14	5.78	6.52	7.35	8.25	9.32	10.44	11.41	12.25	13.06	14.06	15.47	17.33	19.48	21.62	23.01	24.34	66
42	1.02	1.49	1.91	2.30	2.75	3.30	3.89	4.46	5.04	5.72	6.45	7.27	8.20	9.26	10.44	11.41	12.25	13.06	14.06	15.47	17.33	19.48	21.62	23.01	24.34	26.19	67
43	1.08	1.57	2.05	2.48	2.95	3.51	4.16	4.81	5.50	6.28	7.09	8.07	9.21	10.41	11.41	12.25	13.06	14.06	15.47	17.33	19.48	21.62	23.01	24.34	26.19	28.31	68
44	1.16	1.69	2.17	2.62	3.12	3.73	4.45	5.24	6.02	6.88	7.78	9.05	10.35	11.41	12.25	13.06	14.06	15.47	17.33	19.48	21.62	23.01	24.34	26.19	28.31	30.83	69
45	1.29	1.81	2.30	2.77	3.34	4.02	4.87	5.74	6.66	7.57	8.69	10.20	11.41	12.25	13.06	14.06	15.47	17.33	19.48	21.62	23.01	24.34	26.19	28.31	30.83	33.98	70
46	1.42	1.92	2.40	2.91	3.58	4.39	5.30	6.30	7.29	8.35	9.66	11.12	12.25	13.06	14.06	15.47	17.33	19.48	21.62	23.01	24.34	26.19	28.31	30.83	33.98	37.58	71
47	1.56	2.03	2.51	3.12	3.90	4.78	5.80	6.90	7.97	9.28	10.57	11.94	13.06	14.06	15.47	17.33	19.48	21.62	23.01	24.34	26.19	28.31	30.83	33.98	37.58	41.30	72
48	1.71	2.20	2.76	3.42	4.21	5.14	6.25	7.45	8.66	10.14	11.34	12.73	14.06	15.47	17.33	19.48	21.62	23.01	24.34	26.19	28.31	30.83	33.98	37.58	41.30	44.96	73
49	1.83	2.43	3.06	3.78	4.59	5.55	6.72	8.06	9.30	10.73	12.10	13.69	15.45	17.33	19.48	21.62	23.01	24.34	26.19	28.31	30.83	33.98	37.58	41.30	44.96	48.63	74

Valuation Basic Table -- Male -- Smoker -- 1000qx

Issue	Duration																									Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
50	2.02	2.70	3.41	4.16	4.98	5.97	7.25	8.62	9.88	11.32	12.98	15.05	17.27	19.48	21.62	23.01	24.34	26.19	28.31	30.83	33.98	37.58	41.30	44.96	48.63	52.82	75
51	2.25	3.05	3.84	4.65	5.46	6.48	7.71	9.09	10.49	12.10	14.19	16.85	19.38	21.62	23.01	24.34	26.19	28.31	30.83	33.98	37.58	41.30	44.96	48.63	52.82	57.47	76
52	2.50	3.43	4.34	5.17	6.00	6.96	8.20	9.66	11.28	13.30	15.85	18.88	21.48	22.99	24.34	26.19	28.31	30.83	33.98	37.58	41.30	44.96	48.63	52.82	57.47	62.74	77
53	2.62	3.74	4.76	5.70	6.57	7.58	8.93	10.63	12.47	14.92	17.83	20.97	22.69	24.34	26.19	28.31	30.83	33.98	37.58	41.30	44.96	48.63	52.82	57.47	62.74	68.86	78
54	2.72	4.05	5.24	6.24	7.13	8.27	9.88	11.89	14.00	16.79	19.79	22.16	24.31	26.19	28.31	30.83	33.98	37.58	41.30	44.96	48.63	52.82	57.47	62.74	68.86	75.84	79
55	2.85	4.40	5.71	6.72	7.73	9.12	11.06	13.36	15.67	18.53	20.82	23.61	26.19	28.31	30.83	33.98	37.58	41.30	44.96	48.63	52.82	57.47	62.74	68.86	75.84	83.27	80
56	2.97	4.67	6.08	7.23	8.43	10.16	12.44	15.00	17.41	19.63	22.36	25.53	28.31	30.83	33.98	37.58	41.30	44.96	48.63	52.82	57.47	62.74	68.86	75.84	83.27	91.60	81
57	3.06	4.90	6.46	7.85	9.35	11.40	13.95	16.63	19.06	21.78	24.91	28.29	30.83	33.98	37.58	41.30	44.96	48.63	52.82	57.47	62.74	68.86	75.84	83.27	91.60	99.95	82
58	3.30	5.19	6.92	8.59	10.47	12.81	15.47	18.12	20.46	23.55	27.06	30.83	33.98	37.58	41.30	44.96	48.63	52.82	57.47	62.74	68.86	75.84	83.27	91.60	99.95	108.66	83
59	3.59	5.54	7.48	9.47	11.70	14.27	16.99	19.52	21.77	25.22	29.21	33.98	37.58	41.30	44.96	48.63	52.82	57.47	62.74	68.86	75.84	83.27	91.60	99.95	108.66	118.11	84
60	3.99	5.99	8.12	10.43	12.99	15.72	18.43	20.90	23.06	26.99	31.62	37.02	41.30	44.96	48.63	52.82	57.47	62.74	68.86	75.84	83.27	91.60	99.95	108.66	118.11	129.28	85
61	4.46	6.51	8.81	11.38	14.23	17.15	19.85	22.21	24.37	28.92	34.07	39.70	44.96	48.63	52.82	57.47	62.74	68.86	75.84	83.27	91.60	99.95	108.66	118.11	129.28	141.51	86
62	5.00	7.11	9.57	12.40	15.52	18.62	21.37	23.76	26.03	31.12	36.49	42.20	48.26	52.82	57.47	62.74	68.86	75.84	83.27	91.60	99.95	108.66	118.11	129.28	141.51	154.63	87
63	5.33	7.81	10.63	13.75	17.03	20.28	23.20	25.80	28.36	33.77	39.28	45.16	51.58	57.47	62.74	68.86	75.84	83.27	91.60	99.95	108.66	118.11	129.28	141.51	154.63	168.39	88
64	5.56	8.55	11.78	15.18	18.73	22.17	25.34	28.30	31.20	36.85	42.60	48.89	55.90	62.74	68.86	75.84	83.27	91.60	99.95	108.66	118.11	129.28	141.51	154.63	168.39	182.58	89
65	5.68	9.26	12.96	16.79	20.60	24.29	27.74	31.02	34.31	40.31	46.50	53.41	61.20	68.86	75.84	83.27	91.60	99.95	108.66	118.11	129.28	141.51	154.63	168.39	182.58	196.98	90
66	5.72	10.29	14.32	18.32	22.57	26.36	29.83	33.24	36.83	43.16	49.92	57.58	66.42	75.84	83.27	91.60	99.95	108.66	118.11	129.28	140.05	154.55	168.39	182.58	196.98	209.75	91
67	6.03	11.46	15.77	20.01	24.75	28.58	32.10	35.59	39.42	46.20	53.68	62.33	72.23	83.04	91.60	99.95	108.66	118.11	129.28	139.33	153.25	167.64	182.51	196.98	209.75	222.69	92
68	6.92	12.74	17.40	21.84	26.58	31.09	35.25	39.17	42.91	50.34	58.81	68.52	79.20	91.29	99.95	108.66	118.11	129.28	138.61	151.63	166.06	181.01	196.30	209.75	222.69	235.97	93
69	7.73	14.16	19.19	23.83	27.33	33.96	37.91	41.46	45.52	53.64	63.02	73.36	85.13	97.48	108.66	118.11	129.28	137.89	151.34	164.12	179.12	194.47	208.34	222.69	235.97	249.66	94
70	8.61	15.74	21.14	25.98	27.97	36.81	40.17	43.70	51.77	60.88	71.15	82.85	95.23	108.58	118.11	129.28	137.18	146.96	163.52	176.82	192.33	206.43	222.69	235.97	249.66	264.85	95
71	11.00	17.51	23.29	26.89	32.00	39.04	42.08	48.56	56.13	65.68	76.99	89.04	102.11	116.55	129.28	136.47	144.81	161.64	175.84	189.50	203.78	222.69	235.97	249.66	264.85	277.90	96
72	14.04	19.46	25.67	30.88	35.81	40.64	45.54	50.64	56.24	66.16	77.41	89.72	103.40	118.75	135.76	142.69	160.71	172.01	188.09	200.40	222.69	235.97	249.66	264.85	277.90	291.56	97
73	16.29	23.56	29.53	34.38	38.46	42.30	46.35	54.16	57.57	67.31	78.91	91.87	106.48	122.75	140.60	159.79	170.12	187.75	198.51	222.69	235.97	249.66	264.85	277.90	291.56	305.86	98
74	19.08	25.74	31.95	37.32	41.57	45.07	52.33	56.34	60.20	74.65	89.48	96.73	112.39	129.65	148.35	168.25	185.34	197.73	222.69	235.97	249.66	264.85	277.90	291.56	305.86	320.83	99
75	22.26	27.08	34.07	40.94	44.50	50.71	55.31	59.98	72.61	88.31	95.76	111.46	128.81	147.67	167.84	182.95	197.07	222.69	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	100
76	22.42	29.60	36.97	44.06	49.46	54.83	59.86	70.63	87.16	95.29	110.42	128.41	147.44	163.87	180.59	196.42	222.69	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	101
77	22.62	31.41	39.87	48.09	54.20	59.74	69.99	86.02	95.07	109.90	124.78	143.71	159.99	178.26	195.77	222.69	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	102
78	23.51	33.08	42.89	53.39	59.62	69.18	84.90	94.85	109.39	121.55	136.23	156.20	175.96	195.12	222.69	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	103
79	24.75	35.22	46.92	59.50	68.10	83.79	94.63	108.88	119.96	132.64	152.50	173.69	194.47	222.69	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	104
80	26.02	38.36	51.99	66.82	82.70	94.41	108.37	118.40	131.13	148.38	169.44	190.16	222.69	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	105
81	27.68	42.41	58.52	75.85	94.19	107.86	116.86	130.23	146.04	164.26	189.53	222.69	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	455.16	106
82	29.99	47.74	66.68	86.63	107.36	115.34	129.33	145.25	161.92	188.90	222.69	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	455.16	481.56	107
83	33.74	54.67	76.47	98.94	113.84	128.44	144.46	159.62	188.27	222.69	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	455.16	481.56	509.49	108
84	39.45	63.29	87.65	112.36	127.56	143.68	157.35	187.64	222.69	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	455.16	481.56	509.49	539.05	109
85	47.19	73.49	100.05	126.68	142.90	155.11	187.02	222.69	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	455.16	481.56	509.49	539.05	570.31	110
86	56.64	85.33	113.87	142.13	152.90	186.40	222.69	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	111
87	67.57	99.08	129.75	150.73	185.78	222.69	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	112
88	80.36	115.44	148.59	185.16	222.69	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	113
89	96.43	135.33	184.55	222.69	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	114
90	117.67	183.94	222.69	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	115
91	171.79	219.76	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	116
92	210.92	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	117
93	235.97	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	118
94	249.66	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	947.29	119
95	264.85	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	947.29	1000.00	120
96	277.90	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	947.29	1000.00		
97	291.56	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	947.29	1000.00			
98	305.86	320.83	336.48	352.85	369.99	387.90	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	947.29	1000.00				
99	320.83	336.48	352.85	369.98	387.90	406.63	430.21	455.16	481.56	509.49	539.05	570.31	603.39	638.38	675.41	714.58	756.03	799.88	846.27	895.36	947.29	1000.00					

Valuation Basic Table -- Female -- Composite -- 1000qx																										
Issue	Duration																									Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
0	0.41	0.32	0.19	0.13	0.13	0.14	0.15	0.16	0.16	0.16	0.17	0.18	0.21	0.23	0.26	0.28	0.31	0.33	0.35	0.37	0.38	0.39	0.40	0.40	0.41	0.42	25
1	0.28	0.19	0.12	0.13	0.13	0.14	0.15	0.16	0.16	0.16	0.18	0.20	0.23	0.25	0.28	0.30	0.32	0.34	0.36	0.38	0.39	0.40	0.40	0.41	0.42	0.44	26
2	0.19	0.12	0.12	0.13	0.13	0.14	0.15	0.16	0.16	0.18	0.20	0.22	0.25	0.27	0.29	0.32	0.34	0.36	0.37	0.39	0.40	0.40	0.41	0.42	0.44	0.47	27
3	0.12	0.12	0.13	0.13	0.13	0.14	0.15	0.16	0.18	0.20	0.22	0.25	0.27	0.29	0.31	0.33	0.35	0.37	0.38	0.39	0.40	0.41	0.42	0.44	0.47	0.49	28
4	0.12	0.13	0.13	0.13	0.14	0.15	0.16	0.18	0.20	0.22	0.24	0.26	0.29	0.31	0.33	0.34	0.36	0.38	0.39	0.40	0.41	0.42	0.44	0.47	0.49	0.52	29
5	0.13	0.13	0.13	0.14	0.14	0.16	0.18	0.20	0.22	0.24	0.26	0.28	0.30	0.32	0.34	0.36	0.37	0.39	0.40	0.41	0.42	0.44	0.47	0.49	0.52	0.53	30
6	0.13	0.13	0.14	0.14	0.15	0.17	0.20	0.22	0.24	0.26	0.28	0.30	0.32	0.33	0.35	0.37	0.38	0.40	0.41	0.42	0.44	0.47	0.49	0.52	0.53	0.57	31
7	0.13	0.14	0.14	0.15	0.17	0.19	0.21	0.24	0.26	0.28	0.29	0.31	0.33	0.34	0.36	0.38	0.39	0.41	0.42	0.44	0.47	0.49	0.52	0.53	0.57	0.60	32
8	0.14	0.14	0.15	0.16	0.19	0.21	0.23	0.25	0.27	0.29	0.31	0.32	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.47	0.49	0.52	0.53	0.57	0.60	0.64	33
9	0.14	0.15	0.16	0.18	0.20	0.23	0.25	0.27	0.28	0.30	0.32	0.33	0.35	0.36	0.38	0.40	0.42	0.44	0.46	0.49	0.52	0.53	0.57	0.60	0.64	0.69	34
10	0.15	0.16	0.18	0.20	0.22	0.24	0.26	0.28	0.29	0.31	0.32	0.34	0.36	0.37	0.39	0.41	0.43	0.46	0.49	0.52	0.53	0.57	0.60	0.64	0.69	0.76	35
11	0.15	0.18	0.20	0.22	0.24	0.25	0.27	0.29	0.30	0.32	0.33	0.35	0.37	0.38	0.41	0.43	0.45	0.48	0.52	0.53	0.57	0.60	0.64	0.69	0.76	0.81	36
12	0.18	0.20	0.22	0.24	0.25	0.26	0.28	0.29	0.31	0.32	0.34	0.36	0.38	0.40	0.42	0.45	0.48	0.51	0.53	0.57	0.60	0.64	0.69	0.76	0.81	0.88	37
13	0.20	0.22	0.24	0.25	0.26	0.27	0.28	0.30	0.31	0.33	0.35	0.37	0.39	0.42	0.44	0.48	0.51	0.53	0.57	0.60	0.64	0.69	0.76	0.81	0.87	0.92	38
14	0.22	0.24	0.25	0.26	0.26	0.27	0.29	0.30	0.32	0.33	0.36	0.38	0.41	0.44	0.47	0.51	0.53	0.57	0.60	0.64	0.69	0.76	0.81	0.86	0.91	0.97	39
15	0.24	0.25	0.26	0.26	0.27	0.28	0.29	0.30	0.32	0.34	0.37	0.40	0.43	0.46	0.50	0.53	0.57	0.60	0.64	0.69	0.76	0.81	0.86	0.91	0.97	1.02	40
16	0.25	0.26	0.26	0.26	0.27	0.28	0.29	0.31	0.33	0.35	0.38	0.42	0.45	0.49	0.53	0.57	0.60	0.64	0.69	0.76	0.81	0.86	0.91	0.97	1.02	1.08	41
17	0.26	0.26	0.26	0.26	0.27	0.28	0.30	0.32	0.34	0.37	0.40	0.44	0.48	0.52	0.57	0.60	0.64	0.69	0.76	0.81	0.86	0.91	0.97	1.02	1.08	1.16	42
18	0.25	0.25	0.25	0.26	0.27	0.28	0.30	0.33	0.36	0.39	0.43	0.47	0.51	0.56	0.60	0.64	0.69	0.76	0.81	0.86	0.91	0.97	1.02	1.08	1.16	1.25	43
19	0.24	0.24	0.25	0.26	0.27	0.29	0.31	0.34	0.38	0.41	0.46	0.50	0.55	0.60	0.64	0.69	0.76	0.81	0.86	0.91	0.97	1.02	1.08	1.16	1.25	1.36	44
20	0.22	0.23	0.24	0.25	0.27	0.30	0.33	0.36	0.40	0.44	0.49	0.54	0.59	0.64	0.69	0.75	0.80	0.86	0.91	0.97	1.02	1.08	1.16	1.25	1.36	1.49	45
21	0.20	0.21	0.23	0.25	0.28	0.31	0.35	0.38	0.43	0.47	0.52	0.57	0.62	0.68	0.73	0.79	0.84	0.90	0.96	1.02	1.08	1.16	1.25	1.36	1.49	1.64	46
22	0.18	0.20	0.23	0.26	0.29	0.33	0.37	0.41	0.46	0.51	0.56	0.61	0.66	0.72	0.77	0.83	0.89	0.95	1.01	1.08	1.16	1.25	1.36	1.49	1.64	1.83	47
23	0.16	0.19	0.22	0.26	0.30	0.34	0.39	0.44	0.49	0.54	0.59	0.65	0.70	0.76	0.81	0.87	0.93	1.00	1.08	1.16	1.25	1.36	1.49	1.64	1.83	2.04	48
24	0.15	0.19	0.23	0.27	0.31	0.36	0.41	0.46	0.52	0.57	0.63	0.68	0.74	0.79	0.85	0.92	0.98	1.06	1.15	1.25	1.36	1.49	1.64	1.83	2.04	2.28	49
25	0.14	0.19	0.23	0.28	0.33	0.38	0.44	0.49	0.55	0.60	0.66	0.71	0.77	0.83	0.89	0.97	1.04	1.13	1.24	1.36	1.49	1.64	1.83	2.04	2.28	2.55	50
26	0.14	0.19	0.24	0.29	0.34	0.40	0.46	0.51	0.57	0.63	0.69	0.74	0.81	0.87	0.94	1.02	1.12	1.22	1.35	1.49	1.64	1.83	2.04	2.28	2.55	2.85	51
27	0.15	0.20	0.25	0.30	0.36	0.42	0.47	0.53	0.59	0.65	0.71	0.77	0.84	0.92	1.00	1.10	1.21	1.33	1.48	1.64	1.83	2.04	2.28	2.55	2.85	3.19	52
28	0.16	0.21	0.26	0.32	0.37	0.43	0.49	0.55	0.61	0.67	0.74	0.81	0.89	0.97	1.07	1.19	1.31	1.46	1.63	1.82	2.04	2.28	2.55	2.85	3.19	3.56	53
29	0.17	0.23	0.28	0.33	0.39	0.45	0.50	0.57	0.63	0.70	0.77	0.85	0.94	1.04	1.16	1.29	1.45	1.62	1.81	2.03	2.28	2.55	2.85	3.19	3.56	3.95	54
30	0.19	0.24	0.29	0.35	0.40	0.46	0.52	0.58	0.65	0.73	0.81	0.90	1.01	1.13	1.27	1.42	1.60	1.80	2.02	2.27	2.55	2.85	3.19	3.56	3.95	4.37	55
31	0.21	0.26	0.31	0.36	0.42	0.48	0.54	0.61	0.68	0.77	0.86	0.97	1.10	1.24	1.40	1.58	1.78	2.01	2.26	2.54	2.85	3.19	3.56	3.95	4.37	4.85	56
32	0.22	0.27	0.32	0.38	0.43	0.50	0.57	0.64	0.73	0.83	0.94	1.07	1.21	1.37	1.56	1.76	1.99	2.24	2.52	2.83	3.17	3.55	3.95	4.37	4.85	5.36	57
33	0.23	0.28	0.33	0.39	0.46	0.53	0.61	0.69	0.79	0.91	1.04	1.18	1.35	1.53	1.74	1.97	2.22	2.50	2.81	3.15	3.53	3.93	4.37	4.84	5.36	5.91	58
34	0.23	0.28	0.34	0.41	0.48	0.56	0.65	0.76	0.87	1.00	1.15	1.32	1.51	1.71	1.94	2.20	2.48	2.79	3.13	3.50	3.91	4.34	4.82	5.32	5.87	6.44	59
35	0.23	0.29	0.35	0.43	0.51	0.61	0.72	0.84	0.97	1.12	1.29	1.48	1.69	1.92	2.17	2.46	2.77	3.11	3.48	3.88	4.32	4.79	5.29	5.83	6.40	7.00	60
36	0.23	0.30	0.37	0.46	0.55	0.66	0.79	0.93	1.08	1.25	1.44	1.65	1.89	2.14	2.43	2.74	3.08	3.45	3.85	4.28	4.75	5.26	5.79	6.36	6.96	7.60	61
37	0.24	0.31	0.39	0.49	0.60	0.73	0.87	1.03	1.20	1.40	1.61	1.85	2.10	2.39	2.70	3.04	3.41	3.81	4.25	4.72	5.22	5.76	6.33	6.93	7.57	8.24	62
38	0.25	0.33	0.42	0.53	0.66	0.80	0.96	1.14	1.34	1.55	1.79	2.05	2.34	2.65	2.99	3.37	3.77	4.21	4.68	5.18	5.72	6.29	6.90	7.54	8.21	8.91	63
39	0.27	0.36	0.46	0.59	0.73	0.89	1.07	1.27	1.48	1.73	1.99	2.28	2.59	2.94	3.31	3.72	4.16	4.63	5.14	5.68	6.26	6.87	7.51	8.19	8.90	9.64	64
40	0.30	0.40	0.52	0.66	0.81	0.99	1.19	1.41	1.65	1.91	2.20	2.52	2.87	3.25	3.66	4.10	4.58	5.09	5.63	6.22	6.83	7.49	8.17	8.89	9.64	10.44	65
41	0.34	0.45	0.59	0.74	0.91	1.11	1.32	1.56	1.83	2.12	2.44	2.79	3.17	3.58	4.03	4.51	5.03	5.58	6.17	6.80	7.46	8.16	8.89	9.64	10.44	11.31	66
42	0.38	0.52	0.67	0.84	1.03	1.24	1.48	1.74	2.03	2.35	2.69	3.08	3.49	3.94	4.43	4.95	5.51	6.11	6.75	7.42	8.14	8.89	9.64	10.44	11.31	12.27	67
43	0.44	0.59	0.76	0.95	1.17	1.40	1.66	1.95	2.26	2.60	2.98	3.39	3.84	4.33	4.86	5.43	6.04	6.69	7.38	8.11	8.87	9.64	10.44	11.31	12.27	13.33	68
44	0.50	0.67	0.87	1.09	1.32	1.58	1.86	2.17	2.51	2.88	3.29	3.73	4.22	4.75	5.32	5.94	6.60	7.31	8.06	8.85	9.64	10.44	11.31	12.27	13.33	14.49	69
45	0.57	0.77	0.99	1.23	1.49	1.78	2.08	2.42	2.79	3.19	3.62	4.10	4.63	5.20	5.81	6.48	7.21	7.98	8.79	9.64	10.44	11.31	12.27	13.33	14.49	15.80	70
46	0.64	0.87	1.12	1.38	1.67	1.98	2.32	2.68	3.08	3.51	3.98	4.50	5.06	5.67	6.34	7.06	7.84	8.68	9.58	10.44	11.31	12.27	13.33	14.49	15.80	17.31	71
47	0.73	0.98	1.25	1.54	1.86	2.20	2.56	2.95	3.38	3.85	4.35	4.91	5.51	6.17	6.89	7.67	8.52	9.43	10.42	11.31	12.27	13.33	14.49	15.80	17.31	18.97	72
48	0.82	1.10	1.39	1.71	2.04	2.41	2.80	3.23	3.69	4.19	4.74	5.33	5.99	6.70	7.48	8.33	9.24	10.24	11.31	12.27	13.33	14.49	15.80	17.31	18.97	20.79	73
49	0.94	1.22	1.53	1.87	2.23	2.62	3.04	3.49	3.99	4.53	5.12	5.77	6.48	7.26	8.11	9.03	10.03	11.12	12.27	13.33	14.49	15.80	17.31	18.97	20.79	22.79	74

Valuation Basic Table -- Female -- Composite -- 1000qx

Issue	Duration																									Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
50	1.07	1.36	1.67	2.02	2.40	2.81	3.26	3.75	4.28	4.87	5.51	6.22	6.99	7.84	8.77	9.78	10.89	12.09	13.33	14.49	15.80	17.31	18.97	20.79	22.79	24.97	75
51	1.22	1.50	1.82	2.17	2.57	3.00	3.48	4.00	4.58	5.21	5.91	6.68	7.53	8.46	9.48	10.60	11.82	13.16	14.49	15.80	17.31	18.97	20.79	22.79	24.97	27.36	76
52	1.39	1.66	1.97	2.33	2.73	3.18	3.68	4.24	4.87	5.56	6.32	7.16	8.09	9.12	10.25	11.49	12.86	14.35	15.80	17.31	18.97	20.79	22.79	24.97	27.36	29.98	77
53	1.58	1.83	2.13	2.48	2.89	3.36	3.89	4.49	5.16	5.92	6.75	7.68	8.71	9.84	11.10	12.48	14.00	15.68	17.31	18.97	20.79	22.79	24.97	27.36	29.98	32.86	78
54	1.78	2.00	2.29	2.64	3.06	3.55	4.12	4.76	5.48	6.30	7.22	8.25	9.39	10.66	12.06	13.60	15.30	17.18	18.97	20.79	22.79	24.97	27.36	29.98	32.86	36.01	79
55	1.98	2.19	2.47	2.82	3.26	3.77	4.37	5.05	5.84	6.74	7.75	8.89	10.16	11.57	13.14	14.88	16.78	18.88	20.79	22.79	24.97	27.36	29.98	32.86	36.01	39.46	80
56	2.18	2.38	2.66	3.03	3.48	4.02	4.66	5.40	6.26	7.24	8.35	9.61	11.02	12.61	14.37	16.32	18.46	20.79	22.79	24.97	27.36	29.98	32.86	36.01	39.46	43.24	81
57	2.38	2.58	2.87	3.25	3.74	4.32	5.01	5.82	6.75	7.82	9.04	10.44	12.01	13.78	15.75	17.94	20.35	22.79	24.97	27.36	29.98	32.86	36.01	39.46	43.24	47.39	82
58	2.56	2.77	3.08	3.50	4.03	4.67	5.42	6.31	7.33	8.51	9.85	11.39	13.13	15.10	17.30	19.75	22.46	24.97	27.36	29.98	32.86	36.01	39.46	43.24	47.39	51.93	83
59	2.74	2.97	3.31	3.77	4.34	5.05	5.88	6.86	7.99	9.30	10.79	12.49	14.42	16.60	19.05	21.78	24.82	27.36	29.98	32.86	36.01	39.46	43.24	47.39	51.93	56.90	84
60	2.92	3.16	3.53	4.03	4.67	5.46	6.39	7.48	8.74	10.20	11.86	13.75	15.90	18.32	21.04	24.08	27.36	29.98	32.86	36.01	39.46	43.24	47.39	51.93	56.90	62.36	85
61	3.10	3.34	3.74	4.29	5.00	5.88	6.92	8.14	9.57	11.20	13.07	15.19	17.58	20.28	23.31	26.69	29.98	32.86	36.01	39.46	43.24	47.39	51.93	56.90	62.36	68.33	86
62	3.31	3.53	3.95	4.54	5.32	6.30	7.47	8.85	10.46	12.31	14.41	16.80	19.50	22.52	25.90	29.66	32.86	36.01	39.46	43.24	47.39	51.93	56.90	62.36	68.33	74.88	87
63	3.53	3.73	4.14	4.78	5.63	6.72	8.04	9.60	11.42	13.52	15.91	18.61	21.65	25.05	28.83	32.86	36.01	39.46	43.24	47.39	51.93	56.90	62.36	68.33	74.88	82.06	88
64	3.73	3.94	4.35	5.02	5.95	7.16	8.64	10.41	12.47	14.85	17.56	20.63	24.06	27.88	32.11	36.01	39.46	43.24	47.39	51.93	56.90	62.36	68.33	74.88	82.06	89.93	89
65	3.94	4.16	4.56	5.27	6.29	7.63	9.29	11.29	13.63	16.33	19.41	22.87	26.73	31.03	35.77	39.46	43.24	47.39	51.93	56.90	62.36	68.33	74.88	82.06	89.93	98.54	90
66	4.16	4.42	4.81	5.56	6.68	8.17	10.04	12.29	14.94	17.99	21.46	25.37	29.72	34.54	39.46	43.24	47.39	51.93	56.90	62.36	68.33	74.88	82.06	89.93	98.54	107.99	91
67	4.42	4.70	5.09	5.91	7.15	8.82	10.92	13.45	16.43	19.87	23.78	28.16	33.04	38.43	43.24	47.39	51.93	56.90	62.36	68.33	74.88	82.06	89.93	98.54	107.99	118.34	92
68	4.70	5.01	5.44	6.35	7.73	9.60	11.96	14.81	18.16	22.02	26.40	31.30	36.76	42.76	47.39	51.93	56.90	62.36	68.33	74.88	82.06	89.93	98.54	107.99	118.34	129.68	93
69	5.01	5.35	5.85	6.88	8.45	10.55	13.20	16.40	20.15	24.47	29.36	34.83	40.90	47.39	51.93	56.90	62.36	68.33	74.88	82.06	89.93	98.54	107.99	118.34	129.68	142.11	94
70	5.35	5.73	6.34	7.53	9.32	11.70	14.68	18.27	22.47	27.28	32.72	38.79	45.50	51.93	56.90	62.36	68.33	74.88	82.06	89.93	98.54	107.99	118.34	129.68	142.11	155.73	95
71	5.73	6.16	6.92	8.32	10.38	13.08	16.44	20.45	25.13	30.48	36.50	43.21	50.59	56.90	62.36	68.33	74.88	82.06	89.93	98.54	107.99	118.34	129.68	142.11	155.73	170.66	96
72	6.16	6.64	7.61	9.27	11.64	14.71	18.49	22.98	28.18	34.10	40.75	48.12	56.21	62.36	68.33	74.88	82.06	89.93	98.54	107.99	118.34	129.68	142.11	155.73	170.66	187.01	97
73	6.64	7.21	8.43	10.41	13.14	16.63	20.87	25.87	31.64	38.18	45.48	53.55	62.36	68.33	74.88	82.06	89.93	98.54	107.99	118.34	129.68	142.11	155.73	170.66	187.01	204.94	98
74	7.17	7.91	9.44	11.78	14.92	18.87	23.62	29.18	35.55	42.73	50.73	59.54	68.33	74.88	82.06	89.93	98.54	107.99	118.34	129.68	142.11	155.73	170.66	187.01	204.94	224.58	99
75	7.75	8.79	10.68	13.42	17.01	21.46	26.76	32.92	39.93	47.80	56.53	66.12	74.88	82.06	89.93	98.54	107.99	118.34	129.68	142.11	155.73	170.66	187.01	204.94	224.58	246.10	100
76	8.52	9.91	12.20	15.39	19.47	24.46	30.35	37.13	44.82	53.42	62.92	73.33	82.06	89.93	98.54	107.99	118.34	129.68	142.11	155.73	170.66	187.01	204.94	224.58	246.10	269.69	101
77	9.59	11.36	14.07	17.74	22.35	27.90	34.41	41.86	50.26	59.62	69.93	81.20	89.93	98.54	107.99	118.34	129.68	142.11	155.73	170.66	187.01	204.94	224.58	246.10	269.69	295.54	102
78	11.03	13.21	16.37	20.53	25.69	31.84	38.99	47.14	56.28	66.43	77.58	89.74	98.54	107.99	118.34	129.68	142.11	155.73	170.66	187.01	204.94	224.58	246.10	269.69	295.54	323.87	103
79	12.95	15.54	19.17	23.84	29.56	36.33	44.14	53.00	62.92	73.88	85.90	98.54	107.99	118.34	129.68	142.11	155.73	170.66	187.01	204.94	224.58	246.10	269.69	295.54	323.87	354.91	104
80	15.44	18.44	22.54	27.73	34.02	41.42	49.91	59.50	70.19	81.99	94.90	107.99	118.34	129.68	142.11	155.73	170.66	187.01	204.94	224.58	246.10	269.69	295.54	323.87	354.91	388.35	105
81	18.44	21.99	26.55	32.26	39.12	47.14	56.32	66.65	78.13	90.78	104.59	118.34	129.68	142.11	155.73	170.66	187.01	204.94	224.58	246.10	269.69	295.54	323.87	354.91	388.35	422.59	106
82	21.99	26.26	31.26	37.48	44.91	53.55	63.41	74.48	86.76	100.27	114.99	129.68	142.11	155.73	170.66	187.01	204.94	224.58	246.10	269.69	295.54	323.87	354.91	388.35	422.59	457.63	107
83	26.26	31.26	36.74	43.44	51.42	60.68	71.20	83.01	96.09	110.46	126.10	142.11	155.73	170.66	187.01	204.94	224.58	246.10	269.69	295.54	323.87	354.91	388.35	422.59	457.63	492.87	108
84	31.26	36.74	43.03	50.19	58.70	68.55	79.73	92.27	106.14	121.36	137.92	155.73	170.66	187.01	204.94	224.58	246.10	269.69	295.54	323.87	354.91	388.35	422.59	457.63	492.87	529.51	109
85	36.74	43.03	50.16	57.75	66.76	77.18	89.01	102.25	116.91	132.98	150.47	169.37	187.01	204.94	224.58	246.10	269.69	295.54	323.87	354.91	388.35	422.59	457.63	492.87	529.51	566.95	110
86	43.03	50.16	57.75	66.15	75.63	86.60	99.05	112.99	128.41	145.33	163.73	183.62	204.94	224.58	246.10	269.69	295.54	323.87	354.91	388.35	422.59	457.63	492.87	529.51	566.95	605.19	111
87	50.16	57.75	66.15	75.41	85.32	96.81	109.85	124.47	140.65	158.40	177.71	198.60	221.05	245.07	269.69	295.54	323.87	354.91	388.35	422.16	457.17	492.87	529.51	566.95	605.19	644.23	112
88	57.75	66.15	75.41	85.32	95.84	107.81	121.44	136.71	153.63	172.20	192.42	214.30	237.82	263.00	289.82	318.30	348.43	380.22	413.65	448.74	485.48	523.87	563.92	605.19	644.23	683.77	113
89	66.15	75.41	85.32	95.84	107.20	119.63	133.79	149.70	167.35	186.73	207.85	230.72	255.32	281.66	309.73	339.55	371.11	404.40	439.43	476.21	514.72	554.96	596.95	640.68	683.77	723.75	114
90	75.41	85.32	95.84	107.20	119.38	132.24	146.93	163.45	181.81	201.99	224.01	247.86	273.54	301.05	330.39	361.57	394.57	429.40	466.07	504.56	544.89	587.04	631.03	676.84	723.75	764.09	115
91	85.32	95.84	107.20	119.38	132.24	145.66	160.85	177.97	197.01	217.99	240.89	265.73	292.49	321.18	351.80	384.34	418.82	455.22	493.55	533.81	575.99	620.10	666.14	714.10	764.00	804.66	116
92	95.84	107.20	119.38	132.24	145.66	159.89	175.55	193.24	212.96	234.71	258.50	284.31	312.16	342.04	373.95	407.89	443.86	481.86	521.88	563.94	608.03	654.14	702.29	752.46	804.66	846.49	117
93	107.20	119.38	132.24	145.66	159.89	174.92	191.03	209.27	229.65	252.17	276.83	303.63	332.56	363.64	396.85	432.20	469.69	509.31	551.07	594.97	641.00	689.17	739.47	791.91	846.49	889.48	118
94	119.38	132.24	145.66	159.89	174.92	190.76	207.28	226.06	247.08	270.36	295.88	323.66	353.69	385.97	420.50	457.27	496.30	537.58	581.10	626.88	674.90	725.17	777.69	832.46	889.48	933.63	119
95	132.24	145.66	159.89	174.92	190.76	207.28	224.32	243.60	265.25	289.27	315.66	344.42	375.54	409.03	444.89	483.12	523.71	566.67	611.99	659.68	709.74	762.16	816.95	874.11	933.63	1000.00	120
96	145.66	159.89	174.92	190.76	207.28	224.32	242.13	261.90	284.17	308.92	336.16	365.90	398.12	432.83	470.03	509.72	551.90	596.57	643.73	693.38	745.51	800.14	857.25	916.85	1000.00		
97	159.89	174.92	190.76	207.28	224.32	242.13	260.72	280.96	303.82	329.30	357.39	388.10	421.42	457.36	495.92	537.10	580.89	627.30	676.32	727.96	782.22	839.09	898.58	1000.00			
98	174.92	190.76	207.28	224.32	242.13	260.72	280.09	300.78	324.22	350.40	379.34	411.02	445.45	482.63	522.56	565.24	610.66	658.84	709.76	763.43	819.86	879.03	1000.00				
99	190.76	207.28	224.32	242.13	260.72	280.09	300.24	321.36	345.36	372.24	402.01	434.66	470.20	508.63	549.94	594.14	641.23	691.20	744.06	799.80	858.43	1000.00					

Valuation Basic Table -- Female -- Nonsmoker -- 1000qx																											
Issue	Duration																										Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
0	0.41	0.32	0.19	0.13	0.13	0.14	0.15	0.16	0.16	0.16	0.17	0.18	0.21	0.23	0.26	0.28	0.31	0.33	0.34	0.36	0.36	0.37	0.38	0.38	0.39	0.39	25
1	0.28	0.19	0.12	0.13	0.13	0.14	0.15	0.16	0.16	0.16	0.18	0.20	0.23	0.25	0.28	0.30	0.32	0.33	0.35	0.36	0.37	0.38	0.38	0.38	0.39	0.41	26
2	0.19	0.12	0.12	0.13	0.13	0.14	0.15	0.16	0.16	0.18	0.20	0.22	0.25	0.27	0.29	0.32	0.33	0.35	0.35	0.37	0.38	0.38	0.38	0.39	0.40	0.44	27
3	0.12	0.12	0.13	0.13	0.13	0.14	0.15	0.16	0.18	0.20	0.22	0.25	0.27	0.29	0.31	0.32	0.34	0.35	0.36	0.37	0.38	0.38	0.39	0.40	0.43	0.45	28
4	0.12	0.13	0.13	0.13	0.14	0.15	0.16	0.18	0.20	0.22	0.24	0.26	0.29	0.31	0.32	0.33	0.34	0.36	0.37	0.37	0.38	0.39	0.40	0.43	0.45	0.48	29
5	0.13	0.13	0.13	0.14	0.14	0.16	0.18	0.20	0.22	0.24	0.26	0.28	0.30	0.31	0.33	0.34	0.35	0.37	0.37	0.38	0.39	0.40	0.43	0.45	0.48	0.49	30
6	0.13	0.13	0.14	0.14	0.15	0.17	0.20	0.22	0.24	0.26	0.28	0.30	0.31	0.32	0.33	0.35	0.36	0.37	0.38	0.39	0.40	0.43	0.45	0.47	0.48	0.52	31
7	0.13	0.14	0.14	0.15	0.17	0.19	0.21	0.24	0.26	0.28	0.29	0.30	0.32	0.33	0.34	0.36	0.36	0.38	0.39	0.40	0.43	0.45	0.47	0.48	0.52	0.55	32
8	0.14	0.14	0.15	0.16	0.19	0.21	0.23	0.25	0.27	0.29	0.30	0.31	0.33	0.33	0.35	0.36	0.37	0.39	0.40	0.43	0.45	0.47	0.48	0.52	0.54	0.58	33
9	0.14	0.15	0.16	0.18	0.20	0.23	0.25	0.27	0.28	0.29	0.31	0.32	0.33	0.34	0.35	0.37	0.39	0.40	0.42	0.45	0.47	0.48	0.52	0.54	0.58	0.63	34
10	0.15	0.16	0.18	0.20	0.22	0.24	0.26	0.28	0.28	0.30	0.31	0.32	0.34	0.35	0.36	0.38	0.39	0.42	0.45	0.47	0.48	0.52	0.54	0.58	0.63	0.69	35
11	0.15	0.18	0.20	0.22	0.24	0.25	0.27	0.28	0.29	0.30	0.31	0.33	0.35	0.35	0.38	0.39	0.41	0.44	0.47	0.48	0.51	0.54	0.57	0.62	0.68	0.73	36
12	0.18	0.20	0.22	0.24	0.25	0.26	0.27	0.28	0.29	0.30	0.32	0.34	0.35	0.37	0.38	0.41	0.44	0.46	0.48	0.51	0.54	0.57	0.62	0.68	0.73	0.80	37
13	0.20	0.22	0.24	0.25	0.26	0.26	0.27	0.28	0.29	0.31	0.33	0.34	0.36	0.38	0.40	0.44	0.46	0.48	0.51	0.54	0.57	0.62	0.68	0.73	0.78	0.83	38
14	0.22	0.24	0.25	0.26	0.26	0.26	0.28	0.28	0.30	0.31	0.33	0.35	0.38	0.40	0.43	0.46	0.48	0.51	0.54	0.57	0.62	0.68	0.72	0.77	0.82	0.87	39
15	0.24	0.25	0.26	0.26	0.26	0.27	0.28	0.28	0.30	0.31	0.34	0.37	0.39	0.42	0.45	0.48	0.51	0.54	0.57	0.62	0.68	0.72	0.77	0.82	0.87	0.92	40
16	0.25	0.26	0.26	0.25	0.26	0.27	0.28	0.29	0.31	0.32	0.35	0.38	0.41	0.45	0.48	0.51	0.54	0.57	0.62	0.68	0.72	0.77	0.81	0.87	0.91	0.97	41
17	0.26	0.26	0.25	0.25	0.26	0.27	0.28	0.30	0.31	0.34	0.37	0.40	0.44	0.47	0.51	0.54	0.57	0.62	0.68	0.72	0.77	0.81	0.87	0.91	0.97	1.04	42
18	0.25	0.24	0.24	0.25	0.26	0.27	0.28	0.31	0.33	0.36	0.40	0.43	0.47	0.51	0.54	0.57	0.62	0.68	0.72	0.77	0.81	0.87	0.91	0.97	1.04	1.12	43
19	0.23	0.23	0.24	0.25	0.26	0.27	0.29	0.32	0.35	0.38	0.42	0.46	0.50	0.54	0.57	0.62	0.68	0.72	0.77	0.81	0.87	0.91	0.97	1.04	1.12	1.21	44
20	0.21	0.22	0.23	0.24	0.25	0.28	0.31	0.34	0.37	0.41	0.45	0.50	0.54	0.57	0.62	0.68	0.72	0.77	0.81	0.87	0.91	0.97	1.04	1.12	1.21	1.33	45
21	0.19	0.20	0.22	0.24	0.26	0.29	0.33	0.35	0.40	0.43	0.48	0.52	0.57	0.62	0.66	0.72	0.76	0.81	0.86	0.91	0.97	1.04	1.12	1.21	1.33	1.47	46
22	0.17	0.19	0.22	0.24	0.27	0.31	0.34	0.38	0.42	0.47	0.51	0.56	0.60	0.65	0.70	0.75	0.80	0.86	0.91	0.97	1.04	1.12	1.21	1.33	1.47	1.64	47
23	0.15	0.18	0.21	0.24	0.28	0.32	0.36	0.41	0.45	0.49	0.54	0.59	0.64	0.69	0.73	0.79	0.84	0.90	0.97	1.04	1.12	1.21	1.33	1.47	1.64	1.83	48
24	0.14	0.18	0.21	0.25	0.29	0.33	0.38	0.42	0.48	0.52	0.57	0.62	0.67	0.72	0.77	0.83	0.88	0.95	1.03	1.12	1.21	1.33	1.47	1.64	1.83	2.04	49
25	0.13	0.18	0.21	0.26	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.64	0.70	0.75	0.80	0.87	0.94	1.02	1.11	1.21	1.33	1.47	1.64	1.83	2.04	2.29	50
26	0.13	0.18	0.22	0.27	0.31	0.37	0.42	0.46	0.52	0.57	0.62	0.67	0.73	0.78	0.85	0.92	1.01	1.09	1.21	1.33	1.47	1.64	1.83	2.04	2.29	2.56	51
27	0.14	0.18	0.23	0.28	0.33	0.38	0.43	0.48	0.54	0.59	0.64	0.69	0.76	0.83	0.90	0.99	1.08	1.19	1.32	1.47	1.64	1.83	2.04	2.29	2.56	2.88	52
28	0.15	0.19	0.24	0.29	0.34	0.39	0.45	0.50	0.55	0.60	0.67	0.73	0.80	0.87	0.96	1.07	1.17	1.31	1.46	1.62	1.83	2.04	2.29	2.56	2.88	3.22	53
29	0.16	0.21	0.26	0.30	0.35	0.41	0.45	0.52	0.57	0.63	0.69	0.76	0.84	0.93	1.04	1.15	1.30	1.45	1.61	1.81	2.04	2.29	2.56	2.88	3.22	3.58	54
30	0.17	0.22	0.26	0.32	0.36	0.42	0.47	0.52	0.58	0.66	0.73	0.81	0.90	1.01	1.13	1.27	1.43	1.60	1.80	2.02	2.28	2.56	2.87	3.21	3.58	3.96	55
31	0.19	0.24	0.28	0.33	0.38	0.43	0.49	0.55	0.61	0.69	0.77	0.87	0.98	1.11	1.25	1.41	1.58	1.79	2.01	2.26	2.55	2.86	3.20	3.57	3.96	4.41	56
32	0.20	0.24	0.29	0.34	0.39	0.45	0.51	0.57	0.65	0.74	0.84	0.95	1.08	1.22	1.39	1.56	1.77	1.99	2.24	2.51	2.83	3.18	3.56	3.95	4.40	4.88	57
33	0.21	0.25	0.30	0.35	0.41	0.48	0.55	0.62	0.70	0.81	0.93	1.05	1.20	1.36	1.54	1.75	1.97	2.22	2.49	2.80	3.15	3.52	3.94	4.38	4.87	5.39	58
34	0.21	0.25	0.30	0.37	0.43	0.50	0.58	0.68	0.77	0.89	1.02	1.17	1.34	1.51	1.72	1.95	2.20	2.47	2.77	3.11	3.49	3.89	4.34	4.82	5.34	5.89	59
35	0.21	0.26	0.31	0.38	0.45	0.54	0.64	0.75	0.86	0.99	1.14	1.31	1.49	1.70	1.92	2.17	2.45	2.75	3.08	3.44	3.85	4.30	4.77	5.29	5.83	6.41	60
36	0.21	0.27	0.33	0.41	0.49	0.59	0.70	0.82	0.96	1.11	1.27	1.46	1.67	1.89	2.15	2.42	2.73	3.06	3.42	3.81	4.25	4.73	5.23	5.78	6.36	6.97	61
37	0.21	0.27	0.34	0.43	0.53	0.65	0.77	0.91	1.06	1.24	1.42	1.63	1.86	2.11	2.39	2.69	3.03	3.39	3.79	4.21	4.68	5.20	5.74	6.31	6.93	7.58	62
38	0.22	0.29	0.37	0.47	0.58	0.70	0.85	1.00	1.18	1.37	1.58	1.81	2.07	2.34	2.65	2.99	3.35	3.75	4.18	4.64	5.15	5.69	6.27	6.88	7.53	8.21	63
39	0.23	0.31	0.40	0.52	0.64	0.78	0.94	1.12	1.30	1.52	1.75	2.01	2.29	2.60	2.93	3.30	3.71	4.14	4.61	5.11	5.65	6.23	6.84	7.49	8.18	8.90	64
40	0.26	0.35	0.45	0.57	0.71	0.86	1.04	1.24	1.45	1.68	1.94	2.22	2.54	2.88	3.24	3.65	4.09	4.56	5.06	5.61	6.19	6.82	7.47	8.16	8.88	9.66	65
41	0.29	0.39	0.51	0.64	0.79	0.97	1.15	1.36	1.60	1.86	2.15	2.46	2.80	3.18	3.58	4.03	4.51	5.02	5.57	6.16	6.79	7.45	8.15	8.87	9.65	10.50	66
42	0.32	0.44	0.57	0.72	0.89	1.07	1.29	1.52	1.77	2.06	2.36	2.72	3.09	3.50	3.95	4.43	4.95	5.51	6.11	6.75	7.43	8.14	8.87	9.64	10.48	11.42	67
43	0.37	0.50	0.65	0.81	1.01	1.21	1.44	1.69	1.97	2.27	2.62	2.99	3.40	3.86	4.35	4.88	5.45	6.06	6.71	7.40	8.12	8.86	9.63	10.47	11.40	12.45	68
44	0.42	0.56	0.74	0.93	1.13	1.36	1.60	1.88	2.18	2.51	2.89	3.29	3.75	4.24	4.78	5.35	5.97	6.64	7.35	8.10	8.86	9.63	10.46	11.39	12.41	13.57	69
45	0.47	0.64	0.83	1.04	1.27	1.52	1.79	2.09	2.42	2.78	3.17	3.62	4.11	4.65	5.23	5.86	6.55	7.27	8.05	8.86	9.62	10.46	11.38	12.41	13.53	14.83	70
46	0.53	0.72	0.94	1.16	1.41	1.69	1.99	2.31	2.67	3.06	3.49	3.98	4.50	5.08	5.72	6.40	7.13	7.93	8.79	9.62	10.46	11.38	12.40	13.52	14.79	16.29	71
47	0.59	0.80	1.04	1.29	1.57	1.86	2.19	2.54	2.92	3.35	3.82	4.34	4.91	5.53	6.22	6.96	7.77	8.64	9.59	10.45	11.38	12.40	13.52	14.78	16.24	17.90	72
48	0.66	0.89	1.14	1.42	1.71	2.03	2.38	2.77	3.19	3.65	4.16	4.72	5.34	6.02	6.77	7.57	8.44	9.40	10.44	11.38	12.39	13.51	14.78	16.23	17.84	19.67	73
49	0.75	0.98	1.25	1.54	1.86	2.20	2.58	2.99	3.44	3.94	4.50	5.11	5.78	6.53	7.35	8.23	9.19	10.24	11.35	12.39	13.51	14.77	16.23	17.84	19.60	21.61	74

Valuation Basic Table -- Female -- Nonsmoker -- 1000qx

Issue	Duration																									Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
50	0.84	1.08	1.35	1.65	1.99	2.35	2.76	3.20	3.69	4.24	4.84	5.51	6.24	7.06	7.96	8.93	9.99	11.16	12.37	13.51	14.77	16.23	17.84	19.60	21.55	23.75	75
51	0.96	1.19	1.47	1.77	2.13	2.51	2.94	3.42	3.95	4.54	5.20	5.92	6.73	7.63	8.61	9.69	10.87	12.17	13.48	14.77	16.23	17.84	19.60	21.55	23.68	26.10	76
52	1.09	1.32	1.59	1.90	2.26	2.66	3.11	3.62	4.20	4.85	5.56	6.36	7.24	8.23	9.33	10.52	11.85	13.30	14.73	16.23	17.84	19.60	21.55	23.68	26.01	28.68	77
53	1.24	1.45	1.71	2.02	2.39	2.81	3.29	3.84	4.46	5.17	5.95	6.83	7.81	8.90	10.12	11.45	12.93	14.57	16.18	17.83	19.60	21.55	23.68	26.01	28.58	31.53	78
54	1.39	1.59	1.84	2.15	2.53	2.97	3.48	4.07	4.74	5.50	6.37	7.34	8.43	9.65	11.01	12.50	14.16	16.00	17.77	19.59	21.54	23.67	26.01	28.58	31.42	34.65	79
55	1.54	1.73	1.98	2.30	2.69	3.15	3.69	4.32	5.05	5.89	6.84	7.92	9.13	10.49	12.01	13.70	15.56	17.62	19.53	21.53	23.66	26.01	28.58	31.41	34.52	38.07	80
56	1.72	1.90	2.15	2.49	2.89	3.38	3.96	4.64	5.44	6.35	7.40	8.59	9.94	11.47	13.17	15.06	17.16	19.45	21.45	23.64	25.99	28.56	31.40	34.51	37.92	41.82	81
57	1.89	2.08	2.34	2.69	3.13	3.65	4.28	5.03	5.89	6.89	8.04	9.36	10.86	12.57	14.47	16.60	18.96	21.37	23.55	25.96	28.54	31.38	34.49	37.90	41.65	45.95	82
58	2.05	2.25	2.53	2.91	3.39	3.97	4.66	5.48	6.42	7.53	8.79	10.25	11.91	13.81	15.94	18.32	20.97	23.46	25.86	28.51	31.35	34.46	37.88	41.63	45.76	50.47	83
59	2.22	2.43	2.74	3.16	3.68	4.32	5.08	5.98	7.03	8.26	9.66	11.28	13.12	15.22	17.60	20.25	23.23	25.77	28.40	31.31	34.42	37.84	41.60	45.73	50.26	55.43	84
60	2.39	2.61	2.95	3.40	3.98	4.70	5.55	6.56	7.73	9.09	10.66	12.45	14.51	16.85	19.49	22.45	25.67	28.30	31.20	34.38	37.80	41.57	45.71	50.25	55.22	60.92	85
61	2.56	2.78	3.15	3.65	4.29	5.09	6.04	7.17	8.50	10.02	11.79	13.80	16.09	18.70	21.64	24.94	28.19	31.08	34.25	37.74	41.51	45.66	50.21	55.19	60.68	66.92	86
62	2.75	2.97	3.35	3.89	4.60	5.49	6.56	7.83	9.33	11.06	13.04	15.32	17.90	20.82	24.10	27.78	30.96	34.13	37.61	41.43	45.59	50.14	55.14	60.64	66.66	73.52	87
63	2.96	3.16	3.54	4.12	4.90	5.89	7.10	8.54	10.23	12.19	14.45	17.02	19.94	23.22	26.89	30.84	34.00	37.47	41.29	45.49	50.05	55.06	60.57	66.60	73.23	80.76	88
64	3.16	3.37	3.75	4.36	5.21	6.31	7.67	9.30	11.22	13.44	16.01	18.93	22.22	25.91	30.02	33.88	37.34	41.15	45.34	49.93	54.95	60.47	66.52	73.16	80.44	88.71	89
65	3.37	3.58	3.96	4.61	5.54	6.76	8.29	10.14	12.31	14.84	17.76	21.06	24.76	28.92	33.52	37.20	41.00	45.19	49.77	54.81	60.34	66.40	73.05	80.35	88.36	97.41	90
66	3.58	3.84	4.21	4.90	5.93	7.29	9.02	11.11	13.59	16.46	19.75	23.49	27.68	32.36	37.16	40.96	45.14	49.72	54.75	60.29	66.34	73.00	80.30	88.30	97.07	106.97	91
67	3.84	4.11	4.48	5.24	6.39	7.93	9.88	12.24	15.04	18.30	22.03	26.23	30.95	36.19	40.93	45.10	49.68	54.71	60.24	66.29	72.95	80.25	88.25	97.02	106.63	117.44	92
68	4.11	4.41	4.83	5.68	6.96	8.69	10.90	13.57	16.74	20.41	24.61	29.33	34.62	40.48	45.07	49.65	54.67	60.20	66.25	72.91	80.20	88.21	96.97	106.59	117.13	128.92	93
69	4.41	4.75	5.23	6.19	7.66	9.62	12.11	15.13	18.70	22.83	27.53	32.83	38.74	45.07	49.63	54.65	60.18	66.23	72.88	80.17	88.18	96.94	106.56	117.10	128.63	141.50	94
70	4.75	5.12	5.71	6.83	8.50	10.74	13.56	16.97	20.99	25.62	30.87	36.77	43.33	49.63	54.65	60.17	66.22	72.87	80.16	88.16	96.89	106.49	117.00	128.62	141.42	155.16	95
71	5.12	5.55	6.28	7.60	9.54	12.09	15.28	19.12	23.62	28.81	34.65	41.20	48.44	54.65	59.56	65.87	72.65	80.06	88.16	96.87	106.48	116.96	128.57	141.35	155.07	170.14	96
72	5.55	6.02	6.95	8.52	10.77	13.69	17.30	21.63	26.66	32.44	38.92	46.15	54.12	58.95	65.53	72.45	79.96	88.13	96.85	106.48	116.92	128.52	141.28	155.00	170.11	186.54	97
73	6.02	6.59	7.75	9.63	12.24	15.58	19.66	24.51	30.13	36.55	43.71	51.65	58.35	65.19	72.25	79.86	88.10	96.83	106.47	116.89	128.47	141.21	154.93	170.04	186.50	204.53	98
74	6.55	7.28	8.74	10.98	13.99	17.79	22.40	27.82	34.07	41.17	49.05	57.76	64.85	72.05	79.76	88.07	96.81	106.45	116.86	128.42	141.14	154.86	169.97	186.44	204.48	224.23	99
75	7.13	8.14	9.95	12.59	16.05	20.37	25.54	31.59	38.52	46.35	54.99	64.51	71.85	79.66	88.04	96.79	106.43	116.83	128.37	141.07	154.79	169.90	186.38	204.43	224.18	245.82	100
76	7.87	9.21	11.41	14.48	18.43	23.28	29.03	35.71	43.32	51.89	61.30	71.65	79.56	88.01	96.77	106.41	116.80	128.32	141.00	154.72	169.83	186.32	204.38	224.14	245.77	269.48	101
77	8.90	10.60	13.21	16.74	21.21	26.62	33.00	40.34	48.67	58.01	68.24	79.46	87.98	96.75	106.39	116.77	128.27	140.93	154.65	169.76	186.26	204.33	224.10	245.74	269.42	295.40	102
78	10.27	12.37	15.42	19.44	24.45	30.45	37.48	45.53	54.61	64.74	75.82	87.95	96.73	106.37	116.74	128.22	140.86	154.58	169.69	186.20	204.28	224.06	245.71	269.40	295.36	323.80	103
79	12.11	14.61	18.12	22.64	28.21	34.84	42.53	51.29	61.16	72.12	84.09	96.71	106.25	116.71	128.17	140.79	154.51	169.62	186.14	204.23	224.02	245.68	269.38	295.34	323.23	354.91	104
80	14.50	17.40	21.37	26.42	32.56	39.82	48.19	57.70	68.36	80.17	93.04	106.14	116.59	128.04	140.61	154.44	169.55	186.08	204.18	223.98	245.65	269.36	295.32	322.66	354.91	388.35	105
81	17.38	20.82	25.25	30.82	37.54	45.43	54.51	64.78	76.24	88.95	102.73	116.51	127.96	140.52	154.34	169.48	186.02	204.13	223.94	245.62	269.34	295.31	322.09	354.91	388.35	422.59	106
82	20.80	24.95	29.83	35.92	43.21	51.74	61.52	72.55	84.85	98.44	113.15	127.89	140.45	154.26	169.40	185.96	204.08	223.90	245.59	269.32	295.30	321.52	354.91	388.35	422.59	457.63	107
83	24.92	29.80	35.16	41.75	49.61	58.77	69.23	81.04	94.17	108.64	124.30	140.38	154.19	169.33	185.89	204.03	223.86	245.56	269.30	295.29	320.96	354.91	388.35	422.59	457.63	492.87	108
84	29.77	35.13	41.31	48.37	56.78	66.55	77.72	90.29	104.24	119.58	136.18	154.13	169.26	185.82	203.97	223.82	245.53	269.28	295.28	320.40	354.91	388.35	422.59	457.63	492.87	529.51	109
85	35.11	41.28	48.29	55.80	64.74	75.13	86.98	100.28	115.04	131.25	148.87	167.93	185.77	203.91	223.77	245.50	269.26	295.27	319.84	354.91	388.35	422.59	457.63	492.87	529.51	566.95	110
86	41.25	48.26	55.76	64.09	73.55	84.52	97.02	111.04	126.59	143.74	162.28	182.35	203.86	223.72	245.45	269.24	295.26	319.28	354.91	388.35	422.59	457.63	492.87	529.51	566.95	605.19	111
87	48.24	55.73	64.05	73.28	83.20	94.71	107.84	122.57	138.97	156.96	176.44	197.51	220.16	244.39	269.21	295.25	318.72	354.91	388.35	422.16	457.17	492.87	529.51	566.95	605.19	644.23	112
88	55.72	64.03	73.24	83.14	93.70	105.73	119.47	134.95	152.10	170.93	191.33	213.40	237.13	262.50	289.51	318.16	348.43	380.22	413.65	448.74	485.48	523.87	563.92	605.19	644.23	683.77	113
89	64.02	73.22	83.11	93.65	105.07	117.58	131.96	148.10	166.00	185.64	206.95	230.02	254.82	281.35	309.59	339.55	371.11	404.40	439.43	476.21	514.72	554.96	596.95	640.68	683.77	723.75	114
90	73.22	83.11	93.63	105.03	117.28	130.33	145.26	162.03	180.65	201.09	223.30	247.35	273.22	300.90	330.39	361.57	394.57	429.40	466.07	504.56	544.89	587.04	631.03	676.84	723.75	764.09	115
91	83.11	93.62	105.02	117.25	130.28	143.91	159.36	176.75	196.05	217.28	240.38	265.41	292.34	321.18	351.80	384.34	418.82	455.22	493.55	533.81	575.99	620.10	666.14	714.10	764.00	804.66	116
92	93.62	105.02	117.25	130.28	143.88	158.33	174.27	192.23	212.20	234.19	258.17	284.16	312.16	342.04	373.95	407.89	443.86	481.86	521.88	563.94	608.03	654.14	702.29	752.46	804.66	846.49	117
93	105.02	117.25	130.28	143.88	158.32	173.57	189.96	208.47	229.10	251.84	276.68	303.63	332.56	363.64	396.85	432.20	469.69	509.31	551.07	594.97	641.00	689.17	739.47	791.91	846.49	889.48	118
94	117.25	130.28	143.88	158.32	173.57	189.65	206.44	225.48	246.73	270.21	295.88	323.66	353.69	385.97	420.50	457.27	496.30	537.58	581.10	626.88	674.90	725.17	777.69	832.46	889.48	933.63	119
95	130.28	143.88	158.32	173.57	189.65	206.41	223.70	243.23	265.08	289.27	315.66	344.42	375.54	409.03	444.89	483.12	523.71	566.67	611.99	659.68	709.74	762.16	816.95	874.11	933.63	1000.00	120
96	143.88	158.32	173.57	189.65	206.41	223.70	241.73	261.72	284.17	308.92	336.16	365.90	398.12	432.83	470.03	509.72	551.90	596.57	643.73	693.38	745.51	800.14	857.25	916.85	1000.00		
97	158.32	173.57	189.65	206.41	223.70	241.71	260.53	280.96	303.82	329.30	357.39	388.10	421.42	457.36	495.92	537.10	580.89	627.30	676.32	727.96	782.22	839.09	898.58	1000.00			
98	173.57	189.65	206.41	223.70	241.71	260.52	280.09	300.78	324.22	350.40	379.34	411.02	445.45	482.63	522.56	565.24	610.66	658.84	709.76	763.43	819.86	879.03	1000.00				
99	189.65	206.41	223.70	241.71	260.52	280.09	300.24	321.36	345.36	372.24	402.01	434.66	470.20	508.63	549.94	594.14	641.23	691.20	744.06	799.80	858.43	1000.00					

Valuation Basic Table -- Female -- Smoker -- 1000qx

Issue	Duration																										Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
0	0.41	0.32	0.19	0.13	0.13	0.14	0.15	0.16	0.16	0.16	0.17	0.18	0.21	0.23	0.26	0.28	0.33	0.37	0.41	0.45	0.48	0.51	0.54	0.56	0.60	0.64	25
1	0.28	0.19	0.12	0.13	0.13	0.14	0.15	0.16	0.16	0.16	0.18	0.20	0.23	0.25	0.28	0.32	0.36	0.40	0.44	0.48	0.51	0.54	0.56	0.59	0.62	0.68	26
2	0.19	0.12	0.12	0.13	0.13	0.14	0.15	0.16	0.16	0.18	0.20	0.22	0.25	0.27	0.31	0.36	0.40	0.44	0.46	0.51	0.54	0.56	0.59	0.62	0.67	0.73	27
3	0.12	0.12	0.13	0.13	0.13	0.14	0.15	0.16	0.18	0.20	0.22	0.25	0.27	0.31	0.34	0.38	0.42	0.46	0.49	0.53	0.56	0.59	0.62	0.67	0.72	0.77	28
4	0.12	0.13	0.13	0.13	0.14	0.15	0.16	0.18	0.20	0.22	0.24	0.26	0.31	0.34	0.38	0.41	0.45	0.49	0.53	0.56	0.59	0.62	0.67	0.72	0.77	0.83	29
5	0.13	0.13	0.13	0.14	0.14	0.16	0.18	0.20	0.22	0.24	0.26	0.30	0.33	0.37	0.41	0.45	0.48	0.53	0.56	0.59	0.62	0.67	0.72	0.77	0.83	0.86	30
6	0.13	0.13	0.14	0.14	0.15	0.17	0.20	0.22	0.24	0.26	0.30	0.33	0.37	0.40	0.44	0.48	0.51	0.56	0.59	0.62	0.66	0.72	0.76	0.82	0.84	0.94	31
7	0.13	0.14	0.14	0.15	0.17	0.19	0.21	0.24	0.26	0.30	0.32	0.36	0.40	0.43	0.47	0.51	0.54	0.59	0.62	0.66	0.72	0.76	0.82	0.84	0.92	1.00	32
8	0.14	0.14	0.15	0.16	0.19	0.21	0.23	0.25	0.29	0.32	0.36	0.39	0.43	0.46	0.50	0.54	0.58	0.62	0.66	0.72	0.76	0.82	0.84	0.92	0.99	1.08	33
9	0.14	0.15	0.16	0.18	0.20	0.23	0.25	0.29	0.31	0.35	0.39	0.41	0.46	0.49	0.53	0.58	0.62	0.66	0.70	0.76	0.82	0.84	0.92	0.99	1.07	1.17	34
10	0.15	0.16	0.18	0.20	0.22	0.24	0.27	0.31	0.34	0.38	0.40	0.44	0.49	0.52	0.56	0.61	0.65	0.70	0.76	0.82	0.84	0.92	0.99	1.07	1.17	1.30	35
11	0.15	0.18	0.20	0.22	0.24	0.26	0.30	0.34	0.36	0.40	0.43	0.47	0.52	0.55	0.61	0.65	0.69	0.74	0.82	0.84	0.92	0.98	1.06	1.15	1.28	1.40	36
12	0.18	0.20	0.22	0.24	0.26	0.29	0.33	0.35	0.39	0.42	0.46	0.50	0.55	0.59	0.63	0.69	0.74	0.80	0.84	0.92	0.98	1.06	1.15	1.28	1.38	1.53	37
13	0.20	0.22	0.24	0.26	0.29	0.31	0.34	0.38	0.40	0.45	0.49	0.53	0.58	0.63	0.67	0.74	0.80	0.84	0.92	0.98	1.06	1.15	1.28	1.38	1.50	1.60	38
14	0.22	0.24	0.26	0.29	0.30	0.33	0.36	0.39	0.43	0.46	0.52	0.57	0.62	0.67	0.73	0.80	0.84	0.92	0.98	1.06	1.15	1.28	1.38	1.48	1.58	1.70	39
15	0.24	0.26	0.29	0.30	0.33	0.35	0.38	0.40	0.45	0.49	0.55	0.60	0.66	0.71	0.78	0.84	0.92	0.98	1.06	1.15	1.28	1.37	1.47	1.57	1.69	1.80	40
16	0.26	0.29	0.30	0.32	0.34	0.37	0.39	0.43	0.48	0.52	0.57	0.64	0.70	0.77	0.84	0.92	0.98	1.06	1.15	1.28	1.37	1.47	1.57	1.69	1.79	1.92	41
17	0.29	0.30	0.32	0.33	0.35	0.38	0.42	0.46	0.51	0.56	0.62	0.69	0.76	0.83	0.92	0.98	1.06	1.15	1.28	1.37	1.47	1.57	1.69	1.79	1.91	2.07	42
18	0.29	0.31	0.32	0.34	0.37	0.39	0.44	0.50	0.55	0.60	0.67	0.75	0.82	0.91	0.98	1.06	1.15	1.28	1.37	1.47	1.57	1.69	1.79	1.91	2.07	2.24	43
19	0.29	0.31	0.33	0.36	0.38	0.42	0.47	0.52	0.59	0.64	0.73	0.81	0.90	0.98	1.06	1.15	1.28	1.37	1.47	1.57	1.69	1.79	1.91	2.07	2.24	2.45	44
20	0.28	0.30	0.33	0.36	0.40	0.46	0.51	0.56	0.63	0.70	0.79	0.89	0.98	1.06	1.15	1.28	1.37	1.47	1.57	1.69	1.79	1.91	2.07	2.24	2.45	2.69	45
21	0.26	0.29	0.33	0.37	0.42	0.48	0.55	0.60	0.69	0.76	0.85	0.95	1.04	1.15	1.25	1.36	1.46	1.57	1.68	1.79	1.91	2.07	2.24	2.45	2.69	2.96	46
22	0.25	0.28	0.34	0.39	0.45	0.51	0.58	0.66	0.75	0.84	0.93	1.03	1.12	1.23	1.33	1.44	1.55	1.67	1.78	1.91	2.07	2.24	2.45	2.69	2.96	3.30	47
23	0.23	0.28	0.33	0.40	0.47	0.54	0.62	0.71	0.80	0.90	0.99	1.11	1.20	1.31	1.41	1.52	1.63	1.77	1.91	2.07	2.24	2.45	2.69	2.96	3.30	3.74	48
24	0.22	0.29	0.35	0.42	0.49	0.58	0.66	0.75	0.86	0.96	1.07	1.16	1.28	1.37	1.48	1.62	1.73	1.88	2.06	2.24	2.45	2.69	2.96	3.30	3.74	4.23	49
25	0.21	0.29	0.36	0.44	0.53	0.61	0.72	0.81	0.92	1.02	1.13	1.22	1.33	1.45	1.56	1.71	1.85	2.02	2.23	2.45	2.69	2.96	3.30	3.74	4.23	4.77	50
26	0.21	0.29	0.38	0.46	0.55	0.65	0.76	0.85	0.96	1.08	1.19	1.28	1.41	1.53	1.66	1.82	2.01	2.20	2.45	2.69	2.96	3.30	3.74	4.23	4.77	5.36	51
27	0.23	0.31	0.40	0.48	0.59	0.69	0.78	0.89	1.01	1.12	1.23	1.35	1.48	1.63	1.78	1.97	2.18	2.42	2.69	2.96	3.30	3.74	4.23	4.77	5.36	6.00	52
28	0.25	0.33	0.42	0.52	0.61	0.71	0.82	0.93	1.05	1.16	1.29	1.43	1.58	1.73	1.92	2.15	2.38	2.67	2.96	3.30	3.74	4.23	4.77	5.36	6.00	6.69	53
29	0.27	0.37	0.45	0.54	0.65	0.75	0.85	0.98	1.09	1.22	1.35	1.51	1.68	1.87	2.10	2.35	2.66	2.96	3.30	3.74	4.23	4.77	5.36	6.00	6.69	7.43	54
30	0.30	0.39	0.47	0.58	0.67	0.78	0.89	1.00	1.13	1.28	1.43	1.61	1.81	2.04	2.31	2.60	2.96	3.30	3.74	4.23	4.77	5.36	6.00	6.69	7.43	8.22	55
31	0.34	0.42	0.51	0.60	0.71	0.82	0.93	1.06	1.19	1.36	1.53	1.74	1.99	2.26	2.57	2.92	3.30	3.74	4.23	4.77	5.36	6.00	6.69	7.43	8.22	9.06	56
32	0.36	0.44	0.53	0.64	0.73	0.86	0.99	1.12	1.29	1.48	1.69	1.93	2.20	2.51	2.88	3.27	3.74	4.23	4.77	5.36	6.00	6.69	7.43	8.22	9.06	9.95	57
33	0.38	0.46	0.55	0.66	0.79	0.92	1.06	1.22	1.40	1.63	1.88	2.15	2.47	2.82	3.23	3.69	4.19	4.77	5.36	6.00	6.69	7.43	8.22	9.06	9.95	10.81	58
34	0.38	0.47	0.58	0.70	0.83	0.98	1.14	1.35	1.56	1.81	2.09	2.42	2.79	3.18	3.63	4.15	4.72	5.36	6.00	6.69	7.43	8.22	9.06	9.95	10.81	11.77	59
35	0.38	0.49	0.60	0.74	0.89	1.07	1.27	1.50	1.75	2.04	2.36	2.73	3.14	3.59	4.09	4.68	5.31	6.00	6.69	7.43	8.22	9.06	9.95	10.81	11.77	12.76	60
36	0.39	0.51	0.64	0.80	0.97	1.17	1.41	1.67	1.95	2.28	2.64	3.04	3.51	3.99	4.56	5.18	5.87	6.69	7.43	8.22	9.06	9.95	10.81	11.77	12.76	13.78	61
37	0.41	0.54	0.68	0.86	1.06	1.30	1.56	1.86	2.18	2.56	2.96	3.41	3.89	4.45	5.05	5.72	6.46	7.43	8.15	9.06	9.95	10.81	11.77	12.76	13.78	14.94	62
38	0.44	0.58	0.74	0.94	1.18	1.44	1.74	2.07	2.45	2.84	3.29	3.78	4.33	4.92	5.57	6.31	7.09	7.96	8.89	9.89	10.81	11.77	12.76	13.78	14.94	16.09	63
39	0.48	0.64	0.82	1.06	1.32	1.61	1.95	2.32	2.71	3.18	3.67	4.21	4.79	5.45	6.14	6.93	7.77	8.68	9.67	10.73	11.72	12.76	13.78	14.94	16.09	17.30	64
40	0.54	0.72	0.94	1.20	1.48	1.81	2.18	2.59	3.04	3.53	4.06	4.65	5.30	6.01	6.76	7.59	8.50	9.47	10.50	11.62	12.66	13.78	14.91	16.09	17.30	18.62	65
41	0.62	0.82	1.08	1.36	1.67	2.04	2.43	2.88	3.38	3.93	4.51	5.16	5.86	6.61	7.44	8.33	9.29	10.31	11.40	12.57	13.69	14.87	16.09	17.30	18.62	20.03	66
42	0.70	0.96	1.24	1.56	1.91	2.30	2.75	3.23	3.77	4.36	4.99	5.70	6.45	7.27	8.16	9.11	10.12	11.20	12.36	13.56	14.79	16.05	17.30	18.61	20.03	21.61	67
43	0.82	1.10	1.42	1.78	2.19	2.62	3.10	3.64	4.21	4.84	5.54	6.28	7.10	7.98	8.94	9.95	11.03	12.18	13.38	14.65	15.94	17.24	18.57	20.00	21.58	23.35	68
44	0.95	1.27	1.64	2.06	2.49	2.97	3.49	4.07	4.70	5.38	6.12	6.92	7.80	8.75	9.77	10.85	11.99	13.20	14.48	15.80	17.14	18.48	19.93	21.53	23.27	25.24	69
45	1.09	1.47	1.89	2.34	2.83	3.37	3.93	4.56	5.24	5.97	6.75	7.62	8.56	9.57	10.64	11.79	13.02	14.30	15.63	17.01	18.36	19.82	21.43	23.19	25.12	27.35	70
46	1.23	1.67	2.14	2.63	3.18	3.76	4.39	5.05	5.79	6.57	7.42	8.34	9.33	10.40	11.56	12.77	14.06	15.44	16.89	18.23	19.70	21.31	23.08	25.02	27.20	29.78	71
47	1.40	1.88	2.39	2.94	3.55	4.18	4.85	5.57	6.36	7.21	8.10	9.09	10.14	11.28	12.51	13.80	15.18	16.64	18.20	19.55	21.16	22.94	24.88	27.07	29.58	32.44	72
48	1.58	2.11	2.67	3.28	3.90	4.59	5.31	6.10	6.94	7.84	8.82	9.85	10.99	12.20	13.51	14.90	16.35	17.92	19.43	20.99	22.77	24.71	26.90	29.42	32.19	35.32	73
49	1.81	2.35	2.94	3.59	4.27	5.00	5.77	6.60	7.51	8.48	9.52	10.65	11.86	13.17	14.58	16.06	17.63	19.31	20.90	22.56	24.45	26.69	29.21	31.98	35.01	38.47	74

Valuation Basic Table -- Female -- Smoker -- 1000qx

Issue	Duration																										Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
50	2.06	2.62	3.21	3.88	4.60	5.37	6.20	7.10	8.06	9.12	10.23	11.46	12.76	14.17	15.70	17.29	19.00	20.82	22.51	24.19	26.42	28.91	31.64	34.64	37.92	41.63	75
51	2.38	2.92	3.53	4.20	4.96	5.76	6.65	7.60	8.64	9.76	10.97	12.29	13.71	15.24	16.89	18.63	20.48	22.47	23.94	26.15	28.62	31.31	34.27	37.51	41.04	45.05	76
52	2.73	3.26	3.86	4.54	5.30	6.14	7.06	8.08	9.21	10.43	11.73	13.15	14.70	16.37	18.17	20.07	22.12	23.69	25.88	28.33	31.01	33.91	37.11	40.59	44.40	48.74	77
53	3.14	3.63	4.20	4.87	5.65	6.53	7.50	8.58	9.78	11.11	12.53	14.09	15.78	17.60	19.58	21.66	23.44	25.62	28.05	30.72	33.62	36.72	40.15	43.91	48.02	52.72	78
54	3.57	4.00	4.56	5.23	6.02	6.93	7.98	9.13	10.41	11.83	13.40	15.12	16.97	19.00	21.17	23.19	25.36	27.77	30.43	33.33	36.45	39.73	43.44	47.50	51.94	56.99	79
55	4.00	4.42	4.96	5.63	6.46	7.40	8.50	9.72	11.11	12.67	14.38	16.27	18.32	20.54	22.95	25.10	27.49	30.14	33.04	36.18	39.51	42.98	46.98	51.37	56.15	61.59	80
56	4.38	4.76	5.29	5.98	6.82	7.81	8.97	10.28	11.79	13.47	15.34	17.41	19.67	22.16	24.84	27.22	29.86	32.76	35.92	39.29	42.82	46.60	50.91	55.60	60.71	66.54	81
57	4.73	5.10	5.64	6.35	7.25	8.30	9.54	10.96	12.58	14.40	16.43	18.71	21.22	23.97	26.95	29.58	32.48	35.66	39.07	42.68	46.56	50.73	55.14	60.16	65.63	71.86	82
58	5.03	5.42	5.99	6.76	7.73	8.87	10.20	11.76	13.51	15.51	17.71	20.20	22.95	25.99	29.30	32.20	35.40	38.85	42.54	46.50	50.55	54.97	59.71	65.08	70.93	77.58	83
59	5.32	5.74	6.36	7.20	8.22	9.49	10.94	12.64	14.56	16.76	19.20	21.92	24.94	28.27	31.92	35.14	38.63	42.40	46.44	50.37	54.79	59.54	64.64	70.39	76.63	83.70	84
60	5.61	6.03	6.70	7.60	8.74	10.13	11.75	13.62	15.75	18.18	20.87	23.86	27.20	30.86	34.88	38.42	42.26	46.38	50.19	54.61	59.35	64.42	69.75	75.77	82.28	89.67	85
61	5.88	6.30	7.01	7.99	9.25	10.78	12.57	14.65	17.05	19.74	22.74	26.07	29.73	33.78	38.21	42.12	46.32	50.01	54.43	59.16	64.21	69.50	75.60	81.50	89.56	95.97	86
62	6.20	6.57	7.31	8.35	9.71	11.41	13.41	15.74	18.42	21.45	24.79	28.50	32.61	37.09	41.98	46.26	49.84	54.25	58.97	64.01	69.27	75.45	81.24	89.01	95.38	102.64	87
63	6.52	6.85	7.56	8.67	10.14	12.01	14.24	16.86	19.87	23.29	27.05	31.21	35.78	40.78	46.20	49.67	54.07	58.78	63.81	69.04	75.30	80.97	88.46	94.79	101.94	109.68	88
64	6.79	7.13	7.83	8.98	10.57	12.62	15.11	18.05	21.43	25.28	29.50	34.18	39.30	44.86	49.50	53.89	58.59	63.61	68.81	75.15	80.70	87.91	94.20	101.24	108.71	117.10	89
65	7.07	7.42	8.09	9.29	11.02	13.27	16.03	19.32	23.12	27.46	32.21	37.44	43.13	49.33	53.71	58.40	63.41	68.58	75.00	80.43	87.37	93.62	100.54	108.59	116.34	124.88	90
66	7.36	7.77	8.40	9.64	11.49	13.93	16.96	20.57	24.76	29.51	34.74	40.50	46.76	53.53	58.21	63.21	68.35	74.85	80.16	86.83	93.04	99.85	108.04	115.83	124.04	133.07	91
67	7.71	8.14	8.74	10.06	12.06	14.73	18.05	22.00	26.57	31.76	37.51	43.80	50.64	58.02	63.01	68.12	74.70	79.89	86.29	92.46	99.16	107.37	115.17	123.40	132.12	141.64	92
68	8.08	8.53	9.18	10.61	12.78	15.70	19.33	23.65	28.64	34.27	40.53	47.38	54.83	62.81	67.89	73.89	79.62	85.76	91.89	98.48	106.58	114.38	122.62	131.36	141.00	150.58	93
69	8.48	8.96	9.70	11.28	13.69	16.88	20.84	25.54	30.94	37.03	43.82	51.25	59.30	67.66	72.96	78.68	84.80	91.32	97.80	105.67	113.46	121.69	130.43	140.37	150.06	159.90	94
70	8.91	9.43	10.31	12.09	14.77	18.29	22.62	27.72	33.57	40.09	47.42	55.42	64.04	71.97	77.60	83.70	90.19	97.13	104.53	112.40	120.99	130.16	139.74	149.55	159.55	173.32	95
71	9.38	9.96	11.04	13.08	16.09	19.96	24.69	30.20	36.47	43.44	51.30	59.86	69.04	76.45	82.46	88.91	95.82	103.19	111.05	119.41	128.92	139.11	149.04	159.19	172.20	187.83	96
72	9.91	10.53	11.89	14.26	17.62	21.89	27.04	32.99	39.68	47.06	55.46	64.54	74.27	81.13	84.81	94.33	101.66	109.49	117.81	126.70	137.21	148.53	158.83	171.09	185.80	203.52	97
73	10.48	11.21	12.89	15.65	19.41	24.11	29.67	36.04	43.16	50.95	59.84	69.44	79.66	84.53	87.23	99.94	107.71	115.98	124.83	134.25	145.87	158.47	169.99	183.79	202.90	220.48	98
74	11.10	12.04	14.12	17.29	21.48	26.62	32.62	39.41	46.91	55.04	64.43	74.52	84.25	86.41	97.88	105.72	113.92	122.70	132.05	142.03	154.89	168.90	181.81	200.78	218.88	238.81	99
75	11.76	13.10	15.61	19.22	23.85	29.42	35.84	43.03	50.89	59.32	69.17	79.74	85.60	95.88	99.26	112.83	121.90	131.47	141.62	154.40	164.26	179.85	196.90	215.59	236.03	258.60	100
76	12.80	14.61	17.64	21.81	27.01	33.19	40.24	48.05	56.57	65.69	76.28	84.79	93.92	98.92	111.73	121.09	130.89	141.21	153.92	164.05	178.98	195.84	214.25	234.32	256.16	279.99	101
77	14.25	16.56	20.12	24.87	30.68	37.46	45.15	53.63	62.81	72.62	83.99	92.00	98.59	110.64	120.29	130.31	140.80	153.44	163.83	178.57	195.00	213.24	233.10	254.65	277.97	303.08	102
78	16.20	19.05	23.15	28.46	34.88	42.30	50.62	59.77	69.63	80.15	90.12	98.26	109.56	119.49	129.73	140.39	152.96	163.61	178.16	194.32	212.46	232.17	253.58	276.73	301.60	328.01	103
79	18.80	22.15	26.81	32.68	39.69	47.74	56.69	66.50	77.06	88.28	97.93	108.49	118.70	129.16	139.99	152.48	163.39	177.75	193.65	211.43	231.45	252.77	275.85	300.69	327.20	354.91	104
80	21.15	25.98	31.15	37.57	45.16	53.83	63.41	73.86	85.08	97.01	107.43	117.91	128.59	139.59	152.00	163.17	177.34	192.98	210.39	229.92	252.13	275.18	300.04	326.70	354.91	388.35	105
81	25.15	30.60	36.26	43.20	51.34	60.58	70.76	81.84	93.73	106.38	117.13	128.02	139.19	151.52	162.95	176.94	192.31	209.35	228.40	249.97	274.68	299.58	326.35	354.91	388.35	422.59	106
82	30.05	36.09	42.16	49.59	58.24	68.03	78.78	90.46	103.01	116.35	127.45	138.79	151.04	162.73	176.54	191.64	208.32	226.89	247.84	271.76	299.21	326.10	354.91	388.35	422.59	457.63	107
83	35.92	41.12	48.93	56.77	65.88	76.19	87.44	99.73	112.89	126.89	138.39	150.57	162.51	176.14	190.97	207.29	225.39	245.73	268.85	296.76	325.89	354.91	388.35	422.59	457.63	492.87	108
84	40.08	48.27	56.57	64.76	74.29	85.04	96.80	109.62	123.36	137.99	150.10	162.29	175.74	190.31	206.27	223.90	243.63	265.97	294.32	322.00	354.91	388.35	422.59	457.63	492.87	529.51	109
85	47.61	56.37	63.64	73.55	83.43	94.61	106.81	120.09	134.39	149.63	162.07	175.34	189.65	205.25	222.42	241.55	263.12	291.90	318.15	354.91	388.35	422.59	457.63	492.87	529.51	566.95	110
86	56.17	62.52	72.81	83.14	93.33	106.47	117.43	131.15	145.95	161.85	174.94	188.99	204.24	220.95	239.49	260.31	289.50	314.35	354.91	388.35	422.59	457.63	492.87	529.51	566.95	605.19	111
87	61.40	72.07	82.85	93.21	106.12	117.15	128.64	142.75	158.09	174.54	188.33	203.23	219.49	237.45	257.53	287.12	310.60	354.91	388.35	422.16	457.17	492.87	529.51	566.95	605.19	644.23	112
88	71.33	82.56	93.08	105.77	116.86	128.39	140.42	154.95	170.71	187.68	202.23	218.04	235.42	254.77	284.76	306.89	348.43	380.22	413.65	448.74	485.48	523.87	563.92	605.19	644.23	683.77	113
89	82.27	92.95	105.42	116.57	128.16	140.24	152.78	167.61	183.77	201.23	216.60	233.41	252.04	282.42	303.22	339.55	371.11	404.40	439.43	476.21	514.72	554.96	596.95	640.68	683.77	723.75	114
90	92.82	105.07	116.28	127.93	140.04	152.56	165.64	180.71	197.22	215.17	231.42	249.34	280.10	299.60	330.39	361.57	394.57	429.40	466.07	504.56	544.89	587.04	631.03	676.84	723.75	764.09	115
91	104.72	115.99	127.70	139.84	152.36	165.37	180.26	194.21	211.04	229.45	246.67	272.37	296.02	321.18	351.80	384.34	418.82	455.22	493.55	533.81	575.99	620.10	666.14	714.10	764.00	804.66	116
92	115.71	127.47	139.64	152.16	165.08	179.81	193.74	208.05	225.18	244.03	265.18	287.88	312.16	342.04	373.95	407.89	443.86	481.86	521.88	563.94	608.03	654.14	702.29	752.46	804.66	846.49	117
93	127.24	139.44	151.96	164.79	179.37	193.27	207.55	222.20	239.61	258.89	280.43	303.63	332.56	363.64	396.85	432.20	469.69	509.31	551.07	594.97	641.00	689.17	739.47	791.91	846.49	889.48	118
94	139.24	151.76	164.50	178.93	192.81	207.04	221.59	236.61	254.27	273.99	295.88	323.66	353.69	385.97	420.50	457.27	496.30	537.58	581.10	626.88	674.90	725.17	777.69	832.46	889.48	933.63	119
95	151.56	164.21	178.49	192.35	206.53	220.98	235.80	251.24	269.14	289.27	315.66	344.42	375.54	409.03	444.89	483.12	523.71	566.67	611.99	659.68	709.74	762.16	816.95	874.11	933.63	1000.00	120
96	163.92	177.69	191.89	206.02	220.37	234.99	250.46	266.03	284.17	308.92	336.16	365.90	398.12	432.83	470.03	509.72	551.90	596.57	643.73	693.38	745.51	800.14	857.25	916.85	1000.00		
97	176.55	190.82	205.51	219.76	234.19	249.68	265.10	280.96	303.82	329.30	357.39	388.10	421.42	457.36	495.92	537.10	580.89	627.30	676.32	727.96	782.22	839.09	898.58	1000.00			
98	189.37	204.12	219.15	233.39	248.90	264.53	280.09	300.78	324.22	350.40	379.34	411.02	445.45	482.63	522.56	565.24	610.66	658.84	709.76	763.43	819.86	879.03	1000.00				
99	202.32	217.40	232.59	248.12	263.97	280.09	300.24	321.36	345.36	372.24	402.01	434.66	470.20	508.63	549.94	594.14	641.23	691.20	744.06	799.80	858.43	1000.00					

Proposed 2001 CSO Table -- Male -- Composite -- 1000qx																											
Issue	Duration																										Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
0	0.55	0.36	0.36	0.27	0.27	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.39	0.49	0.61	0.74	0.87	0.94	0.98	1.00	1.00	1.02	1.03	1.05	1.07	25
1	0.36	0.36	0.27	0.27	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.39	0.45	0.58	0.71	0.83	0.92	0.96	0.99	1.00	1.02	1.03	1.05	1.07	1.12	26
2	0.30	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.39	0.43	0.55	0.68	0.80	0.89	0.95	0.99	1.00	1.02	1.03	1.05	1.07	1.11	1.17	27
3	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.39	0.42	0.54	0.66	0.78	0.87	0.94	0.99	1.00	1.02	1.03	1.05	1.07	1.10	1.14	1.17	28
4	0.27	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.39	0.42	0.53	0.66	0.78	0.87	0.94	0.98	1.00	1.02	1.03	1.05	1.07	1.10	1.13	1.14	1.15	29
5	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.39	0.41	0.53	0.65	0.78	0.87	0.94	0.98	1.00	1.02	1.03	1.05	1.07	1.10	1.11	1.12	1.13	1.13	30
6	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.39	0.41	0.52	0.65	0.78	0.87	0.94	0.98	1.00	1.01	1.02	1.05	1.07	1.08	1.09	1.10	1.11	1.11	1.12	31
7	0.30	0.31	0.32	0.34	0.35	0.37	0.39	0.41	0.52	0.65	0.78	0.87	0.94	0.98	0.99	1.01	1.01	1.04	1.06	1.07	1.08	1.09	1.10	1.10	1.11	1.13	32
8	0.31	0.32	0.34	0.35	0.37	0.39	0.41	0.51	0.64	0.78	0.87	0.93	0.97	0.98	1.00	1.00	1.03	1.05	1.07	1.08	1.09	1.10	1.10	1.11	1.13	1.15	33
9	0.32	0.34	0.35	0.37	0.39	0.41	0.51	0.64	0.78	0.87	0.93	0.97	0.98	0.99	0.99	1.01	1.04	1.07	1.08	1.09	1.10	1.10	1.11	1.13	1.15	1.18	34
10	0.34	0.35	0.37	0.39	0.41	0.51	0.64	0.77	0.87	0.93	0.97	0.97	0.98	0.98	1.01	1.03	1.07	1.08	1.09	1.10	1.10	1.11	1.13	1.15	1.18	1.21	35
11	0.35	0.37	0.39	0.41	0.51	0.64	0.77	0.87	0.92	0.96	0.96	0.97	0.97	1.00	1.02	1.06	1.08	1.09	1.10	1.10	1.11	1.13	1.15	1.18	1.21	1.28	36
12	0.37	0.39	0.41	0.51	0.64	0.77	0.87	0.92	0.95	0.95	0.96	0.96	0.99	1.02	1.06	1.08	1.09	1.10	1.10	1.11	1.13	1.15	1.18	1.21	1.28	1.34	37
13	0.39	0.41	0.51	0.64	0.77	0.87	0.91	0.94	0.94	0.95	0.95	0.98	1.00	1.05	1.08	1.09	1.10	1.10	1.11	1.13	1.15	1.18	1.21	1.28	1.34	1.44	38
14	0.41	0.50	0.64	0.77	0.87	0.91	0.93	0.93	0.94	0.94	0.96	0.99	1.04	1.08	1.09	1.10	1.10	1.11	1.13	1.15	1.18	1.21	1.28	1.34	1.44	1.54	39
15	0.47	0.64	0.77	0.87	0.90	0.91	0.92	0.93	0.93	0.95	0.98	1.02	1.07	1.09	1.10	1.10	1.11	1.13	1.15	1.18	1.21	1.28	1.34	1.44	1.54	1.65	40
16	0.64	0.77	0.87	0.90	0.91	0.91	0.92	0.92	0.94	0.96	1.00	1.04	1.07	1.10	1.10	1.11	1.13	1.15	1.18	1.21	1.28	1.34	1.44	1.54	1.65	1.79	41
17	0.77	0.87	0.90	0.91	0.91	0.92	0.92	0.93	0.95	0.98	1.01	1.04	1.06	1.07	1.08	1.10	1.15	1.18	1.21	1.28	1.34	1.44	1.54	1.65	1.79	1.96	42
18	0.87	0.88	0.89	0.89	0.90	0.90	0.92	0.93	0.96	0.98	1.00	1.01	1.03	1.06	1.10	1.11	1.18	1.21	1.28	1.34	1.44	1.54	1.65	1.79	1.96	2.15	43
19	0.85	0.86	0.86	0.87	0.87	0.89	0.90	0.93	0.95	0.96	0.97	0.98	1.01	1.06	1.11	1.15	1.21	1.28	1.34	1.44	1.54	1.65	1.79	1.96	2.15	2.39	44
20	0.82	0.82	0.83	0.83	0.84	0.86	0.88	0.90	0.92	0.92	0.94	0.96	1.01	1.07	1.15	1.21	1.28	1.34	1.44	1.54	1.65	1.79	1.96	2.15	2.39	2.64	45
21	0.76	0.77	0.77	0.78	0.80	0.82	0.85	0.86	0.87	0.89	0.92	0.97	1.02	1.09	1.18	1.28	1.34	1.44	1.54	1.65	1.79	1.96	2.15	2.39	2.64	2.89	46
22	0.71	0.71	0.72	0.74	0.77	0.79	0.81	0.82	0.84	0.88	0.93	0.97	1.03	1.12	1.24	1.34	1.44	1.54	1.65	1.79	1.96	2.15	2.39	2.64	2.89	3.16	47
23	0.65	0.66	0.68	0.72	0.75	0.78	0.79	0.81	0.84	0.89	0.94	0.99	1.07	1.17	1.30	1.43	1.54	1.65	1.79	1.96	2.15	2.39	2.64	2.89	3.16	3.33	48
24	0.59	0.61	0.66	0.71	0.75	0.77	0.79	0.82	0.87	0.92	0.97	1.03	1.12	1.23	1.39	1.52	1.65	1.79	1.96	2.15	2.39	2.64	2.89	3.13	3.33	3.51	49
25	0.51	0.57	0.65	0.72	0.75	0.78	0.81	0.85	0.90	0.96	1.02	1.10	1.19	1.32	1.47	1.64	1.79	1.96	2.15	2.39	2.64	2.89	3.11	3.31	3.51	3.76	50
26	0.48	0.57	0.66	0.73	0.77	0.80	0.84	0.89	0.94	1.01	1.09	1.17	1.28	1.43	1.59	1.78	1.96	2.15	2.39	2.64	2.89	3.10	3.30	3.51	3.76	4.06	51
27	0.47	0.58	0.67	0.75	0.80	0.84	0.89	0.94	1.00	1.09	1.17	1.27	1.39	1.56	1.72	1.94	2.15	2.39	2.64	2.89	3.09	3.29	3.51	3.76	4.06	4.47	52
28	0.48	0.59	0.69	0.77	0.84	0.88	0.93	0.99	1.07	1.16	1.27	1.39	1.53	1.71	1.89	2.13	2.36	2.61	2.89	3.09	3.29	3.50	3.76	4.06	4.47	4.92	53
29	0.47	0.60	0.71	0.80	0.88	0.93	0.99	1.07	1.14	1.27	1.39	1.53	1.67	1.85	2.07	2.35	2.61	2.87	3.08	3.29	3.50	3.76	4.05	4.47	4.92	5.45	54
30	0.48	0.61	0.72	0.82	0.91	0.99	1.07	1.14	1.25	1.38	1.50	1.64	1.80	2.00	2.26	2.54	2.81	3.05	3.28	3.50	3.76	4.05	4.47	4.91	5.45	6.06	55
31	0.47	0.61	0.73	0.84	0.94	1.05	1.14	1.23	1.33	1.45	1.58	1.75	1.96	2.21	2.49	2.77	3.02	3.26	3.49	3.74	4.03	4.41	4.89	5.43	6.03	6.75	56
32	0.47	0.61	0.74	0.85	0.97	1.07	1.19	1.29	1.39	1.50	1.66	1.88	2.16	2.45	2.74	3.00	3.25	3.48	3.74	4.03	4.40	4.89	5.41	5.99	6.67	7.41	57
33	0.51	0.64	0.77	0.90	1.02	1.14	1.26	1.36	1.46	1.58	1.77	2.04	2.36	2.67	2.95	3.22	3.47	3.74	4.03	4.40	4.89	5.39	5.96	6.61	7.30	8.02	58
34	0.54	0.67	0.82	0.94	1.08	1.21	1.34	1.45	1.56	1.71	1.94	2.23	2.56	2.89	3.18	3.44	3.73	4.03	4.40	4.87	5.37	5.93	6.57	7.24	7.93	8.62	59
35	0.57	0.71	0.85	0.99	1.13	1.28	1.41	1.55	1.70	1.90	2.14	2.44	2.77	3.11	3.41	3.71	4.03	4.40	4.85	5.34	5.89	6.52	7.18	7.87	8.59	9.35	60
36	0.61	0.74	0.89	1.04	1.19	1.33	1.49	1.68	1.89	2.12	2.37	2.66	3.00	3.35	3.69	4.03	4.40	4.83	5.31	5.85	6.48	7.13	7.82	8.57	9.35	10.35	61
37	0.64	0.77	0.93	1.08	1.23	1.40	1.60	1.85	2.09	2.33	2.58	2.87	3.22	3.62	4.01	4.39	4.81	5.28	5.82	6.43	7.08	7.77	8.52	9.35	10.35	11.64	62
38	0.69	0.85	1.00	1.15	1.30	1.50	1.76	2.04	2.31	2.55	2.80	3.09	3.46	3.89	4.33	4.78	5.26	5.79	6.40	7.04	7.73	8.49	9.35	10.35	11.64	13.13	63
39	0.75	0.92	1.08	1.23	1.40	1.64	1.94	2.23	2.51	2.76	3.01	3.34	3.75	4.20	4.69	5.21	5.75	6.37	7.01	7.70	8.45	9.35	10.35	11.64	13.08	14.66	64
40	0.79	0.99	1.17	1.33	1.53	1.82	2.13	2.44	2.70	2.97	3.28	3.66	4.09	4.58	5.10	5.68	6.32	6.98	7.68	8.43	9.33	10.35	11.62	12.99	14.48	15.83	65
41	0.84	1.07	1.28	1.47	1.71	2.02	2.35	2.64	2.93	3.24	3.61	4.03	4.51	5.03	5.64	6.28	6.93	7.64	8.42	9.31	10.35	11.60	12.94	14.48	15.83	17.01	66
42	0.90	1.17	1.41	1.64	1.90	2.21	2.54	2.86	3.19	3.56	3.98	4.45	4.98	5.59	6.28	6.89	7.58	8.38	9.30	10.35	11.58	12.91	14.40	15.83	17.01	18.57	67
43	0.95	1.23	1.51	1.76	2.03	2.34	2.71	3.07	3.45	3.87	4.34	4.89	5.54	6.21	6.89	7.48	8.31	9.25	10.33	11.55	12.87	14.27	15.69	17.01	18.56	20.37	68
44	1.01	1.32	1.60	1.86	2.14	2.49	2.89	3.32	3.74	4.21	4.72	5.43	6.15	6.83	7.46	8.21	9.17	10.27	11.51	12.83	14.20	15.61	17.01	18.44	20.19	22.49	69
45	1.11	1.41	1.69	1.96	2.29	2.67	3.13	3.60	4.10	4.59	5.21	6.04	6.76	7.39	8.08	9.05	10.18	11.42	12.76	14.14	15.53	16.92	18.31	20.19	22.29	25.09	70
46	1.20	1.49	1.77	2.07	2.44	2.90	3.40	3.95	4.49	5.06	5.80	6.63	7.32	7.94	8.91	10.06	11.32	12.68	14.06	15.45	16.82	18.19	20.01	22.29	24.86	28.11	71
47	1.30	1.57	1.85	2.20	2.64	3.14	3.71	4.32	4.91	5.63	6.37	7.17	7.87	8.70	9.89	11.20	12.60	14.00	15.38	16.75	18.05	19.82	22.09	24.86	27.85	31.32	72
48	1.40	1.68	2.01	2.39	2.85	3.37	3.99	4.67	5.35	6.17	6.89	7.72	8.53	9.61	11.01	12.49	13.96	15.36	16.69	17.95	19.63	21.88	24.64	27.85	31.03	34.62	73
49	1.48	1.83	2.20	2.61	3.08	3.63	4.30	5.06	5.77	6.59	7.41	8.37	9.43	10.70	12.25	13.86	15.29	16.63	17.87	19.45	21.68	24.41	27.59	31.03	34.31	38.08	74

Proposed 2001 CSO Table -- Male -- Composite -- 1000qx

Issue	Duration																										Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
50	1.61	2.00	2.41	2.85	3.33	3.90	4.63	5.43	6.17	7.01	8.01	9.25	10.60	12.07	13.60	15.23	16.55	17.78	19.08	21.48	24.19	27.34	30.74	34.31	37.73	41.84	75
51	1.75	2.21	2.67	3.14	3.62	4.22	4.94	5.75	6.59	7.55	8.81	10.39	11.95	13.47	14.85	16.49	17.69	18.90	21.07	23.96	27.08	30.46	33.98	37.72	41.46	46.08	76
52	1.91	2.43	2.95	3.45	3.95	4.53	5.27	6.14	7.12	8.32	9.86	11.69	13.33	14.42	16.02	17.60	18.89	20.86	23.50	26.82	30.17	33.67	37.38	41.46	45.65	50.92	77
53	2.00	2.62	3.20	3.76	4.30	4.92	5.73	6.75	7.87	9.35	11.12	13.06	14.27	15.62	17.22	18.89	20.85	23.27	26.31	29.88	33.35	37.03	41.08	45.65	50.45	56.56	78
54	2.09	2.81	3.49	4.08	4.64	5.35	6.32	7.53	8.82	10.52	12.40	13.97	15.47	17.06	18.88	20.85	23.26	26.05	29.31	33.03	36.68	40.69	45.23	50.45	56.04	63.06	79
55	2.19	3.02	3.77	4.38	5.01	5.86	7.03	8.43	9.87	11.66	13.19	15.06	16.88	18.70	20.84	23.26	26.05	29.02	32.39	36.33	40.31	44.80	49.98	56.04	62.48	70.14	80
56	2.30	3.22	4.02	4.72	5.46	6.49	7.86	9.41	10.93	12.41	14.22	16.35	18.52	20.64	23.25	26.04	29.01	32.08	35.63	39.92	44.38	49.51	55.52	62.47	69.50	78.19	81
57	2.41	3.41	4.29	5.11	6.02	7.24	8.77	10.41	11.97	13.74	15.83	18.14	20.43	23.03	26.03	29.00	32.07	35.27	39.15	43.95	49.03	54.99	61.90	69.49	77.46	86.54	82
58	2.59	3.62	4.60	5.58	6.69	8.09	9.69	11.34	12.89	14.89	17.24	20.03	22.79	25.77	29.00	32.06	35.26	38.75	43.10	48.56	54.46	61.31	68.85	77.46	85.74	95.51	83
59	2.80	3.87	4.97	6.12	7.44	8.97	10.63	12.24	13.76	16.00	18.68	21.96	25.51	28.71	32.05	35.25	38.74	42.66	47.62	53.94	60.72	68.18	76.74	85.74	94.62	105.43	84
60	3.07	4.18	5.38	6.71	8.22	9.86	11.54	13.15	14.65	17.18	20.29	23.98	28.14	31.72	35.24	38.73	42.65	47.14	52.89	60.13	67.53	76.01	84.92	94.61	104.45	116.57	85
61	3.38	4.53	5.83	7.31	8.98	10.74	12.45	14.02	15.55	18.46	21.94	25.86	30.16	34.89	38.71	42.63	47.12	52.35	58.95	66.87	75.27	84.12	93.73	104.44	115.49	128.91	86
62	3.73	4.92	6.32	7.95	9.78	11.66	13.42	15.04	16.66	19.92	23.60	27.67	32.18	37.27	42.62	47.11	52.33	58.35	65.55	74.53	83.30	92.83	103.45	115.48	127.71	142.35	87
63	3.98	5.37	6.97	8.77	10.71	12.70	14.58	16.34	18.16	21.65	25.51	29.79	34.66	40.28	46.83	52.31	58.33	64.89	73.06	82.48	91.92	102.47	114.39	127.70	141.03	156.73	88
64	4.19	5.85	7.68	9.65	11.75	13.87	15.92	17.92	19.97	23.65	27.76	32.42	37.81	44.12	51.61	58.31	64.86	72.31	80.85	91.02	101.47	113.29	126.48	141.01	155.27	171.88	89
65	4.36	6.33	8.42	10.63	12.91	15.19	17.42	19.65	21.96	25.89	30.38	35.57	41.64	48.86	57.37	64.83	72.28	80.02	89.22	100.46	112.18	125.27	139.67	155.25	170.28	187.66	90
66	4.50	7.01	9.31	11.68	14.25	16.67	19.01	21.41	24.02	28.31	33.30	39.13	46.08	54.27	63.60	72.25	79.98	88.30	98.47	111.06	124.03	138.32	153.77	170.25	185.91	202.44	91
67	4.79	7.78	10.29	12.84	15.76	18.29	20.77	23.33	26.22	30.98	36.58	43.25	51.12	60.10	70.61	79.95	88.25	97.45	108.86	122.79	136.96	152.28	168.63	185.88	200.54	217.83	92
68	5.39	8.64	11.39	14.12	17.13	20.15	23.11	26.07	29.08	34.48	40.91	48.51	57.20	67.39	78.59	88.21	97.40	107.72	120.35	135.58	150.77	166.98	184.11	200.51	215.80	234.04	93
69	5.96	9.58	12.60	15.52	17.95	22.27	25.26	28.15	31.54	37.64	44.88	53.17	62.90	73.63	85.70	97.35	107.66	119.09	132.88	149.26	165.35	182.32	198.62	215.80	234.04	251.14	94
70	6.60	10.66	13.95	17.09	18.77	24.50	27.30	30.37	36.46	43.55	51.70	61.26	71.83	83.71	97.29	107.61	119.02	131.49	146.28	163.68	180.52	196.69	213.75	234.04	251.14	269.17	95
71	8.04	11.85	15.44	17.99	21.55	26.45	29.22	36.06	40.39	48.18	57.34	67.50	78.96	92.07	107.22	118.97	131.41	144.74	160.42	178.72	194.77	211.72	234.04	251.14	269.17	285.64	96
72	9.83	13.15	17.08	20.64	24.25	28.03	32.10	36.57	41.70	50.12	59.51	70.17	82.41	96.58	112.84	131.25	144.67	158.73	175.16	192.84	209.68	234.04	251.14	269.17	285.64	303.18	97
73	11.24	15.66	19.58	23.09	26.37	29.73	33.47	39.92	43.92	52.66	62.61	74.08	87.40	102.73	120.16	139.67	158.66	173.33	189.02	207.64	234.04	251.14	269.17	285.64	303.18	321.88	98
74	12.99	17.18	21.37	25.32	28.88	32.23	38.25	42.60	47.23	56.82	67.69	80.35	94.96	111.61	130.31	151.04	173.26	187.08	203.57	234.04	251.14	269.17	285.64	303.18	321.88	341.85	99
75	15.03	18.34	23.11	28.13	31.48	36.79	41.48	46.42	56.82	67.69	80.35	94.95	111.60	130.30	151.03	173.24	187.05	201.53	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	100
76	15.56	20.29	25.42	30.74	35.37	40.36	45.59	55.19	66.73	79.29	93.78	110.31	128.89	149.49	172.07	187.05	201.53	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	101
77	16.13	21.89	27.82	33.98	39.25	44.72	53.53	65.34	73.39	90.37	106.55	124.76	145.01	167.22	185.15	201.53	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	102
78	17.16	23.53	30.44	38.22	43.94	52.02	64.09	72.83	90.37	106.55	124.76	145.01	167.22	185.15	201.53	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	103
79	18.41	25.48	33.73	43.05	50.42	62.69	72.03	89.02	96.83	114.09	133.36	154.61	176.53	199.49	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	104
80	19.78	28.17	37.88	48.95	61.43	71.38	87.89	96.05	110.23	129.14	150.03	171.63	195.22	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	105
81	21.44	31.55	43.12	56.19	70.77	86.80	95.30	109.46	124.39	144.88	166.15	194.12	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	106
82	23.60	35.89	49.65	64.89	81.61	94.58	108.71	123.69	131.93	166.01	194.12	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	506.69	107
83	26.82	41.51	57.61	75.09	93.94	108.07	123.13	131.48	165.88	194.12	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	506.69	532.69	108
84	31.47	48.54	66.89	86.53	107.43	122.58	131.02	165.58	194.12	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	506.69	532.69	560.31	109
85	37.70	56.98	77.47	99.17	122.02	130.57	165.27	194.12	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	506.69	532.69	560.31	589.64	110
86	45.42	66.99	89.60	113.26	130.12	164.96	193.92	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	506.69	532.69	560.31	589.64	620.79	111
87	54.62	78.95	103.95	129.66	164.66	193.72	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	506.69	532.69	560.31	589.64	620.79	653.84	112
88	65.70	93.50	121.34	164.36	193.52	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	506.69	532.69	560.31	589.64	620.79	653.84	688.94	113
89	79.86	111.58	158.79	193.31	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	506.69	532.69	560.31	589.64	620.79	653.84	688.94	726.18	114
90	98.80	152.25	189.60	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	506.69	532.69	560.31	589.64	620.79	653.84	688.94	726.18	765.70	115
91	143.72	185.25	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	506.69	532.69	560.31	589.64	620.79	653.84	688.94	726.18	765.70	807.61	116
92	179.60	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	506.69	532.69	560.31	589.64	620.79	653.84	688.94	726.18	765.70	807.61	852.07	117
93	234.04	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	506.69	532.69	560.31	589.64	620.79	653.84	688.94	726.18	765.70	807.61	852.07	899.23	118
94	251.14	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	506.69	532.69	560.31	589.64	620.79	653.84	688.94	726.18	765.70	807.61	852.07	899.23	949.22	119
95	269.17	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	506.69	532.69	560.31	589.64	620.79	653.84	688.94	726.18	765.70	807.61	852.07	899.23	949.22	1000.00	120
96	285.64	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	506.69	532.69	560.31	589.64	620.79	653.84	688.94	726.18	765.70	807.61	852.07	899.23	949.22	1000.00		
97	303.18	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	506.69	532.69	560.31	589.64	620.79	653.84	688.94	726.18	765.70	807.61	852.07	899.23	949.22	1000.00			
98	321.88	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	506.69	532.69	560.31	589.64	620.79	653.84	688.94	726.18	765.70	807.61	852.07	899.23	949.22	1000.00				
99	341.85	363.19	380.08	398.06	417.20	437.56	459.21	482.22	506.69	532.69	560.31	589.64	620.79	653.84	688.94	726.18	765.70	807.61	852.07	899.23	949.22	1000.00					

Proposed 2001 CSO Table -- Male -- Nonsmoker -- 1000qx																											
Issue	Duration																										Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
0	0.55	0.36	0.36	0.27	0.27	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.38	0.49	0.61	0.74	0.85	0.92	0.94	0.95	0.95	0.95	0.96	0.97	0.98	25
1	0.36	0.36	0.27	0.27	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.38	0.45	0.58	0.71	0.81	0.90	0.93	0.95	0.95	0.95	0.96	0.97	0.98	1.02	26
2	0.30	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.38	0.43	0.55	0.68	0.78	0.87	0.92	0.94	0.95	0.95	0.96	0.97	0.98	1.01	1.07	27
3	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.38	0.42	0.54	0.66	0.76	0.85	0.91	0.94	0.95	0.95	0.96	0.97	0.98	1.00	1.04	1.05	28
4	0.27	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.38	0.42	0.53	0.66	0.76	0.85	0.91	0.94	0.95	0.95	0.96	0.97	0.98	1.00	1.02	1.02	1.03	29
5	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.38	0.41	0.53	0.65	0.76	0.85	0.91	0.94	0.95	0.95	0.96	0.97	0.98	0.99	1.00	1.00	1.01	1.02	30
6	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.38	0.41	0.52	0.65	0.76	0.85	0.91	0.94	0.94	0.94	0.95	0.96	0.96	0.97	0.98	0.98	0.99	1.00	1.01	31
7	0.30	0.31	0.32	0.34	0.35	0.37	0.38	0.41	0.52	0.65	0.76	0.85	0.91	0.93	0.93	0.93	0.94	0.95	0.95	0.96	0.97	0.97	0.98	0.99	1.00	1.01	32
8	0.31	0.32	0.34	0.35	0.37	0.38	0.41	0.51	0.64	0.76	0.85	0.90	0.92	0.92	0.92	0.93	0.95	0.95	0.96	0.97	0.97	0.98	0.99	1.00	1.01	1.03	33
9	0.32	0.34	0.35	0.37	0.38	0.41	0.51	0.64	0.76	0.85	0.90	0.91	0.91	0.91	0.92	0.93	0.95	0.96	0.97	0.97	0.98	0.99	1.00	1.01	1.03	1.06	34
10	0.34	0.35	0.37	0.38	0.41	0.51	0.64	0.75	0.85	0.89	0.90	0.90	0.90	0.91	0.93	0.94	0.96	0.97	0.97	0.98	0.99	1.00	1.01	1.03	1.06	1.09	35
11	0.35	0.37	0.38	0.41	0.51	0.64	0.75	0.85	0.88	0.89	0.89	0.89	0.90	0.92	0.93	0.96	0.97	0.97	0.98	0.99	1.00	1.01	1.03	1.06	1.09	1.14	36
12	0.37	0.38	0.41	0.51	0.64	0.75	0.85	0.87	0.88	0.88	0.88	0.89	0.91	0.93	0.96	0.97	0.97	0.98	0.99	1.00	1.01	1.03	1.06	1.09	1.14	1.20	37
13	0.38	0.41	0.51	0.64	0.75	0.85	0.86	0.87	0.87	0.87	0.88	0.91	0.92	0.96	0.97	0.97	0.98	0.99	1.00	1.01	1.03	1.06	1.09	1.14	1.20	1.29	38
14	0.41	0.50	0.64	0.75	0.85	0.86	0.87	0.87	0.87	0.88	0.89	0.91	0.95	0.97	0.97	0.98	0.99	1.00	1.01	1.03	1.06	1.09	1.14	1.20	1.29	1.37	39
15	0.47	0.64	0.75	0.85	0.85	0.86	0.86	0.86	0.87	0.88	0.90	0.93	0.97	0.97	0.98	0.99	1.00	1.01	1.03	1.06	1.09	1.14	1.20	1.29	1.37	1.46	40
16	0.64	0.75	0.84	0.84	0.85	0.85	0.85	0.86	0.87	0.88	0.91	0.95	0.96	0.98	0.99	1.00	1.01	1.03	1.06	1.09	1.14	1.20	1.29	1.37	1.46	1.58	41
17	0.75	0.83	0.83	0.84	0.84	0.84	0.85	0.86	0.87	0.90	0.92	0.94	0.95	0.96	0.97	0.98	1.03	1.06	1.09	1.14	1.20	1.29	1.37	1.46	1.58	1.73	42
18	0.82	0.82	0.83	0.83	0.83	0.84	0.85	0.85	0.88	0.89	0.90	0.92	0.93	0.96	0.98	0.99	1.06	1.08	1.14	1.20	1.29	1.37	1.46	1.58	1.73	1.90	43
19	0.79	0.79	0.80	0.80	0.81	0.82	0.82	0.85	0.86	0.86	0.88	0.89	0.91	0.95	0.99	1.03	1.08	1.14	1.20	1.29	1.36	1.46	1.58	1.73	1.90	2.10	44
20	0.75	0.76	0.76	0.77	0.78	0.79	0.80	0.82	0.82	0.83	0.85	0.87	0.90	0.95	1.03	1.08	1.13	1.20	1.29	1.36	1.46	1.58	1.73	1.90	2.10	2.33	45
21	0.70	0.70	0.71	0.72	0.73	0.75	0.77	0.77	0.79	0.81	0.83	0.87	0.91	0.98	1.06	1.13	1.20	1.29	1.36	1.46	1.58	1.73	1.90	2.10	2.33	2.55	46
22	0.65	0.66	0.67	0.68	0.71	0.72	0.73	0.75	0.76	0.80	0.83	0.87	0.93	1.01	1.10	1.20	1.29	1.36	1.46	1.58	1.73	1.90	2.10	2.33	2.55	2.79	47
23	0.60	0.61	0.63	0.66	0.69	0.70	0.72	0.74	0.76	0.80	0.84	0.89	0.96	1.04	1.16	1.28	1.36	1.46	1.58	1.73	1.90	2.10	2.33	2.55	2.79	2.93	48
24	0.55	0.56	0.61	0.65	0.68	0.70	0.72	0.75	0.78	0.82	0.88	0.93	1.00	1.10	1.24	1.35	1.46	1.58	1.73	1.90	2.10	2.33	2.55	2.77	2.93	3.09	49
25	0.47	0.53	0.60	0.65	0.68	0.71	0.74	0.76	0.81	0.87	0.92	0.98	1.07	1.18	1.31	1.45	1.58	1.73	1.90	2.10	2.33	2.55	2.75	2.93	3.09	3.32	50
26	0.45	0.53	0.60	0.67	0.70	0.73	0.75	0.80	0.85	0.91	0.97	1.05	1.15	1.27	1.41	1.58	1.73	1.90	2.10	2.33	2.55	2.75	2.92	3.09	3.32	3.59	51
27	0.44	0.53	0.61	0.69	0.73	0.75	0.80	0.85	0.90	0.97	1.05	1.14	1.24	1.39	1.53	1.72	1.90	2.10	2.32	2.55	2.74	2.91	3.09	3.32	3.59	3.95	52
28	0.44	0.54	0.63	0.70	0.75	0.79	0.84	0.90	0.96	1.04	1.14	1.24	1.36	1.52	1.68	1.90	2.09	2.31	2.55	2.73	2.91	3.09	3.32	3.59	3.95	4.36	53
29	0.44	0.55	0.65	0.72	0.79	0.84	0.90	0.96	1.03	1.14	1.24	1.36	1.49	1.64	1.85	2.08	2.30	2.54	2.73	2.90	3.09	3.32	3.59	3.95	4.36	4.84	54
30	0.44	0.56	0.65	0.74	0.83	0.90	0.96	1.03	1.13	1.23	1.34	1.46	1.60	1.79	2.00	2.26	2.49	2.70	2.90	3.09	3.32	3.59	3.93	4.36	4.84	5.39	55
31	0.44	0.56	0.66	0.76	0.85	0.94	1.03	1.11	1.19	1.29	1.41	1.56	1.75	1.96	2.22	2.45	2.68	2.88	3.08	3.31	3.57	3.91	4.35	4.84	5.38	6.02	56
32	0.44	0.55	0.68	0.77	0.87	0.97	1.07	1.15	1.24	1.34	1.48	1.68	1.92	2.18	2.43	2.66	2.88	3.08	3.31	3.57	3.90	4.35	4.82	5.34	5.97	6.63	57
33	0.46	0.59	0.70	0.81	0.92	1.03	1.13	1.21	1.30	1.41	1.58	1.81	2.10	2.36	2.61	2.85	3.07	3.31	3.57	3.89	4.34	4.80	5.31	5.91	6.55	7.20	58
34	0.50	0.61	0.74	0.85	0.97	1.08	1.20	1.29	1.39	1.53	1.73	1.99	2.27	2.56	2.82	3.04	3.30	3.57	3.89	4.30	4.76	5.27	5.86	6.49	7.14	7.77	59
35	0.53	0.64	0.77	0.89	1.01	1.14	1.26	1.38	1.52	1.69	1.91	2.16	2.45	2.75	3.02	3.28	3.57	3.89	4.29	4.72	5.22	5.80	6.42	7.07	7.75	8.46	60
36	0.55	0.68	0.80	0.93	1.07	1.19	1.33	1.51	1.68	1.89	2.10	2.36	2.66	2.97	3.27	3.57	3.89	4.27	4.70	5.16	5.75	6.36	7.01	7.72	8.46	9.39	61
37	0.59	0.70	0.84	0.97	1.10	1.25	1.43	1.65	1.87	2.07	2.29	2.54	2.85	3.21	3.55	3.89	4.26	4.67	5.14	5.68	6.29	6.94	7.65	8.44	9.39	10.59	62
38	0.63	0.77	0.91	1.03	1.17	1.34	1.57	1.82	2.05	2.26	2.48	2.74	3.07	3.44	3.83	4.23	4.66	5.12	5.65	6.22	6.87	7.59	8.41	9.36	10.58	11.98	63
39	0.68	0.84	0.98	1.11	1.26	1.47	1.74	1.98	2.23	2.45	2.67	2.96	3.32	3.72	4.15	4.61	5.08	5.63	6.20	6.81	7.52	8.37	9.33	10.54	11.92	13.42	64
40	0.73	0.90	1.05	1.19	1.38	1.62	1.90	2.17	2.40	2.63	2.90	3.24	3.62	4.05	4.52	5.02	5.58	6.17	6.79	7.46	8.31	9.28	10.48	11.80	13.25	14.54	65
41	0.77	0.97	1.15	1.33	1.53	1.80	2.09	2.34	2.60	2.87	3.19	3.57	3.99	4.45	4.98	5.55	6.13	6.76	7.45	8.24	9.23	10.41	11.70	13.19	14.53	15.68	66
42	0.82	1.06	1.28	1.47	1.70	1.97	2.26	2.54	2.83	3.15	3.52	3.94	4.40	4.94	5.55	6.09	6.70	7.41	8.23	9.16	10.32	11.60	13.04	14.46	15.67	17.17	67
43	0.87	1.12	1.36	1.58	1.82	2.09	2.41	2.72	3.06	3.42	3.84	4.32	4.89	5.49	6.08	6.61	7.35	8.18	9.13	10.22	11.49	12.84	14.25	15.59	17.15	18.90	68
44	0.93	1.19	1.44	1.67	1.91	2.22	2.57	2.95	3.31	3.71	4.16	4.79	5.43	6.03	6.59	7.26	8.11	9.08	10.18	11.36	12.69	14.08	15.48	16.94	18.72	20.94	69
45	1.01	1.28	1.52	1.76	2.05	2.37	2.77	3.19	3.62	4.04	4.60	5.32	5.96	6.51	7.14	8.00	9.00	10.11	11.29	12.53	13.89	15.29	16.70	18.60	20.74	23.48	70
46	1.09	1.35	1.59	1.86	2.18	2.58	3.03	3.50	3.97	4.48	5.12	5.86	6.47	7.04	7.91	8.92	10.05	11.27	12.51	13.76	15.13	16.51	18.34	20.63	23.22	26.42	71
47	1.18	1.42	1.67	1.98	2.36	2.79	3.30	3.83	4.35	4.98	5.64	6.36	6.99	7.73	8.80	9.98	11.23	12.50	13.76	15.01	16.32	18.08	20.35	23.11	26.12	29.56	72
48	1.27	1.52	1.81	2.15	2.54	3.01	3.56	4.15	4.75	5.48	6.13	6.86	7.60	8.58	9.84	11.18	12.48	13.76	15.01	16.18	17.85	20.06	22.80	25.99	29.22	32.83	73
49	1.34	1.65	1.98	2.34	2.76	3.25	3.83	4.51	5.14	5.87	6.61	7.47	8.44	9.59	10.99	12.46	13.76	15.01	16.16	17.63	19.81	22.50	25.64	29.09	32.43	36.27	74

Proposed 2001 CSO Table -- Male -- Nonsmoker -- 1000qx

Issue	Duration																										Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
50	1.46	1.80	2.16	2.56	2.97	3.49	4.14	4.85	5.51	6.26	7.17	8.28	9.51	10.85	12.26	13.76	14.99	16.13	17.57	19.58	22.22	25.32	28.69	32.27	35.77	39.96	75
51	1.58	1.99	2.39	2.80	3.24	3.77	4.43	5.14	5.90	6.77	7.90	9.34	10.76	12.16	13.43	14.96	16.09	17.48	19.49	21.95	25.00	28.33	31.84	35.62	39.45	44.13	76
52	1.71	2.18	2.64	3.08	3.53	4.05	4.72	5.50	6.38	7.48	8.87	10.53	12.04	13.06	14.56	16.04	17.40	19.39	21.83	24.72	28.00	31.47	35.18	39.30	43.56	48.89	77
53	1.80	2.35	2.86	3.37	3.85	4.41	5.14	6.06	7.07	8.41	10.03	11.81	12.95	14.22	15.72	17.31	19.29	21.71	24.31	27.69	31.11	34.76	38.82	43.42	48.30	54.45	78
54	1.88	2.52	3.11	3.64	4.15	4.79	5.66	6.76	7.94	9.49	11.21	12.67	14.08	15.57	17.23	19.18	21.58	24.23	27.23	30.79	34.40	38.39	42.92	48.16	53.80	60.87	79
55	1.97	2.70	3.36	3.91	4.48	5.26	6.31	7.58	8.90	10.55	11.97	13.71	15.42	17.15	19.08	21.45	24.14	27.00	30.25	34.05	37.99	42.45	47.61	53.67	60.16	67.87	80
56	2.07	2.89	3.59	4.21	4.88	5.83	7.06	8.47	9.87	11.24	12.92	14.90	16.95	18.97	21.33	24.12	26.97	29.94	33.39	37.56	41.97	47.07	53.06	60.01	67.10	75.84	81
57	2.18	3.05	3.84	4.58	5.39	6.50	7.88	9.38	10.82	12.47	14.41	16.57	18.75	21.20	24.08	26.93	29.90	33.03	36.83	41.51	46.54	52.46	59.34	66.94	74.99	84.14	82
58	2.34	3.25	4.12	5.00	6.01	7.26	8.72	10.24	11.67	13.52	15.72	18.33	20.95	23.78	26.89	29.85	32.99	36.42	40.68	46.04	51.87	58.68	66.20	74.83	83.22	93.09	83
59	2.53	3.48	4.46	5.49	6.68	8.06	9.58	11.07	12.47	14.55	17.05	20.14	23.49	26.56	29.79	32.92	36.35	40.22	45.10	51.33	58.03	65.47	74.01	83.06	92.07	103.00	84
60	2.78	3.75	4.83	6.03	7.37	8.86	10.41	11.89	13.30	15.64	18.55	22.02	25.97	29.41	32.84	36.27	40.14	44.59	50.27	57.42	64.76	73.19	82.13	91.87	101.83	114.07	85
61	3.06	4.07	5.23	6.56	8.08	9.67	11.24	12.71	14.14	16.84	20.09	23.80	27.89	32.43	36.17	40.03	44.49	49.67	56.21	64.09	72.41	81.24	90.87	101.64	112.80	126.34	86
62	3.38	4.42	5.68	7.15	8.80	10.51	12.14	13.65	15.18	18.19	21.66	25.51	29.82	34.72	39.92	44.36	49.54	55.54	62.72	71.69	80.39	89.91	100.55	112.62	124.98	139.74	87
63	3.61	4.83	6.27	7.88	9.65	11.46	13.20	14.85	16.57	19.80	23.45	27.53	32.19	37.61	43.97	49.39	55.38	61.94	70.13	79.60	89.00	99.53	111.45	124.81	138.26	154.10	88
64	3.80	5.27	6.90	8.68	10.60	12.53	14.43	16.31	18.24	21.66	25.55	30.01	35.20	41.30	48.57	55.20	61.75	69.24	77.86	88.15	98.55	110.34	123.54	138.11	152.50	169.25	89
65	3.96	5.70	7.58	9.58	11.65	13.75	15.82	17.90	20.07	23.75	28.01	32.99	38.84	45.83	54.13	61.53	69.01	76.86	86.19	97.62	109.28	122.35	136.75	152.39	167.54	185.06	90
66	4.10	6.33	8.40	10.55	12.90	15.14	17.33	19.59	22.07	26.09	30.86	36.46	43.16	51.11	60.24	68.82	76.62	85.06	95.38	108.18	121.10	135.37	150.85	167.41	183.21	199.93	91
67	4.37	7.04	9.30	11.63	14.31	16.68	19.01	21.44	24.20	28.70	34.06	40.48	48.10	56.84	67.14	76.42	84.82	94.15	105.74	119.89	134.02	149.33	165.73	183.08	197.94	215.43	92
68	4.92	7.82	10.32	12.83	15.62	18.44	21.24	24.07	26.97	32.09	38.27	45.60	54.04	63.99	75.01	84.62	93.91	104.39	117.20	132.68	147.84	164.08	181.27	197.82	213.33	231.78	93
69	5.45	8.70	11.45	14.15	16.43	20.46	23.31	26.11	29.38	35.22	42.18	50.21	59.68	70.20	82.10	93.72	104.14	115.74	129.74	146.40	162.49	179.50	195.92	213.25	231.69	249.05	94
70	6.04	9.69	12.71	15.63	17.25	22.60	25.30	28.30	34.12	40.95	48.83	58.11	68.45	80.13	93.56	103.95	115.49	128.15	143.18	160.91	177.75	194.00	211.17	231.64	248.92	267.19	95
71	7.34	10.80	14.11	16.51	19.87	24.49	27.21	33.73	37.98	45.53	54.41	64.33	75.57	88.49	103.48	115.31	127.91	141.46	157.42	176.06	192.16	209.19	231.61	248.85	267.08	283.79	96
72	8.97	12.01	15.64	18.99	22.43	26.07	30.01	34.38	39.41	47.62	56.77	67.19	79.22	93.20	109.31	127.65	141.24	155.56	172.30	190.38	207.26	231.57	248.80	267.06	283.79	301.49	97
73	10.26	14.31	17.98	21.31	24.48	27.75	31.43	37.69	41.72	50.29	60.01	71.27	84.39	99.53	116.84	136.28	155.36	170.33	186.38	205.41	231.54	248.77	267.00	283.79	301.49	320.38	98
74	11.86	15.74	19.67	23.45	26.91	30.21	36.06	40.41	45.08	54.55	65.20	77.64	92.06	108.56	127.17	147.87	170.17	184.32	201.19	231.51	248.74	266.96	283.79	301.49	320.38	340.54	99
75	13.75	16.85	21.35	26.13	29.43	34.61	39.26	44.22	54.46	64.65	77.14	91.47	107.90	126.42	147.03	170.14	184.24	199.08	231.48	248.71	266.92	283.79	301.49	320.38	340.54	362.10	100
76	14.29	18.71	23.55	28.64	33.17	38.08	43.28	52.70	64.10	76.63	90.89	107.24	125.67	146.19	168.75	183.97	198.78	231.45	248.68	266.88	283.79	301.49	320.38	340.54	362.10	379.21	101
77	14.88	20.25	25.86	31.76	36.91	42.31	50.94	62.53	70.66	87.51	103.47	121.51	141.64	163.80	181.86	198.50	231.12	248.65	266.84	283.79	301.49	320.38	340.54	362.10	379.21	397.44	102
78	15.89	21.85	28.39	35.83	41.44	49.34	61.13	69.87	87.18	103.36	121.38	141.48	163.61	181.65	198.25	230.82	248.32	266.79	283.75	301.49	320.38	340.54	362.10	379.21	397.44	416.84	103
79	17.10	23.74	31.56	40.49	47.68	59.59	68.87	85.58	93.62	110.91	129.99	151.13	173.01	196.03	230.56	248.04	266.49	283.42	301.45	320.38	340.54	362.10	379.21	397.44	416.84	437.48	104
80	18.44	26.34	35.55	46.16	58.22	68.02	84.22	92.56	106.81	125.77	146.52	168.06	191.64	230.34	247.79	266.21	283.13	301.15	320.33	340.54	362.10	379.21	397.44	416.84	437.48	459.13	105
81	20.08	29.60	40.62	53.17	67.29	82.94	91.58	105.74	120.80	141.38	162.56	190.42	230.14	247.57	265.98	282.88	300.88	320.06	340.51	362.10	379.21	397.44	416.84	437.48	459.13	482.15	106
82	22.19	33.80	46.93	61.61	77.83	90.65	104.75	119.79	128.40	162.32	190.27	229.96	247.38	265.77	282.66	300.65	319.83	340.27	362.07	379.21	397.44	416.84	437.48	459.13	482.15	506.62	107
83	25.30	39.24	54.65	71.51	89.87	103.88	118.95	127.65	161.77	190.14	229.80	247.21	265.59	282.47	300.45	319.62	340.06	361.86	379.18	397.44	416.84	437.48	459.13	482.15	506.62	532.63	108
84	29.78	46.03	63.66	82.69	103.03	118.15	126.91	161.09	189.70	229.66	247.05	265.43	282.30	300.28	319.44	339.89	361.69	379.04	397.41	416.84	437.48	459.13	482.15	506.62	532.63	560.26	109
85	35.79	54.22	73.98	94.91	117.36	126.21	160.46	189.29	229.18	246.92	265.28	282.16	300.12	319.28	339.73	361.54	378.91	397.31	416.83	437.48	459.13	482.15	506.62	532.63	560.26	589.59	110
86	43.26	63.81	85.59	108.74	125.53	159.84	188.73	228.72	246.45	265.15	282.01	299.99	319.15	339.60	361.41	378.81	397.23	416.78	437.48	459.13	482.15	506.62	532.63	560.26	589.59	620.74	111
87	52.02	75.29	99.61	124.85	159.27	188.19	228.32	246.01	264.70	281.90	299.87	319.02	339.47	361.30	378.71	397.15	416.73	437.48	459.13	482.15	506.62	532.63	560.26	589.59	620.74	653.80	112
88	62.57	89.44	116.63	158.68	187.69	227.93	245.62	264.28	281.48	299.75	318.92	339.36	361.20	378.63	397.09	416.69	437.48	459.13	482.15	506.62	532.63	560.26	589.59	620.74	653.80	688.91	113
89	76.29	107.07	153.05	187.18	227.59	245.25	263.91	281.09	299.37	318.82	339.26	361.10	378.56	397.03	416.66	437.48	459.13	482.15	506.62	532.63	560.26	589.59	620.74	653.80	688.91	726.15	114
90	94.66	146.50	183.28	227.25	244.91	263.55	280.73	299.01	318.47	339.19	361.02	378.50	396.99	416.63	437.48	459.13	482.15	506.62	532.63	560.26	589.59	620.74	653.80	688.91	726.15	765.67	115
91	138.07	178.80	226.91	244.58	263.23	280.40	298.68	318.14	338.88	360.96	378.44	396.94	416.60	437.48	459.13	482.15	506.62	532.63	560.26	589.59	620.74	653.80	688.91	726.15	765.67	807.59	116
92	173.06	226.57	244.25	262.93	280.10	298.39	317.85	338.61	360.70	378.39	396.90	416.58	437.48	459.13	482.15	506.62	532.63	560.26	589.59	620.74	653.80	688.91	726.15	765.67	807.59	852.05	117
93	226.23	243.92	262.61	279.82	298.11	317.58	338.34	360.47	378.20	396.87	416.56	437.48	459.13	482.15	506.62	532.63	560.26	589.59	620.74	653.80	688.91	726.15	765.67	807.59	852.05	899.22	118
94	243.60	262.29	279.52	297.84	317.34	338.11	360.25	378.04	396.73	416.54	437.48	459.13	482.15	506.62	532.63	560.26	589.59	620.74	653.80	688.91	726.15	765.67	807.59	852.05	899.22	949.22	119
95	261.98	279.23	297.57	317.10	337.89	360.05	377.88	396.62	416.48	437.48	459.13	482.15	506.62	532.63	560.26	589.59	620.74	653.80	688.91	726.15	765.67	807.59	852.05	899.22	949.22	1000.00	120
96	278.94	297.30	316.86	337.68	359.87	377.74	396.51	416.42	437.48	459.13	482.15	506.62	532.63	560.26	589.59	620.74	653.80	688.91	726.15	765.67	807.59	852.05	899.22	949.22	1000.00		
97	297.03	316.61	337.47	359.69	377.61	396.41	416.36	437.48	459.13	482.15	506.62	532.63	560.26	589.59	620.74	653.80	688.91	726.15	765.67	807.59	852.05	899.22	949.22	1000.00			
98	316.37	337.26	359.52	377.49	396.32	416.31	437.48	459.13	482.15	506.62	532.63	560.26	589.59	620.74	653.80	688.91	726.15	765.67	807.59	852.05	899.22	949.22	1000.00				
99	337.05	359.34	377.36	396.24	416.26	437.48	459.13	482.15	506.62	532.63	560.26	589.59	620.74	653.80	688.91	726.15	765.67	807.59	852.05	899.22	949.22	1000.00					

Proposed 2001 CSO Table -- Male -- Smoker -- 1000qx																											
Issue	Duration																										Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
0	0.56	0.37	0.36	0.27	0.27	0.28	0.29	0.30	0.31	0.32	0.35	0.36	0.38	0.39	0.49	0.62	0.79	0.97	1.11	1.21	1.27	1.33	1.39	1.46	1.54	1.62	25
1	0.37	0.36	0.27	0.27	0.28	0.29	0.30	0.31	0.32	0.35	0.36	0.38	0.39	0.45	0.59	0.76	0.93	1.09	1.18	1.25	1.33	1.39	1.46	1.54	1.62	1.71	26
2	0.30	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.35	0.36	0.38	0.39	0.43	0.56	0.73	0.89	1.05	1.17	1.25	1.33	1.39	1.46	1.54	1.62	1.70	1.81	27
3	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.35	0.36	0.38	0.39	0.42	0.55	0.71	0.87	1.03	1.16	1.25	1.33	1.39	1.46	1.54	1.62	1.68	1.76	1.82	28
4	0.27	0.28	0.29	0.30	0.31	0.32	0.35	0.36	0.38	0.39	0.42	0.54	0.71	0.87	1.03	1.16	1.24	1.33	1.39	1.46	1.54	1.62	1.68	1.74	1.77	1.81	29
5	0.28	0.29	0.30	0.31	0.32	0.35	0.36	0.38	0.39	0.41	0.54	0.70	0.87	1.03	1.16	1.24	1.33	1.39	1.46	1.54	1.62	1.68	1.71	1.74	1.77	1.80	30
6	0.29	0.30	0.31	0.32	0.35	0.36	0.38	0.39	0.41	0.53	0.70	0.87	1.03	1.16	1.24	1.33	1.38	1.45	1.54	1.62	1.65	1.68	1.71	1.74	1.77	1.80	31
7	0.30	0.31	0.32	0.35	0.36	0.38	0.39	0.41	0.53	0.70	0.87	1.03	1.16	1.24	1.31	1.38	1.43	1.52	1.60	1.63	1.66	1.69	1.72	1.75	1.78	1.81	32
8	0.31	0.32	0.35	0.36	0.38	0.39	0.41	0.52	0.69	0.87	1.03	1.15	1.23	1.30	1.36	1.42	1.51	1.59	1.63	1.66	1.69	1.72	1.75	1.78	1.81	1.87	33
9	0.32	0.35	0.36	0.38	0.39	0.41	0.52	0.69	0.87	1.03	1.15	1.23	1.30	1.35	1.41	1.48	1.57	1.63	1.66	1.69	1.72	1.75	1.78	1.81	1.87	1.94	34
10	0.35	0.36	0.38	0.39	0.41	0.52	0.69	0.86	1.03	1.15	1.23	1.29	1.33	1.39	1.48	1.55	1.63	1.66	1.69	1.72	1.75	1.78	1.81	1.87	1.94	2.00	35
11	0.36	0.38	0.39	0.41	0.52	0.69	0.86	1.03	1.13	1.21	1.27	1.32	1.38	1.46	1.54	1.62	1.66	1.69	1.72	1.75	1.78	1.81	1.87	1.94	2.00	2.11	36
12	0.38	0.39	0.41	0.52	0.69	0.86	1.03	1.13	1.20	1.26	1.31	1.36	1.45	1.54	1.62	1.66	1.69	1.72	1.75	1.78	1.81	1.87	1.94	2.00	2.11	2.23	37
13	0.39	0.41	0.52	0.69	0.86	1.03	1.12	1.19	1.25	1.29	1.35	1.43	1.51	1.60	1.66	1.69	1.72	1.75	1.78	1.81	1.87	1.94	2.00	2.11	2.23	2.40	38
14	0.41	0.51	0.69	0.86	1.03	1.12	1.18	1.23	1.28	1.33	1.40	1.49	1.58	1.66	1.69	1.72	1.75	1.78	1.81	1.87	1.94	2.00	2.11	2.23	2.40	2.57	39
15	0.48	0.69	0.86	1.03	1.11	1.15	1.22	1.26	1.32	1.39	1.48	1.55	1.65	1.69	1.72	1.75	1.78	1.81	1.87	1.94	2.00	2.11	2.23	2.40	2.57	2.77	40
16	0.69	0.86	1.03	1.11	1.15	1.20	1.25	1.30	1.37	1.44	1.52	1.60	1.66	1.72	1.75	1.78	1.81	1.87	1.93	2.00	2.11	2.23	2.40	2.57	2.77	3.03	41
17	0.86	1.03	1.11	1.14	1.19	1.25	1.30	1.35	1.43	1.49	1.55	1.61	1.65	1.70	1.73	1.76	1.87	1.93	2.00	2.10	2.22	2.40	2.57	2.77	3.03	3.33	42
18	1.03	1.09	1.13	1.18	1.22	1.27	1.34	1.40	1.46	1.50	1.54	1.59	1.63	1.69	1.76	1.79	1.93	1.99	2.10	2.22	2.40	2.57	2.77	3.03	3.33	3.69	43
19	1.05	1.09	1.14	1.18	1.23	1.29	1.35	1.41	1.45	1.48	1.52	1.55	1.61	1.69	1.79	1.87	1.99	2.10	2.22	2.39	2.57	2.76	3.03	3.33	3.69	4.12	44
20	1.03	1.08	1.12	1.17	1.22	1.29	1.33	1.37	1.41	1.44	1.48	1.52	1.60	1.72	1.87	1.99	2.10	2.22	2.39	2.57	2.76	3.02	3.33	3.69	4.12	4.57	45
21	1.00	1.04	1.08	1.13	1.19	1.23	1.29	1.31	1.36	1.40	1.46	1.53	1.64	1.77	1.94	2.10	2.22	2.39	2.57	2.76	3.02	3.33	3.69	4.12	4.57	4.99	46
22	0.95	1.00	1.04	1.10	1.15	1.19	1.23	1.27	1.31	1.39	1.46	1.55	1.66	1.83	2.03	2.22	2.39	2.57	2.76	3.02	3.33	3.69	4.12	4.57	4.99	5.46	47
23	0.91	0.95	1.01	1.08	1.13	1.19	1.22	1.26	1.32	1.40	1.50	1.60	1.75	1.91	2.15	2.38	2.57	2.76	3.02	3.33	3.69	4.12	4.54	4.99	5.46	5.71	48
24	0.84	0.90	0.98	1.07	1.14	1.19	1.23	1.29	1.36	1.47	1.56	1.68	1.82	2.03	2.31	2.54	2.76	3.02	3.33	3.69	4.11	4.54	4.99	5.42	5.71	6.02	49
25	0.74	0.84	0.97	1.09	1.16	1.22	1.27	1.33	1.43	1.54	1.66	1.78	1.96	2.18	2.45	2.75	3.02	3.33	3.69	4.10	4.54	4.99	5.39	5.71	6.02	6.44	50
26	0.70	0.84	0.99	1.13	1.20	1.25	1.31	1.41	1.50	1.64	1.77	1.92	2.11	2.38	2.66	3.01	3.33	3.69	4.09	4.54	4.99	5.39	5.71	6.02	6.44	6.96	51
27	0.68	0.86	1.03	1.16	1.25	1.31	1.41	1.50	1.62	1.77	1.92	2.10	2.30	2.61	2.90	3.30	3.69	4.08	4.54	4.99	5.38	5.71	6.02	6.44	6.96	7.65	52
28	0.70	0.90	1.07	1.20	1.31	1.39	1.48	1.60	1.73	1.91	2.10	2.30	2.55	2.88	3.21	3.65	4.07	4.54	4.99	5.37	5.71	6.02	6.44	6.96	7.65	8.45	53
29	0.70	0.92	1.10	1.24	1.39	1.48	1.60	1.73	1.87	2.10	2.30	2.55	2.81	3.14	3.55	4.05	4.54	4.99	5.36	5.71	6.02	6.44	6.96	7.65	8.45	9.37	54
30	0.72	0.94	1.11	1.29	1.45	1.60	1.73	1.87	2.06	2.30	2.51	2.77	3.05	3.42	3.89	4.41	4.90	5.35	5.71	6.02	6.44	6.96	7.65	8.45	9.37	10.35	55
31	0.70	0.94	1.14	1.33	1.52	1.70	1.87	2.03	2.21	2.42	2.66	2.97	3.35	3.80	4.32	4.83	5.29	5.71	6.02	6.44	6.96	7.65	8.45	9.37	10.33	11.46	56
32	0.70	0.93	1.16	1.36	1.56	1.75	1.96	2.14	2.31	2.51	2.81	3.21	3.72	4.26	4.78	5.26	5.70	6.02	6.44	6.96	7.65	8.45	9.37	10.33	11.46	12.50	57
33	0.76	0.99	1.22	1.44	1.66	1.87	2.08	2.26	2.44	2.67	3.02	3.50	4.10	4.66	5.18	5.65	6.02	6.44	6.96	7.65	8.45	9.37	10.32	11.46	12.50	13.42	58
34	0.81	1.05	1.30	1.52	1.77	2.00	2.23	2.43	2.64	2.92	3.33	3.87	4.47	5.08	5.59	6.02	6.44	6.96	7.65	8.45	9.37	10.32	11.46	12.50	13.42	14.32	59
35	0.87	1.11	1.37	1.61	1.86	2.13	2.36	2.62	2.91	3.27	3.72	4.26	4.87	5.48	6.02	6.44	6.96	7.65	8.45	9.37	10.32	11.46	12.50	13.42	14.32	15.42	60
36	0.93	1.17	1.43	1.69	1.96	2.21	2.51	2.87	3.25	3.69	4.14	4.68	5.28	5.95	6.44	6.96	7.65	8.45	9.37	10.32	11.46	12.50	13.42	14.32	15.42	16.93	61
37	0.99	1.21	1.49	1.76	2.03	2.34	2.72	3.17	3.64	4.08	4.54	5.05	5.72	6.44	6.96	7.65	8.45	9.37	10.32	11.46	12.50	13.42	14.32	15.42	16.93	18.90	62
38	1.06	1.34	1.63	1.88	2.16	2.53	3.00	3.54	4.04	4.50	4.94	5.49	6.16	6.96	7.65	8.45	9.37	10.32	11.46	12.50	13.42	14.32	15.42	16.93	18.90	21.17	63
39	1.16	1.48	1.76	2.02	2.33	2.77	3.35	3.89	4.42	4.88	5.35	5.95	6.71	7.55	8.45	9.37	10.32	11.46	12.50	13.42	14.32	15.42	16.93	18.90	21.17	23.44	64
40	1.24	1.59	1.91	2.20	2.58	3.11	3.70	4.28	4.78	5.29	5.86	6.57	7.37	8.28	9.24	10.31	11.46	12.50	13.42	14.32	15.42	16.93	18.90	21.17	23.44	24.97	65
41	1.32	1.72	2.11	2.46	2.90	3.49	4.11	4.67	5.21	5.81	6.50	7.29	8.17	9.13	10.27	11.46	12.50	13.42	14.32	15.42	16.93	18.90	21.17	23.44	24.97	26.46	66
42	1.41	1.90	2.35	2.77	3.26	3.84	4.47	5.08	5.71	6.44	7.22	8.09	9.08	10.21	11.46	12.50	13.42	14.32	15.42	16.93	18.90	21.17	23.44	24.97	26.46	28.47	67
43	1.49	2.01	2.52	2.99	3.49	4.09	4.78	5.48	6.22	7.05	7.91	8.95	10.16	11.43	12.50	13.42	14.32	15.42	16.93	18.90	21.17	23.44	24.97	26.46	28.47	30.78	68
44	1.60	2.16	2.67	3.16	3.70	4.35	5.12	5.96	6.79	7.70	8.66	10.00	11.37	12.50	13.42	14.32	15.42	16.93	18.90	21.17	23.44	24.97	26.46	28.47	30.78	33.50	69
45	1.76	2.31	2.84	3.35	3.96	4.69	5.58	6.51	7.48	8.45	9.64	11.22	12.50	13.42	14.32	15.42	16.93	18.90	21.17	23.44	24.97	26.46	28.47	30.78	33.50	36.88	70
46	1.92	2.46	2.98	3.53	4.24	5.10	6.07	7.12	8.17	9.30	10.68	12.21	13.42	14.32	15.42	16.93	18.90	21.17	23.44	24.97	26.46	28.47	30.78	33.50	36.88	40.72	71
47	2.10	2.60	3.13	3.78	4.61	5.54	6.62	7.78	8.92	10.30	11.66	13.11	14.32	15.42	16.93	18.90	21.17	23.44	24.97	26.46	28.47	30.78	33.50	36.88	40.72	44.70	72
48	2.28	2.81	3.42	4.13	4.97	5.96	7.13	8.39	9.67	11.23	12.51	13.99	15.42	16.93	18.90	21.17	23.44	24.97	26.46	28.47	30.78	33.50	36.88	40.72	44.70	48.66	73
49	2.44	3.09	3.76	4.54	5.40	6.42	7.66	9.07	10.39	11.90	13.36	15.05	16.91	18.90	21.17	23.44	24.97	26.46	28.47	30.78	33.50	36.88	40.72	44.70	48.66	52.64	74

Proposed 2001 CSO Table -- Male -- Smoker -- 1000qx																												
Issue	Duration																											Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
50	2.67	3.40	4.16	4.97	5.85	6.91	8.26	9.70	11.05	12.58	14.33	16.51	18.84	21.17	23.44	24.97	26.46	28.47	30.78	33.50	36.88	40.72	44.70	48.66	52.64	57.19	75
51	2.95	3.80	4.65	5.52	6.39	7.48	8.79	10.25	11.74	13.45	15.65	18.42	21.07	23.44	24.97	26.46	28.47	30.78	33.50	36.88	40.72	44.70	48.66	52.64	57.19	62.23	76
52	3.24	4.23	5.20	6.10	7.00	8.03	9.36	10.91	12.63	14.75	17.42	20.57	23.30	24.95	26.46	28.47	30.78	33.50	36.88	40.72	44.70	48.66	52.64	57.19	62.23	67.94	77
53	3.42	4.60	5.68	6.69	7.64	8.73	10.17	11.97	13.92	16.48	19.52	22.79	24.65	26.46	28.47	30.78	33.50	36.88	40.72	44.70	48.66	52.64	57.19	62.23	67.94	74.54	78
54	3.57	4.97	6.23	7.30	8.28	9.51	11.22	13.33	15.56	18.47	21.61	24.12	26.43	28.47	30.78	33.50	36.88	40.72	44.70	48.66	52.64	57.19	62.23	67.94	74.54	82.05	79
55	3.76	5.38	6.77	7.86	8.96	10.45	12.50	14.91	17.35	20.34	22.78	25.72	28.47	30.78	33.50	36.88	40.72	44.70	48.66	52.64	57.19	62.23	67.94	74.54	82.05	90.07	80
56	3.94	5.72	7.21	8.45	9.75	11.59	13.98	16.67	19.21	21.58	24.47	27.81	30.78	33.50	36.88	40.72	44.70	48.66	52.64	57.19	62.23	67.94	74.54	82.05	90.07	99.05	81
57	4.10	6.03	7.68	9.16	10.77	12.94	15.61	18.43	21.01	23.89	27.19	30.76	33.50	36.88	40.72	44.70	48.66	52.64	57.19	62.23	67.94	74.54	82.05	90.07	99.05	108.11	82
58	4.41	6.40	8.22	10.00	12.00	14.46	17.26	20.06	22.56	25.83	29.53	33.50	36.88	40.72	44.70	48.66	52.64	57.19	62.23	67.94	74.54	82.05	90.07	99.05	108.11	117.61	83
59	4.78	6.83	8.88	10.98	13.34	16.05	18.92	21.61	24.03	27.68	31.88	36.88	40.72	44.70	48.66	52.64	57.19	62.23	67.94	74.54	82.05	90.07	99.05	108.11	117.61	127.94	84
60	5.26	7.37	9.62	12.05	14.75	17.63	20.50	23.15	25.50	29.64	34.51	40.16	44.70	48.66	52.64	57.19	62.23	67.94	74.54	82.05	90.07	99.05	108.11	117.61	127.94	140.09	85
61	5.82	7.99	10.41	13.12	16.12	19.20	22.08	24.63	27.00	31.79	37.19	43.10	48.66	52.64	57.19	62.23	67.94	74.54	82.05	90.07	99.05	108.11	117.61	127.94	140.09	153.39	86
62	6.45	8.69	11.28	14.26	17.55	20.82	23.76	26.36	28.87	34.22	39.87	45.88	52.27	57.19	62.23	67.94	74.54	82.05	90.07	99.05	108.11	117.61	127.94	140.09	153.39	167.69	87
63	6.88	9.50	12.47	15.75	19.21	22.65	25.78	28.61	31.42	37.12	42.94	49.16	55.94	62.23	67.94	74.54	82.05	90.07	99.05	108.11	117.61	127.94	140.09	153.39	167.69	182.72	88
64	7.22	10.36	13.75	17.33	21.07	24.72	28.12	31.33	34.51	40.48	46.57	53.23	60.65	67.94	74.54	82.05	90.07	99.05	108.11	117.61	127.94	140.09	153.39	167.69	182.72	198.27	89
65	7.46	11.21	15.08	19.11	23.13	27.04	30.75	34.30	37.90	44.25	50.82	58.14	66.39	74.54	82.05	90.07	99.05	108.11	117.61	127.94	140.09	153.39	167.69	182.72	198.27	214.13	90
66	7.62	12.37	16.60	20.80	25.28	29.32	33.07	36.78	40.71	47.43	54.61	62.73	72.08	82.05	90.07	99.04	108.10	117.60	127.93	140.07	151.91	167.61	182.72	198.27	214.13	228.43	91
67	8.06	13.69	18.21	22.68	27.66	31.77	35.58	39.41	43.62	50.82	58.77	67.94	78.41	89.83	99.03	108.09	117.59	127.91	140.05	151.16	166.28	181.96	198.20	214.13	228.43	243.02	92
68	9.10	15.13	20.02	24.71	29.72	34.53	39.02	43.30	47.46	55.36	64.36	74.64	85.95	98.71	108.08	117.56	127.88	140.01	150.38	164.59	180.32	196.66	213.43	228.43	243.02	258.10	93
69	10.05	16.71	21.99	26.89	30.69	37.65	41.95	45.90	50.42	59.06	69.02	80.00	92.47	105.56	117.54	127.84	139.96	149.60	164.23	178.29	194.69	211.54	226.98	243.02	258.10	273.74	94
70	11.10	18.48	24.15	29.28	31.59	40.80	44.56	48.54	57.13	66.82	77.73	90.13	103.26	117.42	127.79	139.89	148.80	159.73	177.61	192.30	209.32	225.03	243.02	258.10	273.74	291.05	95
71	13.66	20.44	26.51	30.42	35.89	43.33	46.80	53.78	61.92	72.10	84.11	96.93	110.83	126.17	139.83	148.00	157.48	175.64	191.23	206.39	222.32	243.02	258.10	273.74	291.05	306.33	96
72	16.85	22.55	29.07	34.61	39.91	45.15	50.51	56.13	62.32	72.93	84.95	98.11	112.73	129.10	147.20	155.25	174.60	187.27	204.90	218.86	243.02	258.10	273.74	291.05	306.33	322.44	97
73	19.27	26.84	33.13	38.32	42.78	47.05	51.59	59.97	64.01	74.50	86.95	100.86	116.53	133.97	153.09	173.62	185.32	204.52	216.92	243.02	258.10	273.74	291.05	306.33	322.44	339.45	98
74	22.27	29.24	35.80	41.54	46.20	50.17	57.96	62.57	67.13	82.42	98.16	106.40	123.24	141.81	161.94	183.37	202.05	216.13	243.02	258.10	273.74	291.05	306.33	322.44	339.45	357.42	99
75	25.71	30.87	38.25	45.54	49.56	56.30	61.50	66.87	80.33	96.95	105.39	122.27	140.93	161.22	182.91	199.60	215.45	243.02	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	100
76	26.15	33.72	41.53	49.09	55.02	60.99	66.71	78.30	95.75	104.87	121.17	140.46	160.90	178.83	197.18	214.79	243.02	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	101
77	26.66	35.89	44.85	53.60	60.31	66.54	77.59	94.54	104.57	120.54	136.69	157.04	174.84	194.79	214.12	243.02	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	102
78	27.89	37.96	48.33	59.45	66.36	76.71	93.33	104.24	119.89	133.28	149.37	170.95	192.44	213.46	243.02	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	103
79	29.51	40.56	52.91	66.20	75.58	92.16	103.96	119.29	131.58	145.65	167.14	190.11	212.79	243.02	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	104
80	31.21	44.22	58.59	74.23	91.00	103.66	118.69	129.89	144.00	162.85	185.71	208.38	243.02	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	105
81	33.34	48.83	65.79	84.05	103.39	118.11	128.26	143.00	160.39	180.42	207.74	243.02	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	483.10	106
82	36.18	54.81	74.72	95.72	117.56	126.69	142.05	159.55	178.03	207.10	243.02	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	483.10	507.51	107
83	40.52	62.46	85.36	109.01	125.14	141.12	158.71	175.67	206.45	243.02	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	483.10	507.51	533.44	108
84	46.93	71.93	97.55	123.60	140.19	157.88	173.35	205.81	243.02	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	483.10	507.51	533.44	561.01	109
85	55.48	83.11	111.11	139.26	157.05	171.06	205.17	243.02	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	483.10	507.51	533.44	561.01	590.27	110
86	65.85	96.06	126.24	156.24	168.80	204.54	243.02	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	483.10	507.51	533.44	561.01	590.27	621.35	111
87	77.84	111.08	143.62	166.58	203.91	243.02	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	483.10	507.51	533.44	561.01	590.27	621.35	654.35	112
88	91.94	129.05	164.39	203.27	243.02	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	483.10	507.51	533.44	561.01	590.27	621.35	654.35	689.38	113
89	109.59	150.88	202.65	243.02	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	483.10	507.51	533.44	561.01	590.27	621.35	654.35	689.38	726.56	114
90	132.90	202.03	243.02	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	483.10	507.51	533.44	561.01	590.27	621.35	654.35	689.38	726.56	766.01	115
91	189.56	240.02	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	483.10	507.51	533.44	561.01	590.27	621.35	654.35	689.38	726.56	766.01	807.86	116
92	230.95	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	483.10	507.51	533.44	561.01	590.27	621.35	654.35	689.38	726.56	766.01	807.86	852.26	117
93	258.10	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	483.10	507.51	533.44	561.01	590.27	621.35	654.35	689.38	726.56	766.01	807.86	852.26	899.35	118
94	273.74	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	483.10	507.51	533.44	561.01	590.27	621.35	654.35	689.38	726.56	766.01	807.86	852.26	899.35	949.29	119
95	291.05	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	483.10	507.51	533.44	561.01	590.27	621.35	654.35	689.38	726.56	766.01	807.86	852.26	899.35	949.29	1000.00	120
96	306.33	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	483.10	507.51	533.44	561.01	590.27	621.35	654.35	689.38	726.56	766.01	807.86	852.26	899.35	949.29	1000.00		
97	322.44	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	483.10	507.51	533.44	561.01	590.27	621.35	654.35	689.38	726.56	766.01	807.86	852.26	899.35	949.29	1000.00			
98	339.45	357.42	376.40	390.77	405.92	421.83	438.57	460.15	483.10	507.51	533.44	561.01	590.27	621.35	654.35	689.38	726.56	766.01	807.86	852.26	899.35	949.29	1000.00				
99	357.42	376.40	390.77	405.91	421.83	438.57	460.15	483.10	507.51	533.44	561.01	590.27	621.35	654.35	689.38	726.56	766.01	807.86	852.26	899.35	949.29	1000.00					

Proposed 2001 CSO Table -- Female -- Composite -- 1000qx																											
Issue	Duration																										Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
0	0.48	0.39	0.26	0.20	0.20	0.20	0.21	0.22	0.23	0.23	0.24	0.25	0.28	0.30	0.33	0.35	0.39	0.41	0.43	0.46	0.47	0.48	0.50	0.50	0.52	0.53	25
1	0.35	0.26	0.19	0.20	0.19	0.20	0.21	0.23	0.23	0.23	0.25	0.27	0.30	0.32	0.35	0.38	0.40	0.42	0.45	0.47	0.48	0.50	0.50	0.52	0.53	0.56	26
2	0.26	0.19	0.19	0.19	0.19	0.20	0.22	0.23	0.23	0.25	0.27	0.29	0.32	0.34	0.37	0.40	0.42	0.45	0.46	0.48	0.50	0.50	0.52	0.53	0.56	0.60	27
3	0.19	0.19	0.19	0.19	0.19	0.21	0.22	0.23	0.25	0.27	0.29	0.32	0.34	0.37	0.39	0.41	0.44	0.46	0.47	0.49	0.50	0.52	0.53	0.56	0.60	0.63	28
4	0.19	0.19	0.19	0.19	0.21	0.22	0.23	0.25	0.27	0.29	0.31	0.33	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.50	0.52	0.53	0.56	0.60	0.63	0.66	29
5	0.19	0.19	0.19	0.21	0.21	0.23	0.25	0.27	0.29	0.31	0.33	0.36	0.38	0.40	0.43	0.45	0.46	0.49	0.50	0.52	0.53	0.56	0.60	0.63	0.66	0.68	30
6	0.19	0.19	0.21	0.21	0.22	0.24	0.27	0.29	0.31	0.33	0.36	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.53	0.56	0.60	0.63	0.66	0.68	0.73	31
7	0.19	0.21	0.21	0.22	0.24	0.26	0.28	0.31	0.33	0.36	0.37	0.39	0.42	0.43	0.45	0.48	0.49	0.52	0.53	0.56	0.60	0.63	0.66	0.68	0.73	0.77	32
8	0.21	0.21	0.22	0.23	0.26	0.28	0.30	0.32	0.35	0.37	0.39	0.41	0.43	0.44	0.47	0.49	0.51	0.53	0.56	0.60	0.63	0.66	0.68	0.73	0.77	0.82	33
9	0.21	0.22	0.23	0.25	0.27	0.30	0.32	0.35	0.36	0.38	0.41	0.42	0.44	0.46	0.48	0.51	0.53	0.56	0.59	0.63	0.66	0.68	0.73	0.77	0.82	0.88	34
10	0.22	0.23	0.25	0.27	0.29	0.31	0.34	0.36	0.37	0.40	0.41	0.43	0.46	0.47	0.50	0.52	0.55	0.59	0.63	0.66	0.68	0.73	0.77	0.82	0.88	0.96	35
11	0.22	0.25	0.27	0.29	0.31	0.33	0.35	0.37	0.39	0.41	0.42	0.45	0.47	0.49	0.52	0.55	0.58	0.62	0.66	0.68	0.73	0.77	0.82	0.88	0.96	1.03	36
12	0.25	0.27	0.29	0.31	0.33	0.34	0.36	0.38	0.40	0.41	0.44	0.46	0.49	0.51	0.54	0.58	0.62	0.65	0.68	0.73	0.77	0.82	0.88	0.96	1.03	1.11	37
13	0.27	0.29	0.31	0.33	0.34	0.35	0.37	0.39	0.40	0.43	0.45	0.48	0.50	0.54	0.57	0.62	0.65	0.68	0.73	0.77	0.82	0.88	0.96	1.03	1.10	1.17	38
14	0.29	0.31	0.33	0.34	0.34	0.36	0.38	0.39	0.42	0.43	0.47	0.49	0.53	0.57	0.61	0.65	0.68	0.73	0.77	0.82	0.88	0.96	1.03	1.09	1.16	1.23	39
15	0.31	0.33	0.34	0.34	0.36	0.37	0.38	0.40	0.42	0.45	0.48	0.52	0.56	0.60	0.64	0.68	0.73	0.77	0.82	0.88	0.96	1.03	1.09	1.16	1.23	1.30	40
16	0.33	0.34	0.34	0.35	0.36	0.37	0.39	0.41	0.44	0.46	0.50	0.55	0.59	0.63	0.68	0.73	0.77	0.82	0.88	0.96	1.03	1.09	1.16	1.23	1.30	1.38	41
17	0.34	0.34	0.35	0.35	0.36	0.38	0.40	0.43	0.45	0.49	0.53	0.58	0.62	0.67	0.73	0.77	0.82	0.88	0.96	1.03	1.09	1.16	1.23	1.30	1.38	1.48	42
18	0.33	0.34	0.34	0.35	0.37	0.38	0.41	0.44	0.48	0.52	0.57	0.61	0.66	0.72	0.77	0.82	0.88	0.96	1.03	1.09	1.16	1.23	1.30	1.38	1.48	1.59	43
19	0.33	0.33	0.34	0.36	0.37	0.40	0.42	0.46	0.51	0.55	0.60	0.65	0.71	0.77	0.82	0.88	0.96	1.03	1.09	1.16	1.23	1.30	1.38	1.48	1.59	1.72	44
20	0.31	0.32	0.34	0.35	0.38	0.41	0.45	0.49	0.54	0.58	0.64	0.70	0.76	0.82	0.88	0.95	1.02	1.09	1.16	1.23	1.30	1.38	1.48	1.59	1.72	1.87	45
21	0.29	0.31	0.33	0.36	0.39	0.43	0.48	0.52	0.57	0.62	0.68	0.74	0.80	0.87	0.93	1.01	1.07	1.15	1.22	1.30	1.38	1.48	1.59	1.72	1.87	2.05	46
22	0.28	0.30	0.34	0.37	0.41	0.46	0.51	0.55	0.61	0.67	0.73	0.79	0.85	0.92	0.99	1.06	1.14	1.21	1.29	1.38	1.48	1.59	1.72	1.87	2.05	2.26	47
23	0.26	0.30	0.33	0.38	0.43	0.48	0.53	0.59	0.65	0.71	0.77	0.84	0.90	0.98	1.04	1.12	1.19	1.28	1.38	1.48	1.59	1.72	1.87	2.05	2.26	2.50	48
24	0.26	0.30	0.35	0.40	0.45	0.50	0.56	0.62	0.69	0.75	0.82	0.88	0.96	1.02	1.10	1.18	1.26	1.36	1.47	1.59	1.72	1.87	2.05	2.26	2.50	2.77	49
25	0.25	0.31	0.36	0.42	0.47	0.53	0.60	0.66	0.73	0.79	0.86	0.93	1.00	1.08	1.15	1.25	1.34	1.45	1.58	1.72	1.87	2.05	2.26	2.50	2.77	3.07	50
26	0.26	0.32	0.38	0.43	0.49	0.56	0.63	0.69	0.76	0.83	0.91	0.97	1.06	1.13	1.22	1.32	1.44	1.56	1.71	1.87	2.05	2.26	2.50	2.77	3.07	3.41	51
27	0.28	0.33	0.39	0.45	0.52	0.59	0.65	0.72	0.79	0.87	0.94	1.02	1.10	1.20	1.30	1.42	1.55	1.69	1.86	2.05	2.26	2.50	2.77	3.07	3.41	3.78	52
28	0.29	0.35	0.41	0.48	0.54	0.61	0.68	0.75	0.83	0.90	0.99	1.07	1.17	1.27	1.39	1.53	1.67	1.84	2.04	2.25	2.50	2.77	3.07	3.41	3.78	4.19	53
29	0.31	0.38	0.44	0.50	0.57	0.64	0.70	0.79	0.86	0.95	1.03	1.13	1.24	1.36	1.50	1.65	1.83	2.03	2.24	2.49	2.77	3.07	3.41	3.78	4.19	4.63	54
30	0.34	0.40	0.46	0.53	0.59	0.66	0.74	0.81	0.90	0.99	1.09	1.20	1.33	1.47	1.63	1.80	2.01	2.23	2.48	2.76	3.07	3.41	3.78	4.19	4.63	5.09	55
31	0.37	0.43	0.49	0.55	0.62	0.70	0.77	0.86	0.94	1.05	1.16	1.29	1.44	1.60	1.78	1.99	2.21	2.47	2.75	3.06	3.41	3.78	4.19	4.63	5.09	5.62	56
32	0.39	0.45	0.51	0.58	0.65	0.73	0.82	0.90	1.01	1.13	1.26	1.41	1.57	1.75	1.97	2.19	2.45	2.73	3.04	3.39	3.76	4.18	4.63	5.09	5.62	6.18	57
33	0.41	0.47	0.53	0.61	0.69	0.78	0.87	0.97	1.09	1.23	1.38	1.54	1.73	1.94	2.17	2.43	2.71	3.02	3.37	3.74	4.16	4.61	5.09	5.61	6.18	6.78	58
34	0.42	0.48	0.56	0.64	0.73	0.82	0.93	1.06	1.19	1.34	1.51	1.70	1.92	2.14	2.40	2.69	3.00	3.35	3.72	4.13	4.59	5.06	5.59	6.14	6.74	7.37	59
35	0.43	0.51	0.58	0.68	0.77	0.89	1.02	1.16	1.31	1.48	1.67	1.89	2.12	2.38	2.66	2.98	3.33	3.70	4.11	4.56	5.04	5.56	6.11	6.70	7.33	8.00	60
36	0.45	0.53	0.62	0.72	0.83	0.96	1.10	1.27	1.44	1.63	1.85	2.08	2.35	2.63	2.95	3.30	3.67	4.08	4.53	5.00	5.52	6.08	6.66	7.29	7.96	8.66	61
37	0.47	0.55	0.65	0.77	0.90	1.04	1.21	1.39	1.58	1.81	2.04	2.31	2.59	2.91	3.26	3.63	4.04	4.49	4.97	5.49	6.04	6.63	7.26	7.93	8.63	9.38	62
38	0.49	0.59	0.70	0.83	0.97	1.13	1.32	1.52	1.75	1.98	2.25	2.54	2.86	3.21	3.58	4.00	4.44	4.93	5.45	6.00	6.59	7.22	7.90	8.60	9.35	10.13	63
39	0.53	0.64	0.76	0.90	1.06	1.25	1.45	1.67	1.91	2.19	2.48	2.80	3.15	3.53	3.94	4.39	4.88	5.40	5.96	6.55	7.19	7.87	8.57	9.33	10.12	10.94	64
40	0.58	0.69	0.83	0.99	1.17	1.37	1.59	1.84	2.11	2.40	2.72	3.08	3.46	3.88	4.33	4.82	5.35	5.91	6.50	7.15	7.83	8.55	9.31	10.11	10.94	11.83	65
41	0.63	0.76	0.92	1.10	1.29	1.51	1.75	2.02	2.32	2.64	3.00	3.38	3.80	4.25	4.75	5.28	5.85	6.45	7.10	7.80	8.52	9.30	10.11	10.94	11.83	12.80	66
42	0.69	0.85	1.03	1.22	1.43	1.67	1.94	2.23	2.55	2.91	3.28	3.71	4.16	4.66	5.20	5.77	6.38	7.04	7.75	8.48	9.28	10.11	10.94	11.83	12.80	13.87	67
43	0.77	0.95	1.14	1.35	1.60	1.86	2.15	2.47	2.82	3.19	3.61	4.06	4.56	5.10	5.68	6.30	6.97	7.69	8.44	9.25	10.09	10.94	11.83	12.80	13.87	15.04	68
44	0.85	1.05	1.27	1.52	1.78	2.07	2.38	2.72	3.10	3.51	3.96	4.45	4.99	5.57	6.19	6.87	7.60	8.37	9.20	10.07	10.94	11.83	12.80	13.87	15.04	16.33	69
45	0.95	1.17	1.42	1.69	1.98	2.30	2.63	3.01	3.42	3.86	4.34	4.87	5.45	6.07	6.74	7.48	8.27	9.12	10.01	10.94	11.83	12.80	13.87	15.04	16.33	17.77	70
46	1.04	1.30	1.58	1.87	2.19	2.53	2.91	3.31	3.75	4.23	4.74	5.32	5.93	6.60	7.33	8.12	8.98	9.90	10.88	11.83	12.80	13.87	15.04	16.33	17.77	19.43	71
47	1.16	1.44	1.74	2.06	2.41	2.79	3.19	3.62	4.10	4.61	5.17	5.78	6.44	7.16	7.95	8.81	9.73	10.73	11.81	12.80	13.87	15.04	16.33	17.77	19.43	21.25	72
48	1.27	1.58	1.91	2.26	2.63	3.04	3.47	3.94	4.45	5.00	5.61	6.26	6.98	7.76	8.62	9.54	10.54	11.63	12.80	13.87	15.04	16.33	17.77	19.43	21.25	23.24	73
49	1.42	1.74	2.08	2.46	2.86	3.29	3.75	4.25	4.80	5.40	6.05	6.76	7.54	8.39	9.32	10.33	11.42	12.61	13.87	15.04	16.33	17.77	19.43	21.25	23.24	25.43	74

Proposed 2001 CSO Table -- Female -- Composite -- 1000qx

Issue	Duration																										Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
50	1.58	1.91	2.25	2.64	3.07	3.52	4.02	4.56	5.15	5.80	6.50	7.28	8.12	9.05	10.07	11.17	12.38	13.69	15.04	16.33	17.77	19.43	21.25	23.24	25.43	27.82	75
51	1.77	2.08	2.44	2.83	3.28	3.76	4.29	4.86	5.50	6.20	6.97	7.81	8.74	9.76	10.87	12.09	13.41	14.87	16.33	17.77	19.43	21.25	23.24	25.43	27.82	30.43	76
52	1.97	2.28	2.63	3.04	3.48	3.99	4.54	5.16	5.86	6.61	7.45	8.37	9.38	10.51	11.74	13.08	14.57	16.19	17.77	19.43	21.25	23.24	25.43	27.82	30.43	33.30	77
53	2.20	2.49	2.83	3.23	3.69	4.22	4.81	5.47	6.21	7.04	7.95	8.97	10.09	11.32	12.69	14.19	15.83	17.65	19.43	21.25	23.24	25.43	27.82	30.43	33.30	36.45	78
54	2.44	2.70	3.04	3.44	3.91	4.46	5.10	5.81	6.60	7.50	8.51	9.63	10.87	12.25	13.77	15.43	17.27	19.30	21.25	23.24	25.43	27.82	30.43	33.30	36.45	39.89	79
55	2.68	2.93	3.27	3.67	4.17	4.74	5.41	6.17	7.04	8.02	9.13	10.37	11.75	13.27	14.97	16.85	18.90	21.16	23.24	25.43	27.82	30.43	33.30	36.45	39.89	43.67	80
56	2.92	3.17	3.51	3.94	4.45	5.06	5.77	6.59	7.54	8.61	9.82	11.19	12.72	14.44	16.34	18.43	20.74	23.24	25.43	27.82	30.43	33.30	36.45	39.89	43.67	47.81	81
57	3.17	3.42	3.77	4.21	4.77	5.43	6.20	7.09	8.12	9.29	10.62	12.13	13.83	15.74	17.86	20.21	22.80	25.43	27.82	30.43	33.30	36.45	39.89	43.67	47.81	52.35	82
58	3.40	3.67	4.04	4.53	5.13	5.85	6.69	7.67	8.79	10.08	11.54	13.21	15.09	17.21	19.57	22.20	25.10	27.82	30.43	33.30	36.45	39.89	43.67	47.81	52.35	57.32	83
59	3.63	3.93	4.33	4.87	5.51	6.31	7.23	8.31	9.55	10.98	12.60	14.44	16.52	18.87	21.49	24.42	27.67	30.43	33.30	36.45	39.89	43.67	47.81	52.35	57.32	62.77	84
60	3.87	4.18	4.62	5.20	5.92	6.81	7.84	9.04	10.41	12.00	13.80	15.85	18.16	20.76	23.67	26.92	30.43	33.30	36.45	39.89	43.67	47.81	52.35	57.32	62.77	68.76	85
61	4.11	4.42	4.90	5.54	6.34	7.32	8.47	9.81	11.36	13.13	15.16	17.44	20.01	22.91	26.15	29.76	33.30	36.45	39.89	43.67	47.81	52.35	57.32	62.77	68.76	75.32	86
62	4.39	4.68	5.19	5.87	6.75	7.84	9.13	10.64	12.39	14.39	16.65	19.23	22.12	25.36	28.97	32.98	36.45	39.89	43.67	47.81	52.35	57.32	62.77	68.76	75.32	82.53	87
63	4.68	4.96	5.46	6.20	7.16	8.37	9.81	11.51	13.49	15.75	18.33	21.22	24.48	28.11	32.14	36.45	39.89	43.67	47.81	52.35	57.32	62.77	68.76	75.32	82.53	90.44	88
64	4.95	5.25	5.76	6.54	7.58	8.92	10.54	12.46	14.69	17.25	20.16	23.45	27.11	31.19	35.70	39.89	43.67	47.81	52.35	57.32	62.77	68.76	75.32	82.53	90.44	99.12	89
65	5.24	5.56	6.06	6.89	8.04	9.52	11.33	13.50	16.02	18.92	22.22	25.91	30.03	34.61	39.65	43.67	47.81	52.35	57.32	62.77	68.76	75.32	82.53	90.44	99.12	108.65	90
66	5.54	5.91	6.41	7.29	8.55	10.19	12.23	14.66	17.51	20.78	24.49	28.66	33.29	38.42	43.67	47.81	52.35	57.32	62.77	68.76	75.32	82.53	90.44	99.12	108.65	119.12	91
67	5.89	6.29	6.80	7.76	9.15	10.98	13.27	16.00	19.20	22.88	27.05	31.72	36.91	42.63	47.81	52.35	57.32	62.77	68.76	75.32	82.53	90.44	99.12	108.65	119.12	130.62	92
68	6.27	6.70	7.27	8.33	9.87	11.92	14.48	17.55	21.15	25.27	29.94	35.15	40.95	47.32	52.35	57.32	62.77	68.76	75.32	82.53	90.44	99.12	108.65	119.12	130.62	143.26	93
69	6.68	7.16	7.80	9.00	10.75	13.04	15.91	19.36	23.37	27.98	33.19	39.01	45.45	52.35	57.32	62.77	68.76	75.32	82.53	90.44	99.12	108.65	119.12	130.62	143.26	157.17	94
70	7.14	7.66	8.43	9.80	11.78	14.38	17.60	21.46	25.95	31.08	36.87	43.33	50.45	57.32	62.77	68.76	75.32	82.53	90.44	99.12	108.65	119.12	130.62	143.26	157.17	172.46	95
71	7.64	8.22	9.16	10.75	13.03	15.97	19.59	23.90	28.90	34.60	41.01	48.14	55.97	62.77	68.76	75.32	82.53	90.44	99.12	108.65	119.12	130.62	143.26	157.17	172.46	189.30	96
72	8.20	8.85	10.01	11.88	14.49	17.82	21.90	26.71	32.27	38.58	45.65	53.49	62.08	68.76	75.32	82.53	90.44	99.12	108.65	119.12	130.62	143.26	157.17	172.46	189.30	207.84	97
73	8.82	9.58	11.01	13.22	16.21	19.99	24.56	29.91	36.08	43.05	50.82	59.40	68.76	75.32	82.53	90.44	99.12	108.65	119.12	130.62	143.26	157.17	172.46	189.30	207.84	228.28	98
74	9.51	10.45	12.21	14.81	18.24	22.51	27.61	33.56	40.37	48.03	56.55	65.92	75.32	82.53	90.44	99.12	108.65	119.12	130.62	143.26	157.17	172.46	189.30	207.84	228.28	250.83	99
75	10.26	11.52	13.66	16.69	20.59	25.40	31.09	37.68	45.17	53.57	62.88	73.10	82.53	90.44	99.12	108.65	119.12	130.62	143.26	157.17	172.46	189.30	207.84	228.28	250.83	275.73	100
76	11.21	12.85	15.41	18.92	23.35	28.73	35.05	42.31	50.54	59.72	69.86	80.96	90.44	99.12	108.65	119.12	130.62	143.26	157.17	172.46	189.30	207.84	228.28	250.83	275.73	297.84	101
77	12.48	14.52	17.54	21.56	26.55	32.53	39.52	47.51	56.50	66.51	77.53	89.57	99.12	108.65	119.12	130.62	143.26	157.17	172.46	189.30	207.84	228.28	250.83	275.73	297.84	322.21	102
78	14.15	16.63	20.12	24.66	30.25	36.88	44.56	53.31	63.10	73.98	85.92	98.93	108.65	119.12	130.62	143.26	157.17	172.46	189.30	207.84	228.28	250.83	275.73	297.84	322.21	349.06	103
79	16.32	19.23	23.24	28.33	34.52	41.82	50.22	59.74	70.39	82.15	95.05	108.65	119.12	130.62	143.26	157.17	172.46	189.30	207.84	228.28	250.83	275.73	297.84	322.21	349.06	378.61	104
80	19.08	22.44	26.95	32.61	39.42	47.40	56.55	66.87	78.38	91.07	104.97	119.12	130.62	143.26	157.17	172.46	189.30	207.84	228.28	250.83	275.73	297.84	322.21	349.06	378.61	410.57	105
81	22.39	26.34	31.35	37.57	45.01	53.68	63.59	74.73	87.12	100.77	115.68	130.62	143.26	157.17	172.46	189.30	207.84	228.28	250.83	275.73	297.84	322.21	349.06	378.61	410.57	443.33	106
82	26.28	30.99	36.49	43.27	51.34	60.70	71.37	83.35	96.64	111.27	127.23	143.26	157.17	172.46	189.30	207.84	228.28	250.83	275.73	297.84	322.21	349.06	378.61	410.57	443.33	476.89	107
83	30.93	36.42	42.45	49.77	58.46	68.51	79.93	92.75	106.96	122.59	139.63	157.17	172.46	189.30	207.84	228.28	250.83	275.73	297.84	322.21	349.06	378.61	410.57	443.33	476.89	510.65	108
84	36.36	42.38	49.27	57.12	66.41	77.14	89.32	102.99	118.12	134.76	152.90	172.46	189.30	207.84	228.28	250.83	275.73	297.84	322.21	349.06	378.61	410.57	443.33	476.89	510.65	545.81	109
85	42.32	49.20	56.99	65.34	75.21	86.61	99.55	114.04	130.12	147.79	167.08	187.98	207.84	228.28	250.83	275.73	297.84	322.21	349.06	378.61	410.57	443.33	476.89	510.65	545.81	581.77	110
86	49.14	56.92	65.24	74.47	84.90	96.95	110.63	125.97	142.98	161.71	182.16	204.36	228.28	250.83	275.73	297.84	322.21	349.06	378.61	410.57	443.33	476.89	510.65	545.81	581.77	618.52	111
87	56.85	65.16	74.37	84.55	95.50	108.18	122.58	138.75	156.71	176.49	198.12	221.67	247.16	274.66	297.84	322.21	349.06	378.61	410.57	442.90	476.43	510.65	545.81	581.77	618.52	656.08	112
88	65.09	74.28	84.42	95.34	106.99	120.27	135.39	152.37	171.25	192.06	214.86	239.71	266.64	291.15	316.49	343.49	372.13	402.44	434.39	468.00	503.26	540.17	578.74	618.52	656.08	694.14	113
89	74.20	84.33	95.21	106.83	119.44	133.29	149.08	166.87	186.67	208.53	232.50	258.66	283.47	308.33	334.92	363.25	393.33	425.14	458.69	493.99	531.02	569.78	610.28	652.53	694.14	732.64	114
90	84.26	95.12	106.71	119.27	132.81	147.23	163.70	182.28	203.01	225.92	251.10	276.01	300.21	326.24	354.09	383.79	415.31	448.66	483.85	520.86	559.71	600.37	642.88	687.21	732.64	771.50	115
91	95.05	106.62	119.15	132.65	147.00	162.12	179.26	198.64	220.29	244.28	269.04	292.40	317.68	344.88	374.02	405.08	438.08	473.00	509.85	548.63	589.32	631.95	676.51	722.99	771.41	810.59	116
92	106.55	119.06	132.53	146.84	161.89	177.98	195.78	215.94	238.53	262.86	285.17	309.50	335.86	364.26	394.69	427.15	461.64	498.16	536.70	577.27	619.88	664.51	711.18	759.87	810.59	850.93	117
93	119.00	132.45	146.73	161.73	177.75	194.82	213.27	234.22	257.80	278.84	302.02	327.33	354.78	384.38	416.11	449.98	485.99	524.13	564.40	606.82	651.37	698.06	746.88	797.84	850.93	892.44	118
94	132.39	146.65	161.62	177.60	194.60	212.67	231.74	254.21	273.75	295.55	319.58	345.88	374.43	405.23	438.28	473.57	511.12	550.91	592.95	637.25	683.79	732.58	783.62	836.90	892.44	935.11	119
95	146.59	161.55	177.50	194.45	212.45	231.41	252.47	270.27	290.44	312.97	337.88	365.16	394.80	426.81	461.19	497.94	537.04	578.52	622.36	668.57	717.15	768.09	821.39	877.07	935.11	1000.00	120
96	161.50	177.43	194.35	212.30	231.20	252.47	268.80	287.09	307.87	331.14	356.90	385.16	415.90	449.13	484.85	523.05	563.75	606.94	652.62	700.79	751.44	804.58	860.21	918.33	1000.00		
97	177.38	194.28	212.21	231.06	252.47	268.80	285.91	304.66	326.04	350.04	376.65	405.88	437.72	472.18	509.25	548.95	591.26	636.19	683.73	733.89	786.66	842.05	900.06	1000.00			
98	194.24	212.15	230.97	252.47	268.80	285.91	303.79	323.00	344.96	369.66	397.12	427.32	460.27	495.96	534.41	575.61	619.55	666.25	715.69	767.87	822.82	880.51	1000.00				
99	212.12	230.92	252.47	268.80	285.91	303.79	322.46	342.10	364.62	390.02	418.31	449.48	483.53	520.48	560.31	603.03	648.64	697.13	748.50	802.76	859.91	1000.00					

Proposed 2001 CSO Table -- Female -- Nonsmoker -- 1000qx																											
Issue	Duration																										Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
0	0.48	0.39	0.26	0.20	0.19	0.20	0.21	0.22	0.22	0.23	0.24	0.25	0.28	0.30	0.33	0.35	0.39	0.41	0.42	0.45	0.45	0.46	0.48	0.48	0.50	0.50	25
1	0.35	0.26	0.19	0.19	0.19	0.20	0.21	0.22	0.23	0.23	0.25	0.27	0.30	0.32	0.35	0.38	0.40	0.41	0.44	0.45	0.46	0.48	0.48	0.49	0.50	0.53	26
2	0.26	0.19	0.18	0.19	0.19	0.20	0.21	0.23	0.23	0.25	0.27	0.29	0.32	0.34	0.37	0.40	0.41	0.44	0.44	0.46	0.48	0.48	0.49	0.50	0.52	0.57	27
3	0.19	0.18	0.19	0.19	0.19	0.20	0.22	0.23	0.25	0.27	0.29	0.32	0.34	0.37	0.39	0.40	0.43	0.44	0.45	0.47	0.48	0.49	0.50	0.52	0.56	0.58	28
4	0.18	0.19	0.19	0.19	0.20	0.22	0.23	0.25	0.27	0.29	0.31	0.33	0.37	0.39	0.40	0.42	0.43	0.45	0.47	0.47	0.49	0.50	0.52	0.56	0.58	0.62	29
5	0.19	0.19	0.19	0.20	0.21	0.23	0.25	0.27	0.29	0.31	0.33	0.36	0.38	0.39	0.42	0.43	0.44	0.47	0.47	0.49	0.50	0.52	0.56	0.58	0.62	0.64	30
6	0.19	0.19	0.20	0.21	0.22	0.24	0.27	0.29	0.31	0.33	0.36	0.38	0.39	0.41	0.42	0.44	0.46	0.47	0.49	0.50	0.52	0.56	0.58	0.61	0.63	0.68	31
7	0.19	0.20	0.21	0.22	0.24	0.26	0.28	0.31	0.33	0.36	0.37	0.38	0.41	0.42	0.43	0.46	0.46	0.49	0.50	0.52	0.56	0.58	0.61	0.63	0.68	0.72	32
8	0.20	0.21	0.22	0.23	0.26	0.28	0.30	0.32	0.35	0.37	0.38	0.40	0.42	0.42	0.45	0.46	0.48	0.50	0.52	0.56	0.58	0.61	0.63	0.68	0.71	0.76	33
9	0.21	0.22	0.23	0.25	0.27	0.30	0.32	0.35	0.36	0.37	0.40	0.41	0.42	0.44	0.45	0.48	0.50	0.52	0.55	0.58	0.61	0.63	0.68	0.71	0.76	0.82	34
10	0.22	0.23	0.25	0.27	0.29	0.31	0.34	0.36	0.36	0.39	0.40	0.41	0.44	0.45	0.47	0.49	0.51	0.55	0.58	0.61	0.63	0.68	0.71	0.76	0.82	0.89	35
11	0.22	0.25	0.27	0.29	0.31	0.33	0.35	0.36	0.38	0.39	0.40	0.43	0.45	0.46	0.49	0.51	0.54	0.57	0.61	0.63	0.67	0.71	0.75	0.81	0.88	0.95	36
12	0.25	0.27	0.29	0.31	0.33	0.34	0.35	0.37	0.38	0.39	0.42	0.44	0.46	0.48	0.50	0.54	0.57	0.60	0.63	0.67	0.71	0.75	0.81	0.88	0.95	1.03	37
13	0.27	0.29	0.31	0.33	0.34	0.34	0.36	0.37	0.38	0.41	0.43	0.45	0.47	0.50	0.53	0.57	0.60	0.63	0.67	0.71	0.75	0.81	0.88	0.95	1.01	1.07	38
14	0.29	0.31	0.33	0.34	0.34	0.35	0.37	0.37	0.40	0.41	0.44	0.46	0.50	0.53	0.56	0.60	0.63	0.67	0.71	0.75	0.81	0.88	0.94	1.00	1.06	1.13	39
15	0.31	0.33	0.34	0.34	0.35	0.36	0.37	0.38	0.40	0.42	0.45	0.49	0.52	0.55	0.59	0.63	0.67	0.71	0.75	0.81	0.88	0.94	1.00	1.06	1.13	1.20	40
16	0.33	0.34	0.34	0.34	0.35	0.36	0.38	0.39	0.42	0.43	0.47	0.51	0.54	0.59	0.63	0.67	0.71	0.75	0.81	0.88	0.94	1.00	1.05	1.13	1.19	1.26	41
17	0.34	0.34	0.34	0.34	0.35	0.37	0.38	0.41	0.42	0.46	0.50	0.53	0.58	0.62	0.67	0.71	0.75	0.81	0.88	0.94	1.00	1.05	1.13	1.19	1.26	1.35	42
18	0.33	0.33	0.33	0.34	0.36	0.37	0.39	0.42	0.45	0.49	0.53	0.57	0.62	0.67	0.71	0.75	0.81	0.88	0.94	1.00	1.05	1.13	1.19	1.26	1.35	1.45	43
19	0.32	0.32	0.33	0.35	0.36	0.38	0.40	0.44	0.48	0.51	0.56	0.61	0.66	0.71	0.75	0.81	0.88	0.94	1.00	1.05	1.13	1.19	1.26	1.35	1.45	1.56	44
20	0.30	0.31	0.33	0.34	0.36	0.39	0.43	0.47	0.50	0.55	0.60	0.66	0.71	0.75	0.81	0.88	0.94	1.00	1.05	1.13	1.19	1.26	1.35	1.45	1.56	1.71	45
21	0.28	0.30	0.32	0.35	0.37	0.41	0.46	0.48	0.54	0.58	0.64	0.69	0.75	0.81	0.86	0.94	0.99	1.05	1.12	1.19	1.26	1.35	1.45	1.56	1.71	1.87	46
22	0.27	0.29	0.33	0.35	0.39	0.44	0.47	0.52	0.57	0.63	0.68	0.74	0.79	0.85	0.92	0.98	1.04	1.12	1.19	1.26	1.35	1.45	1.56	1.71	1.87	2.07	47
23	0.25	0.29	0.32	0.36	0.41	0.45	0.50	0.56	0.61	0.66	0.72	0.78	0.84	0.91	0.96	1.03	1.10	1.18	1.26	1.35	1.45	1.56	1.71	1.87	2.07	2.28	48
24	0.25	0.29	0.33	0.38	0.42	0.47	0.53	0.58	0.65	0.70	0.76	0.82	0.89	0.95	1.01	1.09	1.16	1.24	1.34	1.45	1.56	1.71	1.87	2.07	2.28	2.52	49
25	0.24	0.30	0.34	0.39	0.44	0.50	0.56	0.62	0.68	0.74	0.80	0.86	0.93	0.99	1.06	1.15	1.23	1.33	1.44	1.56	1.71	1.87	2.07	2.28	2.52	2.81	50
26	0.25	0.31	0.35	0.41	0.46	0.53	0.59	0.64	0.71	0.77	0.84	0.90	0.97	1.04	1.13	1.21	1.32	1.42	1.56	1.71	1.87	2.07	2.28	2.52	2.81	3.11	51
27	0.27	0.31	0.37	0.43	0.49	0.55	0.61	0.67	0.74	0.81	0.87	0.93	1.02	1.11	1.19	1.30	1.41	1.54	1.70	1.87	2.07	2.28	2.52	2.81	3.11	3.47	52
28	0.28	0.33	0.39	0.45	0.51	0.57	0.64	0.70	0.76	0.83	0.91	0.99	1.08	1.16	1.27	1.40	1.52	1.69	1.86	2.05	2.28	2.52	2.81	3.11	3.47	3.84	53
29	0.30	0.36	0.42	0.47	0.53	0.60	0.65	0.73	0.80	0.87	0.95	1.04	1.13	1.24	1.37	1.50	1.68	1.85	2.04	2.26	2.52	2.81	3.11	3.47	3.84	4.25	54
30	0.32	0.38	0.43	0.50	0.55	0.62	0.68	0.75	0.82	0.92	1.01	1.10	1.21	1.34	1.48	1.65	1.83	2.03	2.25	2.50	2.80	3.11	3.46	3.83	4.25	4.67	55
31	0.35	0.41	0.46	0.52	0.58	0.64	0.72	0.79	0.87	0.97	1.06	1.18	1.31	1.46	1.63	1.81	2.01	2.24	2.49	2.78	3.10	3.45	3.82	4.24	4.67	5.17	56
32	0.37	0.42	0.48	0.54	0.60	0.68	0.75	0.83	0.92	1.03	1.15	1.28	1.43	1.60	1.79	1.99	2.22	2.47	2.76	3.06	3.42	3.80	4.23	4.66	5.16	5.69	57
33	0.39	0.44	0.50	0.56	0.64	0.72	0.81	0.89	0.99	1.12	1.26	1.40	1.58	1.76	1.97	2.20	2.45	2.74	3.04	3.39	3.77	4.19	4.65	5.14	5.68	6.25	58
34	0.40	0.45	0.51	0.60	0.67	0.76	0.85	0.97	1.08	1.22	1.37	1.55	1.74	1.94	2.17	2.43	2.72	3.02	3.36	3.73	4.16	4.60	5.10	5.63	6.20	6.81	59
35	0.41	0.47	0.54	0.62	0.71	0.81	0.93	1.06	1.19	1.34	1.52	1.71	1.92	2.15	2.40	2.69	3.00	3.34	3.70	4.11	4.56	5.06	5.58	6.15	6.75	7.39	60
36	0.42	0.50	0.57	0.67	0.76	0.88	1.01	1.15	1.31	1.49	1.67	1.89	2.12	2.37	2.67	2.97	3.32	3.68	4.09	4.52	5.01	5.54	6.09	6.70	7.34	8.02	61
37	0.44	0.51	0.60	0.70	0.82	0.96	1.10	1.26	1.44	1.64	1.85	2.08	2.34	2.63	2.94	3.28	3.65	4.06	4.50	4.97	5.49	6.06	6.66	7.29	7.98	8.70	62
38	0.46	0.55	0.64	0.76	0.89	1.03	1.20	1.38	1.58	1.80	2.03	2.29	2.58	2.89	3.23	3.61	4.01	4.46	4.94	5.45	6.01	6.61	7.25	7.93	8.65	9.41	63
39	0.49	0.58	0.69	0.83	0.97	1.13	1.31	1.52	1.73	1.97	2.23	2.52	2.84	3.18	3.55	3.96	4.42	4.90	5.42	5.97	6.57	7.21	7.89	8.61	9.38	10.18	64
40	0.53	0.64	0.76	0.90	1.06	1.23	1.44	1.67	1.90	2.16	2.45	2.77	3.12	3.50	3.90	4.36	4.85	5.37	5.92	6.53	7.17	7.87	8.59	9.36	10.16	11.03	65
41	0.58	0.70	0.84	0.99	1.16	1.37	1.57	1.81	2.08	2.37	2.70	3.04	3.42	3.84	4.29	4.79	5.32	5.88	6.49	7.14	7.84	8.57	9.35	10.15	11.02	11.97	66
42	0.63	0.77	0.92	1.09	1.29	1.49	1.74	2.00	2.28	2.61	2.94	3.34	3.75	4.21	4.71	5.24	5.81	6.43	7.09	7.80	8.55	9.34	10.15	11.01	11.95	12.99	67
43	0.70	0.85	1.02	1.21	1.43	1.66	1.92	2.20	2.52	2.85	3.24	3.65	4.11	4.62	5.16	5.74	6.37	7.04	7.76	8.52	9.32	10.14	11.00	11.94	12.97	14.14	68
44	0.77	0.93	1.14	1.35	1.58	1.84	2.11	2.43	2.76	3.13	3.55	4.00	4.50	5.05	5.64	6.27	6.95	7.69	8.47	9.30	10.14	11.00	11.93	12.96	14.10	15.38	69
45	0.84	1.04	1.25	1.49	1.75	2.03	2.34	2.67	3.04	3.44	3.88	4.37	4.91	5.51	6.15	6.84	7.60	8.39	9.25	10.14	10.99	11.93	12.95	14.10	15.34	16.77	70
46	0.93	1.14	1.39	1.64	1.92	2.24	2.57	2.93	3.33	3.77	4.24	4.78	5.36	6.00	6.70	7.45	8.25	9.13	10.07	10.99	11.93	12.95	14.09	15.33	16.73	18.38	71
47	1.01	1.25	1.52	1.80	2.11	2.44	2.81	3.20	3.62	4.10	4.62	5.20	5.83	6.51	7.27	8.08	8.97	9.92	10.96	11.92	12.95	14.09	15.33	16.72	18.33	20.15	72
48	1.11	1.37	1.65	1.96	2.29	2.65	3.04	3.47	3.94	4.45	5.02	5.64	6.32	7.07	7.89	8.77	9.72	10.77	11.91	12.95	14.08	15.32	16.72	18.32	20.09	22.09	73
49	1.23	1.49	1.79	2.12	2.48	2.86	3.28	3.74	4.24	4.80	5.41	6.09	6.82	7.65	8.54	9.51	10.56	11.71	12.92	14.08	15.32	16.71	18.32	20.09	22.02	24.22	74

Proposed 2001 CSO Table -- Female -- Nonsmoker -- 1000qx																											
Issue	Duration																										Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
50	1.35	1.62	1.93	2.26	2.65	3.05	3.51	4.00	4.54	5.15	5.81	6.55	7.36	8.25	9.24	10.30	11.46	12.73	14.06	15.32	16.71	18.32	20.09	22.02	24.16	26.56	75
51	1.50	1.76	2.08	2.42	2.83	3.26	3.74	4.27	4.86	5.51	6.24	7.03	7.92	8.91	9.98	11.15	12.44	13.86	15.29	16.71	18.32	20.09	22.02	24.16	26.49	29.13	76
52	1.66	1.93	2.24	2.60	3.00	3.45	3.96	4.53	5.17	5.89	6.67	7.55	8.51	9.59	10.79	12.09	13.53	15.11	16.67	18.32	20.09	22.02	24.16	26.49	29.04	31.96	77
53	1.85	2.10	2.40	2.76	3.18	3.65	4.19	4.81	5.49	6.28	7.14	8.10	9.17	10.36	11.69	13.13	14.74	16.51	18.27	20.08	22.02	24.16	26.49	29.04	31.86	35.08	78
54	2.04	2.28	2.58	2.94	3.37	3.87	4.44	5.10	5.84	6.68	7.64	8.70	9.89	11.21	12.69	14.31	16.10	18.09	20.02	22.01	24.15	26.48	29.04	31.86	34.97	38.49	79
55	2.23	2.46	2.76	3.14	3.59	4.11	4.72	5.42	6.23	7.15	8.19	9.37	10.69	12.17	13.81	15.64	17.65	19.86	21.95	24.13	26.47	29.04	31.86	34.96	38.36	42.23	80
56	2.45	2.68	2.98	3.38	3.84	4.40	5.05	5.81	6.70	7.70	8.85	10.15	11.61	13.27	15.11	17.14	19.40	21.87	24.05	26.45	29.02	31.84	34.94	38.35	42.08	46.34	81
57	2.67	2.91	3.23	3.64	4.15	4.74	5.45	6.28	7.23	8.33	9.59	11.03	12.65	14.50	16.55	18.84	21.37	23.97	26.36	28.99	31.82	34.92	38.33	42.06	46.17	50.86	82
58	2.88	3.13	3.47	3.92	4.47	5.13	5.91	6.82	7.86	9.07	10.45	12.04	13.83	15.88	18.18	20.73	23.57	26.27	28.89	31.79	34.89	38.30	42.04	46.15	50.67	55.81	83
59	3.10	3.37	3.75	4.24	4.83	5.56	6.41	7.41	8.57	9.91	11.44	13.20	15.19	17.45	20.01	22.85	26.04	28.80	31.67	34.85	38.26	42.00	46.12	50.64	55.60	61.25	84
60	3.32	3.61	4.02	4.55	5.21	6.02	6.97	8.09	9.38	10.86	12.57	14.51	16.73	19.25	22.08	25.25	28.70	31.57	34.74	38.22	41.96	46.08	50.62	55.59	61.04	67.27	85
61	3.55	3.84	4.29	4.87	5.61	6.50	7.56	8.81	10.26	11.92	13.84	16.01	18.48	21.29	24.44	27.96	31.46	34.62	38.08	41.90	46.02	50.57	55.55	61.01	67.03	73.86	86
62	3.81	4.10	4.57	5.20	6.00	7.00	8.19	9.58	11.22	13.10	15.24	17.70	20.48	23.61	27.12	31.05	34.50	37.96	41.77	45.94	50.49	55.48	60.96	66.99	73.60	81.12	87
63	4.09	4.37	4.84	5.51	6.40	7.51	8.84	10.42	12.26	14.38	16.82	19.59	22.72	26.23	30.15	34.37	37.83	41.62	45.80	50.39	55.39	60.88	66.92	73.54	80.83	89.09	88
64	4.36	4.66	5.13	5.85	6.81	8.04	9.54	11.32	13.40	15.80	18.56	21.70	25.22	29.16	33.55	37.70	41.49	45.66	50.24	55.26	60.76	66.81	73.46	80.75	88.77	97.86	89
65	4.65	4.95	5.43	6.20	7.25	8.61	10.29	12.30	14.65	17.38	20.51	24.05	28.00	32.44	37.34	41.34	45.50	50.08	55.10	60.62	66.68	73.33	80.64	88.67	97.50	107.47	90
66	4.94	5.30	5.78	6.60	7.76	9.27	11.17	13.44	16.11	19.20	22.72	26.72	31.19	36.17	41.30	45.46	50.03	55.05	60.56	66.63	73.27	80.59	88.62	97.44	107.13	118.06	91
67	5.29	5.67	6.16	7.05	8.35	10.06	12.19	14.74	17.76	21.25	25.24	29.73	34.75	40.33	45.43	49.99	55.00	60.51	66.58	73.22	80.53	88.57	97.39	107.07	117.71	129.68	92
68	5.65	6.07	6.63	7.62	9.06	10.97	13.38	16.27	19.67	23.60	28.09	33.12	38.75	44.97	49.96	54.97	60.47	66.53	73.17	80.49	88.51	97.34	107.02	117.67	129.37	142.47	93
69	6.06	6.53	7.15	8.27	9.92	12.07	14.78	18.04	21.87	26.29	31.30	36.94	43.22	49.96	54.95	60.45	66.51	73.15	80.46	88.48	97.31	106.99	117.64	129.33	142.17	156.52	94
70	6.51	7.02	7.77	9.06	10.93	13.38	16.44	20.11	24.42	29.36	34.96	41.24	48.21	54.95	60.45	66.50	73.14	80.45	88.47	97.29	106.93	117.56	129.23	142.16	156.44	171.86	95
71	7.00	7.58	8.48	10.00	12.15	14.93	18.38	22.51	27.33	32.87	39.09	46.06	53.75	60.44	65.88	72.79	80.22	88.37	97.29	106.91	117.55	129.19	142.11	156.37	171.77	188.75	96
72	7.56	8.20	9.31	11.09	13.58	16.76	20.65	25.30	30.68	36.85	43.75	51.44	59.90	65.26	72.44	80.02	88.27	97.26	106.89	117.55	129.15	142.06	156.30	171.69	188.72	207.34	97
73	8.17	8.92	10.29	12.40	15.27	18.89	23.29	28.49	34.50	41.34	48.97	57.41	64.66	72.10	79.82	88.16	97.22	106.87	117.54	129.12	142.00	156.22	171.62	188.65	207.30	227.84	98
74	8.86	9.79	11.47	13.97	17.26	21.37	26.33	32.14	38.82	46.39	54.79	64.06	71.75	79.61	88.06	97.19	106.85	117.52	129.08	141.95	156.15	171.55	188.57	207.23	227.79	250.46	99
75	9.61	10.84	12.90	15.81	19.59	24.26	29.81	36.29	43.70	52.05	61.26	71.40	79.41	87.96	97.16	106.83	117.49	129.05	141.90	156.07	171.47	188.50	207.17	227.74	250.40	275.43	100
76	10.53	12.11	14.59	17.96	22.26	27.50	33.68	40.83	48.97	58.12	68.17	79.21	87.86	97.13	106.80	117.47	129.02	141.84	156.00	171.40	188.42	207.11	227.69	250.36	275.38	297.61	101
77	11.76	13.73	16.64	20.51	25.36	31.20	38.06	45.93	54.84	64.83	75.77	87.75	97.10	106.78	117.45	128.98	141.79	155.93	171.32	188.35	207.04	227.63	250.32	275.35	297.55	322.05	102
78	13.35	15.75	19.13	23.53	28.96	35.43	42.99	51.63	61.36	72.21	84.08	97.06	106.76	117.42	128.95	141.73	155.85	171.25	188.28	206.98	227.58	250.28	275.31	297.53	322.01	348.97	103
79	15.44	18.26	22.14	27.07	33.11	40.27	48.54	57.96	68.55	80.31	93.16	106.73	117.30	128.92	141.68	155.78	171.18	188.20	206.91	227.52	250.23	275.27	297.51	321.99	348.40	378.60	104
80	18.10	21.36	25.73	31.24	37.90	45.74	54.76	65.00	76.47	89.17	103.02	117.18	128.79	141.54	155.59	171.10	188.13	206.85	227.47	250.18	275.24	297.49	321.97	347.83	378.60	410.56	105
81	21.28	25.11	29.99	36.07	43.36	51.89	61.70	72.78	85.14	98.85	113.73	128.70	141.46	155.50	170.99	188.05	206.78	227.41	250.14	275.20	297.47	321.96	347.26	378.60	410.56	443.32	106
82	25.04	29.62	35.00	41.64	49.57	58.81	69.40	81.33	94.64	109.35	125.29	141.38	155.42	170.91	187.96	206.72	227.36	250.09	275.16	297.45	321.95	346.69	378.60	410.56	443.32	476.88	107
83	29.54	34.90	40.80	48.01	56.57	66.52	77.87	90.69	104.95	120.68	137.73	155.35	170.83	187.89	206.64	227.30	250.04	275.12	297.43	321.94	346.13	378.60	410.56	443.32	476.88	510.64	108
84	34.81	40.70	47.48	55.22	64.40	75.05	87.22	100.91	116.13	132.89	151.07	170.77	187.81	206.57	227.24	249.99	275.08	297.41	321.93	345.57	378.60	410.56	443.32	476.88	510.64	545.80	109
85	40.62	47.37	55.04	63.30	73.10	84.46	97.42	111.98	128.15	145.97	165.38	186.45	206.51	227.17	249.94	275.04	297.39	321.92	345.01	378.60	410.56	443.32	476.88	510.64	545.80	581.76	110
86	47.28	54.94	63.17	72.32	82.73	94.78	108.50	123.92	141.07	160.03	180.61	203.00	227.11	249.88	274.98	297.37	321.91	344.45	378.60	410.56	443.32	476.88	510.64	545.80	581.76	618.51	111
87	54.85	63.05	72.18	82.32	93.28	105.98	120.47	136.75	154.93	174.95	196.76	220.48	246.17	273.87	297.34	321.90	343.89	378.60	410.56	442.89	476.42	510.64	545.80	581.76	618.51	656.07	112
88	62.97	72.06	82.16	93.06	104.76	118.09	133.32	150.52	169.64	190.72	213.71	238.75	265.91	290.63	316.16	343.33	372.12	402.43	434.38	467.99	503.25	540.16	578.73	618.51	656.07	694.13	113
89	71.98	82.04	92.90	104.54	117.21	131.14	147.16	165.18	185.25	207.37	231.55	257.92	282.95	308.00	334.76	363.24	393.32	425.13	458.68	493.98	531.01	569.77	610.27	652.52	694.13	732.63	114
90	81.97	92.81	104.39	117.00	130.61	145.22	161.95	180.78	201.78	224.97	250.35	275.48	299.87	326.07	354.08	383.78	415.30	448.65	483.84	520.85	559.70	600.36	642.87	687.20	732.63	771.49	115
91	92.74	104.29	116.87	130.42	144.95	160.28	177.69	197.35	219.27	243.53	268.51	292.06	317.51	344.87	374.01	405.07	438.07	472.99	509.84	548.62	589.31	631.94	676.50	722.98	771.40	810.58	116
92	104.23	116.78	130.30	144.78	160.02	176.34	194.43	214.87	237.72	262.32	284.82	309.33	335.85	364.25	394.68	427.14	461.63	498.15	536.69	577.26	619.87	664.50	711.17	759.86	810.58	850.93	117
93	116.72	130.22	144.67	159.86	176.10	193.40	212.14	233.37	257.23	278.49	301.85	327.32	354.77	384.37	416.10	449.97	485.98	524.12	564.39	606.81	651.36	698.05	746.87	797.83	850.93	892.44	118
94	130.16	144.59	159.75	175.95	193.17	211.50	230.86	253.61	273.38	295.38	319.57	345.87	374.42	405.22	438.27	473.56	511.11	550.90	592.94	637.24	683.78	732.57	783.61	836.90	892.44	935.11	119
95	144.54	159.68	175.84	193.02	211.28	230.50	251.83	269.88	290.25	312.96	337.87	365.15	394.79	426.80	461.18	497.93	537.03	578.51	622.35	668.56	717.14	768.08	821.39	877.07	935.11	1000.00	120
96	159.63	175.77	192.92	211.13	230.28	251.83	268.38	286.89	307.86	331.13	356.89	385.15	415.89	449.12	484.84	523.04	563.74	606.93	652.61	700.78	751.43	804.58	860.21	918.33	1000.00		
97	175.73	192.86	211.04	230.14	251.83	268.36	285.70	304.65	326.03	350.03	376.64	405.87	437.71	472.17	509.24	548.94	591.25	636.18	683.72	733.88	786.66	842.05	900.06	1000.00			
98	192.82	210.98	230.05	251.83	268.36	285.69	303.78	322.99	344.95	369.65	397.11	427.31	460.26	495.95	534.40	575.60	619.54	666.24	715.68	767.87	822.82	880.51	1000.00				
99	210.94	230.00	251.83	268.36	285.69	303.78	322.45	342.09	364.61	390.01	418.30	449.47	483.52	520.47	560.30	603.02	648.63	697.12	748.50	802.76	859.91	1000.00					

Proposed 2001 CSO Table -- Female -- Smoker -- 1000qx																											
Issue	Duration																										Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
0	0.48	0.39	0.26	0.20	0.20	0.21	0.22	0.23	0.23	0.23	0.24	0.25	0.28	0.31	0.34	0.36	0.41	0.46	0.50	0.54	0.58	0.61	0.65	0.67	0.72	0.77	25
1	0.35	0.26	0.19	0.20	0.20	0.21	0.22	0.23	0.23	0.23	0.25	0.27	0.31	0.33	0.36	0.40	0.45	0.49	0.53	0.58	0.61	0.65	0.67	0.71	0.75	0.81	26
2	0.26	0.19	0.19	0.20	0.20	0.21	0.22	0.23	0.23	0.25	0.27	0.30	0.33	0.35	0.39	0.45	0.49	0.53	0.56	0.61	0.65	0.67	0.71	0.75	0.80	0.87	27
3	0.19	0.19	0.20	0.20	0.20	0.21	0.22	0.23	0.25	0.27	0.30	0.33	0.35	0.39	0.43	0.47	0.51	0.56	0.59	0.64	0.67	0.71	0.75	0.80	0.86	0.92	28
4	0.19	0.20	0.20	0.20	0.21	0.22	0.23	0.25	0.27	0.30	0.32	0.34	0.39	0.43	0.47	0.50	0.55	0.59	0.64	0.67	0.71	0.75	0.80	0.86	0.92	0.99	29
5	0.20	0.20	0.20	0.21	0.21	0.23	0.25	0.27	0.30	0.32	0.34	0.38	0.42	0.46	0.50	0.55	0.58	0.64	0.67	0.71	0.75	0.80	0.86	0.92	0.99	1.03	30
6	0.20	0.20	0.21	0.21	0.22	0.24	0.27	0.30	0.32	0.34	0.38	0.42	0.46	0.49	0.54	0.58	0.62	0.67	0.71	0.75	0.79	0.86	0.91	0.98	1.01	1.12	31
7	0.20	0.21	0.21	0.22	0.24	0.26	0.29	0.32	0.34	0.38	0.41	0.45	0.49	0.53	0.57	0.62	0.65	0.71	0.75	0.79	0.86	0.91	0.98	1.01	1.10	1.19	32
8	0.21	0.21	0.22	0.23	0.26	0.29	0.31	0.33	0.37	0.41	0.45	0.48	0.53	0.56	0.61	0.65	0.70	0.75	0.79	0.86	0.91	0.98	1.01	1.10	1.18	1.28	33
9	0.21	0.22	0.23	0.25	0.28	0.31	0.33	0.37	0.40	0.44	0.48	0.51	0.56	0.60	0.64	0.70	0.75	0.79	0.84	0.91	0.98	1.01	1.10	1.18	1.27	1.39	34
10	0.22	0.23	0.25	0.28	0.30	0.32	0.35	0.40	0.43	0.47	0.50	0.54	0.60	0.63	0.68	0.74	0.78	0.84	0.91	0.98	1.01	1.10	1.18	1.27	1.39	1.53	35
11	0.22	0.25	0.28	0.30	0.32	0.34	0.39	0.43	0.45	0.50	0.53	0.58	0.63	0.67	0.74	0.78	0.83	0.89	0.98	1.01	1.10	1.17	1.26	1.37	1.51	1.65	36
12	0.25	0.28	0.30	0.32	0.34	0.38	0.42	0.44	0.49	0.52	0.57	0.61	0.67	0.72	0.76	0.83	0.89	0.96	1.01	1.10	1.17	1.26	1.37	1.51	1.63	1.79	37
13	0.28	0.30	0.32	0.34	0.38	0.40	0.43	0.48	0.50	0.56	0.60	0.65	0.71	0.76	0.81	0.89	0.96	1.01	1.10	1.17	1.26	1.37	1.51	1.63	1.76	1.88	38
14	0.30	0.32	0.34	0.38	0.39	0.42	0.46	0.49	0.54	0.57	0.64	0.70	0.75	0.81	0.88	0.96	1.01	1.10	1.17	1.26	1.37	1.51	1.63	1.74	1.86	2.00	39
15	0.32	0.34	0.38	0.39	0.42	0.45	0.48	0.51	0.56	0.61	0.68	0.73	0.80	0.86	0.94	1.01	1.10	1.17	1.26	1.37	1.51	1.62	1.73	1.85	1.99	2.12	40
16	0.34	0.38	0.39	0.41	0.44	0.47	0.50	0.54	0.60	0.65	0.70	0.78	0.85	0.93	1.01	1.10	1.17	1.26	1.37	1.51	1.62	1.73	1.85	1.99	2.11	2.26	41
17	0.38	0.39	0.41	0.43	0.45	0.49	0.53	0.58	0.64	0.69	0.76	0.84	0.92	1.00	1.10	1.17	1.26	1.37	1.51	1.62	1.73	1.85	1.99	2.11	2.25	2.43	42
18	0.38	0.40	0.42	0.44	0.48	0.50	0.56	0.63	0.68	0.74	0.82	0.91	0.99	1.09	1.17	1.26	1.37	1.51	1.62	1.73	1.85	1.99	2.11	2.25	2.43	2.63	43
19	0.38	0.41	0.43	0.47	0.49	0.54	0.60	0.65	0.73	0.79	0.89	0.98	1.08	1.17	1.26	1.37	1.51	1.62	1.73	1.85	1.99	2.11	2.25	2.43	2.63	2.86	44
20	0.38	0.40	0.44	0.47	0.52	0.59	0.64	0.70	0.78	0.86	0.96	1.07	1.17	1.26	1.37	1.51	1.62	1.73	1.85	1.99	2.11	2.25	2.43	2.63	2.86	3.13	45
21	0.36	0.40	0.44	0.49	0.55	0.61	0.69	0.75	0.85	0.93	1.03	1.14	1.24	1.37	1.48	1.61	1.72	1.85	1.98	2.11	2.25	2.43	2.63	2.86	3.13	3.43	46
22	0.36	0.39	0.46	0.52	0.58	0.65	0.73	0.82	0.92	1.02	1.12	1.23	1.34	1.46	1.58	1.70	1.83	1.97	2.10	2.25	2.43	2.63	2.86	3.13	3.43	3.80	47
23	0.34	0.40	0.46	0.53	0.61	0.69	0.78	0.88	0.98	1.09	1.19	1.33	1.43	1.56	1.67	1.80	1.93	2.09	2.25	2.43	2.63	2.86	3.13	3.43	3.80	4.28	48
24	0.34	0.42	0.48	0.56	0.64	0.74	0.83	0.93	1.05	1.16	1.29	1.39	1.53	1.63	1.76	1.92	2.05	2.22	2.42	2.63	2.86	3.13	3.43	3.80	4.28	4.80	49
25	0.34	0.42	0.50	0.59	0.69	0.78	0.90	1.00	1.12	1.24	1.36	1.47	1.59	1.73	1.86	2.03	2.19	2.38	2.62	2.86	3.13	3.43	3.80	4.28	4.80	5.38	50
26	0.34	0.43	0.53	0.62	0.72	0.83	0.95	1.05	1.18	1.31	1.44	1.54	1.69	1.83	1.98	2.16	2.37	2.59	2.86	3.13	3.43	3.80	4.28	4.80	5.38	6.02	51
27	0.37	0.46	0.56	0.65	0.77	0.88	0.98	1.11	1.24	1.37	1.49	1.63	1.78	1.95	2.12	2.33	2.57	2.83	3.13	3.43	3.80	4.28	4.80	5.38	6.02	6.70	52
28	0.40	0.49	0.59	0.70	0.80	0.91	1.04	1.16	1.30	1.42	1.57	1.73	1.90	2.07	2.28	2.54	2.79	3.11	3.43	3.80	4.28	4.80	5.38	6.02	6.70	7.44	53
29	0.43	0.54	0.63	0.73	0.85	0.97	1.08	1.23	1.35	1.50	1.65	1.83	2.02	2.23	2.49	2.76	3.10	3.43	3.80	4.28	4.80	5.38	6.02	6.70	7.44	8.23	54
30	0.47	0.57	0.66	0.78	0.89	1.01	1.13	1.26	1.41	1.58	1.75	1.95	2.17	2.43	2.72	3.04	3.43	3.80	4.28	4.80	5.38	6.02	6.70	7.44	8.23	9.08	55
31	0.52	0.61	0.71	0.82	0.94	1.06	1.19	1.34	1.49	1.68	1.87	2.10	2.38	2.67	3.01	3.39	3.80	4.28	4.80	5.38	6.02	6.70	7.44	8.23	9.08	9.98	56
32	0.55	0.64	0.75	0.87	0.97	1.12	1.27	1.42	1.61	1.82	2.05	2.32	2.61	2.95	3.35	3.77	4.28	4.80	5.38	6.02	6.70	7.44	8.23	9.08	9.98	10.93	57
33	0.58	0.68	0.78	0.90	1.05	1.20	1.36	1.54	1.74	1.99	2.27	2.56	2.91	3.29	3.73	4.23	4.76	5.38	6.02	6.70	7.44	8.23	9.08	9.98	10.93	11.86	58
34	0.59	0.70	0.82	0.96	1.11	1.28	1.46	1.69	1.92	2.20	2.50	2.86	3.26	3.68	4.17	4.72	5.33	6.02	6.70	7.44	8.23	9.08	9.98	10.93	11.86	12.89	59
35	0.61	0.73	0.86	1.02	1.19	1.39	1.61	1.86	2.14	2.45	2.80	3.20	3.64	4.13	4.66	5.29	5.97	6.70	7.44	8.23	9.08	9.98	10.93	11.86	12.89	13.96	60
36	0.63	0.77	0.92	1.10	1.29	1.51	1.77	2.05	2.36	2.72	3.11	3.54	4.05	4.56	5.17	5.83	6.57	7.44	8.23	9.08	9.98	10.93	11.86	12.89	13.96	15.06	61
37	0.67	0.82	0.98	1.18	1.40	1.66	1.94	2.27	2.62	3.03	3.46	3.95	4.46	5.06	5.70	6.42	7.21	8.23	9.01	9.98	10.93	11.86	12.89	13.96	15.06	16.31	62
38	0.72	0.87	1.05	1.28	1.54	1.82	2.15	2.51	2.92	3.34	3.82	4.35	4.94	5.57	6.27	7.06	7.89	8.82	9.81	10.87	11.86	12.89	13.96	15.06	16.31	17.56	63
39	0.77	0.95	1.16	1.42	1.70	2.02	2.39	2.79	3.21	3.71	4.24	4.82	5.44	6.15	6.89	7.73	8.62	9.59	10.65	11.78	12.84	13.96	15.06	16.31	17.56	18.88	64
40	0.85	1.05	1.30	1.58	1.89	2.25	2.65	3.09	3.57	4.10	4.67	5.30	6.00	6.76	7.56	8.44	9.41	10.45	11.55	12.74	13.86	15.06	16.28	17.56	18.88	20.31	65
41	0.95	1.18	1.46	1.77	2.11	2.51	2.93	3.41	3.95	4.54	5.16	5.86	6.61	7.41	8.29	9.24	10.27	11.36	12.52	13.77	14.97	16.24	17.56	18.88	20.31	21.85	66
42	1.06	1.34	1.65	1.99	2.37	2.80	3.28	3.80	4.38	5.01	5.69	6.44	7.25	8.12	9.07	10.09	11.17	12.32	13.56	14.84	16.16	17.52	18.88	20.30	21.85	23.56	67
43	1.20	1.51	1.85	2.24	2.69	3.15	3.67	4.25	4.86	5.53	6.28	7.08	7.95	8.89	9.92	10.99	12.15	13.38	14.66	16.02	17.41	18.82	20.26	21.82	23.53	25.44	68
44	1.35	1.70	2.10	2.55	3.02	3.54	4.10	4.72	5.39	6.12	6.91	7.77	8.71	9.72	10.81	11.97	13.19	14.48	15.85	17.27	18.72	20.17	21.74	23.48	25.36	27.49	69
45	1.52	1.93	2.38	2.87	3.39	3.97	4.58	5.25	5.98	6.76	7.60	8.53	9.53	10.61	11.76	12.98	14.30	15.67	17.10	18.59	20.05	21.63	23.38	25.28	27.37	29.77	70
46	1.69	2.16	2.67	3.19	3.78	4.40	5.08	5.79	6.58	7.42	8.33	9.31	10.37	11.51	12.75	14.05	15.43	16.91	18.47	19.92	21.51	23.26	25.17	27.27	29.62	32.38	71
47	1.89	2.40	2.95	3.54	4.19	4.87	5.59	6.36	7.20	8.11	9.07	10.13	11.25	12.47	13.79	15.17	16.65	18.21	19.89	21.36	23.11	25.03	27.13	29.49	32.18	35.24	72
48	2.10	2.67	3.27	3.92	4.59	5.32	6.10	6.94	7.84	8.81	9.85	10.96	12.18	13.47	14.88	16.36	17.92	19.61	21.24	22.93	24.86	26.96	29.32	32.02	34.99	38.34	73
49	2.37	2.95	3.58	4.27	5.00	5.78	6.61	7.50	8.47	9.51	10.63	11.83	13.13	14.53	16.04	17.63	19.31	21.12	22.84	24.65	26.69	29.10	31.81	34.78	38.03	41.72	74

Proposed 2001 CSO Table -- Female -- Smoker -- 1000qx																											
Issue	Duration																										Attained
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Ultimate	Age
50	2.65	3.25	3.89	4.61	5.38	6.20	7.09	8.06	9.09	10.22	11.41	12.73	14.12	15.63	17.26	18.97	20.80	22.76	24.59	26.43	28.83	31.51	34.44	37.65	41.17	45.13	75
51	3.01	3.60	4.25	4.97	5.79	6.65	7.60	8.62	9.74	10.94	12.23	13.64	15.16	16.80	18.57	20.43	22.41	24.55	26.18	28.56	31.21	34.10	37.28	40.76	44.54	48.83	76
52	3.40	3.98	4.63	5.36	6.18	7.09	8.08	9.17	10.38	11.69	13.08	14.60	16.25	18.04	19.96	22.00	24.19	25.92	28.28	30.92	33.80	36.92	40.35	44.09	48.17	52.81	77
53	3.85	4.39	5.02	5.75	6.59	7.54	8.58	9.74	11.03	12.45	13.97	15.64	17.44	19.39	21.50	23.73	25.66	28.02	30.63	33.50	36.62	39.96	43.64	47.68	52.09	57.12	78
54	4.33	4.81	5.43	6.16	7.02	8.01	9.14	10.37	11.74	13.26	14.94	16.78	18.75	20.92	23.23	25.41	27.75	30.34	33.20	36.32	39.68	43.22	47.20	51.57	56.33	61.74	79
55	4.81	5.29	5.89	6.63	7.53	8.55	9.73	11.05	12.53	14.20	16.03	18.04	20.23	22.60	25.16	27.48	30.06	32.91	36.03	39.40	42.99	46.74	51.04	55.76	60.89	66.72	80
56	5.24	5.68	6.28	7.04	7.96	9.03	10.29	11.69	13.31	15.11	17.10	19.31	21.72	24.37	27.22	29.78	32.62	35.74	39.13	42.76	46.57	50.65	55.29	60.34	65.83	72.08	81
57	5.64	6.08	6.69	7.48	8.46	9.61	10.94	12.47	14.21	16.15	18.32	20.75	23.42	26.34	29.51	32.34	35.45	38.87	42.53	46.42	50.60	55.10	59.87	65.28	71.17	77.85	82
58	6.00	6.46	7.11	7.96	9.03	10.26	11.70	13.38	15.25	17.39	19.74	22.39	25.31	28.54	32.05	35.17	38.60	42.31	46.28	50.54	54.91	59.69	64.82	70.61	76.92	84.06	83
59	6.36	6.85	7.55	8.48	9.60	10.98	12.54	14.37	16.43	18.78	21.38	24.27	27.48	31.01	34.88	38.34	42.08	46.13	50.47	54.73	59.50	64.64	70.16	76.37	83.10	90.71	84
60	6.71	7.21	7.97	8.97	10.22	11.72	13.47	15.47	17.75	20.34	23.21	26.39	29.93	33.81	38.07	41.86	45.98	50.40	54.54	59.31	64.44	69.93	75.71	82.23	89.28	97.25	85
61	7.05	7.56	8.37	9.45	10.83	12.48	14.41	16.64	19.20	22.06	25.25	28.79	32.67	36.96	41.65	45.84	50.34	54.35	59.12	64.24	69.71	75.45	82.05	88.49	97.14	104.18	86
62	7.45	7.91	8.76	9.91	11.39	13.23	15.38	17.87	20.73	23.95	27.49	31.43	35.78	40.52	45.69	50.27	54.17	58.94	64.04	69.50	75.22	81.89	88.22	96.58	103.58	111.53	87
63	7.85	8.28	9.10	10.33	11.94	13.96	16.35	19.14	22.35	25.97	29.96	34.36	39.20	44.48	50.20	54.00	58.75	63.84	69.29	74.98	81.73	87.94	96.02	102.98	110.82	119.32	88
64	8.20	8.65	9.47	10.75	12.49	14.70	17.37	20.50	24.09	28.17	32.63	37.58	42.98	48.85	53.82	58.56	63.64	69.08	74.73	81.57	87.65	95.45	102.37	110.11	118.34	127.56	89
65	8.57	9.04	9.84	11.18	13.07	15.50	18.45	21.95	25.98	30.57	35.58	41.10	47.11	53.64	58.37	63.44	68.87	74.49	81.40	87.37	94.89	101.78	109.40	118.21	126.79	136.25	90
66	8.95	9.49	10.26	11.65	13.68	16.31	19.55	23.39	27.82	32.85	38.37	44.45	51.05	58.18	63.24	68.65	74.25	81.24	87.08	94.33	101.18	108.69	117.64	126.27	135.40	145.45	91
67	9.40	9.96	10.72	12.20	14.39	17.27	20.82	25.02	29.86	35.35	41.42	48.05	55.26	63.04	68.44	74.00	81.07	86.79	93.77	100.57	107.97	116.95	125.59	134.74	144.49	155.15	92
68	9.87	10.47	11.28	12.89	15.27	18.41	22.29	26.88	32.17	38.12	44.73	51.96	59.81	68.22	73.75	80.24	86.49	93.21	99.97	107.26	116.13	124.77	133.94	143.71	154.50	165.36	93
69	10.38	11.02	11.93	13.71	16.34	19.77	24.00	29.00	34.72	41.17	48.34	56.18	64.67	73.49	79.27	85.52	92.22	99.37	106.54	115.18	123.82	132.98	142.76	153.85	164.84	176.14	94
70	10.93	11.62	12.69	14.68	17.60	21.38	26.00	31.43	37.63	44.53	52.28	60.72	69.81	78.24	84.40	91.08	98.20	105.84	114.01	122.73	132.26	142.47	153.20	164.31	175.79	191.27	95
71	11.52	12.28	13.57	15.84	19.11	23.26	28.31	34.17	40.82	48.21	56.52	65.56	75.25	83.20	89.79	96.87	104.48	112.61	121.32	130.63	141.19	152.55	163.78	175.40	190.12	207.70	96
72	12.18	13.00	14.58	17.20	20.84	25.42	30.91	37.24	44.34	52.17	61.05	70.65	80.93	88.37	92.67	102.91	111.01	119.69	128.95	138.89	150.58	163.22	174.99	188.95	205.62	225.57	97
73	12.89	13.83	15.75	18.78	22.84	27.87	33.80	40.58	48.14	56.42	65.83	75.99	86.80	92.28	95.67	109.19	117.81	127.02	136.92	147.52	160.48	174.58	187.79	203.55	224.93	245.01	98
74	13.66	14.83	17.17	20.63	25.14	30.65	37.04	44.27	52.25	60.91	70.86	81.56	91.92	94.75	107.02	115.69	124.82	134.64	145.16	156.48	170.86	186.60	201.46	222.72	243.36	266.17	99
75	14.48	16.07	18.86	22.78	27.77	33.72	40.57	48.24	56.61	65.61	76.07	87.29	93.84	104.89	109.10	123.65	133.75	144.48	155.94	170.20	181.73	199.31	218.62	239.90	263.29	289.22	100
76	15.72	17.80	21.14	25.65	31.24	37.85	45.37	53.69	62.78	72.51	83.77	92.98	102.88	108.72	122.51	132.90	143.86	155.48	169.67	181.45	198.35	217.46	238.44	261.46	286.68	309.08	101
77	17.39	20.00	23.90	29.03	35.26	42.51	50.71	59.76	69.56	80.04	92.14	100.92	108.35	121.37	132.06	143.24	155.03	169.14	181.18	197.86	216.52	237.32	260.12	285.05	307.06	330.64	102
78	19.59	22.76	27.23	32.96	39.84	47.78	56.66	66.44	76.97	88.23	98.99	107.99	120.25	131.22	142.62	154.58	168.62	180.91	197.39	215.77	236.46	259.09	283.87	305.82	329.16	354.04	103
79	22.46	26.17	31.24	37.57	45.09	53.70	63.28	73.77	85.08	97.11	107.63	119.14	130.40	142.02	154.14	168.10	180.65	196.93	215.03	235.35	258.29	282.98	304.94	328.25	353.23	379.41	104
80	25.12	30.35	35.96	42.89	51.04	60.33	70.60	81.80	93.84	106.66	118.04	129.57	141.41	153.71	167.57	180.38	196.45	214.28	234.22	256.67	282.27	304.27	327.60	352.73	379.41	411.32	105
81	29.46	35.35	41.50	48.99	57.75	67.68	78.61	90.52	103.32	116.95	128.75	140.80	153.27	167.05	180.11	195.98	213.52	233.07	255.03	280.00	303.77	327.14	352.38	379.41	411.32	444.02	106
82	34.75	41.27	47.88	55.91	65.24	75.78	87.37	99.96	113.51	127.93	140.19	152.82	166.52	179.83	195.50	212.74	231.90	253.36	277.69	300.85	326.77	352.13	379.41	411.32	444.02	477.53	107
83	41.04	46.77	55.18	63.68	73.53	84.67	96.84	110.13	124.39	139.59	152.38	165.99	179.54	195.01	211.96	230.72	251.67	275.37	297.94	324.32	351.92	379.41	411.32	444.02	477.53	511.24	108
84	45.68	54.46	63.41	72.32	82.67	94.32	107.09	121.02	135.97	151.93	165.46	179.25	194.52	211.17	229.54	249.98	273.02	295.06	321.88	348.03	379.41	411.32	444.02	477.53	511.24	546.35	109
85	53.74	63.15	71.13	81.84	92.61	104.78	118.08	132.58	148.23	164.93	178.96	194.03	210.39	228.36	248.29	270.69	292.21	319.46	344.18	379.41	411.32	444.02	477.53	511.24	546.35	582.26	110
86	62.90	69.95	81.03	92.24	103.40	117.64	129.79	144.85	161.14	178.67	193.53	209.60	227.19	246.62	268.38	289.40	317.06	340.38	379.41	411.32	444.02	477.53	511.24	546.35	582.26	618.97	111
87	68.78	80.24	91.89	103.21	117.20	129.39	142.19	157.78	174.77	193.04	208.82	226.02	244.96	266.10	286.62	314.68	336.63	379.41	411.32	443.59	477.07	511.24	546.35	582.26	618.97	656.48	112
88	79.46	91.55	103.02	116.76	129.00	141.80	155.27	171.43	189.01	208.01	224.81	243.23	263.71	283.86	312.32	332.92	372.93	403.19	435.08	468.64	503.85	540.71	579.23	618.97	656.48	694.49	113
89	91.22	102.84	116.34	128.62	141.46	154.94	169.05	185.68	203.86	223.58	241.49	261.30	281.13	309.98	329.25	364.05	394.08	425.83	459.33	494.58	531.56	570.27	610.73	652.93	694.49	732.94	114
90	102.66	115.93	128.25	141.13	154.61	168.66	183.47	200.51	219.26	239.76	258.91	278.43	307.66	325.63	354.89	384.54	416.00	449.30	484.44	521.40	560.20	600.82	643.28	687.56	732.94	771.75	115
91	115.53	127.90	140.82	154.31	168.32	183.01	199.79	215.87	235.18	256.44	275.76	299.93	322.05	345.68	374.77	405.77	438.72	473.59	510.39	549.12	589.77	632.35	676.86	723.29	771.66	810.78	116
92	127.56	140.52	154.01	167.99	182.54	199.10	215.06	231.69	251.54	273.12	292.74	313.91	336.66	365.01	395.38	427.79	462.23	498.70	537.19	577.72	620.28	664.86	711.48	760.12	810.78	851.08	117
93	140.22	153.73	167.68	182.10	198.45	214.31	230.79	247.96	268.70	286.45	306.46	328.13	355.53	385.07	416.75	450.57	486.53	524.62	564.85	607.22	651.72	698.36	747.13	798.03	851.08	892.54	118
94	153.46	167.39	181.69	197.85	213.63	229.97	246.91	265.70	281.83	300.02	320.38	346.63	375.12	405.87	438.87	474.11	511.61	551.36	593.35	637.60	684.09	732.83	783.81	837.05	892.54	935.16	119
95	167.12	181.30	197.28	213.00	229.23	245.98	264.89	278.80	295.17	313.77	338.63	365.85	395.44	427.40	461.73	498.43	537.49	578.92	622.71	668.87	717.40	768.28	821.54	877.17	935.16	1000.00	120
96	180.93	196.37	212.41	228.54	245.12	264.08	278.02	292.06	308.67	331.89	357.59	385.80	416.49	449.67	485.34	523.50	564.15	607.29	652.92	701.04	751.63	804.73	860.31	918.38	1000.00		
97	195.12	211.21	227.89	244.32	263.28	277.24	291.13	305.46	326.79	350.73	377.29	406.47	438.26	472.67	509.70	549.35	591.61	636.49	683.98	734.08	786.81	842.15	900.11	1000.00			
98	209.63	226.36	243.57	262.48	276.46	290.56	304.59	323.75	345.65	370.30	397.71	427.86	460.76	496.41	534.81	575.96	619.85	666.50	715.88	768.02	822.92	880.56	1000.00				
99	224.42	241.67	261.68	275.68	290.00	304.59	323.21	342.79	365.26	390.61	418.85	449.97	483.98	520.88	560.66	603.33	648.89	697.32	748.65	802.86	859.96	1000.00					

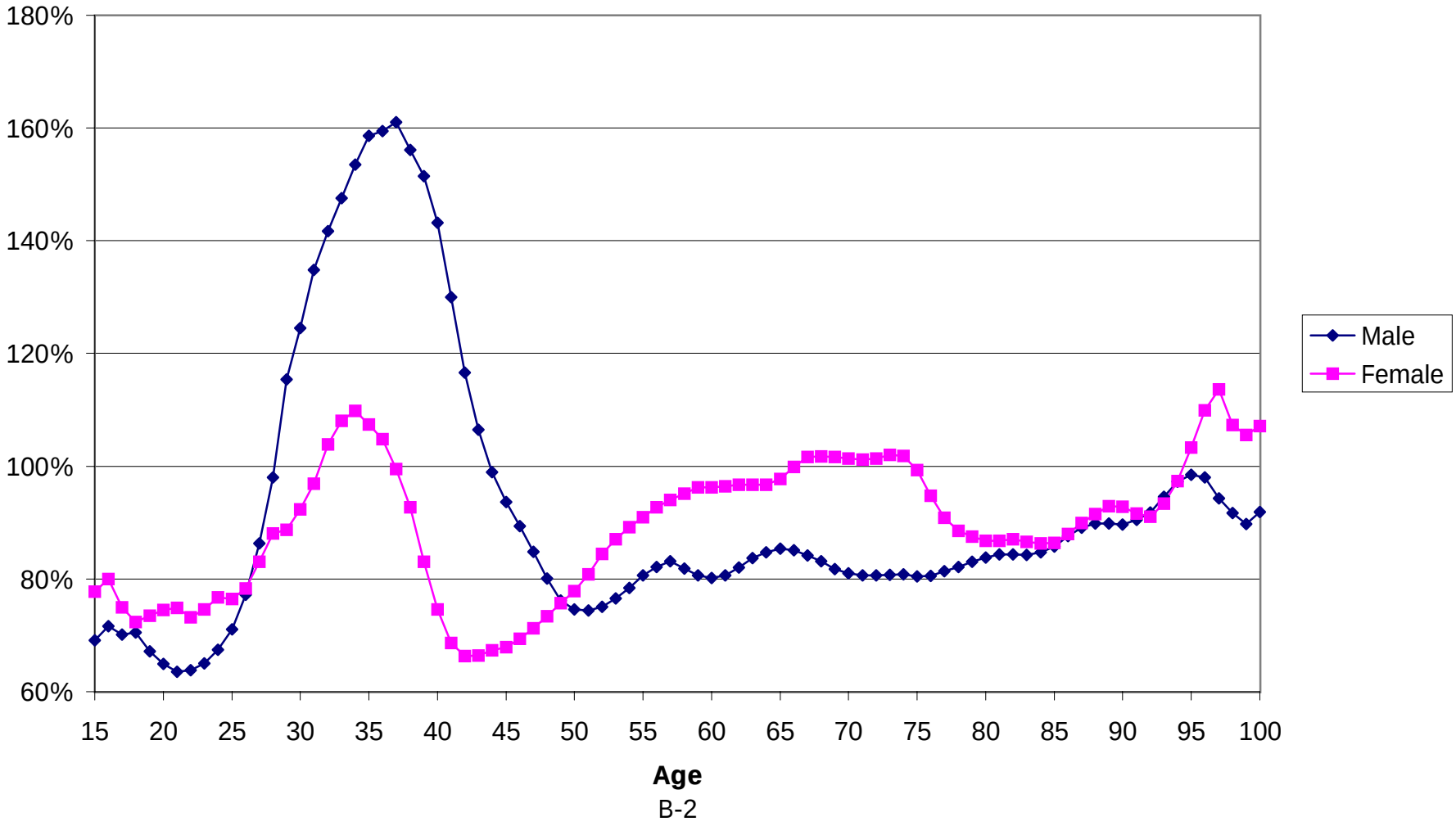
Appendix B

Mortality Comparisons

1975-80 v. 1990-95 Basic Table -- Composite -- Ultimate -- 1000qx

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Male				Female			
Age	1975-80	1990-95	(3) - (2)	(3) / (2)	1975-80	1990-95	(7) - (6)	(7) / (6)
0		0.90				0.50		
1		0.49				0.34		
2		0.32				0.23		
3		0.22				0.16		
4		0.14				0.12		
5		0.14				0.11		
6		0.15				0.13		
7		0.15				0.15		
8		0.16				0.15		
9		0.16				0.16		
10		0.16				0.16		
11		0.20				0.17		
12		0.26				0.21		
13		0.31				0.24		
14		0.39				0.27		
15	0.68	0.47	-0.21	69%	0.36	0.28	-0.08	78%
16	1.01	0.72	-0.29	72%	0.40	0.32	-0.08	80%
17	1.14	0.80	-0.34	70%	0.44	0.33	-0.11	75%
18	1.22	0.86	-0.36	70%	0.47	0.34	-0.13	72%
19	1.31	0.88	-0.43	67%	0.49	0.36	-0.13	73%
20	1.37	0.89	-0.48	65%	0.51	0.38	-0.13	75%
21	1.40	0.89	-0.51	64%	0.52	0.39	-0.13	75%
22	1.41	0.90	-0.51	64%	0.53	0.39	-0.14	73%
23	1.40	0.91	-0.49	65%	0.53	0.40	-0.13	75%
24	1.38	0.93	-0.45	67%	0.53	0.41	-0.12	77%
25	1.34	0.95	-0.39	71%	0.53	0.41	-0.12	76%
26	1.29	1.00	-0.29	77%	0.53	0.42	-0.11	78%
27	1.24	1.07	-0.17	86%	0.53	0.44	-0.09	83%
28	1.20	1.18	-0.02	98%	0.53	0.47	-0.06	88%
29	1.17	1.35	0.18	115%	0.54	0.48	-0.06	89%
30	1.14	1.42	0.28	124%	0.55	0.51	-0.04	92%
31	1.12	1.51	0.39	135%	0.58	0.56	-0.02	97%
32	1.11	1.57	0.46	142%	0.61	0.63	0.02	104%
33	1.12	1.65	0.53	148%	0.65	0.70	0.05	108%
34	1.14	1.75	0.61	154%	0.70	0.77	0.07	110%
35	1.17	1.86	0.69	159%	0.77	0.83	0.06	107%
36	1.22	1.94	0.72	159%	0.84	0.88	0.04	105%
37	1.28	2.06	0.78	161%	0.93	0.93	0.00	99%
38	1.36	2.12	0.76	156%	1.03	0.96	-0.07	93%
39	1.45	2.20	0.75	151%	1.15	0.96	-0.19	83%
40	1.56	2.23	0.67	143%	1.29	0.96	-0.33	75%
41	1.70	2.21	0.51	130%	1.45	1.00	-0.45	69%
42	1.87	2.18	0.31	117%	1.62	1.07	-0.55	66%
43	2.07	2.20	0.13	106%	1.79	1.19	-0.60	66%
44	2.31	2.29	-0.02	99%	1.96	1.32	-0.64	67%
45	2.58	2.42	-0.16	94%	2.14	1.45	-0.69	68%
46	2.89	2.58	-0.31	89%	2.33	1.62	-0.71	69%
47	3.24	2.75	-0.49	85%	2.52	1.80	-0.72	71%
48	3.61	2.89	-0.72	80%	2.72	2.00	-0.72	73%
49	4.02	3.06	-0.96	76%	2.93	2.22	-0.71	76%
50	4.45	3.32	-1.13	75%	3.17	2.47	-0.70	78%
51	4.92	3.66	-1.26	74%	3.43	2.77	-0.66	81%
52	5.44	4.08	-1.36	75%	3.71	3.13	-0.58	84%
53	6.00	4.59	-1.41	77%	4.04	3.52	-0.52	87%
54	6.61	5.18	-1.43	78%	4.40	3.93	-0.47	89%
55	7.27	5.87	-1.40	81%	4.80	4.37	-0.43	91%
56	8.01	6.58	-1.43	82%	5.23	4.85	-0.38	93%
57	8.82	7.34	-1.48	83%	5.70	5.36	-0.34	94%
58	9.73	7.96	-1.77	82%	6.22	5.92	-0.30	95%
59	10.75	8.67	-2.08	81%	6.78	6.52	-0.26	96%
60	11.89	9.53	-2.36	80%	7.37	7.09	-0.28	96%
61	13.17	10.62	-2.55	81%	8.00	7.71	-0.29	96%
62	14.57	11.96	-2.61	82%	8.67	8.38	-0.29	97%
63	16.07	13.45	-2.62	84%	9.38	9.07	-0.31	97%
64	17.71	15.01	-2.70	85%	10.15	9.81	-0.34	97%
65	19.50	16.65	-2.85	85%	10.99	10.74	-0.25	98%
66	21.47	18.27	-3.20	85%	11.91	11.90	-0.01	100%
67	23.65	19.90	-3.75	84%	12.92	13.14	0.22	102%
68	26.05	21.66	-4.39	83%	14.03	14.27	0.24	102%
69	28.69	23.44	-5.25	82%	15.25	15.50	0.25	102%
70	31.57	25.57	-6.00	81%	16.63	16.86	0.23	101%
71	34.68	27.95	-6.73	81%	18.21	18.42	0.21	101%
72	38.00	30.63	-7.37	81%	20.04	20.31	0.27	101%
73	41.60	33.57	-8.03	81%	22.17	22.62	0.45	102%
74	45.54	36.81	-8.73	81%	24.65	25.11	0.46	102%
75	49.90	40.15	-9.75	80%	27.53	27.34	-0.19	99%
76	54.71	44.09	-10.62	81%	30.86	29.24	-1.62	95%
77	60.03	48.83	-11.20	81%	34.69	31.52	-3.17	91%
78	65.85	54.07	-11.78	82%	39.07	34.59	-4.48	89%
79	72.18	59.95	-12.23	83%	44.00	38.51	-5.49	88%
80	79.02	66.19	-12.83	84%	49.48	42.93	-6.55	87%
81	86.36	72.84	-13.52	84%	55.51	48.18	-7.33	87%
82	94.12	79.43	-14.69	84%	62.09	54.05	-8.04	87%
83	102.35	86.24	-16.11	84%	69.22	59.90	-9.32	87%
84	111.41	94.36	-17.05	85%	76.90	66.35	-10.55	86%
85	121.31	104.01	-17.30	86%	85.13	73.52	-11.61	86%
86	132.05	115.70	-16.35	88%	93.91	82.63	-11.28	88%
87	143.63	127.97	-15.66	89%	103.24	92.83	-10.41	90%
88	156.05	140.20	-15.85	90%	113.12	103.50	-9.62	91%
89	169.12	151.99	-17.13	90%	123.55	114.82	-8.73	93%
90	182.61	163.71	-18.90	90%	134.53	124.90	-9.63	93%
91	196.52	177.82	-18.70	90%	146.06	133.78	-12.28	92%
92	210.85	193.53	-17.32	92%	158.14	143.97	-14.17	91%
93	225.60	213.45	-12.15	95%	170.77	159.42	-11.35	93%
94	240.77	234.23	-6.54	97%	183.95	179.17	-4.78	97%
95	256.36	252.53	-3.83	99%	197.68	204.16	6.48	103%
96	272.37	267.09	-5.28	98%	211.96	232.94	20.98	110%
97	288.80	272.42	-16.38	94%	226.79	257.77	30.98	114%
98	305.65	280.31	-25.34	92%	242.17	259.91	17.74	107%
99	322.92	289.67	-33.25	90%	258.10	272.42	14.32	106%
100	340.61	312.84	-27.77	92%	274.58	294.21	19.63	107%
101		339.44				319.22		
102		369.98				347.95		
103		405.13				381.01		
104		445.65				419.11		
105		494.67				463.11		
106		554.03				514.06		
107		626.05				575.74		
108		707.44				650.59		
109		799.40				741.67		
110		863.36				852.92		
111		906.52				912.15		
112		933.72				939.52		
113		952.39				958.31		
114		966.68				967.89		
115		976.35				972.73		
116		981.23				977.60		
117		986.14				982.48		
118		991.07				987.40		
119		996.02				992.33		
120		999.99				999.99		

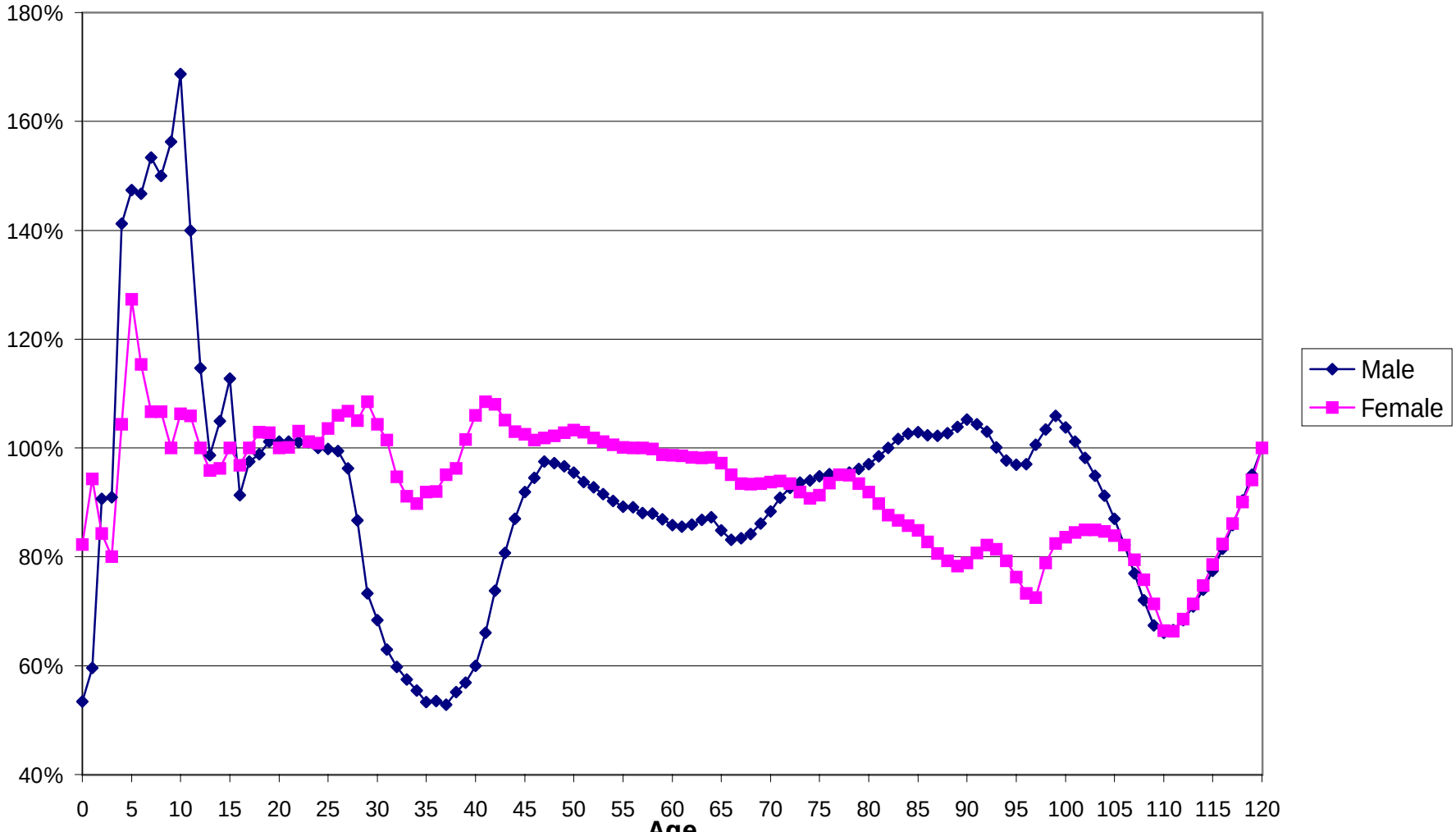
1990-95 Basic Table as a % of 1975-80 Basic Table -- Composite -- Ultimate



1990-95 Basic Table v. Valuation Basic Table -- Composite -- Ultimate -- 1000qx

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Male				Female			
Age	1990-95	VBT	(3) - (2)	(3) / (2)	1990-95	VBT	(7) - (6)	(7) / (6)
0	0.90	0.48	-0.42	53%	0.50	0.41	-0.09	82%
1	0.49	0.29	-0.20	60%	0.34	0.32	-0.02	94%
2	0.32	0.29	-0.03	91%	0.23	0.19	-0.04	84%
3	0.22	0.20	-0.02	91%	0.16	0.13	-0.03	80%
4	0.14	0.20	0.06	141%	0.12	0.13	0.01	104%
5	0.14	0.21	0.07	147%	0.11	0.14	0.03	127%
6	0.15	0.22	0.07	147%	0.13	0.15	0.02	115%
7	0.15	0.23	0.08	153%	0.15	0.16	0.01	107%
8	0.16	0.24	0.08	150%	0.15	0.16	0.01	107%
9	0.16	0.25	0.09	156%	0.16	0.16	0.00	100%
10	0.16	0.27	0.11	169%	0.16	0.17	0.01	106%
11	0.20	0.28	0.08	140%	0.17	0.18	0.01	106%
12	0.26	0.30	0.04	115%	0.21	0.21	0.00	100%
13	0.31	0.31	0.00	99%	0.24	0.23	-0.01	96%
14	0.39	0.41	0.02	105%	0.27	0.26	-0.01	96%
15	0.47	0.53	0.06	113%	0.28	0.28	0.00	100%
16	0.72	0.66	-0.06	91%	0.32	0.31	-0.01	97%
17	0.80	0.78	-0.02	98%	0.33	0.33	0.00	100%
18	0.86	0.85	-0.01	99%	0.34	0.35	0.01	103%
19	0.88	0.89	0.01	101%	0.36	0.37	0.01	103%
20	0.89	0.90	0.01	101%	0.38	0.38	0.00	100%
21	0.89	0.90	0.01	101%	0.39	0.39	0.00	100%
22	0.90	0.91	0.01	101%	0.39	0.40	0.01	103%
23	0.91	0.92	0.01	101%	0.40	0.40	0.00	101%
24	0.93	0.93	0.00	100%	0.41	0.41	0.00	101%
25	0.95	0.95	0.00	100%	0.41	0.42	0.01	104%
26	1.00	0.99	-0.01	99%	0.42	0.44	0.02	106%
27	1.07	1.03	-0.04	96%	0.44	0.47	0.03	107%
28	1.18	1.02	-0.16	87%	0.47	0.49	0.02	105%
29	1.35	0.99	-0.36	73%	0.48	0.52	0.04	108%
30	1.42	0.97	-0.45	68%	0.51	0.53	0.02	104%
31	1.51	0.95	-0.56	63%	0.56	0.57	0.01	101%
32	1.57	0.94	-0.63	60%	0.63	0.60	-0.03	95%
33	1.65	0.95	-0.70	57%	0.70	0.64	-0.06	91%
34	1.75	0.97	-0.78	55%	0.77	0.69	-0.08	90%
35	1.86	0.99	-0.87	53%	0.83	0.76	-0.07	92%
36	1.94	1.04	-0.90	53%	0.88	0.81	-0.07	92%
37	2.06	1.09	-0.97	53%	0.93	0.88	-0.05	95%
38	2.12	1.17	-0.95	55%	0.96	0.92	-0.04	96%
39	2.20	1.25	-0.95	57%	0.96	0.97	0.01	102%
40	2.23	1.34	-0.89	60%	0.96	1.02	0.06	106%
41	2.21	1.46	-0.75	66%	1.00	1.08	0.08	109%
42	2.18	1.61	-0.57	74%	1.07	1.16	0.09	108%
43	2.20	1.78	-0.42	81%	1.19	1.25	0.06	105%
44	2.29	1.99	-0.30	87%	1.32	1.36	0.04	103%
45	2.42	2.22	-0.20	92%	1.45	1.49	0.04	103%
46	2.58	2.44	-0.14	94%	1.62	1.64	0.02	101%
47	2.75	2.68	-0.07	98%	1.80	1.83	0.03	102%
48	2.89	2.81	-0.08	97%	2.00	2.04	0.04	102%
49	3.06	2.96	-0.10	97%	2.22	2.28	0.06	103%
50	3.32	3.17	-0.15	95%	2.47	2.55	0.08	103%
51	3.66	3.43	-0.23	94%	2.77	2.85	0.08	103%
52	4.08	3.79	-0.29	93%	3.13	3.19	0.06	102%
53	4.59	4.20	-0.39	91%	3.52	3.56	0.04	101%
54	5.18	4.68	-0.50	90%	3.93	3.95	0.02	101%
55	5.87	5.23	-0.64	89%	4.37	4.37	0.00	100%
56	6.58	5.86	-0.72	89%	4.85	4.85	0.00	100%
57	7.34	6.46	-0.88	88%	5.36	5.36	0.00	100%
58	7.96	7.00	-0.96	88%	5.92	5.91	-0.01	100%
59	8.67	7.53	-1.14	87%	6.52	6.44	-0.08	99%
60	9.53	8.18	-1.35	86%	7.09	7.00	-0.09	99%
61	10.62	9.09	-1.53	86%	7.71	7.60	-0.11	99%
62	11.96	10.28	-1.68	86%	8.38	8.24	-0.14	98%
63	13.45	11.67	-1.78	87%	9.07	8.91	-0.16	98%
64	15.01	13.09	-1.92	87%	9.81	9.64	-0.17	98%
65	16.65	14.14	-2.51	85%	10.74	10.44	-0.30	97%
66	18.27	15.19	-3.08	83%	11.90	11.31	-0.59	95%
67	19.90	16.60	-3.30	83%	13.14	12.27	-0.87	93%
68	21.66	18.24	-3.42	84%	14.27	13.33	-0.94	93%
69	23.44	20.19	-3.25	86%	15.50	14.49	-1.01	93%
70	25.57	22.60	-2.97	88%	16.86	15.80	-1.06	94%
71	27.95	25.40	-2.55	91%	18.42	17.31	-1.11	94%
72	30.63	28.38	-2.25	93%	20.31	18.97	-1.34	93%
73	33.57	31.43	-2.14	94%	22.62	20.79	-1.83	92%
74	36.81	34.61	-2.20	94%	25.11	22.79	-2.32	91%
75	40.15	38.07	-2.08	95%	27.34	24.97	-2.37	91%
76	44.09	41.96	-2.13	95%	29.24	27.36	-1.88	94%
77	48.83	46.42	-2.41	95%	31.52	29.98	-1.54	95%
78	54.07	51.64	-2.43	96%	34.59	32.86	-1.73	95%
79	59.95	57.67	-2.28	96%	38.51	36.01	-2.50	94%
80	66.19	64.23	-1.96	97%	42.93	39.46	-3.47	92%
81	72.84	71.70	-1.14	98%	48.18	43.24	-4.94	90%
82	79.43	79.41	-0.02	100%	54.05	47.39	-6.66	88%
83	86.24	87.67	1.43	102%	59.90	51.93	-7.97	87%
84	94.36	96.80	2.44	103%	66.35	56.90	-9.45	86%
85	104.01	107.06	3.05	103%	73.52	62.36	-11.16	85%
86	115.70	118.42	2.72	102%	82.63	68.33	-14.30	83%
87	127.97	130.79	2.82	102%	92.83	74.88	-17.95	81%
88	140.20	143.99	3.79	103%	103.50	82.06	-21.44	79%
89	151.99	157.86	5.87	104%	114.82	89.93	-24.89	78%
90	163.71	172.25	8.54	105%	124.90	98.54	-26.36	79%
91	177.82	185.54	7.72	104%	133.78	107.99	-25.79	81%
92	193.53	199.31	5.78	103%	143.97	118.34	-25.63	82%
93	213.45	213.73	0.28	100%	159.42	129.68	-29.74	81%
94	234.23	228.89	-5.34	98%	179.17	142.11	-37.06	79%
95	252.53	244.81	-7.72	97%	204.16	155.73	-48.43	76%
96	267.09	259.01	-8.08	97%	232.94	170.66	-62.28	73%
97	272.42	274.03	1.61	101%	257.77	187.01	-70.76	73%
98	280.31	289.92	9.61	103%	259.91	204.94	-54.97	79%
99	289.67	306.74	17.07	106%	272.42	224.58	-47.84	82%
100	312.84	324.53	11.69	104%	294.21	246.10	-48.11	84%
101	339.44	343.35	3.91	101%	319.22	269.69	-49.53	84%
102	369.98	363.27	-6.71	98%	347.95	295.54	-52.41	85%
103	405.13	384.34	-20.79	95%	381.01	323.87	-57.14	85%
104	445.65	406.63	-39.02	91%	419.11	354.91	-64.20	85%
105	494.67	430.21	-64.46	87%	463.11	388.35	-74.76	84%
106	554.03	455.16	-98.87	82%	514.06	422.59	-91.47	82%
107	626.05	481.56	-144.49	77%	575.74	457.63	-118.11	79%
108	707.44	509.49	-197.95	72%	650.59	492.87	-157.72	76%
109	799.40	539.05	-260.35	67%	741.67	529.51	-212.16	71%
110	863.36	570.31	-293.05	66%	852.92	566.95	-285.97	66%
111	906.52	603.39	-303.13	67%	912.15	605.19	-306.96	66%
112	933.72	638.38	-295.34	68%	939.52	644.23	-295.29	69%
113	952.39	675.41	-276.98	71%	958.31	683.77	-274.54	71%
114	966.68	714.58	-252.10	74%	967.89	723.75	-244.14	75%
115	976.35	756.03	-220.32	77%	972.73	764.09	-208.64	79%
116	981.23	799.88	-181.35	82%	977.60	804.66	-172.94	82%
117	986.14	846.27	-139.87	86%	982.48	846.49	-135.99	86%
118	991.07	895.36	-95.71	90%	987.40	889.48	-97.92	90%
119	996.02	947.29	-48.73	95%	992.33	933.63	-58.70	94%
120	999.99	1000.00	0.01	100%	999.99	1000.00	0.01	100%

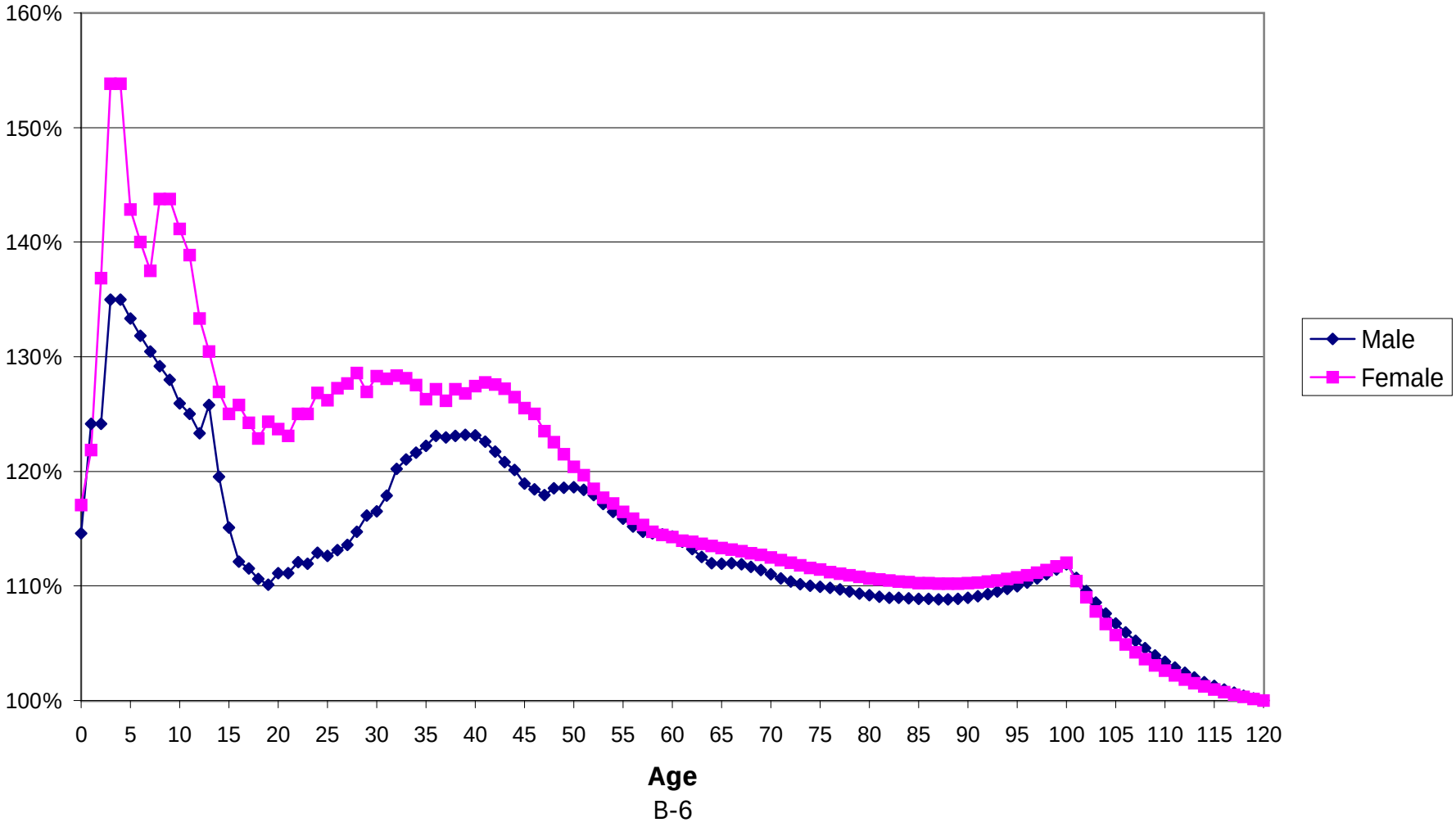
Valuation Basic Table as a % of 1990-95 Basic Table
Composite, Ultimate



Valuation Basic Table v. Proposed 2001 CSO Table -- Composite -- Ultimate -- 1000qx

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Male				Female			
Age	VBT	2001	(3) - (2)	(3) / (2)	VBT	2001	(7) - (6)	(7) / (6)
0	0.48	0.55	0.07	115%	0.41	0.48	0.07	117%
1	0.29	0.36	0.07	124%	0.32	0.39	0.07	122%
2	0.29	0.36	0.07	124%	0.19	0.26	0.07	137%
3	0.20	0.27	0.07	135%	0.13	0.20	0.07	154%
4	0.20	0.27	0.07	135%	0.13	0.20	0.07	154%
5	0.21	0.28	0.07	133%	0.14	0.20	0.06	143%
6	0.22	0.29	0.07	132%	0.15	0.21	0.06	140%
7	0.23	0.30	0.07	130%	0.16	0.22	0.06	138%
8	0.24	0.31	0.07	129%	0.16	0.23	0.07	144%
9	0.25	0.32	0.07	128%	0.16	0.23	0.07	144%
10	0.27	0.34	0.07	126%	0.17	0.24	0.07	141%
11	0.28	0.35	0.07	125%	0.18	0.25	0.07	139%
12	0.30	0.37	0.07	123%	0.21	0.28	0.07	133%
13	0.31	0.39	0.08	126%	0.23	0.30	0.07	130%
14	0.41	0.49	0.08	120%	0.26	0.33	0.07	127%
15	0.53	0.61	0.08	115%	0.28	0.35	0.07	125%
16	0.66	0.74	0.08	112%	0.31	0.39	0.08	126%
17	0.78	0.87	0.09	112%	0.33	0.41	0.08	124%
18	0.85	0.94	0.09	111%	0.35	0.43	0.08	123%
19	0.89	0.98	0.09	110%	0.37	0.46	0.09	124%
20	0.90	1.00	0.10	111%	0.38	0.47	0.09	124%
21	0.90	1.00	0.10	111%	0.39	0.48	0.09	123%
22	0.91	1.02	0.11	112%	0.40	0.50	0.10	125%
23	0.92	1.03	0.11	112%	0.40	0.50	0.10	125%
24	0.93	1.05	0.12	113%	0.41	0.52	0.11	127%
25	0.95	1.07	0.12	113%	0.42	0.53	0.11	126%
26	0.99	1.12	0.13	113%	0.44	0.56	0.12	127%
27	1.03	1.17	0.14	114%	0.47	0.60	0.13	128%
28	1.02	1.17	0.15	115%	0.49	0.63	0.14	129%
29	0.99	1.15	0.16	116%	0.52	0.66	0.14	127%
30	0.97	1.13	0.16	116%	0.53	0.68	0.15	128%
31	0.95	1.12	0.17	118%	0.57	0.73	0.16	128%
32	0.94	1.13	0.19	120%	0.60	0.77	0.17	128%
33	0.95	1.15	0.20	121%	0.64	0.82	0.18	128%
34	0.97	1.18	0.21	122%	0.69	0.88	0.19	128%
35	0.99	1.21	0.22	122%	0.76	0.96	0.20	126%
36	1.04	1.28	0.24	123%	0.81	1.03	0.22	127%
37	1.09	1.34	0.25	123%	0.88	1.11	0.23	126%
38	1.17	1.44	0.27	123%	0.92	1.17	0.25	127%
39	1.25	1.54	0.29	123%	0.97	1.23	0.26	127%
40	1.34	1.65	0.31	123%	1.02	1.30	0.28	127%
41	1.46	1.79	0.33	123%	1.08	1.38	0.30	128%
42	1.61	1.96	0.35	122%	1.16	1.48	0.32	128%
43	1.78	2.15	0.37	121%	1.25	1.59	0.34	127%
44	1.99	2.39	0.40	120%	1.36	1.72	0.36	126%
45	2.22	2.64	0.42	119%	1.49	1.87	0.38	126%
46	2.44	2.89	0.45	118%	1.64	2.05	0.41	125%
47	2.68	3.16	0.48	118%	1.83	2.26	0.43	123%
48	2.81	3.33	0.52	119%	2.04	2.50	0.46	123%
49	2.96	3.51	0.55	119%	2.28	2.77	0.49	121%
50	3.17	3.76	0.59	119%	2.55	3.07	0.52	120%
51	3.43	4.06	0.63	118%	2.85	3.41	0.56	120%
52	3.79	4.47	0.68	118%	3.19	3.78	0.59	118%
53	4.20	4.92	0.72	117%	3.56	4.19	0.63	118%
54	4.68	5.45	0.77	116%	3.95	4.63	0.68	117%
55	5.23	6.06	0.83	116%	4.37	5.09	0.72	116%
56	5.86	6.75	0.89	115%	4.85	5.62	0.77	116%
57	6.46	7.41	0.95	115%	5.36	6.18	0.82	115%
58	7.00	8.02	1.02	115%	5.91	6.78	0.87	115%
59	7.53	8.62	1.09	114%	6.44	7.37	0.93	114%
60	8.18	9.35	1.17	114%	7.00	8.00	1.00	114%
61	9.09	10.35	1.26	114%	7.60	8.66	1.06	114%
62	10.28	11.64	1.36	113%	8.24	9.38	1.14	114%
63	11.67	13.13	1.46	113%	8.91	10.13	1.22	114%
64	13.09	14.66	1.57	112%	9.64	10.94	1.30	113%
65	14.14	15.83	1.69	112%	10.44	11.83	1.39	113%
66	15.19	17.01	1.82	112%	11.31	12.80	1.49	113%
67	16.60	18.57	1.97	112%	12.27	13.87	1.60	113%
68	18.24	20.37	2.13	112%	13.33	15.04	1.71	113%
69	20.19	22.49	2.30	111%	14.49	16.33	1.84	113%
70	22.60	25.09	2.49	111%	15.80	17.77	1.97	112%
71	25.40	28.11	2.71	111%	17.31	19.43	2.12	112%
72	28.38	31.32	2.94	110%	18.97	21.25	2.28	112%
73	31.43	34.62	3.19	110%	20.79	23.24	2.45	112%
74	34.61	38.08	3.47	110%	22.79	25.43	2.64	112%
75	38.07	41.84	3.77	110%	24.97	27.82	2.85	111%
76	41.96	46.08	4.12	110%	27.36	30.43	3.07	111%
77	46.42	50.92	4.50	110%	29.98	33.30	3.32	111%
78	51.64	56.56	4.92	110%	32.86	36.45	3.59	111%
79	57.67	63.06	5.39	109%	36.01	39.89	3.88	111%
80	64.23	70.14	5.91	109%	39.46	43.67	4.21	111%
81	71.70	78.19	6.49	109%	43.24	47.81	4.57	111%
82	79.41	86.54	7.13	109%	47.39	52.35	4.96	110%
83	87.67	95.51	7.84	109%	51.93	57.32	5.39	110%
84	96.80	105.43	8.63	109%	56.90	62.77	5.87	110%
85	107.06	116.57	9.51	109%	62.36	68.76	6.40	110%
86	118.42	128.91	10.49	109%	68.33	75.32	6.99	110%
87	130.79	142.35	11.56	109%	74.88	82.53	7.65	110%
88	143.99	156.73	12.74	109%	82.06	90.44	8.38	110%
89	157.86	171.88	14.02	109%	89.93	99.12	9.19	110%
90	172.25	187.66	15.41	109%	98.54	108.65	10.11	110%
91	185.54	202.44	16.90	109%	107.99	119.12	11.13	110%
92	199.31	217.83	18.52	109%	118.34	130.62	12.28	110%
93	213.73	234.04	20.31	110%	129.68	143.26	13.58	110%
94	228.89	251.14	22.25	110%	142.11	157.17	15.06	111%
95	244.81	269.17	24.36	110%	155.73	172.46	16.73	111%
96	259.01	285.64	26.63	110%	170.66	189.30	18.64	111%
97	274.03	303.18	29.15	111%	187.01	207.84	20.83	111%
98	289.92	321.88	31.96	111%	204.94	228.28	23.34	111%
99	306.74	341.85	35.11	111%	224.58	250.83	26.25	112%
100	324.53	363.19	38.66	112%	246.10	275.73	29.63	112%
101	343.35	380.08	36.73	111%	269.69	297.84	28.15	110%
102	363.27	398.06	34.79	110%	295.54	322.21	26.67	109%
103	384.34	417.20	32.86	109%	323.87	349.06	25.19	108%
104	406.63	437.56	30.93	108%	354.91	378.61	23.70	107%
105	430.21	459.21	29.00	107%	388.35	410.57	22.22	106%
106	455.16	482.22	27.06	106%	422.59	443.33	20.74	105%
107	481.56	506.69	25.13	105%	457.63	476.89	19.26	104%
108	509.49	532.69	23.20	105%	492.87	510.65	17.78	104%
109	539.05	560.31	21.26	104%	529.51	545.81	16.30	103%
110	570.31	589.64	19.33	103%	566.95	581.77	14.81	103%
111	603.39	620.79	17.40	103%	605.19	618.52	13.33	102%
112	638.38	653.84	15.46	102%	644.23	656.08	11.85	102%
113	675.41	688.94	13.53	102%	683.77	694.14	10.37	102%
114	714.58	726.18	11.60	102%	723.75	732.64	8.89	101%
115	756.03	765.70	9.67	101%	764.09	771.50	7.41	101%
116	799.88	807.61	7.73	101%	804.66	810.59	5.93	101%
117	846.27	852.07	5.80	101%	846.49	850.93	4.44	101%
118	895.36	899.23	3.87	100%	889.48	892.44	2.96	100%
119	947.29	949.22	1.93	100%	933.63	935.11	1.48	100%
120	1000.00	1000.00	0.00	100%	1000.00	1000.00	0.00	100%

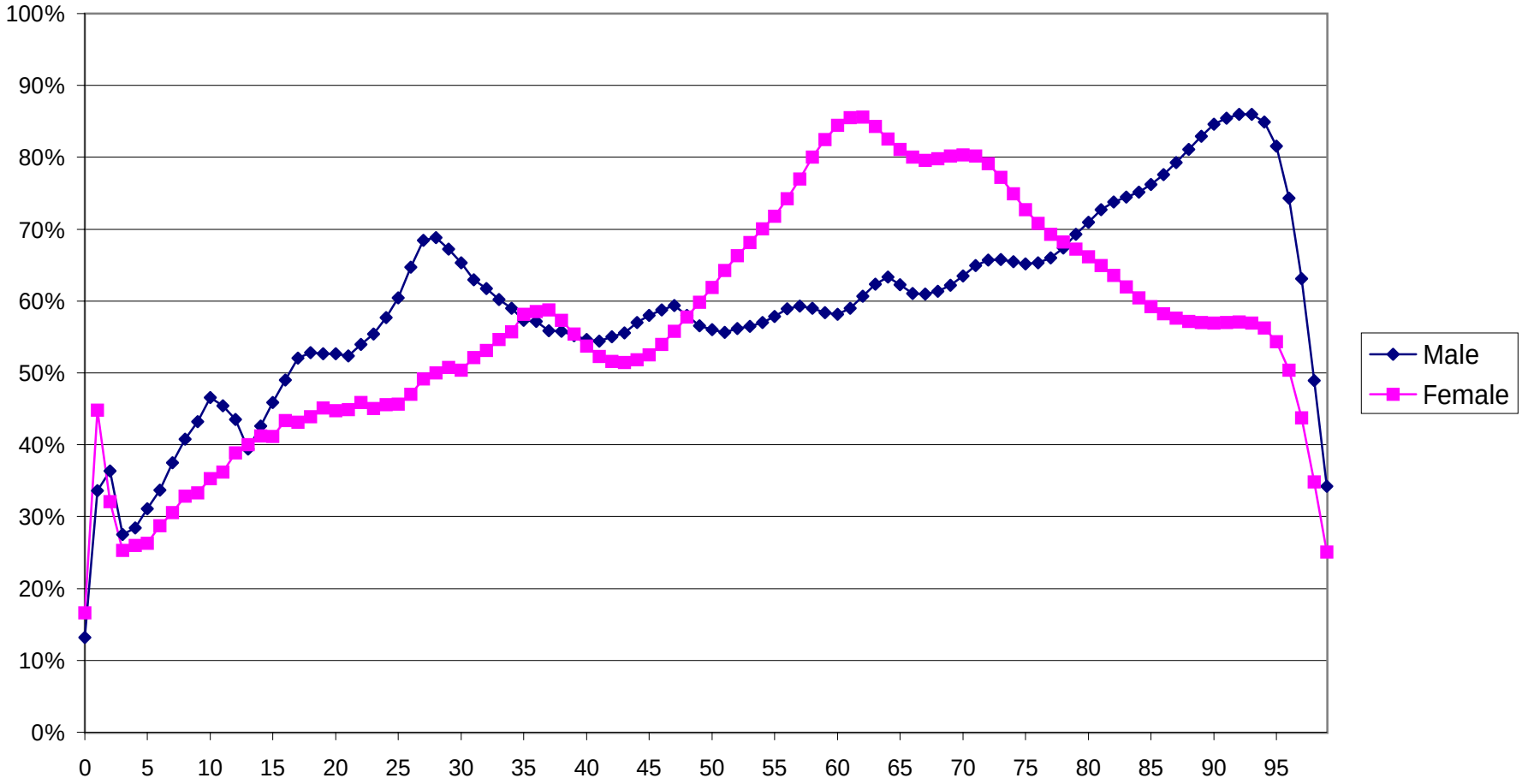
Proposed 2001 CSO Table as a % of Valuation Basic Table
Composite, Ultimate



1980 CSO Table v. Proposed 2001 CSO Table -- Composite -- Ultimate -- 1000qx

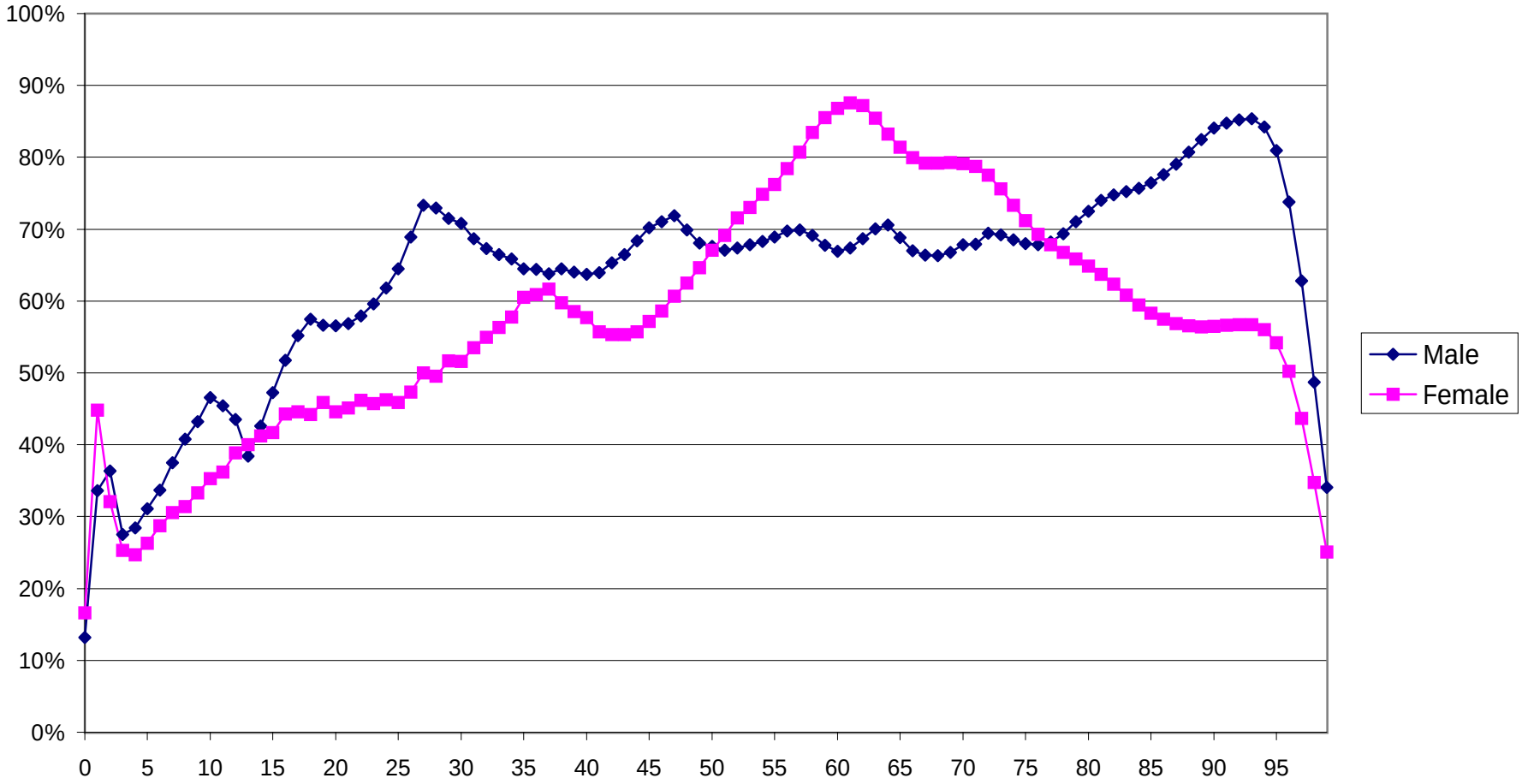
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Male				Female			
Age	1980	2001	(3) - (2)	(3) / (2)	1980	2001	(7) - (6)	(7) / (6)
0	4.18	0.55	-3.63	13%	2.89	0.48	-2.41	17%
1	1.07	0.36	-0.71	34%	0.87	0.39	-0.48	45%
2	0.99	0.36	-0.63	36%	0.81	0.26	-0.55	32%
3	0.98	0.27	-0.71	28%	0.79	0.20	-0.59	25%
4	0.95	0.27	-0.68	28%	0.77	0.20	-0.57	26%
5	0.90	0.28	-0.62	31%	0.76	0.20	-0.56	26%
6	0.86	0.29	-0.57	34%	0.73	0.21	-0.52	29%
7	0.80	0.30	-0.50	38%	0.72	0.22	-0.50	31%
8	0.76	0.31	-0.45	41%	0.70	0.23	-0.47	33%
9	0.74	0.32	-0.42	43%	0.69	0.23	-0.46	33%
10	0.73	0.34	-0.39	47%	0.68	0.24	-0.44	35%
11	0.77	0.35	-0.42	45%	0.69	0.25	-0.44	36%
12	0.85	0.37	-0.48	44%	0.72	0.28	-0.44	39%
13	0.99	0.39	-0.60	39%	0.75	0.30	-0.45	40%
14	1.15	0.49	-0.66	43%	0.80	0.33	-0.47	41%
15	1.33	0.61	-0.72	46%	0.85	0.35	-0.50	41%
16	1.51	0.74	-0.77	49%	0.90	0.39	-0.51	43%
17	1.67	0.87	-0.80	52%	0.95	0.41	-0.54	43%
18	1.78	0.94	-0.84	53%	0.98	0.43	-0.55	44%
19	1.86	0.98	-0.88	53%	1.02	0.46	-0.56	45%
20	1.90	1.00	-0.90	53%	1.05	0.47	-0.58	45%
21	1.91	1.00	-0.91	52%	1.07	0.48	-0.59	45%
22	1.89	1.02	-0.87	54%	1.09	0.50	-0.59	46%
23	1.86	1.03	-0.83	55%	1.11	0.50	-0.61	45%
24	1.82	1.05	-0.77	58%	1.14	0.52	-0.62	46%
25	1.77	1.07	-0.70	60%	1.16	0.53	-0.63	46%
26	1.73	1.12	-0.61	65%	1.19	0.56	-0.63	47%
27	1.71	1.17	-0.54	68%	1.22	0.60	-0.62	49%
28	1.70	1.17	-0.53	69%	1.26	0.63	-0.63	50%
29	1.71	1.15	-0.56	67%	1.30	0.66	-0.64	51%
30	1.73	1.13	-0.60	65%	1.35	0.68	-0.67	50%
31	1.78	1.12	-0.66	63%	1.40	0.73	-0.67	52%
32	1.83	1.13	-0.70	62%	1.45	0.77	-0.68	53%
33	1.91	1.15	-0.76	60%	1.50	0.82	-0.68	55%
34	2.00	1.18	-0.82	59%	1.58	0.88	-0.70	56%
35	2.11	1.21	-0.90	57%	1.65	0.96	-0.69	58%
36	2.24	1.28	-0.96	57%	1.76	1.03	-0.73	59%
37	2.40	1.34	-1.06	56%	1.89	1.11	-0.78	59%
38	2.58	1.44	-1.14	56%	2.04	1.17	-0.87	57%
39	2.79	1.54	-1.25	55%	2.22	1.23	-0.99	55%
40	3.02	1.65	-1.37	55%	2.42	1.30	-1.12	54%
41	3.29	1.79	-1.50	54%	2.64	1.38	-1.26	52%
42	3.56	1.96	-1.60	55%	2.87	1.48	-1.39	52%
43	3.87	2.15	-1.72	56%	3.09	1.59	-1.50	51%
44	4.19	2.39	-1.80	57%	3.32	1.72	-1.60	52%
45	4.55	2.64	-1.91	58%	3.56	1.87	-1.69	53%
46	4.92	2.89	-2.03	59%	3.80	2.05	-1.75	54%
47	5.32	3.16	-2.16	59%	4.05	2.26	-1.79	56%
48	5.74	3.33	-2.41	58%	4.33	2.50	-1.83	58%
49	6.21	3.51	-2.70	57%	4.63	2.77	-1.86	60%
50	6.71	3.76	-2.95	56%	4.96	3.07	-1.89	62%
51	7.30	4.06	-3.24	56%	5.31	3.41	-1.90	64%
52	7.96	4.47	-3.49	56%	5.70	3.78	-1.92	66%
53	8.71	4.92	-3.79	56%	6.15	4.19	-1.96	68%
54	9.56	5.45	-4.11	57%	6.61	4.63	-1.98	70%
55	10.47	6.06	-4.41	58%	7.09	5.09	-2.00	72%
56	11.46	6.75	-4.71	59%	7.57	5.62	-1.95	74%
57	12.49	7.41	-5.08	59%	8.03	6.18	-1.85	77%
58	13.59	8.02	-5.57	59%	8.47	6.78	-1.69	80%
59	14.77	8.62	-6.15	58%	8.94	7.37	-1.57	82%
60	16.08	9.35	-6.73	58%	9.47	8.00	-1.47	84%
61	17.54	10.35	-7.19	59%	10.13	8.66	-1.47	85%
62	19.19	11.64	-7.55	61%	10.96	9.38	-1.58	86%
63	21.06	13.13	-7.93	62%	12.02	10.13	-1.89	84%
64	23.14	14.66	-8.48	63%	13.25	10.94	-2.31	83%
65	25.42	15.83	-9.59	62%	14.59	11.83	-2.76	81%
66	27.85	17.01	-10.84	61%	16.00	12.80	-3.20	80%
67	30.44	18.57	-11.87	61%	17.43	13.87	-3.56	80%
68	33.19	20.37	-12.82	61%	18.84	15.04	-3.80	80%
69	36.17	22.49	-13.68	62%	20.36	16.33	-4.03	80%
70	39.51	25.09	-14.42	64%	22.11	17.77	-4.34	80%
71	43.30	28.11	-15.19	65%	24.23	19.43	-4.80	80%
72	47.65	31.32	-16.33	66%	26.87	21.25	-5.62	79%
73	52.64	34.62	-18.02	66%	30.11	23.24	-6.87	77%
74	58.19	38.08	-20.11	65%	33.93	25.43	-8.50	75%
75	64.19	41.84	-22.35	65%	38.24	27.82	-10.42	73%
76	70.53	46.08	-24.45	65%	42.97	30.43	-12.54	71%
77	77.12	50.92	-26.20	66%	48.04	33.30	-14.74	69%
78	83.90	56.56	-27.34	67%	53.45	36.45	-17.00	68%
79	91.05	63.06	-27.99	69%	59.35	39.89	-19.46	67%
80	98.87	70.14	-28.73	71%	65.99	43.67	-22.32	66%
81	107.48	78.19	-29.29	73%	73.60	47.81	-25.79	65%
82	117.25	86.54	-30.71	74%	82.40	52.35	-30.05	64%
83	128.26	95.51	-32.75	74%	92.53	57.32	-35.21	62%
84	140.25	105.43	-34.82	75%	103.81	62.77	-41.04	60%
85	152.95	116.57	-36.38	76%	116.10	68.76	-47.34	59%
86	166.09	128.91	-37.18	78%	129.29	75.32	-53.97	58%
87	179.55	142.35	-37.20	79%	143.32	82.53	-60.79	58%
88	193.27	156.73	-36.54	81%	158.18	90.44	-67.74	57%
89	207.29	171.88	-35.41	83%	173.94	99.12	-74.82	57%
90	221.77	187.66	-34.11	85%	190.75	108.65	-82.10	57%
91	236.98	202.44	-34.54	85%	208.87	119.12	-89.75	57%
92	253.45	217.83	-35.62	86%	228.81	130.62	-98.19	57%
93	272.11	234.04	-38.07	86%	251.51	143.26	-108.25	57%
94	295.90	251.14	-44.76	85%	279.31	157.17	-122.14	56%
95	329.96	269.17	-60.79	82%	317.32	172.46	-144.86	54%
96	384.55	285.64	-98.91	74%	375.74	189.30	-186.44	50%
97	480.20	303.18	-177.02	63%	474.97	207.84	-267.13	44%
98	657.98	321.88	-336.10	49%	655.85	228.28	-427.57	35%
99	1000.00	341.85	-658.15	34%	1000.00	250.83	-749.17	25%
100		363.19				275.73		
101		380.08				297.84		
102		398.06				322.21		
103		417.20				349.06		
104		437.56				378.61		
105		459.21				410.57		
106		482.22				443.33		
107		506.69				476.89		
108		532.69				510.65		
109		560.31				545.81		
110		589.64				581.77		
111		620.79				618.52		
112		653.84				656.08		
113		688.94				694.14		
114		726.18				732.64		
115		765.70				771.50		
116		807.61				810.59		
117		852.07				850.93		
118		899.23				892.44		
119		949.22				935.11		
120		1000.00				1000.00		

Proposed 2001 CSO Table as a % of 1980 CSO Table
Composite, Ultimate



1980 CSO Table v. Proposed 2001 CSO Table -- Nonsmoker -- Ultimate -- 1000qx																		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Male				Female						Male				Female			
Age	1980	2001	(3) - (2)	(3) / (2)	1980	2001	(7) - (6)	(7) / (6)		Age	1980	2001	(3) - (2)	(3) / (2)	1980	2001	(7) - (6)	(7) / (6)
0	4.18	0.55	-3.63	13%	2.89	0.48	-2.41	17%		60	12.64	8.46	-4.18	67%	8.51	7.39	-1.12	87%
1	1.07	0.36	-0.71	34%	0.87	0.39	-0.48	45%		61	13.94	9.39	-4.55	67%	9.16	8.02	-1.14	88%
2	0.99	0.36	-0.63	36%	0.81	0.26	-0.55	32%		62	15.42	10.59	-4.83	69%	9.98	8.70	-1.28	87%
3	0.98	0.27	-0.71	28%	0.79	0.20	-0.59	25%		63	17.11	11.98	-5.13	70%	11.01	9.41	-1.60	85%
4	0.95	0.27	-0.68	28%	0.77	0.19	-0.58	25%		64	19.02	13.42	-5.60	71%	12.23	10.18	-2.05	83%
5	0.90	0.28	-0.62	31%	0.76	0.20	-0.56	26%		65	21.13	14.54	-6.59	69%	13.55	11.03	-2.52	81%
6	0.86	0.29	-0.57	34%	0.73	0.21	-0.52	29%		66	23.40	15.68	-7.72	67%	14.97	11.97	-3.00	80%
7	0.80	0.30	-0.50	38%	0.72	0.22	-0.50	31%		67	25.86	17.17	-8.69	66%	16.41	12.99	-3.42	79%
8	0.76	0.31	-0.45	41%	0.70	0.22	-0.48	31%		68	28.50	18.90	-9.60	66%	17.86	14.14	-3.72	79%
9	0.74	0.32	-0.42	43%	0.69	0.23	-0.46	33%		69	31.38	20.94	-10.44	67%	19.41	15.38	-4.03	79%
10	0.73	0.34	-0.39	47%	0.68	0.24	-0.44	35%		70	34.63	23.48	-11.15	68%	21.20	16.77	-4.43	79%
11	0.77	0.35	-0.42	45%	0.69	0.25	-0.44	36%		71	38.91	26.42	-12.49	68%	23.34	18.38	-4.96	79%
12	0.85	0.37	-0.48	44%	0.72	0.28	-0.44	39%		72	42.56	29.56	-13.00	69%	25.99	20.15	-5.84	78%
13	0.99	0.38	-0.61	38%	0.75	0.30	-0.45	40%		73	47.44	32.83	-14.61	69%	29.22	22.09	-7.13	76%
14	1.15	0.49	-0.66	43%	0.80	0.33	-0.47	41%		74	52.92	36.27	-16.65	69%	33.02	24.22	-8.80	73%
15	1.29	0.61	-0.68	47%	0.84	0.35	-0.49	42%		75	58.80	39.96	-18.84	68%	37.32	26.56	-10.76	71%
16	1.43	0.74	-0.69	52%	0.88	0.39	-0.49	44%		76	65.06	44.13	-20.93	68%	42.04	29.13	-12.91	69%
17	1.54	0.85	-0.69	55%	0.92	0.41	-0.51	45%		77	71.64	48.89	-22.75	68%	47.11	31.96	-15.15	68%
18	1.60	0.92	-0.68	58%	0.95	0.42	-0.53	44%		78	78.47	54.45	-24.02	69%	52.53	35.08	-17.45	67%
19	1.66	0.94	-0.72	57%	0.98	0.45	-0.53	46%		79	85.72	60.87	-24.85	71%	58.45	38.49	-19.96	66%
20	1.68	0.95	-0.73	57%	1.01	0.45	-0.56	45%		80	93.67	67.87	-25.80	72%	65.12	42.23	-22.89	65%
21	1.67	0.95	-0.72	57%	1.02	0.46	-0.56	45%		81	102.52	75.84	-26.68	74%	72.76	46.34	-26.42	64%
22	1.64	0.95	-0.69	58%	1.04	0.48	-0.56	46%		82	112.52	84.14	-28.38	75%	81.59	50.86	-30.73	62%
23	1.61	0.96	-0.65	60%	1.05	0.48	-0.57	46%		83	123.79	93.09	-30.70	75%	91.76	55.81	-35.95	61%
24	1.57	0.97	-0.60	62%	1.08	0.50	-0.58	46%		84	136.11	103.00	-33.11	76%	103.03	61.25	-41.78	59%
25	1.52	0.98	-0.54	64%	1.09	0.50	-0.59	46%		85	149.20	114.07	-35.13	76%	115.38	67.27	-48.11	58%
26	1.48	1.02	-0.46	69%	1.12	0.53	-0.59	47%		86	162.80	126.34	-36.46	78%	128.58	73.86	-54.72	57%
27	1.46	1.07	-0.39	73%	1.14	0.57	-0.57	50%		87	176.79	139.74	-37.05	79%	142.71	81.12	-61.59	57%
28	1.44	1.05	-0.39	73%	1.17	0.58	-0.59	50%		88	190.89	154.10	-36.79	81%	157.61	89.09	-68.52	57%
29	1.44	1.03	-0.41	72%	1.20	0.62	-0.58	52%		89	205.29	169.25	-36.04	82%	173.51	97.86	-75.65	56%
30	1.44	1.02	-0.42	71%	1.24	0.64	-0.60	52%		90	220.19	185.06	-35.13	84%	190.39	107.47	-82.92	56%
31	1.47	1.01	-0.46	69%	1.27	0.68	-0.59	54%		91	235.84	199.93	-35.91	85%	208.58	118.06	-90.52	57%
32	1.50	1.01	-0.49	67%	1.31	0.72	-0.59	55%		92	252.75	215.43	-37.32	85%	228.60	129.68	-98.92	57%
33	1.55	1.03	-0.52	66%	1.35	0.76	-0.59	56%		93	271.63	231.78	-39.85	85%	251.40	142.47	-108.93	57%
34	1.61	1.06	-0.55	66%	1.42	0.82	-0.60	58%		94	295.65	249.05	-46.60	84%	279.31	156.52	-122.79	56%
35	1.69	1.09	-0.60	64%	1.47	0.89	-0.58	61%		95	329.95	267.19	-62.76	81%	317.32	171.86	-145.46	54%
36	1.77	1.14	-0.63	64%	1.56	0.95	-0.61	61%		96	384.55	283.79	-100.76	74%	375.74	188.75	-186.99	50%
37	1.88	1.20	-0.68	64%	1.67	1.03	-0.64	62%		97	480.20	301.49	-178.71	63%	474.97	207.34	-267.63	44%
38	2.00	1.29	-0.71	65%	1.79	1.07	-0.72	60%		98	657.98	320.38	-337.60	49%	655.85	227.84	-428.01	35%
39	2.14	1.37	-0.77	64%	1.93	1.13	-0.80	59%		99	1000.00	340.54	-659.46	34%	1000.00	250.46	-749.54	25%
40	2.29	1.46	-0.83	64%	2.08	1.20	-0.88	58%		100		362.10				275.43		
41	2.47	1.58	-0.89	64%	2.26	1.26	-1.00	56%		101		379.21				297.61		
42	2.65	1.73	-0.92	65%	2.44	1.35	-1.09	55%		102		397.44				322.05		
43	2.86	1.90	-0.96	66%	2.62	1.45	-1.17	55%		103		416.84				348.97		
44	3.07	2.10	-0.97	68%	2.80	1.56	-1.24	56%		104		437.48				378.60		
45	3.32	2.33	-0.99	70%	2.99	1.71	-1.28	57%		105		459.13				410.56		
46	3.59	2.55	-1.04	71%	3.19	1.87	-1.32	59%		106		482.15				443.32		
47	3.88	2.79	-1.09	72%	3.41	2.07	-1.34	61%		107		506.62				476.88		
48	4.19	2.93	-1.26	70%	3.65	2.28	-1.37	62%		108		532.63				510.64		
49	4.54	3.09	-1.45	68%	3.90	2.52	-1.38	65%		109		560.26				545.80		
50	4.91	3.32	-1.59	68%	4.19	2.81	-1.38	67%		110		589.59				581.76		
51	5.35	3.59	-1.76	67%	4.50	3.11	-1.39	69%		111		620.74				618.51		
52	5.86	3.95	-1.91	67%	4.85	3.47	-1.38	72%		112		653.80				656.07		
53	6.43	4.36	-2.07	68%	5.26	3.84	-1.42	73%		113		688.91				694.13		
54	7.09	4.84	-2.25	68%	5.68	4.25	-1.43	75%		114		726.15				732.63		
55	7.82	5.39	-2.43	69%	6.13	4.67	-1.46	76%		115		765.67				771.49		
56	8.63	6.02	-2.61	70%	6.59	5.17	-1.42	78%		116		807.59				810.58		
57	9.49	6.63	-2.86	70%	7.05	5.69	-1.36	81%		117		852.05				850.93		
58	10.42	7.20	-3.22	69%	7.49	6.25	-1.24	83%		118		899.22				892.44		
59	11.47	7.77	-3.70	68%	7.96	6.81	-1.15	86%		119		949.22				935.11		
										120		1000.00				1000.00		

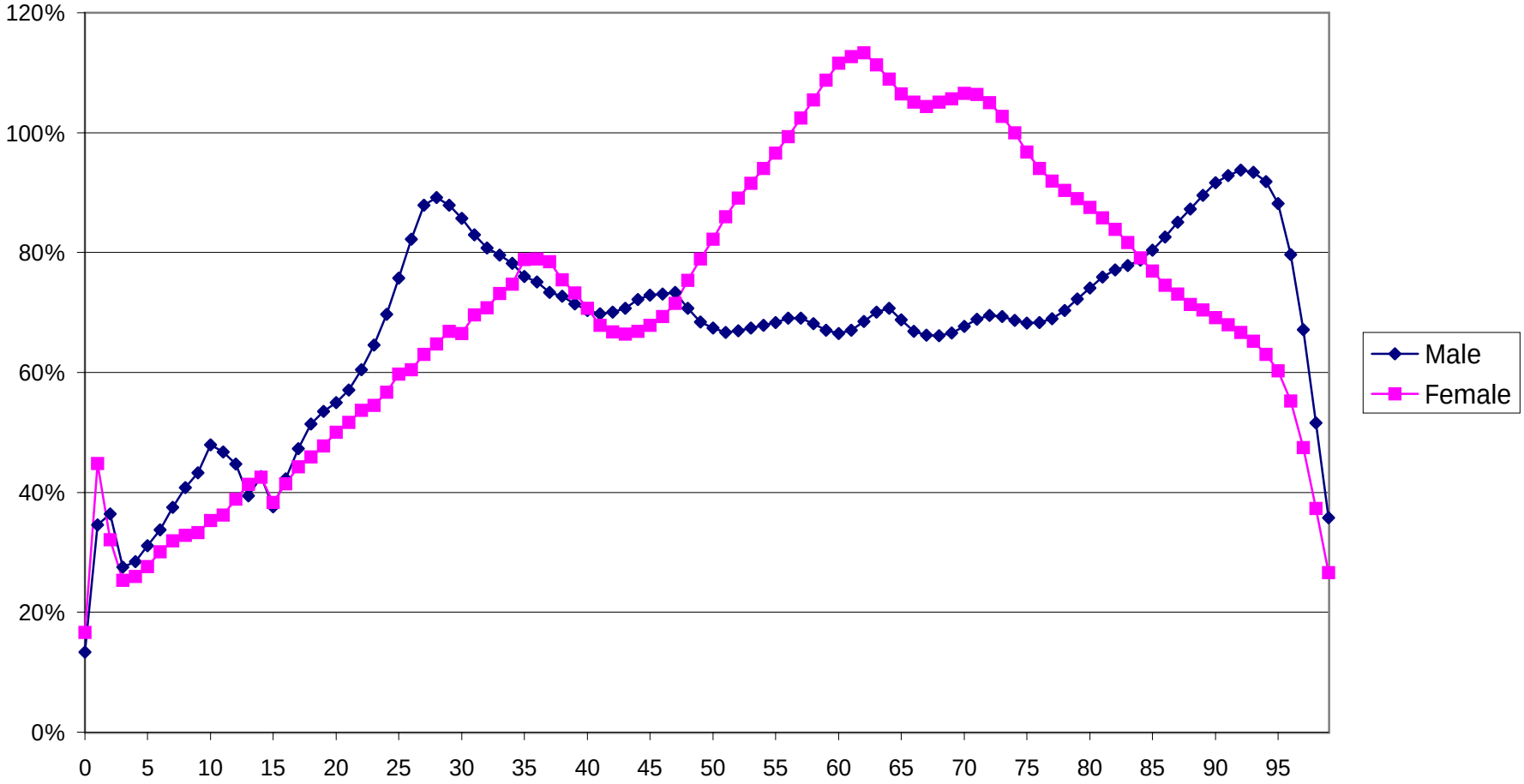
Proposed 2001 CSO Table as a % of 1980 CSO Table
Nonsmoker, Ultimate



1980 CSO Table v. Proposed 2001 CSO Table -- Smoker -- Ultimate -- 1000qx								
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Male				Female			
Age	1980	2001	(3) - (2)	(3) / (2)	1980	2001	(7) - (6)	(7) / (6)
0	4.18	0.56	-3.62	13%	2.89	0.48	-2.41	17%
1	1.07	0.37	-0.70	35%	0.87	0.39	-0.48	45%
2	0.99	0.36	-0.63	36%	0.81	0.26	-0.55	32%
3	0.98	0.27	-0.71	28%	0.79	0.20	-0.59	25%
4	0.95	0.27	-0.68	28%	0.77	0.20	-0.57	26%
5	0.90	0.28	-0.62	31%	0.76	0.21	-0.55	28%
6	0.86	0.29	-0.57	34%	0.73	0.22	-0.51	30%
7	0.80	0.30	-0.50	38%	0.72	0.23	-0.49	32%
8	0.76	0.31	-0.45	41%	0.70	0.23	-0.47	33%
9	0.74	0.32	-0.42	43%	0.69	0.23	-0.46	33%
10	0.73	0.35	-0.38	48%	0.68	0.24	-0.44	35%
11	0.77	0.36	-0.41	47%	0.69	0.25	-0.44	36%
12	0.85	0.38	-0.47	45%	0.72	0.28	-0.44	39%
13	0.99	0.39	-0.60	39%	0.75	0.31	-0.44	41%
14	1.15	0.49	-0.66	43%	0.80	0.34	-0.46	43%
15	1.65	0.62	-1.03	38%	0.94	0.36	-0.58	38%
16	1.87	0.79	-1.08	42%	0.99	0.41	-0.58	41%
17	2.05	0.97	-1.08	47%	1.04	0.46	-0.58	44%
18	2.16	1.11	-1.05	51%	1.09	0.50	-0.59	46%
19	2.26	1.21	-1.05	54%	1.13	0.54	-0.59	48%
20	2.31	1.27	-1.04	55%	1.16	0.58	-0.58	50%
21	2.33	1.33	-1.00	57%	1.18	0.61	-0.57	52%
22	2.30	1.39	-0.91	60%	1.21	0.65	-0.56	54%
23	2.26	1.46	-0.80	65%	1.23	0.67	-0.56	54%
24	2.21	1.54	-0.67	70%	1.27	0.72	-0.55	57%
25	2.14	1.62	-0.52	76%	1.29	0.77	-0.52	60%
26	2.08	1.71	-0.37	82%	1.34	0.81	-0.53	60%
27	2.06	1.81	-0.25	88%	1.38	0.87	-0.51	63%
28	2.04	1.82	-0.22	89%	1.42	0.92	-0.50	65%
29	2.06	1.81	-0.25	88%	1.48	0.99	-0.49	67%
30	2.10	1.80	-0.30	86%	1.55	1.03	-0.52	66%
31	2.17	1.80	-0.37	83%	1.61	1.12	-0.49	70%
32	2.24	1.81	-0.43	81%	1.68	1.19	-0.49	71%
33	2.35	1.87	-0.48	80%	1.75	1.28	-0.47	73%
34	2.48	1.94	-0.54	78%	1.86	1.39	-0.47	75%
35	2.63	2.00	-0.63	76%	1.94	1.53	-0.41	79%
36	2.81	2.11	-0.70	75%	2.09	1.65	-0.44	79%
37	3.04	2.23	-0.81	73%	2.28	1.79	-0.49	79%
38	3.30	2.40	-0.90	73%	2.49	1.88	-0.61	76%
39	3.60	2.57	-1.03	71%	2.73	2.00	-0.73	73%
40	3.94	2.77	-1.17	70%	3.00	2.12	-0.88	71%
41	4.34	3.03	-1.31	70%	3.33	2.26	-1.07	68%
42	4.75	3.33	-1.42	70%	3.64	2.43	-1.21	67%
43	5.22	3.69	-1.53	71%	3.96	2.63	-1.33	66%
44	5.71	4.12	-1.59	72%	4.28	2.86	-1.42	67%
45	6.27	4.57	-1.70	73%	4.61	3.13	-1.48	68%
46	6.83	4.99	-1.84	73%	4.95	3.43	-1.52	69%
47	7.44	5.46	-1.98	73%	5.31	3.80	-1.51	72%
48	8.08	5.71	-2.37	71%	5.68	4.28	-1.40	75%
49	8.80	6.02	-2.78	68%	6.08	4.80	-1.28	79%
50	9.56	6.44	-3.12	67%	6.54	5.38	-1.16	82%
51	10.44	6.96	-3.48	67%	7.00	6.02	-0.98	86%
52	11.42	7.65	-3.77	67%	7.52	6.70	-0.82	89%
53	12.54	8.45	-4.09	67%	8.13	7.44	-0.69	92%
54	13.80	9.37	-4.43	68%	8.75	8.23	-0.52	94%
55	15.14	10.35	-4.79	68%	9.40	9.08	-0.32	97%
56	16.59	11.46	-5.13	69%	10.05	9.98	-0.07	99%
57	18.09	12.50	-5.59	69%	10.67	10.93	0.26	102%
58	19.69	13.42	-6.27	68%	11.25	11.86	0.61	105%
59	21.35	14.32	-7.03	67%	11.85	12.89	1.04	109%

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Male				Female			
Age	1980	2001	(3) - (2)	(3) / (2)	1980	2001	(7) - (6)	(7) / (6)
60	23.19	15.42	-7.77	66%	12.51	13.96	1.45	112%
61	25.26	16.93	-8.33	67%	13.36	15.06	1.70	113%
62	27.59	18.90	-8.69	69%	14.39	16.31	1.92	113%
63	30.23	21.17	-9.06	70%	15.78	17.56	1.78	111%
64	33.14	23.44	-9.70	71%	17.33	18.88	1.55	109%
65	36.29	24.97	-11.32	69%	19.07	20.31	1.24	107%
66	39.57	26.46	-13.11	67%	20.79	21.85	1.06	105%
67	43.01	28.47	-14.54	66%	22.58	23.56	0.98	104%
68	46.55	30.78	-15.77	66%	24.20	25.44	1.24	105%
69	50.32	33.50	-16.82	67%	26.02	27.49	1.47	106%
70	54.48	36.88	-17.60	68%	27.95	29.77	1.82	107%
71	59.09	40.72	-18.37	69%	30.45	32.38	1.93	106%
72	64.33	44.70	-19.63	69%	33.55	35.24	1.69	105%
73	70.23	48.66	-21.57	69%	37.33	38.34	1.01	103%
74	76.66	52.64	-24.02	69%	41.74	41.72	-0.02	100%
75	83.77	57.19	-26.58	68%	46.64	45.13	-1.51	97%
76	91.10	62.23	-28.87	68%	51.92	48.83	-3.09	94%
77	98.52	67.94	-30.58	69%	57.46	52.81	-4.65	92%
78	105.91	74.54	-31.37	70%	63.23	57.12	-6.11	90%
79	113.49	82.05	-31.44	72%	69.41	61.74	-7.67	89%
80	121.59	90.07	-31.52	74%	76.26	66.72	-9.54	87%
81	130.41	99.05	-31.36	76%	84.00	72.08	-11.92	86%
82	140.20	108.11	-32.09	77%	92.84	77.85	-14.99	84%
83	151.03	117.61	-33.42	78%	102.87	84.06	-18.81	82%
84	162.49	127.94	-34.55	79%	114.65	90.71	-23.94	79%
85	174.20	140.09	-34.11	80%	126.42	97.25	-29.17	77%
86	185.78	153.39	-32.39	83%	139.79	104.18	-35.61	75%
87	197.06	167.69	-29.37	85%	152.67	111.53	-41.14	73%
88	209.37	182.72	-26.65	87%	167.23	119.32	-47.91	71%
89	221.52	198.27	-23.25	90%	181.07	127.56	-53.51	70%
90	233.69	214.13	-19.56	92%	197.01	136.25	-60.76	69%
91	246.12	228.43	-17.69	93%	214.00	145.45	-68.55	68%
92	259.33	243.02	-16.31	94%	232.54	155.15	-77.39	67%
93	276.30	258.10	-18.20	93%	253.55	165.36	-88.19	65%
94	298.15	273.74	-24.41	92%	279.31	176.14	-103.17	63%
95	329.96	291.05	-38.91	88%	317.32	191.27	-126.05	60%
96	384.55	306.33	-78.22	80%	375.74	207.70	-168.04	55%
97	480.20	322.44	-157.76	67%	474.97	225.57	-249.40	47%
98	657.98	339.45	-318.53	52%	655.85	245.01	-410.84	37%
99	1000.00	357.42	-642.58	36%	1000.00	266.17	-733.83	27%
100		376.40				289.22		
101		390.77				309.08		
102		405.92				330.64		
103		421.83				354.04		
104		438.57				379.41		
105		460.15				411.32		
106		483.10				444.02		
107		507.51				477.53		
108		533.44				511.24		
109		561.01				546.35		
110		590.27				582.26		
111		621.35				618.97		
112		654.35				656.48		
113		689.38				694.49		
114		726.56				732.94		
115		766.01				771.75		
116		807.86				810.78		
117		852.26				851.08		
118		899.35				892.54		
119		949.29				935.16		
120		1000.00				1000.00		

Proposed 2001 CSO Table as a % of 1980 CSO Table
Smoker, Ultimate



Appendix C

Statutory Reserve Comparisons

Male -- Issue Age 25 -- Whole Life -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 1.73		Alpha = 1.05		Alpha = -0.69		Alpha = 60%	
	Beta = 8.01		Beta = 6.21		Beta = -1.80		Beta = 78%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.87	0.00	0.52	0.00	-0.34	0.00	60%	
5	28.62	28.41	22.83	22.77	-5.79	-5.64	80%	80%
10	70.76	71.38	57.03	57.73	-13.72	-13.65	81%	81%
15	121.12	122.56	98.96	100.45	-22.16	-22.11	82%	82%
20	179.39	181.61	148.77	151.02	-30.63	-30.59	83%	83%
25	245.69	248.73	206.37	209.51	-39.32	-39.23	84%	84%
30	320.03	323.78	273.51	277.53	-46.52	-46.25	85%	86%
35	400.43	404.75	348.42	353.25	-52.01	-51.50	87%	87%
40	485.65	490.27	430.71	435.96	-54.95	-54.31	89%	89%
45	571.87	576.49	518.06	523.95	-53.80	-52.54	91%	91%
50	656.15	660.17	606.70	612.36	-49.45	-47.81	92%	93%
55	731.01	734.08	692.74	697.88	-38.27	-36.20	95%	95%
60	797.07	799.00	768.96	772.85	-28.11	-26.16	96%	97%
65	850.08	851.00	829.93	831.92	-20.15	-19.08	98%	98%
70	905.28	908.06	872.98	873.52	-32.30	-34.54	96%	96%

Female -- Issue Age 25 -- Whole Life -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO - 1980 CSO		2001 CSO / 1980 CSO	
	Alpha = 1.14		Alpha = 0.52		Alpha = -0.62		Alpha = 46%	
	Beta = 6.51		Beta = 5.21		Beta = -1.30		Beta = 80%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.57	0.00	0.26	0.00	-0.31	0.00	46%	
5	23.84	23.73	20.52	20.65	-3.32	-3.08	86%	87%
10	58.44	58.98	50.66	51.35	-7.78	-7.63	87%	87%
15	99.72	100.91	86.74	88.08	-12.99	-12.83	87%	87%
20	147.19	149.00	130.04	132.16	-17.14	-16.85	88%	89%
25	201.61	204.19	180.94	183.78	-20.68	-20.41	90%	90%
30	263.83	267.18	238.66	242.14	-25.17	-25.04	90%	91%
35	334.55	338.91	302.43	306.49	-32.12	-32.41	90%	90%
40	415.70	420.93	372.41	377.14	-43.29	-43.79	90%	90%
45	503.62	509.57	448.83	454.15	-54.79	-55.42	89%	89%
50	598.07	604.24	529.60	535.16	-68.48	-69.08	89%	89%
55	689.05	694.61	611.13	616.61	-77.93	-78.00	89%	89%
60	772.20	776.55	690.16	695.22	-82.05	-81.33	89%	90%
65	840.50	843.49	763.39	767.72	-77.11	-75.78	91%	91%
70	904.98	908.94	827.87	831.19	-77.10	-77.75	91%	91%

Male -- Issue Age 35 -- Whole Life -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 2.07		Alpha = 1.18		Alpha = -0.88		Alpha = 57%	
	Beta = 12.51		Beta = 9.67		Beta = -2.84		Beta = 77%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	1.03	0.00	0.59	0.00	-0.44	0.00	57%	
5	45.59	45.26	37.17	37.24	-8.43	-8.02	82%	82%
10	108.99	109.51	90.47	91.36	-18.53	-18.15	83%	83%
15	181.13	182.55	152.12	153.96	-29.02	-28.58	84%	84%
20	262.02	264.21	223.97	226.77	-38.05	-37.44	85%	86%
25	349.51	352.31	304.15	307.81	-45.36	-44.50	87%	87%
30	442.23	445.36	392.22	396.32	-50.02	-49.04	89%	89%
35	536.04	539.18	485.71	490.50	-50.33	-48.68	91%	91%
40	627.76	630.23	580.58	585.12	-47.17	-45.11	92%	93%
45	709.21	710.65	672.67	676.65	-36.55	-34.00	95%	95%
50	781.09	781.30	754.23	756.89	-26.85	-24.41	97%	97%
55	838.77	837.87	819.49	820.11	-19.28	-17.77	98%	98%
60	898.83	899.97	865.57	864.63	-33.26	-35.33	96%	96%

Female -- Issue Age 35 -- Whole Life -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 1.62		Alpha = 0.94		Alpha = -0.68		Alpha = 58%	
	Beta = 10.06		Beta = 8.19		Beta = -1.87		Beta = 81%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.81	0.00	0.47	0.00	-0.34	0.00	58%	
5	36.77	36.51	31.65	31.75	-5.12	-4.75	86%	87%
10	87.63	88.04	77.63	78.55	-10.00	-9.49	89%	89%
15	145.96	147.18	131.67	133.36	-14.29	-13.82	90%	91%
20	212.63	214.68	192.96	195.33	-19.67	-19.36	91%	91%
25	288.42	291.55	260.67	263.65	-27.75	-27.89	90%	90%
30	375.38	379.44	334.97	338.66	-40.41	-40.78	89%	89%
35	469.61	474.43	416.11	420.43	-53.49	-54.00	89%	89%
40	570.82	575.89	501.87	506.44	-68.95	-69.44	88%	88%
45	668.32	672.73	588.44	592.92	-79.88	-79.80	88%	88%
50	757.43	760.54	672.35	676.39	-85.08	-84.15	89%	89%
55	830.61	832.28	750.10	753.37	-80.51	-78.91	90%	91%
60	899.71	902.42	818.57	820.77	-81.14	-81.65	91%	91%

Male -- Issue Age 45 -- Whole Life -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	4.46	Alpha =	2.59	Alpha =	-1.88	Alpha =	58%
	Beta =	20.33	Beta =	15.73	Beta =	-4.60	Beta =	77%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	2.23	0.00	1.29	0.00	-0.94	0.00	58%	
5	68.90	67.49	57.08	56.67	-11.82	-10.82	83%	84%
10	161.17	160.64	137.20	137.84	-23.97	-22.80	85%	86%
15	260.97	261.14	226.60	228.20	-34.37	-32.94	87%	87%
20	366.76	367.29	324.80	326.90	-41.96	-40.39	89%	89%
25	473.77	474.32	429.05	431.90	-44.72	-42.41	91%	91%
30	578.39	578.18	534.82	537.41	-43.57	-40.77	92%	93%
35	671.31	669.93	637.50	639.47	-33.82	-30.46	95%	95%
40	753.30	750.51	728.45	728.93	-24.86	-21.58	97%	97%
45	819.11	815.05	801.21	799.42	-17.90	-15.63	98%	98%
50	887.62	885.88	852.59	849.07	-35.04	-36.82	96%	96%

Female -- Issue Age 45 -- Whole Life -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	3.49	Alpha =	1.83	Alpha =	-1.66	Alpha =	52%
	Beta =	15.91	Beta =	13.19	Beta =	-2.72	Beta =	83%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	1.74	0.00	0.92	0.00	-0.83	0.00	52%	
5	54.27	53.26	49.06	48.81	-5.22	-4.45	90%	92%
10	128.29	128.20	116.33	116.82	-11.96	-11.37	91%	91%
15	212.42	213.52	190.64	191.82	-21.78	-21.71	90%	90%
20	308.96	311.10	272.20	274.15	-36.77	-36.95	88%	88%
25	413.57	416.55	361.25	363.89	-52.31	-52.66	87%	87%
30	525.93	529.18	455.37	458.29	-70.55	-70.89	87%	87%
35	634.16	636.68	550.38	553.21	-83.78	-83.47	87%	87%
40	733.08	734.17	642.48	644.82	-90.60	-89.35	88%	88%
45	814.33	813.81	727.82	729.31	-86.50	-84.50	89%	90%
50	891.04	891.67	802.97	803.28	-88.07	-88.39	90%	90%

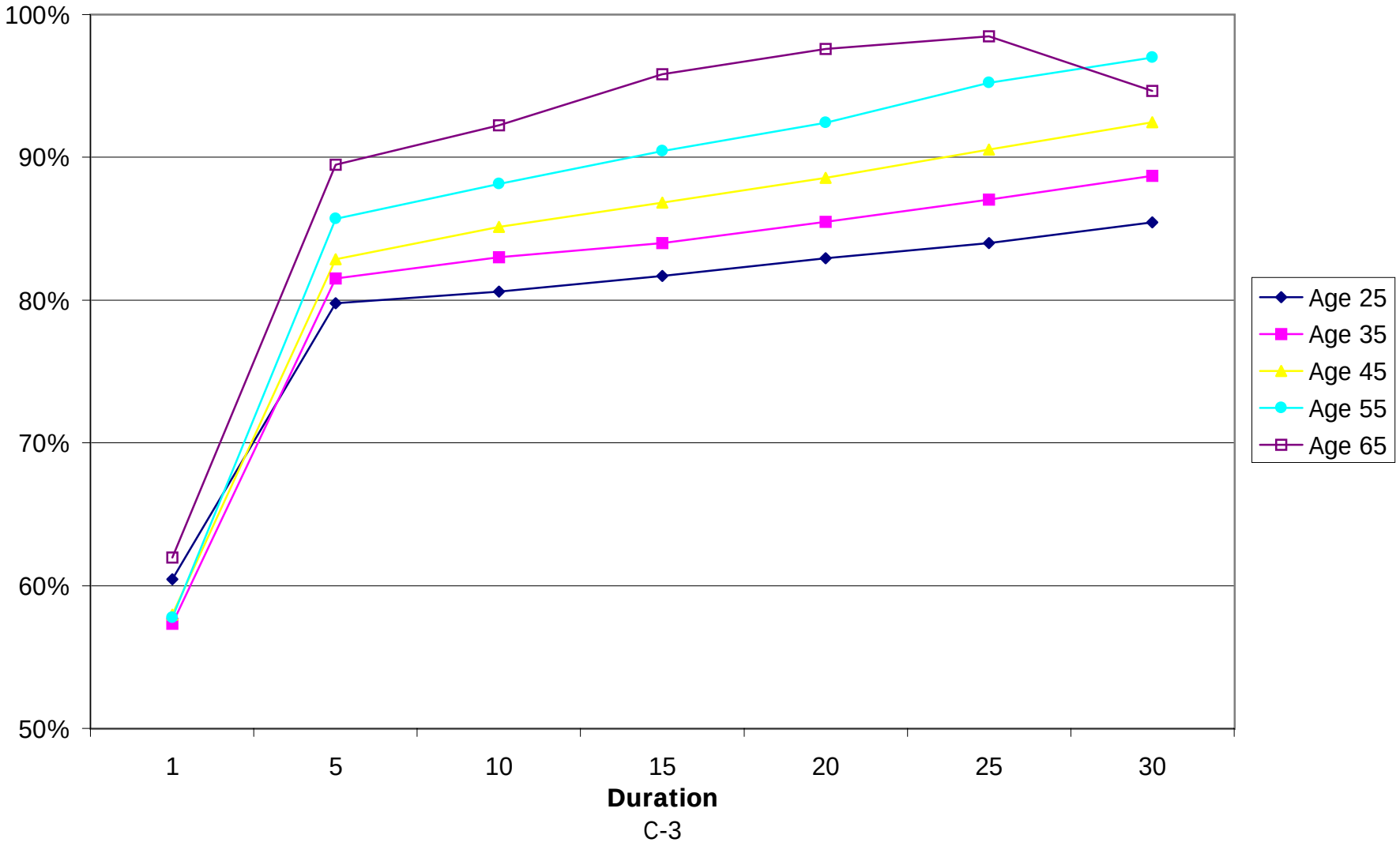
Male -- Issue Age 55 -- Whole Life -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	10.30	Alpha =	5.95	Alpha =	-4.35	Alpha =	58%
	Beta =	34.26	Beta =	26.53	Beta =	-7.73	Beta =	77%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	5.15	0.00	2.97	0.00	-2.17	0.00	58%	
5	103.27	98.75	88.49	86.43	-14.78	-12.31	86%	88%
10	232.31	228.23	204.72	203.26	-27.58	-24.97	88%	89%
15	362.84	358.77	328.12	327.55	-34.72	-31.22	90%	91%
20	490.46	485.47	453.33	452.44	-37.13	-33.03	92%	93%
25	603.80	597.38	574.87	573.24	-28.94	-24.14	95%	96%
30	703.81	695.68	682.52	679.14	-21.29	-16.54	97%	98%
35	784.08	774.40	768.65	762.57	-15.43	-11.83	98%	98%
40	867.65	860.80	829.46	821.34	-38.19	-39.46	96%	95%

Female -- Issue Age 55 -- Whole Life -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	6.96	Alpha =	4.99	Alpha =	-1.97	Alpha =	72%
	Beta =	25.85	Beta =	21.69	Beta =	-4.16	Beta =	84%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	3.48	0.00	2.50	0.00	-0.98	0.00	72%	
5	83.23	80.89	71.56	69.67	-11.67	-11.22	86%	86%
10	196.05	194.92	165.45	164.44	-30.61	-30.48	84%	84%
15	318.30	318.16	267.96	267.75	-50.33	-50.41	84%	84%
20	449.61	449.78	376.31	376.42	-73.30	-73.36	84%	84%
25	576.10	575.41	485.68	485.68	-90.41	-89.73	84%	84%
30	691.70	689.34	591.70	591.14	-100.00	-98.20	86%	86%
35	786.65	782.41	689.94	688.39	-96.71	-94.02	88%	88%
40	876.29	873.40	776.45	773.55	-99.85	-99.85	89%	89%

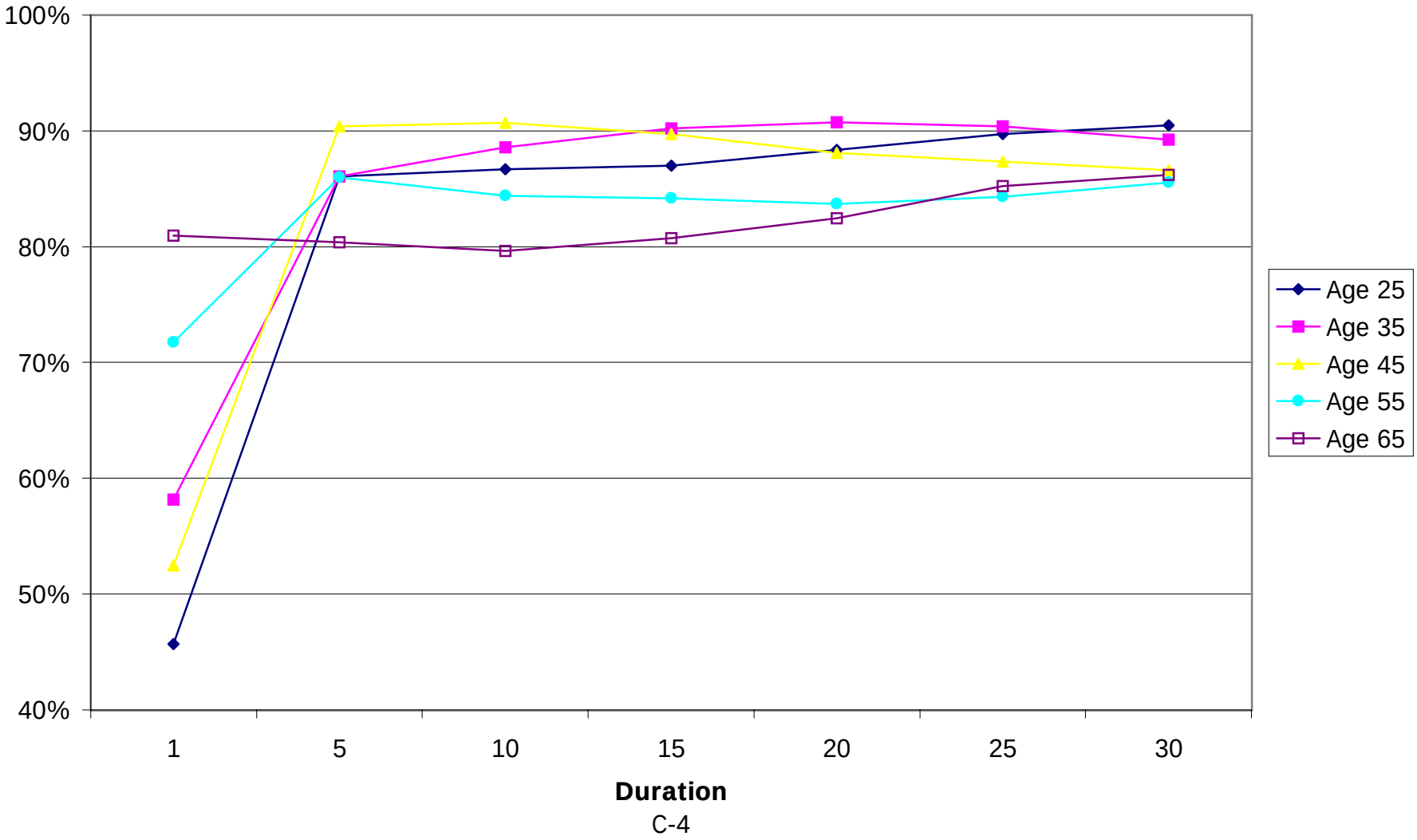
Male -- Issue Age 65 -- Whole Life -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	25.19	Alpha =	15.61	Alpha =	-9.58	Alpha =	62%
	Beta =	60.64	Beta =	47.01	Beta =	-13.63	Beta =	78%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	12.59	0.00	7.80	0.00	-4.79	0.00	62%	
5	152.86	140.06	136.78	129.71	-16.08	-10.36	89%	93%
10	324.00	309.97	298.83	291.34	-25.18	-18.63	92%	94%
15	476.01	460.05	456.12	447.68	-19.89	-12.37	96%	97%
20	610.13	591.88	595.45	584.73	-14.69	-7.15	98%	99%
25	717.78	697.46	706.92	692.72	-10.86	-4.74	98%	99%
30	829.86	813.33	785.62	768.78	-44.24	-44.55	95%	95%

Female -- Issue Age 65 -- Whole Life -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	14.38	Alpha =	11.64	Alpha =	-2.74	Alpha =	81%
	Beta =	45.15	Beta =	36.34	Beta =	-8.81	Beta =	80%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	7.19	0.00	5.82	0.00	-1.37	0.00	81%	
5	133.41	127.20	107.26	102.12	-26.15	-25.08	80%	80%
10	301.49	295.68	240.11	235.37	-61.38	-60.31	80%	80%
15	463.41	456.50	374.22	369.35	-89.19	-87.15	81%	81%
20	611.39	602.33	504.22	498.66	-107.17	-103.67	82%	83%
25	732.93	721.47	624.68	617.91	-108.24	-103.56	85%	86%
30	847.68	837.95	730.75	722.33	-116.92	-115.62	86%	86%

Whole Life Mean Statutory Reserves
Proposed 2001 CSO as a % of 1980 CSO
Composite -- Ultimate -- Male



Whole Life Mean Statutory Reserves
Proposed 2001 CSO as a % of 1980 CSO
Composite -- Ultimate -- Female



Male -- Issue Age 25 -- Whole Life -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 1.49		Alpha = 0.96		Alpha = -0.53		Alpha = 64%	
	Beta = 7.19		Beta = 5.95		Beta = -1.24		Beta = 83%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.74	0.00	0.48	0.00	-0.26	0.00	64%	
5	25.96	25.83	22.09	22.08	-3.87	-3.75	85%	85%
10	64.53	65.19	55.28	55.99	-9.25	-9.20	86%	86%
15	111.20	112.70	96.02	97.51	-15.18	-15.18	86%	87%
20	166.39	168.76	144.69	146.97	-21.69	-21.79	87%	87%
25	230.72	234.03	201.40	204.59	-29.32	-29.44	87%	87%
30	304.50	308.72	267.88	271.99	-36.63	-36.73	88%	88%
35	386.26	391.19	342.64	347.60	-43.62	-43.59	89%	89%
40	474.08	479.43	425.23	430.69	-48.85	-48.74	90%	90%
45	563.78	569.18	513.46	519.57	-50.33	-49.60	91%	91%
50	651.25	656.01	603.20	609.09	-48.05	-46.92	93%	93%
55	729.31	733.08	690.28	695.66	-39.03	-37.42	95%	95%
60	797.65	800.17	767.47	771.57	-30.18	-28.60	96%	96%
65	851.63	852.99	829.20	831.38	-22.43	-21.61	97%	97%
70	906.63	909.77	872.82	873.52	-33.82	-36.25	96%	96%

Female -- Issue Age 25 -- Whole Life -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 1.07		Alpha = 1.14		Alpha = 0.07		Alpha = 106%	
	Beta = 6.20		Beta = 6.51		Beta = 0.31		Beta = 105%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.53	0.00	0.24	0.00	-0.29	0.00	46%	
5	22.79	22.70	19.94	20.07	-2.85	-2.63	87%	88%
10	56.09	56.65	49.28	49.97	-6.81	-6.68	88%	88%
15	96.13	97.37	84.51	85.85	-11.62	-11.52	88%	88%
20	142.90	144.84	126.94	129.05	-15.95	-15.78	89%	89%
25	197.35	200.12	177.01	179.86	-20.34	-20.25	90%	90%
30	260.26	263.87	234.13	237.64	-26.13	-26.22	90%	90%
35	332.11	336.74	297.64	301.79	-34.47	-34.95	90%	90%
40	414.33	419.82	367.78	372.63	-46.54	-47.19	89%	89%
45	503.27	509.44	444.69	450.15	-58.57	-59.29	88%	88%
50	598.25	604.62	526.25	532.00	-72.00	-72.62	88%	88%
55	689.63	695.36	608.84	614.52	-80.78	-80.85	88%	88%
60	772.93	777.44	688.99	694.25	-83.94	-83.19	89%	89%
65	841.22	844.36	763.15	767.63	-78.07	-76.73	91%	91%
70	905.44	909.51	828.07	831.48	-77.37	-78.03	91%	91%

Male -- Issue Age 35 -- Whole Life -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 1.65		Alpha = 1.07		Alpha = -0.59		Alpha = 64%	
	Beta = 11.20		Beta = 9.28		Beta = -1.92		Beta = 83%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.83	0.00	0.53	0.00	-0.29	0.00	64%	
5	41.87	41.76	36.01	36.14	-5.87	-5.63	86%	87%
10	101.47	102.31	87.99	88.96	-13.48	-13.35	87%	87%
15	170.94	172.80	148.55	150.50	-22.39	-22.30	87%	87%
20	250.62	253.45	219.55	222.48	-31.07	-30.98	88%	88%
25	338.91	342.53	299.40	303.23	-39.52	-39.29	88%	89%
30	433.76	437.81	387.61	391.97	-46.15	-45.85	89%	90%
35	530.63	534.74	481.83	486.90	-48.80	-47.83	91%	91%
40	625.09	628.51	577.68	582.51	-47.41	-46.00	92%	93%
45	709.40	711.74	670.68	674.96	-38.71	-36.78	95%	95%
50	783.20	784.20	753.12	756.04	-30.08	-28.16	96%	96%
55	841.50	841.26	819.04	819.92	-22.46	-21.34	97%	97%
60	900.98	902.66	865.63	864.92	-35.35	-37.74	96%	96%

Female -- Issue Age 35 -- Whole Life -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 1.44		Alpha = 0.87		Alpha = -0.57		Alpha = 61%	
	Beta = 9.58		Beta = 7.93		Beta = -1.65		Beta = 83%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.72	0.00	0.44	0.00	-0.28	0.00	61%	
5	35.54	35.38	30.85	30.98	-4.69	-4.41	87%	88%
10	85.52	86.11	75.83	76.77	-9.69	-9.34	89%	89%
15	143.71	145.19	128.90	130.63	-14.80	-14.55	90%	90%
20	210.94	213.32	189.45	191.88	-21.49	-21.43	90%	90%
25	287.72	291.19	256.78	259.87	-30.95	-31.32	89%	89%
30	375.59	379.98	331.12	334.97	-44.46	-45.01	88%	88%
35	470.63	475.75	412.65	417.15	-57.98	-58.61	88%	88%
40	572.14	577.47	499.11	503.90	-73.03	-73.56	87%	87%
45	669.79	674.44	586.66	591.38	-83.13	-83.07	88%	88%
50	758.82	762.15	671.61	675.89	-87.20	-86.26	89%	89%
55	831.80	833.67	750.22	753.68	-81.57	-79.99	90%	90%
60	900.42	903.30	819.04	821.37	-81.38	-81.93	91%	91%

Male -- Issue Age 45 -- Whole Life -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	3.25	Alpha =	2.28	Alpha =	-0.97	Alpha =	70%
	Beta =	18.29	Beta =	15.13	Beta =	-3.17	Beta =	83%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	1.63	0.00	1.14	0.00	-0.49	0.00	70%	
5	65.40	64.69	55.82	55.58	-9.57	-9.11	85%	86%
10	155.50	155.88	134.75	135.60	-20.74	-20.28	87%	87%
15	255.33	256.60	223.52	225.38	-31.80	-31.21	88%	88%
20	362.57	364.34	321.59	324.03	-40.98	-40.31	89%	89%
25	472.10	473.93	426.34	429.57	-45.76	-44.36	90%	91%
30	578.91	579.96	532.90	535.86	-46.01	-44.10	92%	92%
35	674.23	674.07	636.29	638.64	-37.94	-35.43	94%	95%
40	757.69	756.00	727.94	728.78	-29.75	-27.22	96%	96%
45	823.63	820.54	801.23	799.80	-22.40	-20.75	97%	97%
50	891.00	890.12	853.02	849.83	-37.97	-40.29	96%	95%

Female -- Issue Age 45 -- Whole Life -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	2.93	Alpha =	1.67	Alpha =	-1.26	Alpha =	57%
	Beta =	15.25	Beta =	12.79	Beta =	-2.46	Beta =	84%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	1.46	0.00	0.84	0.00	-0.63	0.00	57%	
5	53.81	53.14	48.04	47.88	-5.78	-5.25	89%	90%
10	128.28	128.60	114.35	114.96	-13.94	-13.64	89%	89%
15	213.34	214.86	188.08	189.43	-25.26	-25.44	88%	88%
20	310.67	313.21	269.51	271.67	-41.16	-41.54	87%	87%
25	415.95	419.30	358.79	361.67	-57.15	-57.63	86%	86%
30	528.39	531.97	453.48	456.68	-74.90	-75.29	86%	86%
35	636.55	639.39	549.36	552.48	-87.19	-86.90	86%	86%
40	735.16	736.54	642.40	645.04	-92.76	-91.50	87%	88%
45	816.00	815.76	728.50	730.23	-87.50	-85.53	89%	90%
50	892.02	892.88	803.87	804.36	-88.15	-88.52	90%	90%

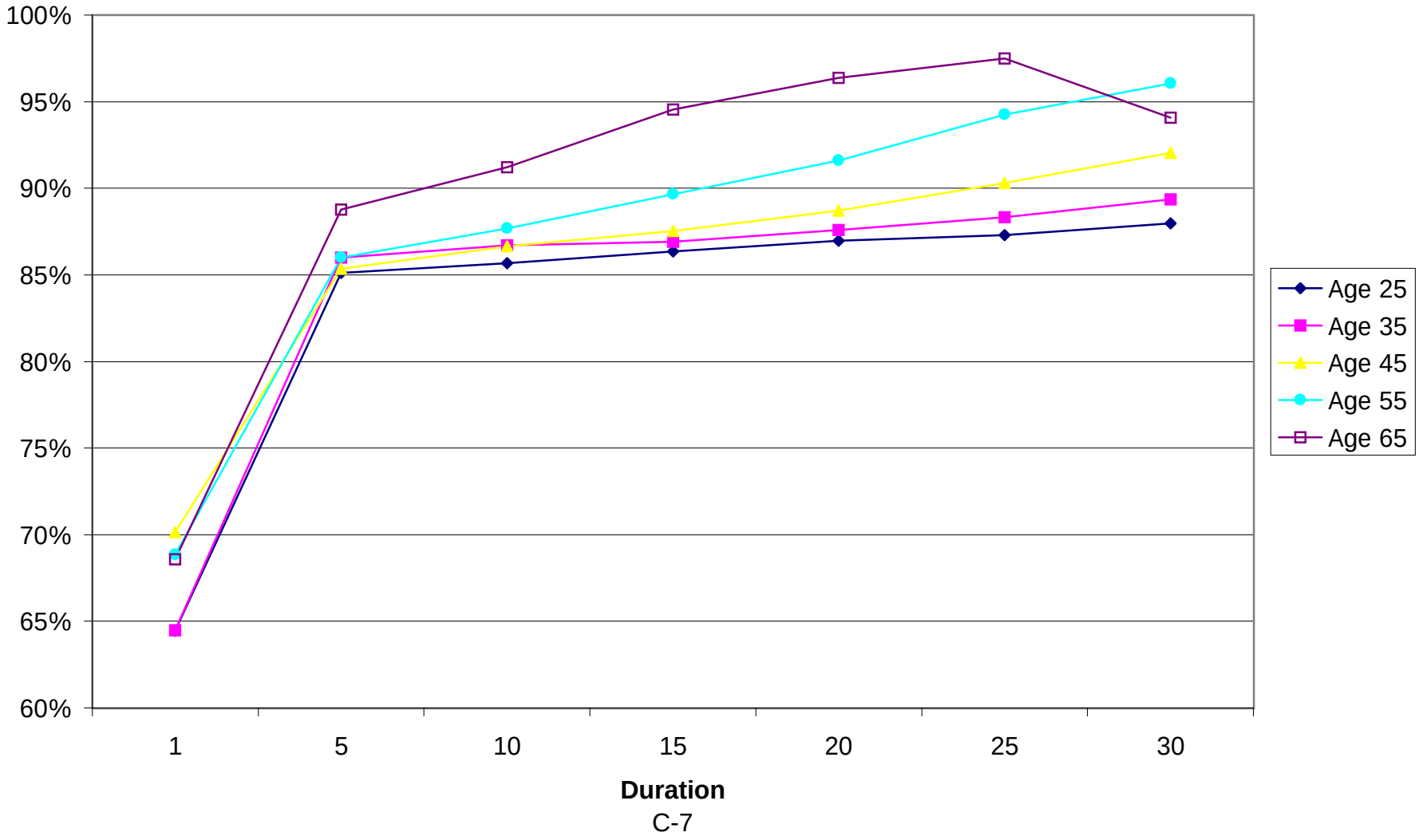
Male -- Issue Age 55 -- Whole Life -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	7.68	Alpha =	5.29	Alpha =	-2.39	Alpha =	69%
	Beta =	31.34	Beta =	25.62	Beta =	-5.72	Beta =	82%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	3.84	0.00	2.64	0.00	-1.20	0.00	69%	
5	101.60	98.56	87.38	85.69	-14.22	-12.87	86%	87%
10	231.64	229.21	203.13	202.13	-28.51	-27.08	88%	88%
15	364.45	362.09	326.77	326.70	-37.68	-35.39	90%	90%
20	493.97	490.67	452.55	452.16	-41.43	-38.51	92%	92%
25	609.56	604.79	574.59	573.48	-34.97	-31.32	94%	95%
30	710.76	704.15	682.76	679.87	-28.01	-24.28	96%	97%
35	790.76	782.45	769.27	763.69	-21.49	-18.75	97%	98%
40	872.64	867.04	830.40	822.75	-42.24	-44.29	95%	95%

Female -- Issue Age 55 -- Whole Life -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	6.02	Alpha =	4.58	Alpha =	-1.44	Alpha =	76%
	Beta =	25.13	Beta =	21.08	Beta =	-4.05	Beta =	84%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	3.01	0.00	2.29	0.00	-0.72	0.00	76%	
5	83.69	81.82	70.71	69.06	-12.98	-12.76	84%	84%
10	197.51	196.84	164.23	163.51	-33.28	-33.32	83%	83%
15	320.63	320.90	266.77	266.88	-53.85	-54.02	83%	83%
20	452.12	452.66	375.52	376.00	-76.60	-76.66	83%	83%
25	578.61	578.28	485.64	486.03	-92.97	-92.25	84%	84%
30	693.93	691.90	592.50	592.33	-101.43	-99.57	85%	86%
35	788.47	784.54	691.38	690.17	-97.09	-94.37	88%	88%
40	877.37	874.73	777.94	775.31	-99.43	-99.42	89%	89%

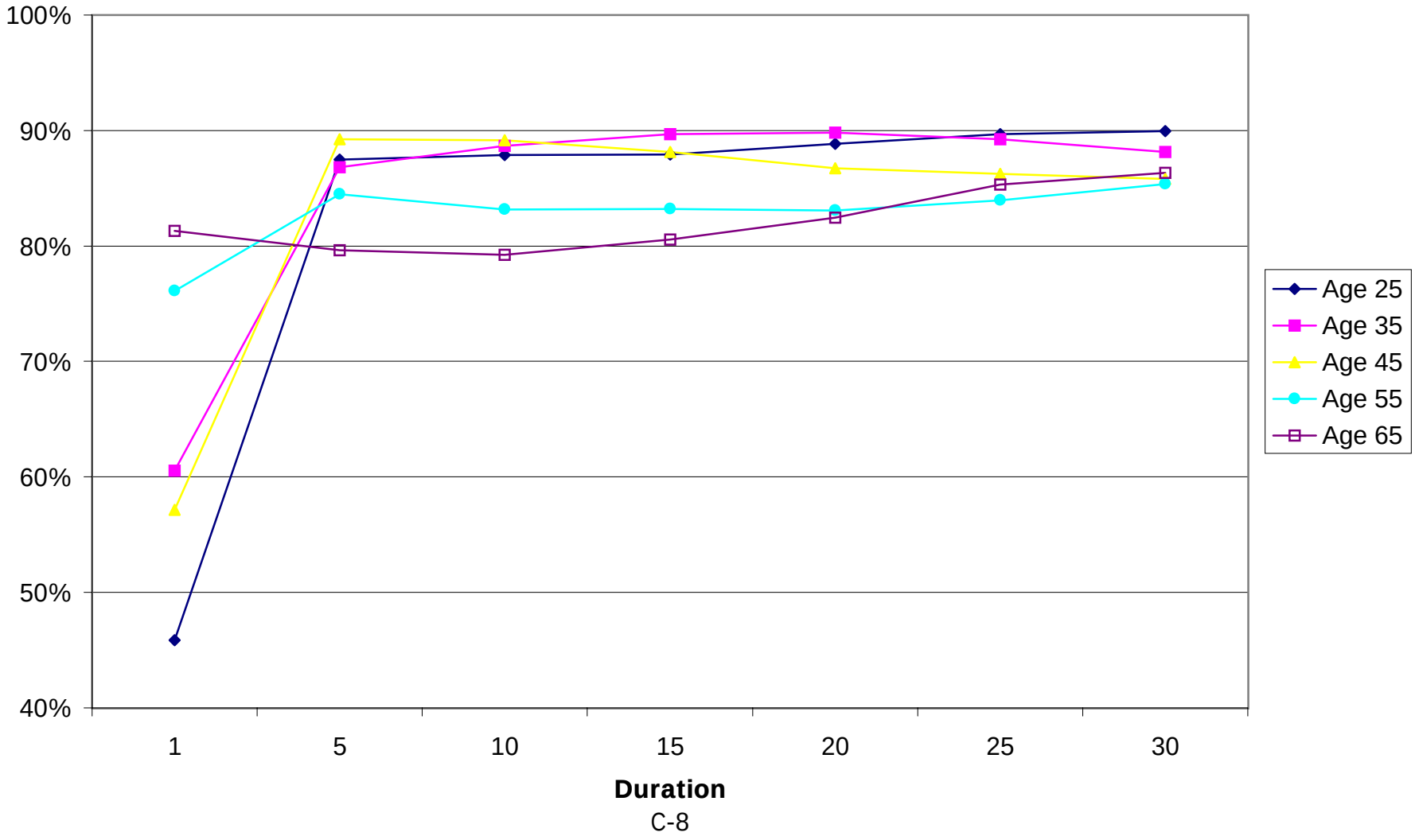
Male -- Issue Age 65 -- Whole Life -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	20.89	Alpha =	14.33	Alpha =	-6.56	Alpha =	69%
	Beta =	56.90	Beta =	45.70	Beta =	-11.20	Beta =	80%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	10.45	0.00	7.16	0.00	-3.28	0.00	69%	
5	153.48	142.91	136.23	129.85	-17.26	-13.07	89%	91%
10	327.51	315.66	298.78	291.98	-28.73	-23.68	91%	92%
15	482.82	469.01	456.50	448.77	-26.31	-20.24	95%	96%
20	618.81	602.52	596.30	586.27	-22.50	-16.25	96%	97%
25	726.34	707.78	708.10	694.60	-18.23	-13.18	97%	98%
30	836.66	821.81	787.11	770.92	-49.55	-50.89	94%	94%

Female -- Issue Age 65 -- Whole Life -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	13.35	Alpha =	10.85	Alpha =	-2.50	Alpha =	81%
	Beta =	44.47	Beta =	35.50	Beta =	-8.97	Beta =	80%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	6.67	0.00	5.43	0.00	-1.25	0.00	81%	
5	134.09	128.33	106.80	102.09	-27.29	-26.25	80%	80%
10	302.87	297.45	239.99	235.74	-62.88	-61.72	79%	79%
15	465.23	458.70	374.86	370.50	-90.37	-88.20	81%	81%
20	613.25	604.53	505.74	500.69	-107.51	-103.84	82%	83%
25	734.60	723.44	626.84	620.53	-107.75	-102.91	85%	86%
30	848.70	839.21	732.86	724.81	-115.84	-114.41	86%	86%

Whole Life Mean Statutory Reserves
Proposed 2001 CSO as a % of 1980 CSO
Nonsmoker -- Ultimate -- Male



Whole Life Mean Statutory Reserves
Proposed 2001 CSO as a % of 1980 CSO
Nonsmoker -- Ultimate -- Female



Male -- Issue Age 25 -- Whole Life -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 2.10		Alpha = 1.59		Alpha = -0.51		Alpha = 76%	
	Beta = 9.43		Beta = 7.85		Beta = -1.59		Beta = 83%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	1.05	0.00	0.79	0.00	-0.25	0.00	76%	
5	33.56	33.29	27.65	27.37	-5.91	-5.92	82%	82%
10	82.82	83.49	68.55	69.15	-14.26	-14.34	83%	83%
15	141.25	142.80	118.17	119.63	-23.08	-23.17	84%	84%
20	207.67	209.96	175.79	177.95	-31.88	-32.01	85%	85%
25	281.20	284.19	240.09	243.07	-41.11	-41.12	85%	86%
30	361.13	364.61	313.01	316.64	-48.12	-47.96	87%	87%
35	444.24	447.97	390.65	394.82	-53.59	-53.15	88%	88%
40	528.82	532.44	472.50	476.59	-56.33	-55.85	89%	90%
45	609.95	613.19	556.01	560.62	-53.94	-52.57	91%	91%
50	686.32	688.73	638.66	642.84	-47.66	-45.89	93%	93%
55	750.91	752.17	717.49	721.03	-33.42	-31.14	96%	96%
60	806.19	806.39	786.05	788.46	-20.14	-17.93	98%	98%
65	850.94	850.52	840.33	840.83	-10.61	-9.69	99%	99%
70	903.37	905.50	877.53	876.82	-25.84	-28.69	97%	97%

Female -- Issue Age 25 -- Whole Life -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 1.26		Alpha = 0.75		Alpha = -0.51		Alpha = 60%	
	Beta = 7.33		Beta = 6.77		Beta = -0.56		Beta = 92%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.63	0.00	0.38	0.00	-0.25	0.00	60%	
5	26.83	26.70	26.31	26.40	-0.52	-0.29	98%	99%
10	65.60	66.17	64.46	65.23	-1.14	-0.94	98%	99%
15	111.44	112.68	109.48	111.00	-1.96	-1.68	98%	99%
20	163.09	164.87	162.85	165.23	-0.24	0.36	100%	100%
25	220.95	223.43	224.22	227.28	3.27	3.86	101%	102%
30	285.71	288.84	290.77	294.22	5.06	5.38	102%	102%
35	357.61	361.63	360.67	364.43	3.06	2.81	101%	101%
40	438.84	443.56	433.93	438.05	-4.91	-5.51	99%	99%
45	524.50	529.73	510.47	514.84	-14.03	-14.89	97%	97%
50	615.21	620.47	586.85	590.89	-28.36	-29.57	95%	95%
55	700.16	704.66	658.77	662.29	-41.39	-42.37	94%	94%
60	777.29	780.63	723.77	726.41	-53.52	-54.21	93%	93%
65	840.68	842.96	780.84	782.86	-59.84	-60.10	93%	93%
70	903.76	907.44	833.74	835.71	-70.02	-71.72	92%	92%

Male -- Issue Age 35 -- Whole Life -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 2.58		Alpha = 1.96		Alpha = -0.62		Alpha = 76%	
	Beta = 14.92		Beta = 12.19		Beta = -2.73		Beta = 82%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	1.29	0.00	0.98	0.00	-0.31	0.00	76%	
5	53.72	53.18	44.81	44.56	-8.90	-8.62	83%	84%
10	127.08	127.36	107.34	107.85	-19.74	-19.51	84%	85%
15	208.30	209.36	177.13	178.53	-31.17	-30.83	85%	85%
20	296.59	298.18	256.26	258.37	-40.33	-39.80	86%	87%
25	388.39	390.25	340.52	343.22	-47.86	-47.04	88%	88%
30	481.81	483.56	429.35	431.96	-52.46	-51.60	89%	89%
35	571.43	572.75	519.99	523.15	-51.44	-49.60	91%	91%
40	655.77	656.19	609.68	612.38	-46.09	-43.80	93%	93%
45	727.12	726.26	695.24	697.24	-31.88	-29.02	96%	96%
50	788.18	786.14	769.64	770.42	-18.54	-15.72	98%	98%
55	837.61	834.90	828.56	827.26	-9.05	-7.63	99%	99%
60	895.52	895.62	868.92	866.31	-26.60	-29.31	97%	97%

Female -- Issue Age 35 -- Whole Life -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 1.90		Alpha = 1.50		Alpha = -0.40		Alpha = 79%	
	Beta = 11.41		Beta = 10.74		Beta = -0.67		Beta = 94%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.95	0.00	0.75	0.00	-0.20	0.00	79%	
5	41.19	40.78	40.27	40.19	-0.93	-0.59	98%	99%
10	97.02	97.20	97.88	98.74	0.86	1.53	101%	102%
15	159.57	160.50	164.14	165.73	4.57	5.23	103%	103%
20	229.57	231.21	235.99	238.00	6.42	6.79	103%	103%
25	307.30	309.90	311.45	313.81	4.15	3.91	101%	101%
30	395.11	398.47	390.55	393.29	-4.56	-5.18	99%	99%
35	487.72	491.62	473.20	476.19	-14.52	-15.43	97%	97%
40	585.78	589.71	555.66	558.31	-30.12	-31.41	95%	95%
45	677.61	680.73	633.30	635.39	-44.31	-45.34	93%	93%
50	760.99	762.85	703.48	704.62	-57.51	-58.23	92%	92%
55	829.51	830.23	765.09	765.56	-64.42	-64.67	92%	92%
60	897.71	899.94	822.22	822.63	-75.49	-77.31	92%	91%

Male -- Issue Age 45 -- Whole Life -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 6.15		Alpha = 4.48		Alpha = -1.67		Alpha = 73%	
	Beta = 24.61		Beta = 19.82		Beta = -4.79		Beta = 81%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	3.08	0.00	2.24	0.00	-0.84	0.00	73%	
5	79.67	77.30	66.52	65.13	-13.15	-12.17	83%	84%
10	182.70	180.96	156.57	156.00	-26.13	-24.95	86%	86%
15	289.83	288.41	252.46	252.56	-37.37	-35.86	87%	88%
20	398.86	397.30	353.55	353.55	-45.31	-43.75	89%	89%
25	503.44	501.39	456.70	457.33	-46.74	-44.06	91%	91%
30	601.88	598.76	558.78	558.88	-43.10	-39.88	93%	93%
35	685.14	680.54	656.14	655.45	-29.00	-25.09	96%	96%
40	756.40	750.43	740.82	738.73	-15.58	-11.69	98%	98%
45	814.08	807.32	807.86	803.42	-6.22	-3.90	99%	100%
50	881.66	878.19	853.80	847.86	-27.86	-30.33	97%	97%

Female -- Issue Age 45 -- Whole Life -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 4.52		Alpha = 3.07		Alpha = -1.45		Alpha = 68%	
	Beta = 18.09		Beta = 17.49		Beta = -0.60		Beta = 97%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	2.26	0.00	1.53	0.00	-0.73	0.00	68%	
5	59.12	57.52	61.92	61.00	2.80	3.48	105%	106%
10	137.71	136.91	142.78	142.35	5.08	5.44	104%	104%
15	224.97	225.25	227.72	227.67	2.75	2.42	101%	101%
20	323.56	324.68	316.75	317.13	-6.80	-7.56	98%	98%
25	427.52	429.26	409.77	410.44	-17.75	-18.83	96%	96%
30	537.60	539.39	502.58	502.86	-35.02	-36.53	93%	93%
35	640.71	641.56	589.97	589.62	-50.73	-51.94	92%	92%
40	734.31	733.76	668.96	667.54	-65.35	-66.22	91%	91%
45	811.24	809.41	738.31	736.14	-72.93	-73.27	91%	91%
50	887.80	887.66	802.60	800.36	-85.20	-87.30	90%	90%

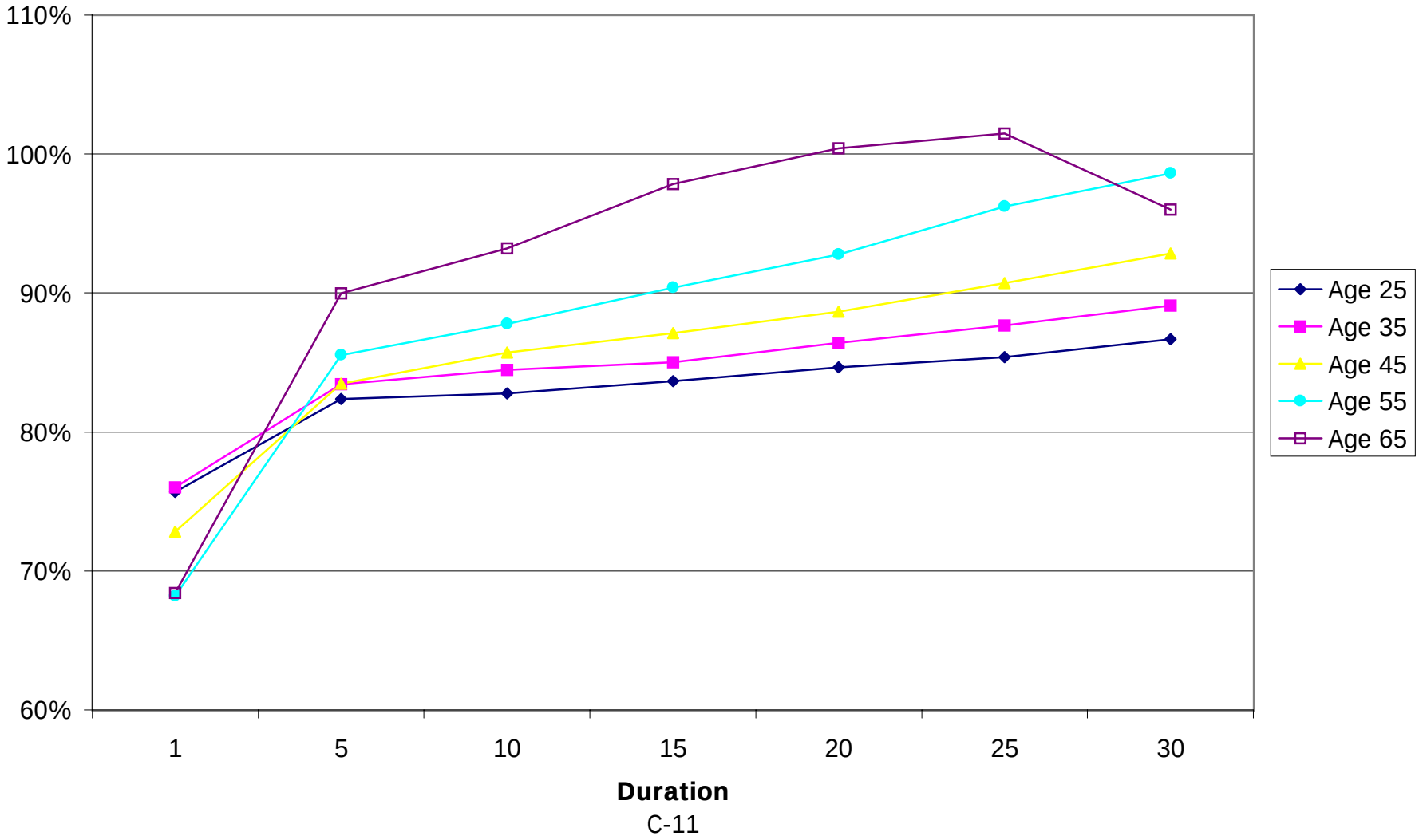
Male -- Issue Age 55 -- Whole Life -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 14.92		Alpha = 10.18		Alpha = -4.75		Alpha = 68%	
	Beta = 41.76		Beta = 33.14		Beta = -8.62		Beta = 79%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	7.46	0.00	5.09	0.00	-2.37	0.00	68%	
5	115.29	108.06	98.62	94.17	-16.67	-13.89	86%	87%
10	251.96	244.54	221.13	216.56	-30.83	-27.98	88%	89%
15	383.04	375.01	346.14	342.34	-36.90	-32.68	90%	91%
20	506.43	497.07	469.84	465.40	-36.58	-31.67	93%	94%
25	610.80	599.58	587.84	582.44	-22.96	-17.14	96%	97%
30	700.12	687.17	690.46	683.37	-9.66	-3.80	99%	99%
35	772.42	758.49	771.71	761.76	-0.71	3.28	100%	100%
40	857.13	847.32	827.38	815.62	-29.75	-31.70	97%	96%

Female -- Issue Age 55 -- Whole Life -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 9.24		Alpha = 8.92		Alpha = -0.32		Alpha = 97%	
	Beta = 29.20		Beta = 28.95		Beta = -0.25		Beta = 99%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	4.62	0.00	4.46	0.00	-0.16	0.00	97%	
5	88.10	84.52	85.66	81.52	-2.44	-2.99	97%	96%
10	204.59	202.02	191.54	187.91	-13.05	-14.10	94%	93%
15	327.44	325.59	302.16	298.88	-25.29	-26.71	92%	92%
20	457.52	455.72	412.53	408.79	-44.99	-46.93	90%	90%
25	579.35	576.45	516.46	511.97	-62.89	-64.49	89%	89%
30	689.96	685.40	610.39	604.63	-79.56	-80.77	88%	88%
35	780.86	774.79	692.86	686.21	-88.00	-88.58	89%	89%
40	871.33	867.25	769.32	762.59	-102.01	-104.67	88%	88%

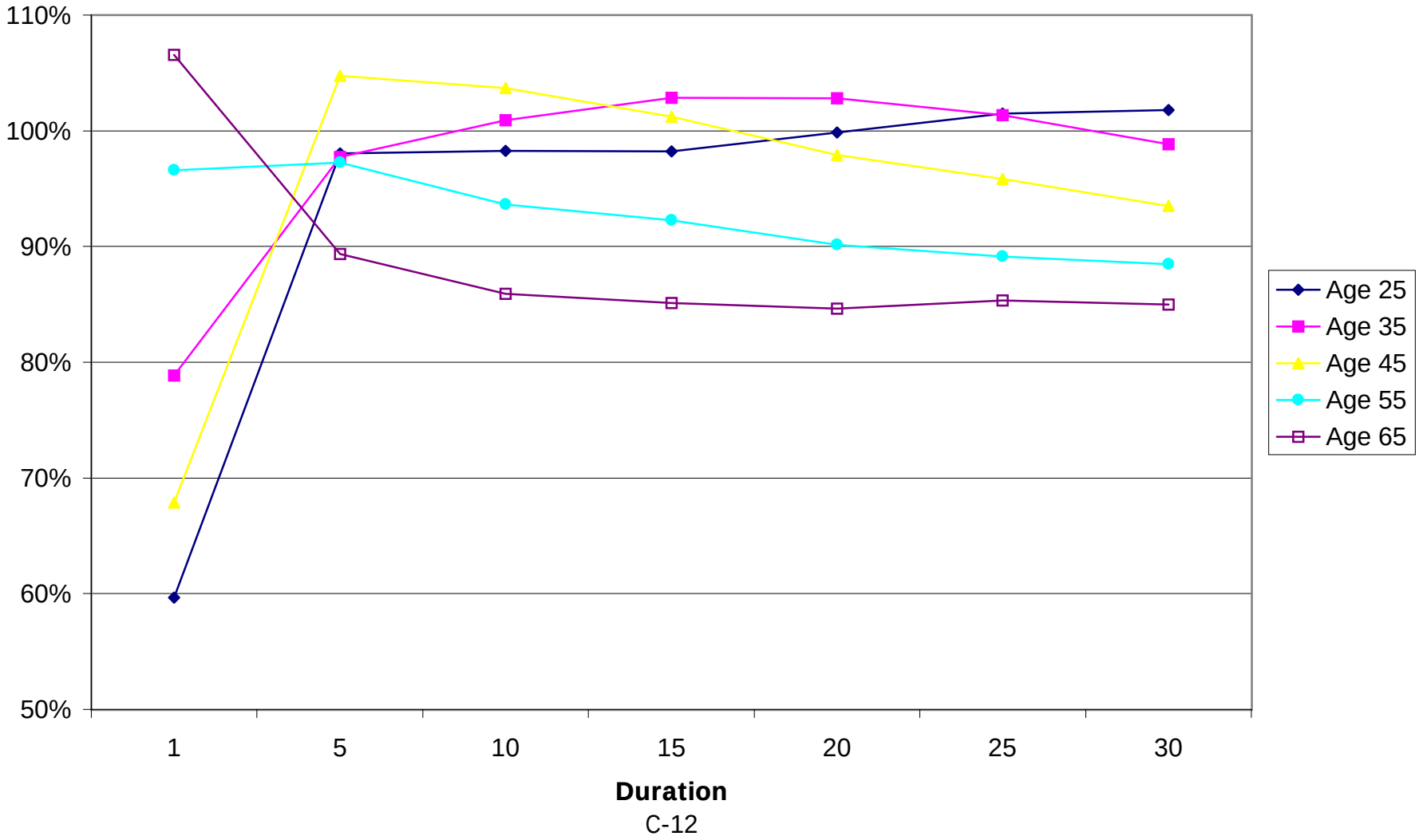
Male -- Issue Age 65 -- Whole Life -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 36.15		Alpha = 24.73		Alpha = -11.42		Alpha = 68%	
	Beta = 73.31		Beta = 57.34		Beta = -15.97		Beta = 78%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	18.08	0.00	12.37	0.00	-5.71	0.00	68%	
5	161.55	142.52	145.36	133.51	-16.18	-9.00	90%	94%
10	330.83	309.98	308.34	295.66	-22.49	-14.32	93%	95%
15	474.02	450.62	463.81	449.85	-10.22	-0.76	98%	100%
20	596.57	570.80	599.01	582.83	2.44	12.03	100%	102%
25	695.76	668.64	706.06	686.11	10.30	17.47	101%	103%
30	811.99	790.52	779.41	757.07	-32.58	-33.44	96%	96%

Female -- Issue Age 65 -- Whole Life -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 18.83		Alpha = 20.07		Alpha = 1.24		Alpha = 107%	
	Beta = 50.32		Beta = 48.07		Beta = -2.25		Beta = 96%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	9.42	0.00	10.04	0.00	0.62	0.00	107%	
5	137.19	128.50	122.58	112.71	-14.61	-15.79	89%	88%
10	305.28	296.66	262.26	251.81	-43.02	-44.85	86%	85%
15	462.72	452.68	393.79	382.38	-68.93	-70.30	85%	84%
20	605.64	593.46	512.66	499.65	-92.98	-93.81	85%	84%
25	723.12	708.97	617.03	602.89	-106.09	-106.09	85%	85%
30	840.02	828.46	713.79	699.55	-126.23	-128.91	85%	84%

Whole Life Mean Statutory Reserves
Proposed 2001 CSO as a % of 1980 CSO
Smoker -- Ultimate -- Male



Whole Life Mean Statutory Reserves
Proposed 2001 CSO as a % of 1980 CSO
Smoker -- Ultimate -- Female



Male -- Issue Age 45 -- Whole Life -- Composite -- Select & Ult -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	1.51	Alpha =	1.09	Alpha =	-0.43	Alpha =	72%
	Beta =	18.45	Beta =	15.13	Beta =	-3.32	Beta =	82%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.76	0.00	0.54	0.00	-0.21	0.00	72%	
5	70.09	69.90	59.68	59.91	-10.41	-10.00	85%	86%
10	167.75	169.02	142.04	143.18	-25.70	-25.84	85%	85%
15	276.05	277.93	232.79	234.77	-43.26	-43.16	84%	84%
20	384.93	386.09	330.82	333.29	-54.10	-52.81	86%	86%
25	488.76	489.93	434.66	437.77	-54.10	-52.16	89%	89%
30	590.28	590.71	539.40	542.19	-50.87	-48.52	91%	92%
35	680.44	679.73	641.02	643.19	-39.42	-36.54	94%	95%
40	759.99	757.93	731.03	731.73	-28.96	-26.20	96%	97%
45	823.84	820.55	803.04	801.49	-20.80	-19.06	97%	98%
50	890.32	889.27	853.89	850.62	-36.44	-38.65	96%	96%

Female -- Issue Age 45 -- Whole Life -- Composite -- Select & Ult -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	1.08	Alpha =	0.93	Alpha =	-0.15	Alpha =	86%
	Beta =	14.61	Beta =	12.75	Beta =	-1.86	Beta =	87%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.54	0.00	0.46	0.00	-0.08	0.00	86%	
5	57.03	57.12	50.25	50.40	-6.79	-6.72	88%	88%
10	135.96	137.08	119.41	120.32	-16.56	-16.76	88%	88%
15	225.68	227.87	195.65	197.21	-30.03	-30.66	87%	87%
20	323.70	326.26	277.73	279.83	-45.97	-46.42	86%	86%
25	426.00	429.39	366.09	368.87	-59.91	-60.52	86%	86%
30	535.88	539.54	459.47	462.54	-76.41	-77.00	86%	86%
35	641.74	644.68	553.74	556.71	-88.00	-87.97	86%	86%
40	738.48	740.02	645.12	647.61	-93.37	-92.41	87%	88%
45	817.94	817.91	729.79	731.43	-88.15	-86.48	89%	89%
50	892.96	894.06	804.35	804.82	-88.61	-89.23	90%	90%

Male -- Issue Age 45 -- Whole Life -- Composite -- Ultimate -- 4.50%								
	VBT		2001 CSO		2001 CSO-VBT		2001 CSO/VBT	
	Alpha =	2.17	Alpha =	2.59	Alpha =	0.41	Alpha =	119%
	Beta =	14.80	Beta =	15.73	Beta =	0.93	Beta =	106%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	1.09	0.00	1.29	0.00	0.21	0.00	119%	
5	54.81	54.60	57.08	56.67	2.28	2.07	104%	104%
10	132.41	133.27	137.20	137.84	4.80	4.58	104%	103%
15	219.47	221.32	226.60	228.20	7.13	6.88	103%	103%
20	315.66	318.05	324.80	326.90	9.14	8.85	103%	103%
25	418.37	421.57	429.05	431.90	10.68	10.34	103%	102%
30	523.16	526.14	534.82	537.41	11.67	11.27	102%	102%
35	625.42	627.84	637.50	639.47	12.08	11.63	102%	102%
40	716.36	717.32	728.45	728.93	12.09	11.61	102%	102%
45	789.23	787.91	801.21	799.42	11.98	11.51	102%	101%
50	840.61	837.57	852.59	849.07	11.97	11.49	101%	101%

Female -- Issue Age 45 -- Whole Life -- Composite -- Ultimate -- 4.50%								
	VBT		2001 CSO		2001 CSO-VBT		2001 CSO/VBT	
	Alpha =	1.46	Alpha =	1.83	Alpha =	0.37	Alpha =	126%
	Beta =	12.31	Beta =	13.19	Beta =	0.88	Beta =	107%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.73	0.00	0.92	0.00	0.19	0.00	126%	
5	46.84	46.78	49.06	48.81	2.21	2.03	105%	104%
10	111.58	112.26	116.33	116.82	4.75	4.56	104%	104%
15	183.44	184.82	190.64	191.82	7.19	6.99	104%	104%
20	262.77	264.96	272.20	274.15	9.42	9.19	104%	103%
25	349.96	352.87	361.25	363.89	11.30	11.02	103%	103%
30	442.67	445.92	455.37	458.29	12.70	12.37	103%	103%
35	536.82	540.03	550.38	553.21	13.56	13.18	103%	102%
40	628.63	631.41	642.48	644.82	13.85	13.41	102%	102%
45	714.23	716.21	727.82	729.31	13.59	13.10	102%	102%
50	790.26	791.14	802.97	803.28	12.71	12.14	102%	102%

Male -- Issue Age 45 -- Whole Life -- Composite -- Select & Ult -- 4.50%								
	VBT		2001 CSO		2001 CSO-VBT		2001 CSO/VBT	
	Alpha =	0.68	Alpha =	1.09	Alpha =	0.41	Alpha =	161%
	Beta =	14.20	Beta =	15.13	Beta =	0.93	Beta =	107%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.34	0.00	0.54	0.00	0.21	0.00	161%	
5	57.43	57.86	59.68	59.91	2.26	2.05	104%	104%
10	137.31	138.66	142.04	143.18	4.74	4.52	103%	103%
15	225.75	227.98	232.79	234.77	7.04	6.80	103%	103%
20	321.80	324.54	330.82	333.29	9.03	8.74	103%	103%
25	424.11	427.56	434.66	437.77	10.55	10.21	102%	102%
30	527.87	531.05	539.40	542.19	11.53	11.13	102%	102%
35	629.08	631.70	641.02	643.19	11.94	11.50	102%	102%
40	719.07	720.25	731.03	731.73	11.96	11.48	102%	102%
45	791.19	790.10	803.04	801.49	11.85	11.39	101%	101%
50	842.04	839.25	853.89	850.62	11.84	11.37	101%	101%

Female -- Issue Age 45 -- Whole Life -- Composite -- Select & Ult -- 4.50%								
	VBT		2001 CSO		2001 CSO-VBT		2001 CSO/VBT	
	Alpha =	0.56	Alpha =	0.93	Alpha =	0.37	Alpha =	167%
	Beta =	11.88	Beta =	12.75	Beta =	0.87	Beta =	107%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.28	0.00	0.46	0.00	0.19	0.00	167%	
5	48.04	48.39	50.25	50.40	2.20	2.02	105%	104%
10	114.69	115.79	119.41	120.32	4.72	4.53	104%	104%
15	188.52	190.29	195.65	197.21	7.13	6.92	104%	104%
20	268.40	270.74	277.73	279.83	9.33	9.10	103%	103%
25	354.90	357.96	366.09	368.87	11.19	10.92	103%	103%
30	446.89	450.28	459.47	462.54	12.58	12.26	103%	103%
35	540.30	543.65	553.74	556.71	13.44	13.06	102%	102%
40	631.38	634.31	645.12	647.61	13.73	13.30	102%	102%
45	716.31	718.44	729.79	731.43	13.48	12.99	102%	102%
50	791.74	792.78	804.35	804.82	12.61	12.04	102%	102%

Male -- Issue Age 25 -- 20 Year Level Premium Term -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	1.73	Alpha =	1.05	Alpha =	-0.69	Alpha =	60%
	Beta =	2.21	Beta =	1.32	Beta =	-0.89	Beta =	60%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.87	0.00	0.52	0.00	-0.34	0.00	60%	
2	1.37	0.54	0.78	0.23	-0.60	-0.30	57%	44%
3	1.93	1.12	0.99	0.43	-0.94	-0.69	51%	38%
4	2.53	1.74	1.19	0.63	-1.35	-1.11	47%	36%
5	3.16	2.38	1.41	0.86	-1.76	-1.52	44%	36%
6	3.81	3.03	1.65	1.13	-2.15	-1.90	43%	37%
7	4.45	3.66	1.93	1.41	-2.52	-2.25	43%	39%
8	5.06	4.26	2.22	1.70	-2.85	-2.56	44%	40%
9	5.64	4.82	2.50	1.98	-3.14	-2.83	44%	41%
10	6.17	5.31	2.78	2.25	-3.39	-3.06	45%	42%
11	6.61	5.70	3.03	2.49	-3.58	-3.21	46%	44%
12	6.95	5.99	3.25	2.68	-3.70	-3.31	47%	45%
13	7.16	6.12	3.41	2.81	-3.75	-3.31	48%	46%
14	7.21	6.08	3.49	2.85	-3.71	-3.23	48%	47%
15	7.06	5.82	3.48	2.79	-3.58	-3.04	49%	48%
16	6.67	5.32	3.36	2.61	-3.32	-2.71	50%	49%
17	6.02	4.51	3.10	2.28	-2.92	-2.23	52%	50%
18	5.05	3.39	2.68	1.76	-2.38	-1.63	53%	52%
19	3.75	1.90	2.05	1.02	-1.70	-0.88	55%	54%
20	2.05	0.00	1.17	0.00	-0.88	0.00	57%	

Female -- Issue Age 25 -- 20 Year Level Premium Term -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	1.14	Alpha =	0.52	Alpha =	-0.62	Alpha =	46%
	Beta =	1.72	Beta =	0.91	Beta =	-0.80	Beta =	53%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.57	0.00	0.26	0.00	-0.31	0.00	46%	
2	1.15	0.58	0.65	0.38	-0.50	-0.19	57%	66%
3	1.72	1.15	1.02	0.74	-0.70	-0.41	59%	64%
4	2.29	1.71	1.37	1.09	-0.92	-0.62	60%	64%
5	2.84	2.25	1.71	1.42	-1.13	-0.84	60%	63%
6	3.37	2.77	2.04	1.74	-1.34	-1.03	60%	63%
7	3.88	3.26	2.34	2.03	-1.53	-1.23	60%	62%
8	4.35	3.73	2.62	2.29	-1.74	-1.44	60%	61%
9	4.80	4.16	2.86	2.51	-1.94	-1.65	60%	60%
10	5.21	4.53	3.06	2.68	-2.15	-1.85	59%	59%
11	5.55	4.85	3.19	2.78	-2.36	-2.07	57%	57%
12	5.82	5.07	3.25	2.81	-2.57	-2.26	56%	55%
13	5.98	5.17	3.24	2.76	-2.74	-2.41	54%	53%
14	6.00	5.12	3.16	2.65	-2.85	-2.48	53%	52%
15	5.86	4.89	3.01	2.47	-2.85	-2.42	51%	50%
16	5.52	4.43	2.79	2.20	-2.73	-2.23	51%	50%
17	4.94	3.74	2.48	1.85	-2.46	-1.89	50%	50%
18	4.11	2.77	2.07	1.38	-2.04	-1.39	50%	50%
19	3.01	1.53	1.53	0.77	-1.48	-0.76	51%	50%
20	1.63	0.00	0.84	0.00	-0.78	0.00	52%	

Male -- Issue Age 35 -- 20 Year Level Premium Term -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	2.07	Alpha =	1.18	Alpha =	-0.88	Alpha =	57%
	Beta =	4.36	Beta =	2.48	Beta =	-1.89	Beta =	57%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	1.03	0.00	0.59	0.00	-0.44	0.00	57%	
2	3.32	2.27	1.88	1.28	-1.44	-0.99	57%	56%
3	5.56	4.48	3.16	2.56	-2.40	-1.93	57%	57%
4	7.73	6.62	4.41	3.79	-3.32	-2.83	57%	57%
5	9.81	8.64	5.62	4.98	-4.19	-3.66	57%	58%
6	11.77	10.53	6.78	6.11	-4.98	-4.42	58%	58%
7	13.56	12.23	7.87	7.16	-5.69	-5.08	58%	58%
8	15.17	13.75	8.85	8.08	-6.32	-5.67	58%	59%
9	16.56	15.02	9.70	8.84	-6.87	-6.17	59%	59%
10	17.70	16.03	10.36	9.41	-7.34	-6.62	59%	59%
11	18.56	16.72	10.81	9.74	-7.75	-6.98	58%	58%
12	19.08	17.08	11.03	9.84	-8.06	-7.24	58%	58%
13	19.25	17.05	10.99	9.66	-8.26	-7.38	57%	57%
14	19.00	16.59	10.72	9.31	-8.28	-7.28	56%	56%
15	18.29	15.63	10.27	8.75	-8.02	-6.88	56%	56%
16	17.05	14.11	9.57	7.92	-7.48	-6.20	56%	56%
17	15.20	11.92	8.56	6.73	-6.64	-5.19	56%	56%
18	12.60	8.93	7.14	5.07	-5.47	-3.86	57%	57%
19	9.15	5.01	5.20	2.86	-3.95	-2.15	57%	57%
20	4.69	0.00	2.67	0.00	-2.02	0.00	57%	

Female -- Issue Age 35 -- 20 Year Level Premium Term -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	1.62	Alpha =	0.94	Alpha =	-0.68	Alpha =	58%
	Beta =	3.32	Beta =	1.95	Beta =	-1.38	Beta =	59%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.81	0.00	0.47	0.00	-0.34	0.00	58%	
2	2.50	1.68	1.47	0.98	-1.03	-0.69	59%	59%
3	4.15	3.30	2.43	1.93	-1.72	-1.36	59%	59%
4	5.73	4.84	3.37	2.86	-2.36	-1.98	59%	59%
5	7.22	6.27	4.29	3.77	-2.93	-2.50	59%	60%
6	8.58	7.57	5.19	4.65	-3.40	-2.91	60%	61%
7	9.80	8.70	6.05	5.50	-3.75	-3.21	62%	63%
8	10.84	9.66	6.86	6.27	-3.98	-3.38	63%	65%
9	11.71	10.44	7.60	6.98	-4.11	-3.46	65%	67%
10	12.39	11.02	8.25	7.58	-4.13	-3.43	67%	69%
11	12.86	11.38	8.80	8.06	-4.07	-3.32	68%	71%
12	13.11	11.52	9.19	8.38	-3.92	-3.14	70%	73%
13	13.13	11.41	9.41	8.50	-3.71	-2.91	72%	74%
14	12.87	11.01	9.42	8.38	-3.46	-2.63	73%	76%
15	12.31	10.29	9.16	7.98	-3.16	-2.31	74%	78%
16	11.40	9.19	8.60	7.26	-2.81	-1.93	75%	79%
17	10.10	7.68	7.68	6.15	-2.42	-1.53	76%	80%
18	8.35	5.70	6.36	4.62	-1.99	-1.08	76%	81%
19	6.09	3.15	4.58	2.59	-1.51	-0.57	75%	82%
20	3.24	0.00	2.27	0.00	-0.97	0.00	70%	

Male -- Issue Age 45 -- 20 Year Level Premium Term -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	4.46	Alpha =	2.59	Alpha =	-1.88	Alpha =	58%
	Beta =	10.00	Beta =	5.93	Beta =	-4.07	Beta =	59%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	2.23	0.00	1.29	0.00	-0.94	0.00	58%	
2	7.71	5.42	4.59	3.24	-3.12	-2.18	59%	60%
3	13.07	10.71	7.77	6.37	-5.29	-4.34	59%	59%
4	18.27	15.83	10.89	9.47	-7.39	-6.36	60%	60%
5	23.29	20.75	13.97	12.54	-9.32	-8.21	60%	60%
6	28.08	25.41	16.99	15.51	-11.09	-9.90	61%	61%
7	32.56	29.72	19.87	18.31	-12.69	-11.41	61%	62%
8	36.66	33.60	22.54	20.84	-14.11	-12.75	61%	62%
9	40.26	36.93	24.91	23.05	-15.35	-13.88	62%	62%
10	43.27	39.60	26.91	24.83	-16.36	-14.77	62%	63%
11	45.56	41.51	28.43	26.09	-17.13	-15.42	62%	63%
12	47.03	42.54	29.37	26.72	-17.65	-15.82	62%	63%
13	47.57	42.61	29.69	26.72	-17.88	-15.88	62%	63%
14	47.09	41.57	29.38	26.11	-17.71	-15.46	62%	63%
15	45.44	39.30	28.45	24.86	-16.99	-14.44	63%	63%
16	42.44	35.57	26.80	22.80	-15.64	-12.77	63%	64%
17	37.85	30.13	24.18	19.62	-13.67	-10.51	64%	65%
18	31.39	22.65	20.24	14.94	-11.15	-7.72	64%	66%
19	22.70	12.75	14.66	8.45	-8.04	-4.30	65%	66%
20	11.38	0.00	7.19	0.00	-4.18	0.00	63%	

Female -- Issue Age 45 -- 20 Year Level Premium Term -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	3.49	Alpha =	1.83	Alpha =	-1.66	Alpha =	52%
	Beta =	6.60	Beta =	4.82	Beta =	-1.78	Beta =	73%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	1.74	0.00	0.92	0.00	-0.83	0.00	52%	
2	4.81	3.01	3.89	2.95	-0.92	-0.07	81%	98%
3	7.77	5.92	6.80	5.82	-0.97	-0.10	88%	98%
4	10.60	8.68	9.61	8.58	-0.99	-0.10	91%	99%
5	13.28	11.27	12.30	11.20	-0.97	-0.07	93%	99%
6	15.77	13.66	14.84	13.64	-0.93	-0.01	94%	100%
7	18.04	15.81	17.16	15.86	-0.87	0.05	95%	100%
8	20.04	17.67	19.25	17.81	-0.80	0.14	96%	101%
9	21.73	19.18	21.04	19.44	-0.69	0.26	97%	101%
10	23.04	20.29	22.49	20.71	-0.55	0.41	98%	102%
11	23.94	20.98	23.55	21.58	-0.39	0.59	98%	103%
12	24.40	21.22	24.18	21.95	-0.23	0.73	99%	103%
13	24.42	21.01	24.28	21.78	-0.14	0.77	99%	104%
14	23.97	20.34	23.80	21.00	-0.17	0.66	99%	103%
15	23.05	19.15	22.70	19.58	-0.35	0.42	99%	102%
16	21.56	17.36	20.92	17.44	-0.64	0.08	97%	100%
17	19.39	14.80	18.39	14.52	-0.99	-0.29	95%	98%
18	16.33	11.25	15.02	10.70	-1.31	-0.55	92%	95%
19	12.13	6.40	10.72	5.90	-1.41	-0.50	88%	92%
20	6.50	0.00	5.36	0.00	-1.14	0.00	82%	

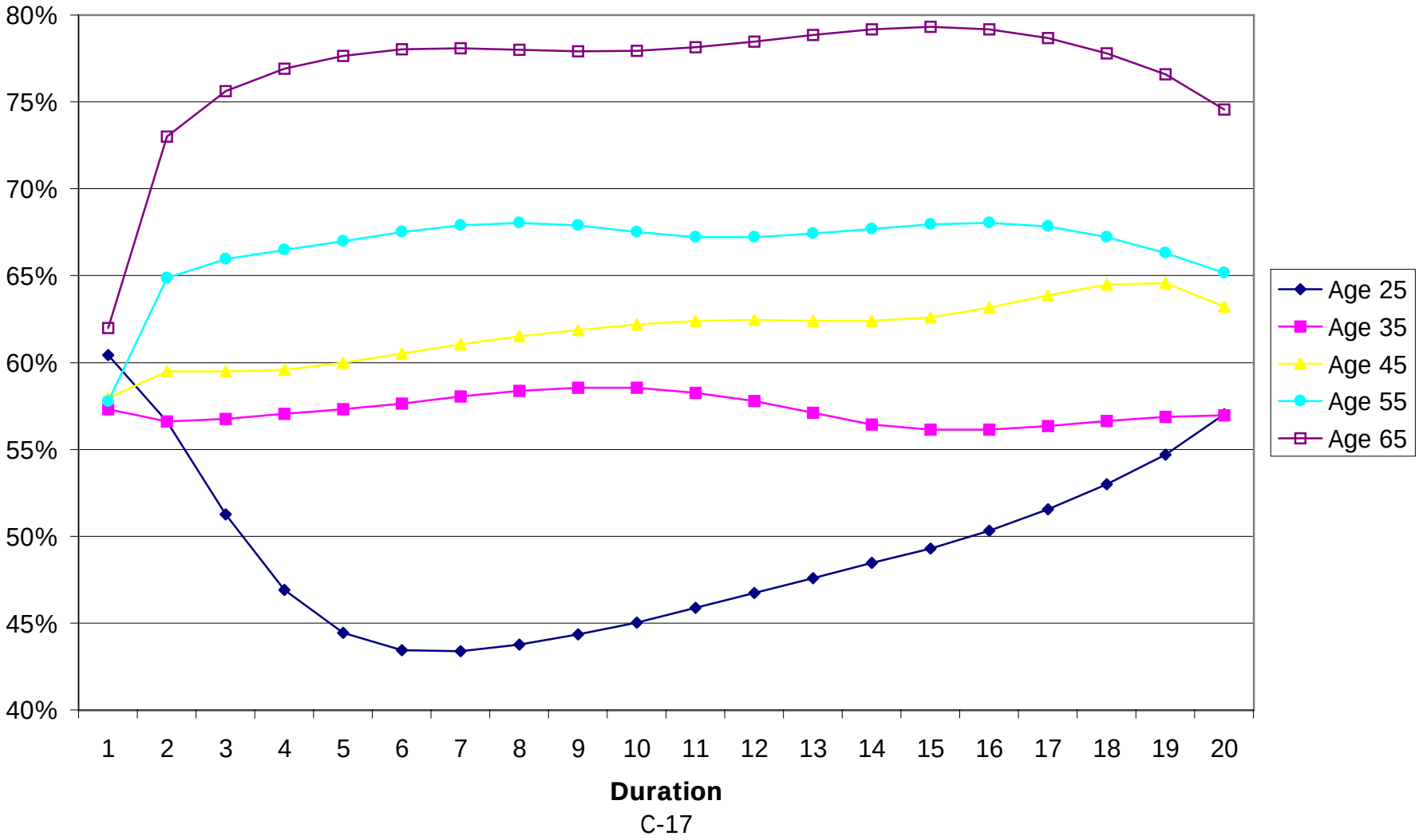
Male -- Issue Age 55 -- 20 Year Level Premium Term -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	10.30	Alpha =	5.95	Alpha =	-4.35	Alpha =	58%
	Beta =	23.54	Beta =	14.93	Beta =	-8.61	Beta =	63%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	5.15	0.00	2.97	0.00	-2.17	0.00	58%	
2	18.21	12.89	11.81	8.70	-6.40	-4.19	65%	68%
3	30.95	25.46	20.41	17.19	-10.54	-8.28	66%	67%
4	43.33	37.66	28.81	25.50	-14.52	-12.16	66%	68%
5	55.30	49.40	37.04	33.66	-18.26	-15.75	67%	68%
6	66.75	60.56	45.05	41.53	-21.70	-19.04	67%	69%
7	77.54	70.98	52.64	48.84	-24.90	-22.15	68%	69%
8	87.49	80.47	59.52	55.28	-27.97	-25.18	68%	69%
9	96.39	88.77	65.43	60.64	-30.96	-28.13	68%	68%
10	103.97	95.63	70.19	64.82	-33.78	-30.82	68%	68%
11	109.99	100.80	73.92	68.10	-36.06	-32.70	67%	68%
12	114.18	104.02	76.73	70.44	-37.44	-33.58	67%	68%
13	116.28	105.00	78.39	71.41	-37.89	-33.60	67%	68%
14	115.98	103.42	78.50	70.67	-37.48	-32.75	68%	68%
15	112.89	98.83	76.70	67.81	-36.19	-31.02	68%	69%
16	106.47	90.58	72.45	62.17	-34.02	-28.40	68%	69%
17	95.97	77.82	65.10	53.11	-30.87	-24.72	68%	68%
18	80.41	59.46	54.06	40.09	-26.35	-19.37	67%	67%
19	58.53	34.07	38.81	22.61	-19.72	-11.46	66%	66%
20	28.80	0.00	18.77	0.00	-10.04	0.00	65%	

Female -- Issue Age 55 -- 20 Year Level Premium Term -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	6.96	Alpha =	4.99	Alpha =	-1.97	Alpha =	72%
	Beta =	14.01	Beta =	11.30	Beta =	-2.71	Beta =	81%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	3.48	0.00	2.50	0.00	-0.98	0.00	72%	
2	10.45	6.90	8.69	6.07	-1.77	-0.83	83%	88%
3	17.30	13.69	14.62	11.87	-2.68	-1.82	85%	87%
4	24.05	20.40	20.27	17.37	-3.78	-3.03	84%	85%
5	30.70	26.99	25.61	22.55	-5.09	-4.44	83%	84%
6	37.21	33.41	30.61	27.37	-6.60	-6.04	82%	82%
7	43.47	39.52	35.23	31.78	-8.25	-7.74	81%	80%
8	49.34	45.15	39.40	35.72	-9.94	-9.44	80%	79%
9	54.61	50.05	43.07	39.12	-11.54	-10.93	79%	78%
10	59.04	54.02	46.16	41.90	-12.88	-12.12	78%	78%
11	62.46	56.89	48.58	43.95	-13.88	-12.94	78%	77%
12	64.73	58.56	50.21	45.16	-14.52	-13.40	78%	77%
13	65.74	58.91	50.92	45.37	-14.82	-13.54	77%	77%
14	65.41	57.90	50.55	44.43	-14.86	-13.47	77%	77%
15	63.60	55.30	48.94	42.14	-14.67	-13.16	77%	76%
16	60.05	50.79	45.85	38.26	-14.20	-12.53	76%	75%
17	54.32	43.83	41.00	32.44	-13.31	-11.39	75%	74%
18	45.76	33.68	34.07	24.38	-11.70	-9.30	74%	72%
19	33.56	19.42	24.70	13.72	-8.85	-5.70	74%	71%
20	16.72	0.00	12.51	0.00	-4.20	0.00	75%	

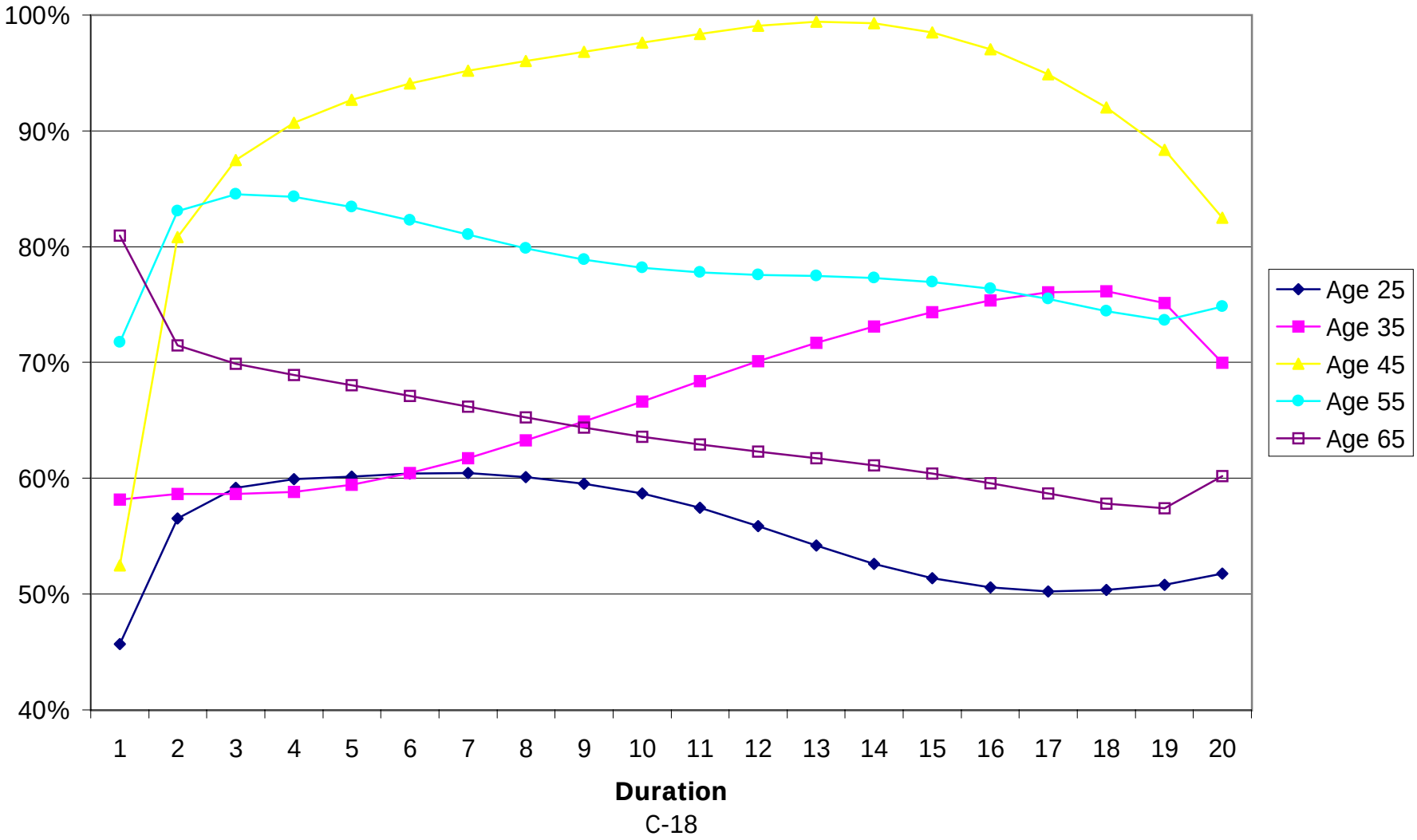
Male -- Issue Age 65 -- 20 Year Level Premium Term -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	25.19	Alpha =	15.61	Alpha =	-9.58	Alpha =	62%
	Beta =	53.86	Beta =	37.64	Beta =	-16.22	Beta =	70%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	12.59	0.00	7.80	0.00	-4.79	0.00	62%	
2	40.83	27.81	29.81	21.98	-11.02	-5.83	73%	79%
3	68.36	55.05	51.69	43.77	-16.66	-11.28	76%	80%
4	95.28	81.66	73.29	65.17	-22.00	-16.49	77%	80%
5	121.52	107.52	94.37	85.94	-27.15	-21.58	78%	80%
6	146.88	132.37	114.61	105.64	-32.27	-26.73	78%	80%
7	171.06	155.89	133.60	123.93	-37.46	-31.96	78%	79%
8	193.68	177.60	151.08	140.61	-42.59	-37.00	78%	79%
9	214.21	196.96	166.91	155.58	-47.30	-41.38	78%	79%
10	232.12	213.41	180.94	168.66	-51.18	-44.75	78%	79%
11	246.84	226.41	192.90	179.50	-53.94	-46.91	78%	79%
12	257.84	235.41	202.34	187.54	-55.51	-47.87	78%	80%
13	264.53	239.79	208.61	192.04	-55.92	-47.75	79%	80%
14	266.21	238.78	210.81	191.94	-55.41	-46.84	79%	80%
15	261.93	231.23	207.75	185.93	-54.18	-45.30	79%	80%
16	250.23	215.37	198.12	172.66	-52.12	-42.71	79%	80%
17	228.99	188.75	180.17	150.03	-48.83	-38.72	79%	79%
18	195.16	147.70	151.83	115.99	-43.33	-31.71	78%	79%
19	144.33	87.10	110.55	67.48	-33.78	-19.62	77%	77%
20	70.48	0.00	52.56	0.00	-17.92	0.00	75%	

Female -- Issue Age 65 -- 20 Year Level Premium Term -- Composite -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	14.38	Alpha =	11.64	Alpha =	-2.74	Alpha =	81%
	Beta =	35.07	Beta =	25.76	Beta =	-9.31	Beta =	73%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	7.19	0.00	5.82	0.00	-1.37	0.00	81%	
2	27.70	20.32	19.80	13.84	-7.90	-6.49	71%	68%
3	47.92	40.45	33.49	27.39	-14.43	-13.06	70%	68%
4	67.99	60.46	46.86	40.58	-21.13	-19.88	69%	67%
5	87.90	80.28	59.81	53.28	-28.10	-27.00	68%	66%
6	107.54	99.73	72.19	65.35	-35.35	-34.39	67%	66%
7	126.67	118.53	83.84	76.57	-42.83	-41.96	66%	65%
8	144.91	136.21	94.55	86.77	-50.36	-49.44	65%	64%
9	161.76	152.24	104.14	95.75	-57.62	-56.49	64%	63%
10	176.69	166.07	112.38	103.26	-64.31	-62.81	64%	62%
11	189.16	177.18	119.03	109.05	-70.12	-68.13	63%	62%
12	198.64	185.04	123.80	112.79	-74.84	-72.25	62%	61%
13	204.61	189.11	126.32	114.09	-78.29	-75.02	62%	60%
14	206.46	188.74	126.17	112.49	-80.29	-76.24	61%	60%
15	203.40	182.98	122.85	107.45	-80.55	-75.54	60%	59%
16	194.25	170.45	115.73	98.26	-78.52	-72.19	60%	58%
17	177.34	149.16	104.06	84.10	-73.28	-65.06	59%	56%
18	150.30	116.37	86.90	63.93	-63.40	-52.44	58%	55%
19	109.87	68.30	63.07	36.45	-46.80	-31.84	57%	53%
20	51.68	0.00	31.11	0.00	-20.58	0.00	60%	

Level Premium 20 Year Term Mean Statutory Reserves
Proposed 2001 CSO as a % of 1980 CSO
Composite -- Ultimate -- Male



Level Premium 20 Year Term Mean Statutory Reserves
Proposed 2001 CSO as a % of 1980 CSO
Composite -- Ultimate -- Female



Male -- Issue Age 25 -- 20 Year Level Premium Term -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 1.49		Alpha = 0.96		Alpha = -0.53		Alpha = 64%	
	Beta = 1.76		Beta = 1.18		Beta = -0.57		Beta = 67%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.74	0.00	0.48	0.00	-0.26	0.00	64%	
2	1.04	0.32	0.69	0.19	-0.35	-0.13	66%	60%
3	1.38	0.68	0.86	0.34	-0.52	-0.34	62%	50%
4	1.75	1.07	1.02	0.52	-0.73	-0.56	58%	48%
5	2.16	1.48	1.21	0.72	-0.95	-0.76	56%	49%
6	2.58	1.91	1.42	0.95	-1.15	-0.97	55%	49%
7	3.00	2.34	1.66	1.19	-1.34	-1.14	55%	51%
8	3.42	2.74	1.91	1.45	-1.51	-1.30	56%	53%
9	3.81	3.12	2.16	1.69	-1.65	-1.43	57%	54%
10	4.17	3.46	2.40	1.92	-1.77	-1.53	58%	56%
11	4.47	3.72	2.62	2.13	-1.85	-1.59	59%	57%
12	4.70	3.92	2.81	2.30	-1.90	-1.62	60%	59%
13	4.85	4.02	2.95	2.41	-1.90	-1.61	61%	60%
14	4.88	4.00	3.02	2.44	-1.87	-1.56	62%	61%
15	4.79	3.83	3.00	2.38	-1.79	-1.44	63%	62%
16	4.54	3.50	2.90	2.24	-1.64	-1.26	64%	64%
17	4.12	2.97	2.69	1.96	-1.43	-1.02	65%	66%
18	3.48	2.24	2.33	1.51	-1.16	-0.72	67%	68%
19	2.62	1.25	1.78	0.87	-0.84	-0.38	68%	70%
20	1.50	0.00	1.03	0.00	-0.48	0.00	68%	

Female -- Issue Age 25 -- 20 Year Level Premium Term -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 1.07		Alpha = 0.49		Alpha = -0.58		Alpha = 46%	
	Beta = 1.53		Beta = 0.85		Beta = -0.68		Beta = 55%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.53	0.00	0.24	0.00	-0.29	0.00	46%	
2	0.99	0.45	0.59	0.34	-0.39	-0.11	60%	76%
3	1.44	0.90	0.92	0.66	-0.51	-0.24	64%	73%
4	1.88	1.34	1.24	0.98	-0.64	-0.36	66%	73%
5	2.32	1.77	1.55	1.27	-0.77	-0.49	67%	72%
6	2.73	2.18	1.84	1.56	-0.89	-0.61	67%	72%
7	3.14	2.57	2.12	1.82	-1.02	-0.75	67%	71%
8	3.52	2.95	2.36	2.05	-1.16	-0.89	67%	70%
9	3.88	3.30	2.58	2.25	-1.31	-1.04	66%	68%
10	4.21	3.59	2.75	2.40	-1.45	-1.19	65%	67%
11	4.48	3.85	2.87	2.49	-1.62	-1.36	64%	65%
12	4.70	4.03	2.92	2.51	-1.78	-1.51	62%	62%
13	4.83	4.10	2.91	2.46	-1.92	-1.64	60%	60%
14	4.84	4.06	2.84	2.36	-2.01	-1.69	59%	58%
15	4.73	3.87	2.71	2.20	-2.02	-1.67	57%	57%
16	4.45	3.52	2.50	1.96	-1.95	-1.56	56%	56%
17	4.00	2.96	2.22	1.64	-1.78	-1.32	56%	56%
18	3.34	2.20	1.86	1.22	-1.49	-0.98	56%	56%
19	2.47	1.22	1.38	0.68	-1.10	-0.53	56%	56%
20	1.37	0.00	0.76	0.00	-0.61	0.00	56%	

Male -- Issue Age 35 -- 20 Year Level Premium Term -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 1.65		Alpha = 1.07		Alpha = -0.59		Alpha = 64%	
	Beta = 3.25		Beta = 2.19		Beta = -1.06		Beta = 67%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.83	0.00	0.53	0.00	-0.29	0.00	64%	
2	2.42	1.59	1.66	1.13	-0.76	-0.46	69%	71%
3	3.99	3.14	2.78	2.24	-1.21	-0.90	70%	71%
4	5.51	4.64	3.88	3.32	-1.64	-1.32	70%	72%
5	6.98	6.07	4.93	4.36	-2.04	-1.71	71%	72%
6	8.36	7.41	5.96	5.36	-2.41	-2.05	71%	72%
7	9.65	8.63	6.92	6.29	-2.73	-2.35	72%	73%
8	10.81	9.73	7.79	7.10	-3.02	-2.63	72%	73%
9	11.82	10.67	8.54	7.78	-3.29	-2.89	72%	73%
10	12.68	11.44	9.13	8.29	-3.55	-3.15	72%	72%
11	13.34	11.99	9.54	8.59	-3.80	-3.40	71%	72%
12	13.77	12.29	9.73	8.68	-4.04	-3.61	71%	71%
13	13.93	12.32	9.70	8.53	-4.23	-3.79	70%	69%
14	13.80	12.03	9.48	8.23	-4.33	-3.80	69%	68%
15	13.33	11.37	9.09	7.75	-4.24	-3.62	68%	68%
16	12.47	10.31	8.48	7.02	-3.98	-3.29	68%	68%
17	11.15	8.74	7.59	5.97	-3.56	-2.76	68%	68%
18	9.28	6.56	6.33	4.51	-2.94	-2.06	68%	69%
19	6.76	3.70	4.62	2.55	-2.13	-1.15	68%	69%
20	3.47	0.00	2.37	0.00	-1.10	0.00	68%	

Female -- Issue Age 35 -- 20 Year Level Premium Term -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 1.44		Alpha = 0.87		Alpha = -0.57		Alpha = 61%	
	Beta = 2.84		Beta = 1.78		Beta = -1.05		Beta = 63%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.72	0.00	0.44	0.00	-0.28	0.00	61%	
2	2.11	1.37	1.34	0.89	-0.77	-0.48	64%	65%
3	3.45	2.70	2.21	1.75	-1.24	-0.95	64%	65%
4	4.75	3.96	3.07	2.60	-1.68	-1.36	65%	66%
5	5.97	5.14	3.91	3.43	-2.06	-1.71	65%	67%
6	7.10	6.22	4.72	4.22	-2.38	-2.00	66%	68%
7	8.12	7.17	5.50	5.00	-2.61	-2.17	68%	70%
8	9.00	7.98	6.25	5.71	-2.75	-2.27	69%	72%
9	9.73	8.65	6.93	6.36	-2.81	-2.29	71%	74%
10	10.33	9.16	7.54	6.93	-2.79	-2.24	73%	76%
11	10.76	9.51	8.04	7.37	-2.72	-2.15	75%	77%
12	11.01	9.67	8.41	7.66	-2.60	-2.01	76%	79%
13	11.06	9.61	8.61	7.77	-2.45	-1.84	78%	81%
14	10.88	9.31	8.61	7.67	-2.27	-1.64	79%	82%
15	10.45	8.74	8.39	7.32	-2.06	-1.42	80%	84%
16	9.71	7.84	7.88	6.66	-1.83	-1.19	81%	85%
17	8.63	6.59	7.05	5.66	-1.58	-0.93	82%	86%
18	7.17	4.91	5.84	4.24	-1.33	-0.67	82%	86%
19	5.24	2.73	4.20	2.38	-1.04	-0.35	80%	87%
20	2.78	0.00	2.08	0.00	-0.70	0.00	75%	

Male -- Issue Age 45 -- 20 Year Level Premium Term -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 3.25		Alpha = 2.28		Alpha = -0.97		Alpha = 70%	
	Beta = 7.69		Beta = 5.32		Beta = -2.36		Beta = 69%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	1.63	0.00	1.14	0.00	-0.49	0.00	70%	
2	6.03	4.36	4.14	2.96	-1.89	-1.41	69%	68%
3	10.35	8.65	7.04	5.81	-3.31	-2.84	68%	67%
4	14.58	12.82	9.89	8.65	-4.69	-4.17	68%	67%
5	18.68	16.85	12.72	11.47	-5.96	-5.38	68%	68%
6	22.62	20.70	15.49	14.19	-7.13	-6.51	68%	69%
7	26.35	24.31	18.15	16.78	-8.20	-7.53	69%	69%
8	29.79	27.58	20.61	19.12	-9.18	-8.46	69%	69%
9	32.86	30.45	22.80	21.17	-10.06	-9.29	69%	69%
10	35.48	32.81	24.66	22.83	-10.82	-9.99	70%	70%
11	37.54	34.57	26.09	24.02	-11.45	-10.55	70%	69%
12	38.93	35.61	26.99	24.64	-11.94	-10.96	69%	69%
13	39.57	35.84	27.32	24.68	-12.25	-11.16	69%	69%
14	39.35	35.16	27.08	24.15	-12.27	-11.01	69%	69%
15	38.12	33.39	26.24	23.01	-11.88	-10.38	69%	69%
16	35.71	30.34	24.72	21.11	-10.98	-9.22	69%	70%
17	31.91	25.79	22.30	18.17	-9.60	-7.62	70%	70%
18	26.47	19.46	18.67	13.84	-7.80	-5.61	71%	71%
19	19.07	10.99	13.50	7.84	-5.56	-3.15	71%	71%
20	9.34	0.00	6.58	0.00	-2.76	0.00	70%	

Female -- Issue Age 45 -- 20 Year Level Premium Term -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 2.93		Alpha = 1.67		Alpha = -1.26		Alpha = 57%	
	Beta = 5.78		Beta = 4.45		Beta = -1.33		Beta = 77%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	1.46	0.00	0.84	0.00	-0.63	0.00	57%	
2	4.28	2.78	3.59	2.74	-0.69	-0.04	84%	98%
3	7.01	5.47	6.29	5.40	-0.72	-0.07	90%	99%
4	9.64	8.04	8.91	7.97	-0.74	-0.07	92%	99%
5	12.15	10.48	11.42	10.42	-0.73	-0.06	94%	99%
6	14.51	12.75	13.78	12.69	-0.73	-0.06	95%	100%
7	16.68	14.82	15.95	14.77	-0.72	-0.05	96%	100%
8	18.62	16.63	17.90	16.58	-0.72	-0.05	96%	100%
9	20.27	18.12	19.57	18.11	-0.70	-0.01	97%	100%
10	21.58	19.27	20.93	19.30	-0.65	0.04	97%	100%
11	22.53	20.01	21.94	20.13	-0.59	0.12	97%	101%
12	23.06	20.33	22.53	20.49	-0.53	0.16	98%	101%
13	23.15	20.20	22.64	20.34	-0.51	0.15	98%	101%
14	22.79	19.61	22.21	19.62	-0.59	0.01	97%	100%
15	21.96	18.52	21.19	18.30	-0.77	-0.22	96%	99%
16	20.56	16.81	19.53	16.32	-1.02	-0.49	95%	97%
17	18.47	14.35	17.18	13.59	-1.29	-0.75	93%	95%
18	15.52	10.91	14.03	10.03	-1.48	-0.88	90%	92%
19	11.45	6.22	10.00	5.53	-1.45	-0.69	87%	89%
20	6.00	0.00	4.99	0.00	-1.01	0.00	83%	

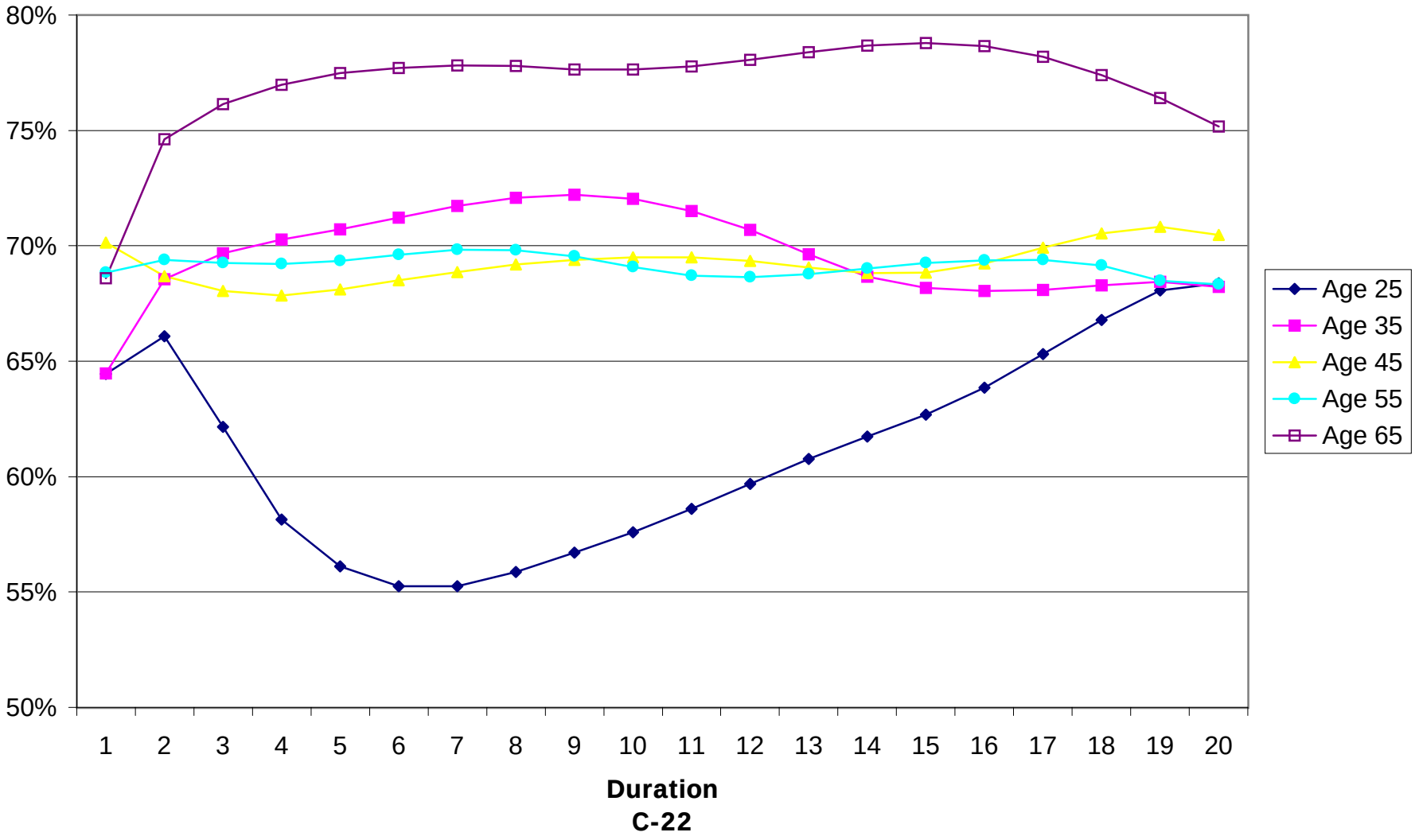
Male -- Issue Age 55 -- 20 Year Level Premium Term -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 7.68		Alpha = 5.29		Alpha = -2.39		Alpha = 69%	
	Beta = 19.90		Beta = 13.83		Beta = -6.08		Beta = 69%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	3.84	0.00	2.64	0.00	-1.20	0.00	69%	
2	15.95	11.99	11.06	8.30	-4.88	-3.69	69%	69%
3	27.82	23.75	19.27	16.41	-8.55	-7.35	69%	69%
4	39.44	35.23	27.30	24.36	-12.15	-10.87	69%	69%
5	50.71	46.30	35.17	32.15	-15.54	-14.14	69%	69%
6	61.52	56.84	42.83	39.67	-18.69	-17.17	70%	70%
7	71.74	66.73	50.09	46.68	-21.65	-20.05	70%	70%
8	81.21	75.78	56.70	52.89	-24.51	-22.89	70%	70%
9	89.72	83.75	62.40	58.08	-27.32	-25.67	70%	69%
10	97.02	90.40	67.03	62.16	-29.99	-28.24	69%	69%
11	102.88	95.46	70.68	65.39	-32.19	-30.07	69%	68%
12	107.03	98.70	73.45	67.70	-33.58	-31.00	69%	69%
13	109.21	99.81	75.11	68.69	-34.10	-31.12	69%	69%
14	109.10	98.48	75.29	68.06	-33.81	-30.42	69%	69%
15	106.32	94.26	73.64	65.39	-32.68	-28.88	69%	69%
16	100.35	86.54	69.61	60.01	-30.74	-26.52	69%	69%
17	90.18	73.93	62.58	51.32	-27.60	-22.61	69%	69%
18	75.17	56.50	51.97	38.79	-23.20	-17.71	69%	69%
19	54.40	32.39	37.26	21.91	-17.14	-10.49	68%	68%
20	26.15	0.00	17.87	0.00	-8.28	0.00	68%	

Female -- Issue Age 55 -- 20 Year Level Premium Term -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 6.02		Alpha = 4.58		Alpha = -1.44		Alpha = 76%	
	Beta = 13.08		Beta = 10.59		Beta = -2.48		Beta = 81%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	3.01	0.00	2.29	0.00	-0.72	0.00	76%	
2	10.00	6.93	8.19	5.79	-1.81	-1.14	82%	83%
3	16.88	13.75	13.86	11.33	-3.02	-2.42	82%	82%
4	23.65	20.48	19.26	16.59	-4.40	-3.89	81%	81%
5	30.32	27.09	24.37	21.55	-5.95	-5.54	80%	80%
6	36.84	33.50	29.17	26.19	-7.67	-7.31	79%	78%
7	43.10	39.61	33.61	30.44	-9.48	-9.17	78%	77%
8	48.97	45.24	37.64	34.24	-11.33	-11.01	77%	76%
9	54.24	50.17	41.18	37.53	-13.06	-12.64	76%	75%
10	58.70	54.17	44.18	40.23	-14.53	-13.93	75%	74%
11	62.17	57.10	46.53	42.24	-15.64	-14.86	75%	74%
12	64.49	58.81	48.13	43.43	-16.36	-15.38	75%	74%
13	65.55	59.20	48.84	43.67	-16.70	-15.54	75%	74%
14	65.24	58.19	48.52	42.77	-16.72	-15.42	74%	74%
15	63.43	55.58	46.98	40.58	-16.45	-15.00	74%	73%
16	59.84	51.01	44.02	36.86	-15.82	-14.15	74%	72%
17	54.04	43.98	39.36	31.27	-14.67	-12.71	73%	71%
18	45.41	33.76	32.69	23.51	-12.72	-10.24	72%	70%
19	33.14	19.44	23.67	13.23	-9.47	-6.21	71%	68%
20	16.26	0.00	11.91	0.00	-4.35	0.00	73%	

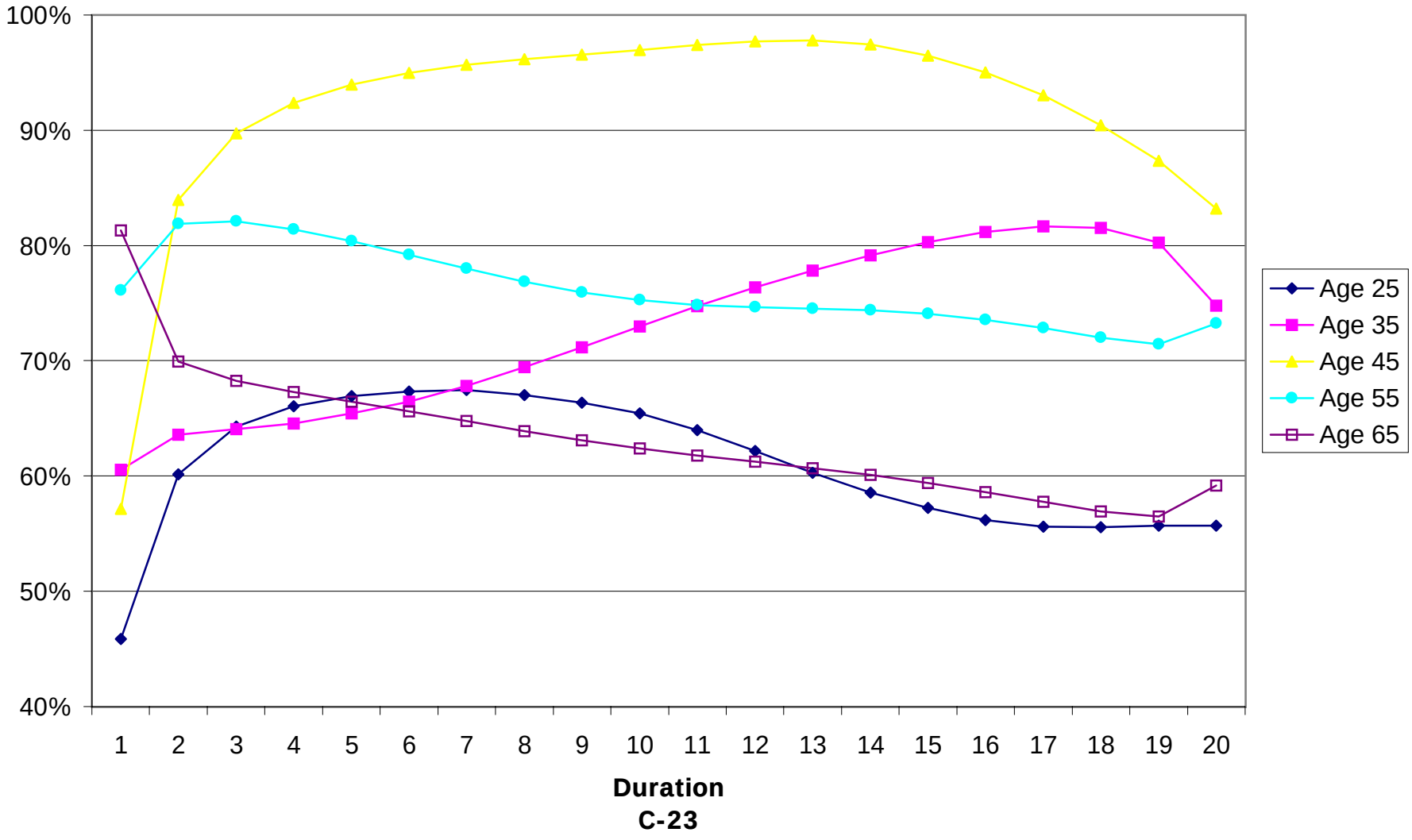
Male -- Issue Age 65 -- 20 Year Level Premium Term -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 20.89		Alpha = 14.33		Alpha = -6.56		Alpha = 69%	
	Beta = 49.52		Beta = 36.05		Beta = -13.46		Beta = 73%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	10.45	0.00	7.16	0.00	-3.28	0.00	69%	
2	38.70	27.87	28.87	21.69	-9.82	-6.18	75%	78%
3	66.30	55.20	50.48	43.21	-15.82	-11.99	76%	78%
4	93.31	81.90	71.82	64.37	-21.49	-17.52	77%	79%
5	119.62	107.82	92.68	84.92	-26.94	-22.90	77%	79%
6	145.03	132.72	112.70	104.43	-32.33	-28.29	78%	79%
7	168.98	155.72	131.51	122.54	-37.47	-33.18	78%	79%
8	191.33	177.42	148.83	139.07	-42.50	-38.36	78%	78%
9	211.86	196.77	164.50	153.87	-47.36	-42.90	78%	78%
10	229.74	213.19	178.35	166.76	-51.39	-46.43	78%	78%
11	244.46	226.21	190.13	177.44	-54.33	-48.77	78%	78%
12	255.49	235.25	199.41	185.33	-56.08	-49.92	78%	79%
13	262.22	239.68	205.56	189.73	-56.67	-49.95	78%	79%
14	263.95	238.70	207.68	189.58	-56.27	-49.12	79%	79%
15	259.69	231.17	204.61	183.60	-55.08	-47.57	79%	79%
16	248.00	215.32	195.05	170.45	-52.95	-44.87	79%	79%
17	226.74	188.65	177.28	148.07	-49.46	-40.58	78%	78%
18	192.87	147.57	149.28	114.44	-43.58	-33.12	77%	78%
19	142.03	86.99	108.53	66.56	-33.51	-20.43	76%	77%
20	68.25	0.00	51.30	0.00	-16.95	0.00	75%	

Female -- Issue Age 65 -- 20 Year Level Premium Term -- Nonsmoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha = 13.35		Alpha = 10.85		Alpha = -2.50		Alpha = 81%	
	Beta = 34.23		Beta = 24.70		Beta = -9.53		Beta = 72%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	6.67	0.00	5.43	0.00	-1.25	0.00	81%	
2	27.37	20.51	19.14	13.58	-8.23	-6.92	70%	66%
3	47.77	40.80	32.60	26.91	-15.17	-13.89	68%	66%
4	67.98	60.92	45.74	39.86	-22.24	-21.06	67%	65%
5	87.99	80.82	58.46	52.35	-29.53	-28.47	66%	65%
6	107.67	100.30	70.64	64.24	-37.03	-36.06	66%	64%
7	126.81	119.09	82.12	75.30	-44.69	-43.79	65%	63%
8	145.03	136.74	92.68	85.36	-52.35	-51.38	64%	62%
9	161.86	152.74	102.15	94.23	-59.71	-58.51	63%	62%
10	176.75	166.54	110.30	101.67	-66.45	-64.87	62%	61%
11	189.19	177.62	116.90	107.42	-72.30	-70.20	62%	60%
12	198.65	185.45	121.64	111.15	-77.01	-74.30	61%	60%
13	204.59	189.50	124.16	112.48	-80.43	-77.02	61%	59%
14	206.41	189.09	124.05	110.93	-82.36	-78.16	60%	59%
15	203.31	183.29	120.80	105.97	-82.51	-77.33	59%	58%
16	194.11	170.70	113.80	96.93	-80.31	-73.77	59%	57%
17	177.13	149.34	102.30	82.98	-74.83	-66.36	58%	56%
18	150.02	116.47	85.38	63.08	-64.64	-53.39	57%	54%
19	109.51	68.31	61.88	35.97	-47.63	-32.34	57%	53%
20	51.27	0.00	30.34	0.00	-20.94	0.00	59%	

Level Premium 20 Year Term Mean Statutory Reserves
Proposed 2001 CSO as a % of 1980 CSO
Nonsmoker -- Ultimate -- Male



Level Premium 20 Year Term Mean Stautory Reserves
Proposed 2001 CSO as a % of 1980 CSO
Nonsmoker -- Ultimate -- Female



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Male -- Issue Age 25 -- 20 Year Level Premium Term -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	2.10	Alpha =	1.59	Alpha =	-0.51	Alpha =	76%
	Beta =	2.79	Beta =	2.15	Beta =	-0.63	Beta =	77%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	1.05	0.00	0.79	0.00	-0.25	0.00	76%	
2	1.78	0.78	1.33	0.50	-0.46	-0.28	74%	64%
3	2.60	1.62	1.79	0.93	-0.81	-0.70	69%	57%
4	3.47	2.53	2.22	1.36	-1.25	-1.17	64%	54%
5	4.38	3.45	2.67	1.82	-1.71	-1.63	61%	53%
6	5.31	4.38	3.15	2.32	-2.16	-2.06	59%	53%
7	6.22	5.27	3.66	2.84	-2.56	-2.44	59%	54%
8	7.10	6.14	4.18	3.37	-2.92	-2.77	59%	55%
9	7.94	6.94	4.70	3.87	-3.24	-3.07	59%	56%
10	8.69	7.65	5.17	4.32	-3.52	-3.33	60%	56%
11	9.33	8.23	5.60	4.72	-3.73	-3.51	60%	57%
12	9.84	8.66	5.96	5.04	-3.88	-3.62	61%	58%
13	10.16	8.88	6.22	5.25	-3.94	-3.63	61%	59%
14	10.25	8.84	6.35	5.29	-3.90	-3.55	62%	60%
15	10.06	8.49	6.31	5.16	-3.75	-3.33	63%	61%
16	9.53	7.78	6.07	4.83	-3.46	-2.96	64%	62%
17	8.60	6.63	5.60	4.21	-3.00	-2.42	65%	63%
18	7.21	5.00	4.81	3.25	-2.40	-1.75	67%	65%
19	5.30	2.81	3.64	1.88	-1.65	-0.93	69%	67%
20	2.80	0.00	2.02	0.00	-0.78	0.00	72%	

Female -- Issue Age 25 -- 20 Year Level Premium Term -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	1.26	Alpha =	0.75	Alpha =	-0.51	Alpha =	60%
	Beta =	2.06	Beta =	1.44	Beta =	-0.62	Beta =	70%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.63	0.00	0.38	0.00	-0.25	0.00	60%	
2	1.42	0.78	1.06	0.68	-0.36	-0.10	75%	87%
3	2.19	1.55	1.72	1.33	-0.47	-0.23	79%	85%
4	2.96	2.32	2.36	1.95	-0.61	-0.37	80%	84%
5	3.72	3.06	2.96	2.53	-0.76	-0.53	80%	83%
6	4.45	3.77	3.54	3.10	-0.91	-0.67	80%	82%
7	5.14	4.45	4.08	3.61	-1.06	-0.84	79%	81%
8	5.80	5.09	4.56	4.06	-1.24	-1.02	79%	80%
9	6.41	5.68	4.98	4.45	-1.44	-1.23	78%	78%
10	6.97	6.20	5.31	4.74	-1.65	-1.46	76%	76%
11	7.45	6.65	5.54	4.90	-1.91	-1.75	74%	74%
12	7.84	6.97	5.64	4.95	-2.20	-2.03	72%	71%
13	8.08	7.12	5.62	4.85	-2.45	-2.27	70%	68%
14	8.12	7.06	5.48	4.66	-2.64	-2.40	67%	66%
15	7.93	6.75	5.22	4.34	-2.71	-2.41	66%	64%
16	7.48	6.15	4.83	3.88	-2.65	-2.27	65%	63%
17	6.70	5.19	4.29	3.26	-2.41	-1.93	64%	63%
18	5.55	3.86	3.57	2.43	-1.98	-1.43	64%	63%
19	4.02	2.14	2.62	1.36	-1.41	-0.78	65%	64%
20	2.10	0.00	1.40	0.00	-0.70	0.00	67%	

Male -- Issue Age 35 -- 20 Year Level Premium Term -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	2.58	Alpha =	1.96	Alpha =	-0.62	Alpha =	76%
	Beta =	5.98	Beta =	4.21	Beta =	-1.77	Beta =	70%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	1.29	0.00	0.98	0.00	-0.31	0.00	76%	
2	4.68	3.37	3.23	2.24	-1.45	-1.13	69%	66%
3	8.01	6.67	5.46	4.47	-2.55	-2.21	68%	67%
4	11.26	9.87	7.65	6.62	-3.61	-3.25	68%	67%
5	14.38	12.91	9.77	8.71	-4.61	-4.20	68%	67%
6	17.33	15.76	11.81	10.69	-5.52	-5.07	68%	68%
7	20.04	18.35	13.70	12.51	-6.34	-5.84	68%	68%
8	22.49	20.65	15.41	14.10	-7.08	-6.54	69%	68%
9	24.60	22.59	16.86	15.41	-7.74	-7.17	69%	68%
10	26.35	24.13	17.99	16.35	-8.36	-7.78	68%	68%
11	27.65	25.19	18.72	16.88	-8.93	-8.31	68%	67%
12	28.46	25.74	19.05	17.01	-9.40	-8.73	67%	66%
13	28.71	25.71	18.95	16.67	-9.77	-9.03	66%	65%
14	28.36	25.03	18.47	16.07	-9.88	-8.96	65%	64%
15	27.30	23.58	17.69	15.11	-9.60	-8.47	65%	64%
16	25.43	21.29	16.50	13.68	-8.93	-7.61	65%	64%
17	22.62	17.98	14.77	11.64	-7.86	-6.33	65%	65%
18	18.72	13.48	12.33	8.80	-6.39	-4.68	66%	65%
19	13.51	7.56	8.99	4.98	-4.52	-2.59	67%	66%
20	6.77	0.00	4.59	0.00	-2.18	0.00	68%	

Female -- Issue Age 35 -- 20 Year Level Premium Term -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	1.90	Alpha =	1.50	Alpha =	-0.40	Alpha =	79%
	Beta =	4.27	Beta =	3.30	Beta =	-0.97	Beta =	77%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.95	0.00	0.75	0.00	-0.20	0.00	79%	
2	3.29	2.32	2.53	1.76	-0.77	-0.56	77%	76%
3	5.57	4.56	4.26	3.46	-1.32	-1.10	76%	76%
4	7.76	6.69	5.95	5.14	-1.81	-1.55	77%	77%
5	9.81	8.67	7.61	6.78	-2.20	-1.89	78%	78%
6	11.71	10.48	9.23	8.38	-2.48	-2.10	79%	80%
7	13.39	12.04	10.80	9.91	-2.60	-2.13	81%	82%
8	14.83	13.36	12.28	11.34	-2.56	-2.02	83%	85%
9	16.02	14.42	13.64	12.64	-2.38	-1.78	85%	88%
10	16.95	15.21	14.85	13.76	-2.10	-1.44	88%	91%
11	17.58	15.70	15.86	14.67	-1.72	-1.03	90%	93%
12	17.92	15.87	16.64	15.31	-1.28	-0.55	93%	97%
13	17.91	15.68	17.11	15.62	-0.80	-0.07	96%	100%
14	17.53	15.12	17.18	15.45	-0.35	0.33	98%	102%
15	16.75	14.11	16.75	14.74	0.00	0.63	100%	104%
16	15.48	12.59	15.73	13.42	0.25	0.83	102%	107%
17	13.68	10.51	14.04	11.37	0.36	0.86	103%	108%
18	11.29	7.80	11.59	8.52	0.31	0.72	103%	109%
19	8.19	4.31	8.29	4.77	0.11	0.46	101%	111%
20	4.29	0.00	4.03	0.00	-0.26	0.00	94%	

Male -- Issue Age 45 -- 20 Year Level Premium Term -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	6.15	Alpha =	4.48	Alpha =	-1.67	Alpha =	73%
	Beta =	14.20	Beta =	9.85	Beta =	-4.35	Beta =	69%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	3.08	0.00	2.24	0.00	-0.84	0.00	73%	
2	11.03	7.86	7.52	5.19	-3.51	-2.67	68%	66%
3	18.78	15.51	12.61	10.17	-6.18	-5.34	67%	66%
4	26.31	22.91	17.58	15.14	-8.73	-7.77	67%	66%
5	33.55	29.98	22.52	20.05	-11.03	-9.93	67%	67%
6	40.43	36.68	27.34	24.79	-13.09	-11.89	68%	68%
7	46.87	42.86	31.94	29.25	-14.93	-13.61	68%	68%
8	52.74	48.43	36.18	33.25	-16.57	-15.17	69%	69%
9	57.91	53.20	39.89	36.67	-18.02	-16.53	69%	69%
10	62.20	57.01	42.94	39.36	-19.26	-17.65	69%	69%
11	65.47	59.73	45.21	41.22	-20.25	-18.51	69%	69%
12	67.56	61.19	46.57	42.07	-20.99	-19.11	69%	69%
13	68.32	61.26	46.93	41.94	-21.39	-19.32	69%	68%
14	67.61	59.76	46.34	40.88	-21.27	-18.87	69%	68%
15	65.23	56.51	44.80	38.86	-20.43	-17.65	69%	69%
16	60.95	51.20	42.16	35.61	-18.79	-15.59	69%	70%
17	54.41	43.43	38.04	30.63	-16.37	-12.80	70%	71%
18	45.17	32.71	31.90	23.32	-13.27	-9.39	71%	71%
19	32.68	18.45	23.18	13.20	-9.50	-5.26	71%	72%
20	16.33	0.00	11.52	0.00	-4.80	0.00	71%	

Female -- Issue Age 45 -- 20 Year Level Premium Term -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	4.52	Alpha =	3.07	Alpha =	-1.45	Alpha =	68%
	Beta =	8.68	Beta =	8.36	Beta =	-0.32	Beta =	96%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	2.26	0.00	1.53	0.00	-0.73	0.00	68%	
2	6.34	4.00	6.79	5.23	0.45	1.22	107%	131%
3	10.26	7.84	11.96	10.33	1.70	2.49	117%	132%
4	14.00	11.49	16.94	15.20	2.94	3.71	121%	132%
5	17.55	14.92	21.67	19.78	4.12	4.86	123%	133%
6	20.83	18.06	26.07	24.01	5.24	5.94	125%	133%
7	23.82	20.90	30.08	27.81	6.26	6.90	126%	133%
8	26.47	23.36	33.64	31.12	7.17	7.76	127%	133%
9	28.69	25.34	36.67	33.86	7.98	8.52	128%	134%
10	30.41	26.80	39.09	35.96	8.69	9.17	129%	134%
11	31.57	27.68	40.83	37.33	9.25	9.66	129%	135%
12	32.15	27.95	41.78	37.87	9.63	9.93	130%	136%
13	32.12	27.61	41.86	37.50	9.75	9.89	130%	136%
14	31.48	26.67	41.01	36.17	9.53	9.50	130%	136%
15	30.20	25.06	39.13	33.73	8.92	8.66	130%	135%
16	28.22	22.70	36.07	30.06	7.86	7.37	128%	132%
17	25.35	19.32	31.74	25.06	6.39	5.74	125%	130%
18	21.35	14.70	25.95	18.48	4.60	3.78	122%	126%
19	15.86	8.35	18.51	10.19	2.65	1.84	117%	122%
20	8.51	0.00	9.27	0.00	0.76	0.00	109%	

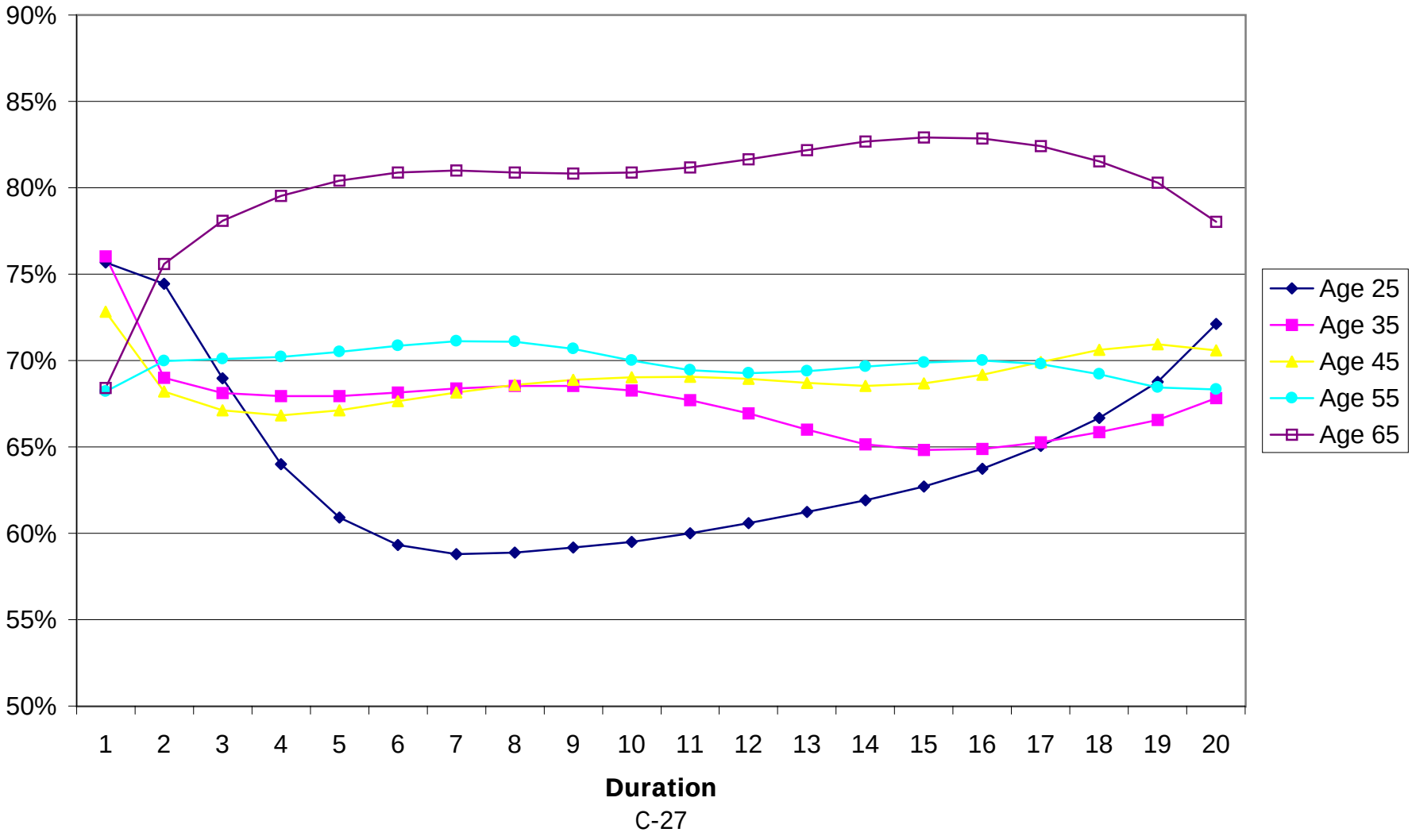
Male -- Issue Age 55 -- 20 Year Level Premium Term -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	14.92	Alpha =	10.18	Alpha =	-4.75	Alpha =	68%
	Beta =	32.40	Beta =	22.59	Beta =	-9.80	Beta =	70%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	7.46	0.00	5.09	0.00	-2.37	0.00	68%	
2	24.65	16.89	17.25	11.90	-7.40	-5.00	70%	70%
3	41.30	33.31	28.95	23.41	-12.35	-9.90	70%	70%
4	57.44	49.17	40.33	34.66	-17.11	-14.51	70%	70%
5	73.00	64.43	51.47	45.68	-21.53	-18.75	71%	71%
6	87.87	78.92	62.27	56.27	-25.60	-22.65	71%	71%
7	101.86	92.41	72.44	66.02	-29.42	-26.38	71%	71%
8	114.72	104.63	81.54	74.47	-33.18	-30.17	71%	71%
9	126.15	115.27	89.16	81.26	-36.99	-34.01	71%	70%
10	135.82	123.98	95.08	86.31	-40.74	-37.67	70%	70%
11	143.41	130.44	99.57	90.24	-43.84	-40.20	69%	69%
12	148.60	134.36	102.92	93.01	-45.67	-41.35	69%	69%
13	151.07	135.39	104.82	94.04	-46.25	-41.34	69%	69%
14	150.47	133.16	104.78	92.92	-45.69	-40.24	70%	70%
15	146.33	127.11	102.28	89.05	-44.05	-38.06	70%	70%
16	137.96	116.42	96.59	81.54	-41.37	-34.88	70%	70%
17	124.41	100.02	86.84	69.55	-37.57	-30.47	70%	70%
18	104.43	76.44	72.27	52.41	-32.15	-24.03	69%	69%
19	76.34	43.83	52.25	29.49	-24.09	-14.34	68%	67%
20	38.11	0.00	26.04	0.00	-12.07	0.00	68%	

Female -- Issue Age 55 -- 20 Year Level Premium Term -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	9.24	Alpha =	8.92	Alpha =	-0.32	Alpha =	97%
	Beta =	17.92	Beta =	18.98	Beta =	1.06	Beta =	106%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	4.62	0.00	4.46	0.00	-0.16	0.00	97%	
2	13.18	8.44	14.31	9.63	1.13	1.19	109%	114%
3	21.54	16.72	23.72	18.83	2.18	2.11	110%	113%
4	29.76	24.87	32.71	27.60	2.95	2.73	110%	111%
5	37.84	32.89	41.21	35.84	3.37	2.95	109%	109%
6	45.75	40.70	49.16	43.49	3.41	2.79	107%	107%
7	53.37	48.11	56.49	50.50	3.12	2.39	106%	105%
8	60.49	54.95	63.10	56.70	2.60	1.75	104%	103%
9	66.85	60.83	68.87	62.06	2.02	1.23	103%	102%
10	72.15	65.55	73.75	66.46	1.60	0.90	102%	101%
11	76.17	68.87	77.59	69.74	1.42	0.87	102%	101%
12	78.76	70.72	80.23	71.73	1.47	1.01	102%	101%
13	79.79	70.94	81.45	72.18	1.66	1.24	102%	102%
14	79.22	69.57	80.99	70.81	1.77	1.24	102%	102%
15	76.90	66.31	78.55	67.31	1.65	1.00	102%	102%
16	72.56	60.89	73.79	61.28	1.22	0.38	102%	101%
17	65.68	52.55	66.20	52.14	0.52	-0.41	101%	99%
18	55.43	40.38	55.23	39.34	-0.20	-1.05	100%	97%
19	40.79	23.29	40.27	22.22	-0.52	-1.06	99%	95%
20	20.60	0.00	20.60	0.00	0.00	0.00	100%	

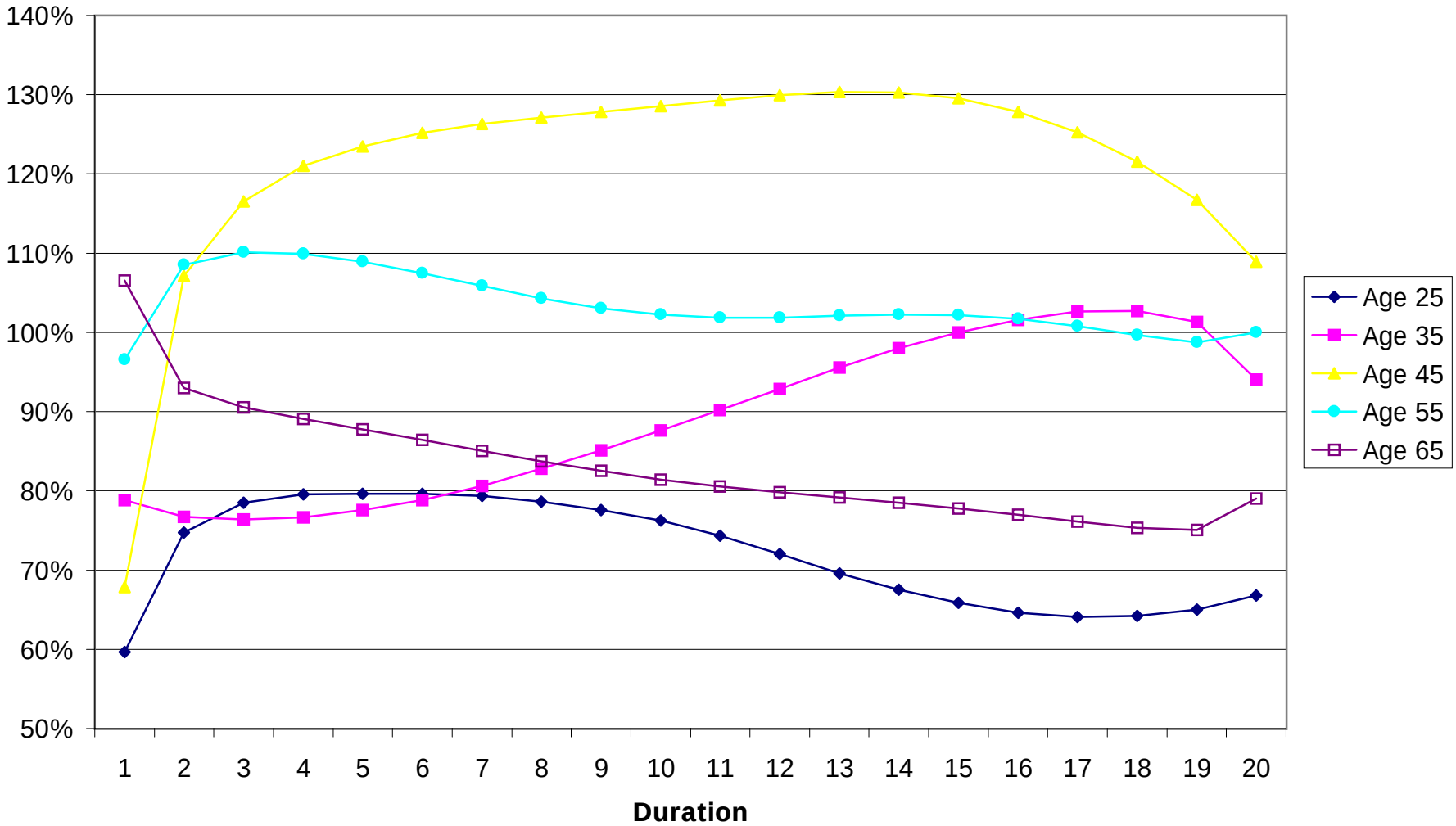
Male -- Issue Age 65 -- 20 Year Level Premium Term -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	36.15	Alpha =	24.73	Alpha =	-11.42	Alpha =	68%
	Beta =	68.40	Beta =	49.93	Beta =	-18.48	Beta =	73%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	18.08	0.00	12.37	0.00	-5.71	0.00	68%	
2	49.62	30.84	37.51	25.10	-12.11	-5.74	76%	81%
3	80.04	60.83	62.50	49.98	-17.54	-10.85	78%	82%
4	109.62	90.00	87.17	74.43	-22.45	-15.57	80%	83%
5	138.33	118.25	111.24	98.12	-27.09	-20.13	80%	83%
6	166.00	145.34	134.27	120.50	-31.73	-24.85	81%	83%
7	192.35	170.96	155.79	141.15	-36.56	-29.80	81%	83%
8	216.98	194.60	175.53	159.97	-41.46	-34.63	81%	82%
9	239.35	215.70	193.42	176.95	-45.93	-38.75	81%	82%
10	258.90	233.71	209.44	192.01	-49.46	-41.70	81%	82%
11	274.98	247.86	223.26	204.57	-51.73	-43.28	81%	83%
12	286.92	257.59	234.27	214.04	-52.65	-43.55	82%	83%
13	294.14	262.29	241.75	219.54	-52.38	-42.74	82%	84%
14	295.95	261.20	244.66	219.85	-51.29	-41.35	83%	84%
15	291.36	253.11	241.60	213.42	-49.76	-39.69	83%	84%
16	278.79	236.07	231.01	198.67	-47.78	-37.39	83%	84%
17	255.86	207.25	210.85	173.10	-45.01	-34.14	82%	84%
18	219.09	162.54	178.64	134.26	-40.45	-28.28	82%	83%
19	163.51	96.08	131.30	78.41	-32.21	-17.67	80%	82%
20	82.24	0.00	64.17	0.00	-18.07	0.00	78%	

Female -- Issue Age 65 -- 20 Year Level Premium Term -- Smoker -- Ultimate -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO-1980 CSO		2001 CSO/1980 CSO	
	Alpha =	18.83	Alpha =	20.07	Alpha =	1.24	Alpha =	107%
	Beta =	41.47	Beta =	39.84	Beta =	-1.62	Beta =	96%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	9.42	0.00	10.04	0.00	0.62	0.00	107%	
2	31.78	22.09	29.56	19.27	-2.22	-2.82	93%	87%
3	53.70	43.84	48.61	38.10	-5.10	-5.74	91%	87%
4	75.39	65.47	67.15	56.35	-8.25	-9.12	89%	86%
5	96.90	86.85	85.04	73.88	-11.86	-12.97	88%	85%
6	118.13	107.94	102.11	90.49	-16.03	-17.45	86%	84%
7	138.83	128.25	118.09	105.85	-20.74	-22.40	85%	83%
8	158.50	147.28	132.70	119.71	-25.79	-27.56	84%	81%
9	176.58	164.41	145.68	131.80	-30.90	-32.61	83%	80%
10	192.46	179.05	156.71	141.77	-35.75	-37.28	81%	79%
11	205.58	190.65	165.54	149.46	-40.04	-41.18	81%	78%
12	215.40	198.68	171.87	154.44	-43.52	-44.24	80%	78%
13	221.38	202.62	175.24	156.19	-46.15	-46.42	79%	77%
14	222.96	201.83	175.06	154.08	-47.90	-47.75	79%	76%
15	219.33	195.35	170.64	147.36	-48.68	-48.00	78%	75%
16	209.28	181.74	161.13	135.05	-48.15	-46.69	77%	74%
17	191.06	158.92	145.42	115.94	-45.64	-42.97	76%	73%
18	162.19	124.00	122.14	88.49	-40.06	-35.52	75%	71%
19	119.26	73.05	89.51	50.69	-29.75	-22.36	75%	69%
20	57.26	0.00	45.27	0.00	-11.99	0.00	79%	

Level Premium 20 Year Term Mean Statutory Reserves
Proposed 2001 CSO as a % of 1980 CSO
Smoker -- Ultimate -- Male



Level Premium 20 Year Term Mean Statutory Reserves
Proposed 2001 CSO as a % of 1980 CSO
Smoker -- Ultimate -- Female



Male -- Issue Age 45 -- 20 Year Level Premium Term -- Composite -- Select & Ult -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO - 1980 CSO		2001 CSO / 1980 CSO	
	Alpha =	1.51	Alpha =	1.09	Alpha =	-0.43	Alpha =	72%
	Beta =	7.26	Beta =	5.07	Beta =	-2.20	Beta =	70%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.76	0.00	0.54	0.00	-0.21	0.00	72%	
2	6.30	5.33	4.46	3.85	-1.84	-1.47	71%	72%
3	11.44	10.29	8.26	7.60	-3.18	-2.69	72%	74%
4	16.27	14.98	11.96	11.25	-4.31	-3.73	74%	75%
5	20.90	19.55	15.53	14.74	-5.37	-4.82	74%	75%
6	25.40	23.99	18.90	18.01	-6.50	-5.98	74%	75%
7	29.77	28.29	22.02	20.97	-7.75	-7.32	74%	74%
8	33.97	32.40	24.82	23.60	-9.16	-8.80	73%	73%
9	38.01	36.36	27.26	25.86	-10.75	-10.50	72%	71%
10	41.78	39.93	29.33	27.74	-12.44	-12.19	70%	69%
11	45.01	42.83	30.95	29.09	-14.06	-13.74	69%	68%
12	47.51	44.92	31.92	29.69	-15.59	-15.24	67%	66%
13	49.01	45.84	32.17	29.59	-16.85	-16.26	66%	65%
14	49.37	45.63	31.75	28.85	-17.62	-16.78	64%	63%
15	48.50	44.11	30.65	27.38	-17.85	-16.73	63%	62%
16	46.03	40.69	28.65	24.86	-17.38	-15.83	62%	61%
17	41.55	35.16	25.49	21.05	-16.07	-14.11	61%	60%
18	34.65	26.88	20.94	15.77	-13.71	-11.12	60%	59%
19	24.80	15.46	14.82	8.80	-9.98	-6.66	60%	57%
20	11.36	0.00	6.93	0.00	-4.43	0.00	61%	

Female -- Issue Age 45 -- 20 Year Level Premium Term -- Composite -- Select & Ult -- 4.50%								
	1980 CSO		2001 CSO		2001 CSO - 1980 CSO		2001 CSO / 1980 CSO	
	Alpha =	1.08	Alpha =	0.93	Alpha =	-0.15	Alpha =	86%
	Beta =	4.67	Beta =	4.16	Beta =	-0.51	Beta =	89%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.54	0.00	0.46	0.00	-0.08	0.00	86%	
2	4.04	3.41	3.66	3.15	-0.39	-0.26	90%	92%
3	7.36	6.63	6.75	6.20	-0.60	-0.44	92%	93%
4	10.49	9.66	9.73	9.11	-0.75	-0.56	93%	94%
5	13.42	12.50	12.56	11.86	-0.86	-0.64	94%	95%
6	16.16	15.14	15.22	14.41	-0.94	-0.73	94%	95%
7	18.68	17.55	17.67	16.76	-1.02	-0.79	95%	95%
8	20.95	19.67	19.88	18.83	-1.07	-0.84	95%	96%
9	22.95	21.56	21.80	20.60	-1.16	-0.96	95%	96%
10	24.67	23.11	23.38	22.00	-1.29	-1.11	95%	95%
11	26.03	24.28	24.58	22.99	-1.46	-1.29	94%	95%
12	27.03	25.11	25.32	23.50	-1.71	-1.61	94%	94%
13	27.61	25.43	25.55	23.45	-2.05	-1.98	93%	92%
14	27.52	24.94	25.19	22.77	-2.33	-2.17	92%	91%
15	26.74	23.87	24.15	21.38	-2.59	-2.49	90%	90%
16	25.25	21.95	22.35	19.17	-2.90	-2.78	89%	87%
17	22.79	18.96	19.68	16.04	-3.11	-2.92	86%	85%
18	19.07	14.51	16.04	11.87	-3.04	-2.64	84%	82%
19	13.75	8.32	11.30	6.57	-2.45	-1.75	82%	79%
20	6.50	0.00	5.36	0.00	-1.13	0.00	83%	

Male -- Issue Age 45 -- 20 Year Level Premium Term -- Composite -- Ultimate -- 4.50%								
	VBT		2001 CSO		2001 CSO - VBT		2001 CSO / VBT	
	Alpha =	2.17	Alpha =	2.59	Alpha =	0.41	Alpha =	119%
	Beta =	5.15	Beta =	5.93	Beta =	0.78	Beta =	115%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	1.09	0.00	1.29	0.00	0.21	0.00	119%	
2	4.02	2.89	4.59	3.24	0.57	0.36	114%	112%
3	6.85	5.67	7.77	6.37	0.92	0.70	113%	112%
4	9.63	8.45	10.89	9.47	1.25	1.02	113%	112%
5	12.40	11.21	13.97	12.54	1.57	1.33	113%	112%
6	15.13	13.89	16.99	15.51	1.86	1.61	112%	112%
7	17.74	16.44	19.87	18.31	2.14	1.87	112%	111%
8	20.17	18.75	22.54	20.84	2.38	2.10	112%	111%
9	22.32	20.75	24.91	23.05	2.59	2.30	112%	111%
10	24.14	22.38	26.91	24.83	2.77	2.46	111%	111%
11	25.53	23.53	28.43	26.09	2.90	2.56	111%	111%
12	26.39	24.10	29.37	26.72	2.98	2.62	111%	111%
13	26.68	24.10	29.69	26.72	3.01	2.62	111%	111%
14	26.41	23.56	29.38	26.11	2.98	2.55	111%	111%
15	25.58	22.45	28.45	24.86	2.87	2.41	111%	111%
16	24.12	20.63	26.80	22.80	2.68	2.17	111%	111%
17	21.78	17.78	24.18	19.62	2.39	1.83	111%	110%
18	18.25	13.57	20.24	14.94	1.99	1.37	111%	110%
19	13.20	7.69	14.66	8.45	1.46	0.76	111%	110%
20	6.42	0.00	7.19	0.00	0.77	0.00	112%	

Female -- Issue Age 45 -- 20 Year Level Premium Term -- Composite -- Ultimate -- 4.50%								
	VBT		2001 CSO		2001 CSO - VBT		2001 CSO / VBT	
	Alpha =	1.46	Alpha =	1.83	Alpha =	0.37	Alpha =	126%
	Beta =	4.15	Beta =	4.82	Beta =	0.68	Beta =	116%
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.73	0.00	0.92	0.00	0.19	0.00	126%	
2	3.40	2.66	3.89	2.95	0.48	0.29	114%	111%
3	6.02	5.24	6.80	5.82	0.77	0.57	113%	111%
4	8.57	7.74	9.61	8.58	1.05	0.84	112%	111%
5	11.00	10.11	12.30	11.20	1.31	1.09	112%	111%
6	13.28	12.31	14.84	13.64	1.55	1.33	112%	111%
7	15.39	14.32	17.16	15.86	1.77	1.54	112%	111%
8	17.28	16.08	19.25	17.81	1.97	1.73	111%	111%
9	18.89	17.56	21.04	19.44	2.14	1.88	111%	111%
10	20.20	18.71	22.49	20.71	2.28	2.00	111%	111%
11	21.17	19.49	23.55	21.58	2.38	2.09	111%	111%
12	21.73	19.83	24.18	21.95	2.45	2.13	111%	111%
13	21.82	19.67	24.28	21.78	2.46	2.12	111%	111%
14	21.38	18.94	23.80	21.00	2.43	2.06	111%	111%
15	20.37	17.64	22.70	19.58	2.34	1.94	111%	111%
16	18.75	15.71	20.92	17.44	2.17	1.73	112%	111%
17	16.46	13.06	18.39	14.52	1.94	1.46	112%	111%
18	13.41	9.62	15.02	10.70	1.61	1.08	112%	111%
19	9.54	5.30	10.72	5.90	1.18	0.60	112%	111%
20	4.73	0.00	5.36	0.00	0.64	0.00	114%	

Male -- Issue Age 45 -- 20 Year Level Premium Term -- Composite -- Select & Ult -- 4.50%								
	VBT		2001 CSO		2001 CSO - VBT		2001 CSO / VBT	
	Alpha = 0.68		Alpha = 1.09		Alpha = 0.41		Alpha = 161%	
	Beta = 4.29		Beta = 5.07		Beta = 0.78		Beta = 118%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.34	0.00	0.54	0.00	0.21	0.00	161%	
2	3.89	3.50	4.46	3.85	0.57	0.35	115%	110%
3	7.35	6.91	8.26	7.60	0.91	0.69	112%	110%
4	10.71	10.23	11.96	11.25	1.25	1.02	112%	110%
5	13.96	13.41	15.53	14.74	1.56	1.33	111%	110%
6	17.05	16.40	18.90	18.01	1.86	1.61	111%	110%
7	19.89	19.10	22.02	20.97	2.13	1.86	111%	110%
8	22.45	21.51	24.82	23.60	2.37	2.10	111%	110%
9	24.68	23.57	27.26	25.86	2.58	2.29	110%	110%
10	26.58	25.30	29.33	27.74	2.76	2.45	110%	110%
11	28.06	26.53	30.95	29.09	2.89	2.56	110%	110%
12	28.94	27.06	31.92	29.69	2.98	2.62	110%	110%
13	29.16	26.96	32.17	29.59	3.01	2.62	110%	110%
14	28.78	26.30	31.75	28.85	2.98	2.55	110%	110%
15	27.78	24.98	30.65	27.38	2.87	2.41	110%	110%
16	25.98	22.69	28.65	24.86	2.68	2.17	110%	110%
17	23.10	19.22	25.49	21.05	2.39	1.83	110%	110%
18	18.95	14.39	20.94	15.77	1.99	1.37	110%	110%
19	13.36	8.04	14.82	8.80	1.46	0.77	111%	110%
20	6.16	0.00	6.93	0.00	0.77	0.00	113%	

Female -- Issue Age 45 -- 20 Year Level Premium Term -- Composite -- Select & Ult -- 4.50%								
	VBT		2001 CSO		2001 CSO - VBT		2001 CSO / VBT	
	Alpha = 0.56		Alpha = 0.93		Alpha = 0.37		Alpha = 167%	
	Beta = 3.48		Beta = 4.16		Beta = 0.68		Beta = 119%	
	Reserve		Reserve		Reserve		Reserve	
Duration	Mean	Terminal	Mean	Terminal	Mean	Terminal	Mean	Terminal
1	0.28	0.00	0.46	0.00	0.19	0.00	167%	
2	3.17	2.85	3.66	3.15	0.49	0.30	115%	110%
3	5.98	5.61	6.75	6.20	0.78	0.58	113%	110%
4	8.68	8.26	9.73	9.11	1.05	0.85	112%	110%
5	11.25	10.76	12.56	11.86	1.31	1.10	112%	110%
6	13.66	13.08	15.22	14.41	1.55	1.33	111%	110%
7	15.89	15.22	17.67	16.76	1.78	1.54	111%	110%
8	17.90	17.10	19.88	18.83	1.98	1.73	111%	110%
9	19.65	18.71	21.80	20.60	2.15	1.89	111%	110%
10	21.09	19.99	23.38	22.00	2.29	2.01	111%	110%
11	22.18	20.90	24.58	22.99	2.39	2.10	111%	110%
12	22.87	21.36	25.32	23.50	2.45	2.13	111%	110%
13	23.09	21.32	25.55	23.45	2.47	2.12	111%	110%
14	22.76	20.71	25.19	22.77	2.43	2.06	111%	110%
15	21.81	19.44	24.15	21.38	2.34	1.94	111%	110%
16	20.18	17.43	22.35	19.17	2.18	1.74	111%	110%
17	17.75	14.58	19.68	16.04	1.94	1.46	111%	110%
18	14.42	10.79	16.04	11.87	1.61	1.09	111%	110%
19	10.12	5.96	11.30	6.57	1.18	0.60	112%	110%
20	4.72	0.00	5.36	0.00	0.64	0.00	114%	

Male -- Issue Age 35 -- Level Premium to 0 UL -- Composite -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	0.31	0.21	-0.10	67%
5	13.71	11.73	-1.97	86%
10	39.54	39.54	0.00	100%
15	75.45	75.45	0.00	100%
20	116.89	116.89	0.00	100%
25	166.71	166.71	0.00	100%
30	226.66	226.66	0.00	100%
35	298.15	298.15	0.00	100%
40	375.96	375.96	0.00	100%
45	471.15	471.15	0.00	100%
50	587.21	587.21	0.00	100%
55	727.70	727.70	0.00	100%
60	917.33	917.33	0.00	100%

Female -- Issue Age 35 -- Level Premium to 0 UL -- Composite -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	0.24	0.16	-0.08	65%
5	10.86	9.70	-1.17	89%
10	31.72	31.72	0.00	100%
15	59.72	59.72	0.00	100%
20	91.70	91.70	0.00	100%
25	130.80	130.80	0.00	100%
30	177.97	177.97	0.00	100%
35	236.84	236.84	0.00	100%
40	307.19	307.19	0.00	100%
45	388.84	388.84	0.00	100%
50	482.17	482.17	0.00	100%
55	584.83	584.83	0.00	100%
60	695.78	695.78	0.00	100%

Male -- Issue Age 45 -- Level Premium to 0 UL -- Composite -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	0.71	0.50	-0.21	71%
5	23.88	20.35	-3.53	85%
10	69.99	69.99	0.00	100%
15	124.35	124.35	0.00	100%
20	183.58	183.58	0.00	100%
25	253.13	253.13	0.00	100%
30	326.12	326.12	0.00	100%
35	411.69	411.69	0.00	100%
40	508.68	508.68	0.00	100%
45	619.41	619.41	0.00	100%
50	743.25	743.25	0.00	100%

Female -- Issue Age 45 -- Level Premium to 0 UL -- Composite -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	0.58	0.35	-0.23	60%
5	18.28	16.90	-1.38	92%
10	54.41	54.41	0.00	100%
15	96.30	96.30	0.00	100%
20	142.62	142.62	0.00	100%
25	199.92	199.92	0.00	100%
30	267.23	267.23	0.00	100%
35	342.98	342.98	0.00	100%
40	424.41	424.41	0.00	100%
45	503.45	503.45	0.00	100%
50	575.23	575.23	0.00	100%

Male -- Issue Age 55 -- Level Premium to 0 UL -- Composite -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	1.79	1.23	-0.56	69%
5	38.29	33.02	-5.27	86%
10	111.96	111.96	0.00	100%
15	187.65	187.65	0.00	100%
20	259.76	259.76	0.00	100%
25	341.07	341.07	0.00	100%
30	425.26	425.26	0.00	100%
35	508.20	508.20	0.00	100%
40	584.58	584.58	0.00	100%

Female -- Issue Age 55 -- Level Premium to 0 UL -- Composite -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	1.20	0.97	-0.22	81%
5	28.31	24.68	-3.64	87%
10	86.33	86.33	0.00	100%
15	149.70	149.70	0.00	100%
20	216.77	216.77	0.00	100%
25	290.38	290.38	0.00	100%
30	365.29	365.29	0.00	100%
35	426.49	426.49	0.00	100%
40	460.99	460.99	0.00	100%

Male -- Issue Age 65 -- Level Premium to 0 UL -- Composite -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	4.53	3.12	-1.41	69%
5	48.44	43.40	-5.04	90%
10	134.01	134.01	0.00	100%
15	224.59	224.59	0.00	100%
20	301.12	301.12	0.00	100%
25	359.58	359.58	0.00	100%
30	376.94	376.94	0.00	100%

Female -- Issue Age 65 -- Level Premium to 0 UL -- Composite -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	2.38	2.09	-0.29	88%
5	38.61	31.75	-6.86	82%
10	118.96	118.96	0.00	100%
15	199.92	199.92	0.00	100%
20	270.29	270.29	0.00	100%
25	319.29	319.29	0.00	100%
30	320.56	320.56	0.00	100%

Male -- Issue Age 35 -- Level Premium to 0 UL -- Nonsmoker -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	0.27	0.17	-0.09	65%
5	12.78	11.00	-1.78	86%
10	37.43	37.43	0.00	100%
15	70.62	70.62	0.00	100%
20	108.84	108.84	0.00	100%
25	155.04	155.04	0.00	100%
30	210.85	210.85	0.00	100%
35	277.40	277.40	0.00	100%
40	349.47	349.47	0.00	100%
45	435.48	435.48	0.00	100%
50	534.91	534.91	0.00	100%
55	653.87	653.87	0.00	100%
60	820.32	820.32	0.00	100%

Female -- Issue Age 35 -- Level Premium to 0 UL -- Nonsmoker -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	0.22	0.13	-0.08	61%
5	10.11	8.81	-1.30	87%
10	29.88	29.88	0.00	100%
15	55.72	55.72	0.00	100%
20	85.08	85.08	0.00	100%
25	121.14	121.14	0.00	100%
30	164.80	164.80	0.00	100%
35	219.29	219.29	0.00	100%
40	284.21	284.21	0.00	100%
45	358.62	358.62	0.00	100%
50	440.44	440.44	0.00	100%
55	522.01	522.01	0.00	100%
60	602.88	602.88	0.00	100%

Male -- Issue Age 45 -- Level Premium to 0 UL -- Nonsmoker -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	0.59	0.42	-0.18	70%
5	22.70	19.42	-3.28	86%
10	65.16	65.16	0.00	100%
15	115.37	115.37	0.00	100%
20	170.40	170.40	0.00	100%
25	235.17	235.17	0.00	100%
30	303.17	303.17	0.00	100%
35	381.52	381.52	0.00	100%
40	465.60	465.60	0.00	100%
45	551.98	551.98	0.00	100%
50	643.74	643.74	0.00	100%

Female -- Issue Age 45 -- Level Premium to 0 UL -- Nonsmoker -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	0.50	0.28	-0.21	57%
5	17.36	15.57	-1.79	90%
10	50.48	50.48	0.00	100%
15	89.08	89.08	0.00	100%
20	131.90	131.90	0.00	100%
25	184.91	184.91	0.00	100%
30	247.15	247.15	0.00	100%
35	316.62	316.62	0.00	100%
40	389.03	389.03	0.00	100%
45	451.22	451.22	0.00	100%
50	489.88	489.88	0.00	100%

Male -- Issue Age 55 -- Level Premium to 0 UL -- Nonsmoker -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	1.47	1.02	-0.46	69%
5	36.87	31.82	-5.05	86%
10	104.79	104.79	0.00	100%
15	174.93	174.93	0.00	100%
20	242.21	242.21	0.00	100%
25	317.39	317.39	0.00	100%
30	392.56	392.56	0.00	100%
35	456.70	456.70	0.00	100%
40	493.71	493.71	0.00	100%

Female -- Issue Age 55 -- Level Premium to 0 UL -- Nonsmoker - Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	1.04	0.79	-0.25	76%
5	27.40	23.31	-4.09	85%
10	80.79	80.79	0.00	100%
15	139.24	139.24	0.00	100%
20	201.16	201.16	0.00	100%
25	268.88	268.88	0.00	100%
30	336.43	336.43	0.00	100%
35	386.34	386.34	0.00	100%
40	395.78	395.78	0.00	100%

Male -- Issue Age 65 -- Level Premium to 0 UL -- Nonsmoker -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	3.76	2.59	-1.17	69%
5	46.63	41.66	-4.96	89%
10	124.40	124.40	0.00	100%
15	207.72	207.72	0.00	100%
20	277.29	277.29	0.00	100%
25	326.31	326.31	0.00	100%
30	325.39	325.39	0.00	100%

Female -- Issue Age 65 -- Level Premium to 0 UL -- Nonsmoker - Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	2.06	1.68	-0.38	81%
5	37.28	30.08	-7.20	81%
10	110.71	110.71	0.00	100%
15	184.76	184.76	0.00	100%
20	248.39	248.39	0.00	100%
25	290.06	290.06	0.00	100%
30	281.66	281.66	0.00	100%

Male -- Issue Age 35 -- Level Premium to 0 UL -- Smoker -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	0.54	0.41	-0.13	76%
5	19.42	16.22	-3.19	84%
10	52.52	52.52	0.00	100%
15	105.17	105.17	0.00	100%
20	166.38	166.38	0.00	100%
25	238.36	238.36	0.00	100%
30	323.77	323.77	0.00	100%
35	425.57	425.57	0.00	100%
40	538.70	538.70	0.00	100%
45	690.22	690.22	0.00	100%
50	908.46	908.46	0.00	100%
55	1181.18	1181.18	0.00	100%
60	1513.27	1513.27	0.00	100%

Female -- Issue Age 35 -- Level Premium to 0 UL -- Smoker -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	0.41	0.32	-0.09	79%
5	15.48	15.16	-0.33	98%
10	43.00	43.00	0.00	100%
15	84.30	84.30	0.00	100%
20	132.35	132.35	0.00	100%
25	190.15	190.15	0.00	100%
30	258.84	258.84	0.00	100%
35	344.66	344.66	0.00	100%
40	448.35	448.35	0.00	100%
45	574.44	574.44	0.00	100%
50	738.56	738.56	0.00	100%
55	970.73	970.73	0.00	100%
60	1266.48	1266.48	0.00	100%

Male -- Issue Age 45 -- Level Premium to 0 UL -- Smoker -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	1.43	1.04	-0.39	73%
5	31.14	26.06	-5.07	84%
10	99.72	99.72	0.00	100%
15	179.55	179.55	0.00	100%
20	264.55	264.55	0.00	100%
25	363.46	363.46	0.00	100%
30	467.09	467.09	0.00	100%
35	597.00	597.00	0.00	100%
40	773.33	773.33	0.00	100%
45	1033.64	1033.64	0.00	100%
50	1354.55	1354.55	0.00	100%

Female -- Issue Age 45 -- Level Premium to 0 UL -- Smoker -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	1.08	0.73	-0.35	68%
5	23.96	25.13	1.18	105%
10	78.57	78.57	0.00	100%
15	140.64	140.64	0.00	100%
20	208.48	208.48	0.00	100%
25	292.10	292.10	0.00	100%
30	390.58	390.58	0.00	100%
35	504.87	504.87	0.00	100%
40	641.72	641.72	0.00	100%
45	824.27	824.27	0.00	100%
50	1099.52	1099.52	0.00	100%

Male -- Issue Age 55 -- Level Premium to 0 UL -- Smoker -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	3.71	2.53	-1.17	68%
5	47.01	40.39	-6.62	86%
10	156.01	156.01	0.00	100%
15	265.76	265.76	0.00	100%
20	367.59	367.59	0.00	100%
25	486.53	486.53	0.00	100%
30	626.14	626.14	0.00	100%
35	824.52	824.52	0.00	100%
40	1142.78	1142.78	0.00	100%

Female -- Issue Age 55 -- Level Premium to 0 UL -- Smoker -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	2.18	2.11	-0.07	97%
5	33.95	33.09	-0.86	97%
10	120.40	120.40	0.00	100%
15	214.02	214.02	0.00	100%
20	312.72	312.72	0.00	100%
25	422.40	422.40	0.00	100%
30	542.61	542.61	0.00	100%
35	673.12	673.12	0.00	100%
40	861.61	861.61	0.00	100%

Male -- Issue Age 65 -- Level Premium to 0 UL -- Smoker -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	9.29	6.39	-2.90	69%
5	59.57	54.05	-5.51	91%
10	193.01	193.01	0.00	100%
15	328.20	328.20	0.00	100%
20	447.54	447.54	0.00	100%
25	563.97	563.97	0.00	100%
30	693.60	693.60	0.00	100%

Female -- Issue Age 65 -- Level Premium to 0 UL -- Smoker -- Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	4.33	4.61	0.28	107%
5	46.80	42.04	-4.75	90%
10	169.65	169.65	0.00	100%
15	293.03	293.03	0.00	100%
20	404.82	404.82	0.00	100%
25	498.81	498.81	0.00	100%
30	559.54	559.54	0.00	100%

Male -- Issue Age 45 -- Level Premium to 0 UL -- Composite -- Select & Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	0.46	0.21	-0.25	46%
5	24.72	21.25	-3.47	86%
10	69.99	69.99	0.00	100%
15	124.35	124.35	0.00	100%
20	183.58	183.58	0.00	100%
25	253.13	253.13	0.00	100%
30	326.12	326.12	0.00	100%
35	411.69	411.69	0.00	100%
40	508.68	508.68	0.00	100%
45	619.41	619.41	0.00	100%
50	743.25	743.25	0.00	100%

Female -- Issue Age 45 -- Level Premium to 0 UL -- Composite -- Select & Ultimate -- 4.50%				
	Mean Reserves			
Duration	1980 CSO	2001 CSO	2001-1980	2001/1980
1	0.46	0.17	-0.29	37%
5	18.67	17.29	-1.38	93%
10	54.41	54.41	0.00	100%
15	96.30	96.30	0.00	100%
20	142.62	142.62	0.00	100%
25	199.92	199.92	0.00	100%
30	267.23	267.23	0.00	100%
35	342.98	342.98	0.00	100%
40	424.41	424.41	0.00	100%
45	503.45	503.45	0.00	100%
50	575.23	575.23	0.00	100%

Appendix D

Sufficiency Testing

The proposed CSO table was constructed to ensure that the loaded table will produce expected tabular deaths that exceed the number of actual deaths in the 1990-95 study period for 71% of the companies that participated in the study. Extending this to the universe of companies implies sufficiency of the mortality table itself for 71% of the companies that will use it. However, this says nothing about reserve levels produced by the table using current interest assumptions and valuation techniques.

Adequacy and Sufficiency

Adequacy testing is typically done in the aggregate on a company by company basis. It may be done using cash flow testing or gross premium valuation techniques. As a result, it was suggested that our test should be based on a Gross Premium Reserve (GPR).

The problem with a GPR test is that it is a "gross" valuation, recognizing all the elements that affect pricing and experience. For a company there is a relationship between the pricing assumptions and the emergence of the experience. To the extent there are differences these would be reflected in the gross premium reserve and exert a discipline on the company through the reserving process. The problem with an industry GPR is in the differences. For an industry calculation, both the pricing and the experience have to be set by assumptions. The results can be "controlled" by how the pricing and experience are set in relation to one another.

This control of the results can be eliminated if the assumptions for expenses (used in a broad sense to include expenses, taxes, cost of capital, etc.) and profits are eliminated from the equation. If it is assumed that the pricing and experience assumptions for these factors are equal, except for a first year allowance to recognize that expenses are front ended, the resulting GPR reduces to a reserve calculation using only interest, mortality and lapse. This check reserve can, therefore, be used as a measure of sufficiency[1] for the 2001 CSO table.

The check reserves used in this report were set using a one-year preliminary term reserve calculation involving interest, mortality and, for term insurance, lapse. Check reserve calculations were done on a continuous basis and mean reserves were used for the comparisons. For UL, reserves are

[1] While the terms "adequacy" and "sufficiency" are synonyms, "adequacy" carries some historical valuation meaning relating to the status of a particular company's reserve levels. The term "sufficiency" is similar, but different, and will be used here in conjunction with the measurement of reserve levels for companies in general.

dependent on the accumulated value within the contract. We used the product of a major writer of UL to determine the accumulation values. The premium level selected was that which produced an accumulation value near zero at age 100 given illustrated charges and credits (COIs,, expense loads, credited interest, etc.). Note that reserves for UL are equal to the greater of the accumulation value and the calculated reserve. We did not consider deficiency reserves because we did not have gross premium assumptions upon which to base them. Excluding deficiency reserves is conservative as deficiency reserves would increase the statutory reserve while leaving the check reserve unchanged.

Assumptions are based on industry statistics but the tests are done to simulate the experience of companies that are at approximately the 85th percentile in terms of needed reserve level. In other words, according to our assumptions, only 15% of companies would need higher reserves.

Sufficiency testing was only done using the ultimate, composite (of smokers and nonsmokers) table. As noted in the report, tests of the valuation table demonstrated that reserves produced by the new select and ultimate tables were generally greater than those produced by the ultimate table alone. As a result, if the ultimate table is sufficient, the select and ultimate tables will be also. The report also notes that aggregate reserves for a block of business are nearly the same if either the smoking distinct tables or the composite table is used. Thus, if the composite table is adequate, the smoking distinct tables will be also.

Two forms of sufficiency testing were done:

- Check reserves calculated using 85th percentile values for each assumption (interest, mortality and sometimes persistency) were compared to statutory reserves produced by the table. This comparison was done without aggregating (i.e., on a cell-by-cell basis).

- We also determined how much a particular assumption needed to change, while holding the other assumptions at the 85th percentile level, to produce check reserves that were equal to the statutory reserve produced by the new table. This was done with aggregation at the plan level (20 year level premium term, whole life, and universal life) for a model office company.

Assumptions

Assumptions necessary to calculate the check reserves were needed for mortality, interest, and lapse. Our original intent was to consider both variation

by company and variation in experience over time. We were able to find distributions representing variation by company for all three factors. However, we only found a suitable distribution of variation over time for the interest assumption. As a result, the interest rate considers variation over time but the lapse and mortality assumptions do not.

To set the interest assumption, we started with a value that represented the environment that might be expected to exist at the 85th percentile of all possible futures. Then we determined where the 85th percentile company would fall relative to that overall environment. For the other assumptions, we made a conservative assumption as to the environment using our collective judgment and then used our data to find where the 85th percentile company would be relative to that environment.

Mortality

Assumptions for the variation in mortality by company were developed by examining the spread of experience between the companies that contributed experience to the 1990-95 Basic Table. The standard deviation, by company, of the actual to expected mortality ratios exhibited by these 21 companies was 20%.

Assumptions for the variation in mortality over time were more difficult to develop. The overall trend in mortality has been downward for some time but some feel that changes in underwriting that are unlikely to be repeated are a major part of the cause of the improvement. In addition, it is not likely that this trend is uniform by age. Finally, any view of the future should consider adverse deviations such as the 1917 flu epidemic or AIDS. Given the unknowns, we opted to use mortality that does not increase or decrease over time, assuming that the downward trend will absorb any catastrophic situations. (Note that the VBT anticipates improvements in mortality through 2001, but does not provide for additional improvement thereafter.)

Combining these two sets of assumptions lead to a base case assumption of 120% of the Valuation Basic Table for all years.

Sufficiency testing was only done using the ultimate, composite (of smokers and nonsmokers) table.

Interest

To gain insights into company variation in investment return, the task force examined variations in interest earnings by company over the past 5 years using the NAIC database. We found the following:

Table D-1
Average Net Investment Income
1995-1999

80th Percentile	7.90%
50th Percentile	7.18%
20th Percentile	6.09%

(Results were expressed in this fashion because some large outliers had an undue effect on standard deviation calculations.)

If one assumes that variation in interest rates by company is normally distributed, the difference between the 20th percentile and the 80th is 1.68 standard deviations. This suggests that the standard deviation of this distribution is about 1% ((7.90-6.09)/1.68=1.08, rounded down).

Information on the variability in interest rates over time was obtained from an analysis of the results of the interest rate model used for C3 testing, based on the 12/31/00 yield curve. This model produces treasury rates at various durations. We focused on 10 year maturities as most representative of how insurance companies invest. The key statistic reviewed was the geometric mean over 30 years for each of the 200 scenarios. The mean was 6.6% with a standard deviation of 1.8%.

The final assumption needed to develop the check reserve interest rate concerned the fact that companies will earn more than a treasury rate on their investments. We added a corporate spread of 70 BP to the treasury rates to get a number that is more comparable to what companies might earn.

Combining these assumptions yields an interest rate assumption of 4.5% for all years. This number was calculated as the mean of the projection for the 30 year geometric mean less one standard deviation in interest rate movement over time, less one standard deviation in interest rate variation by company, plus the corporate spread (6.6% - 1.8% - 1.0% + 0.7% = 4.5%).

Lapse

The check reserve methodology also allows for consideration of lapse rates. For level term insurance, early lapse reduces the overall cost of insurance and will reduce the necessary reserve.

Data on variation in term insurance lapse rates by company was obtained from the LIMRA, International study, 1993-94 UNITED STATES LAPSES BY

DURATION AND PRODUCT LINE: LONG-TERM ORDINARY LAPSE SURVEY*. Our overall focus was on lapse rates by duration. We were particularly interested in the portion of the report that gave information on lapse rates for different quartiles of the company population contributing to the study.

Using the LIMRA data, we calculated the standard deviation of the variation in lapse rates by company for each duration grouping. While information was available for the variation in lapse rates by issue age, we used the data for all ages combined to simplify the calculations. The following table shows the results.

Table D-2
Level Term Lapse Rates by Volume[1]

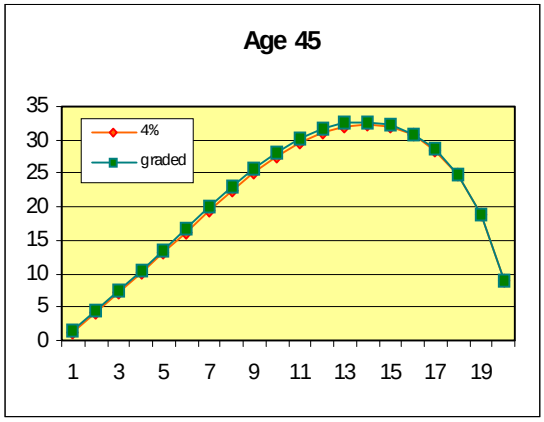
POLICY YEAR	1st Quartile	Median	3rd Quartile	Std Dev[2]	85th %[3]
1	9.1%	10.3%	14.0%	3.6%	6.7%
2	8.1%	10.4%	13.7%	4.2%	6.2%
3-5	8.6%	9.7%	14.9%	4.7%	5.0%
6-10	4.9%	7.1%	9.7%	3.6%	3.5%
11+	4.0%	6.5%	8.2%	3.1%	3.4%

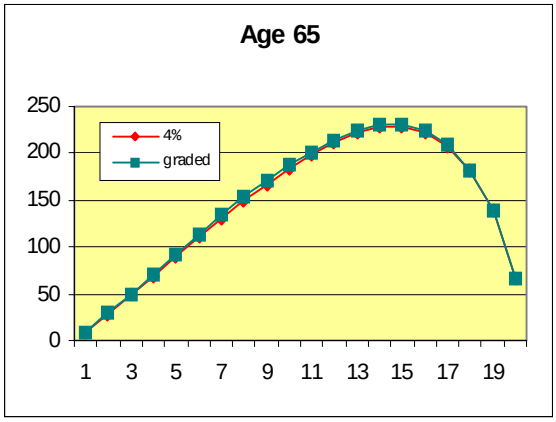
[1] Source: LIMRA International
[2] Standard Deviation is calculated as (3rd quartile - 1st quartile)/1.35
[3] 85th percentile is calculated as one standard deviation under the median

In order to simplify the calculation of check reserves, lapse rates that were level by duration were desirable. We did tests comparing reserves calculated using the values in the right-hand column above to those based on a level 4%. The results of those tests are shown below. As the charts show, there is little difference between the reserves calculated with either assumption. As a result, we opted for a level 4% lapse rate as representative of the graded scale.

* Copyright © 1996 LIMRA International.

Charts D-1a – D-1b
20 Year Level Premium Term Check Reserves by Lapse Rate



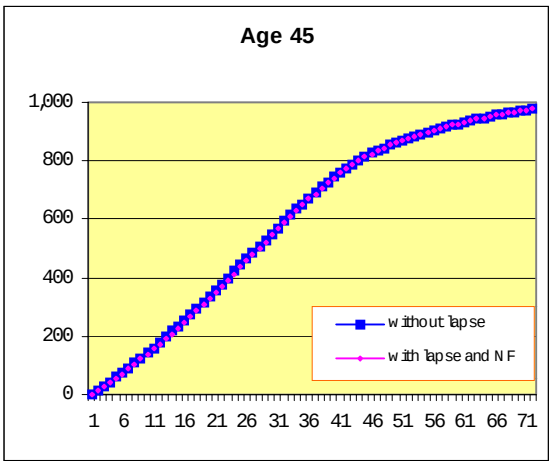


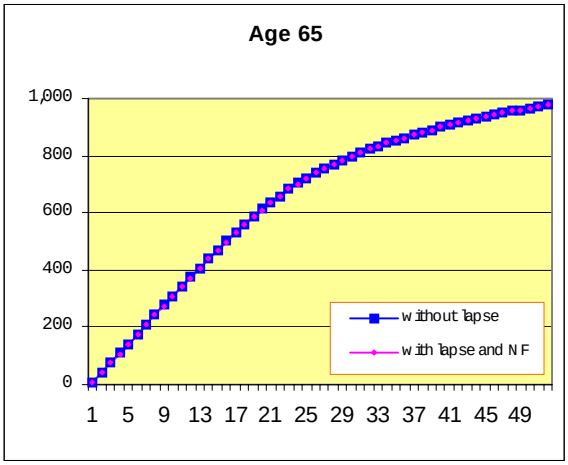
As noted earlier, we were unable to get information on the volatility of lapse rates over time. Obviously, lapse rates will vary over time with changes in the environment for insurance. For example, reductions in term insurance prices during the 1990's probably caused increased lapse rates during that time period. However, given that we had no information upon which to build a distribution, we simply assumed that lapse experience doesn't change over time.

Upon review of these two sets of assumptions, the task force decided to use a level lapse rate of 4% for term.

For permanent insurance, the presence of nonforfeiture values reduces the effect of lapsation on reserve values. If the nonforfeiture value is assumed to be equal to the reserve, lapse will have no effect on insurance costs as the reserve released will be equal to the benefit paid. Thus the task force considered leaving lapse rates out of the calculation of check reserves for permanent insurance. However, in practice cash values are often less than reserves. The task force ran tests using a nonforfeiture value interest rate that was 1% greater than the valuation interest rate, along with a level lapse rate of 4%, to determine if ignoring lapse was indeed a conservative approach. Results of this test are shown below for selected cells

Charts D-2a – D-2b
Comparison of Whole Life Check Reserves With and Without Lapse





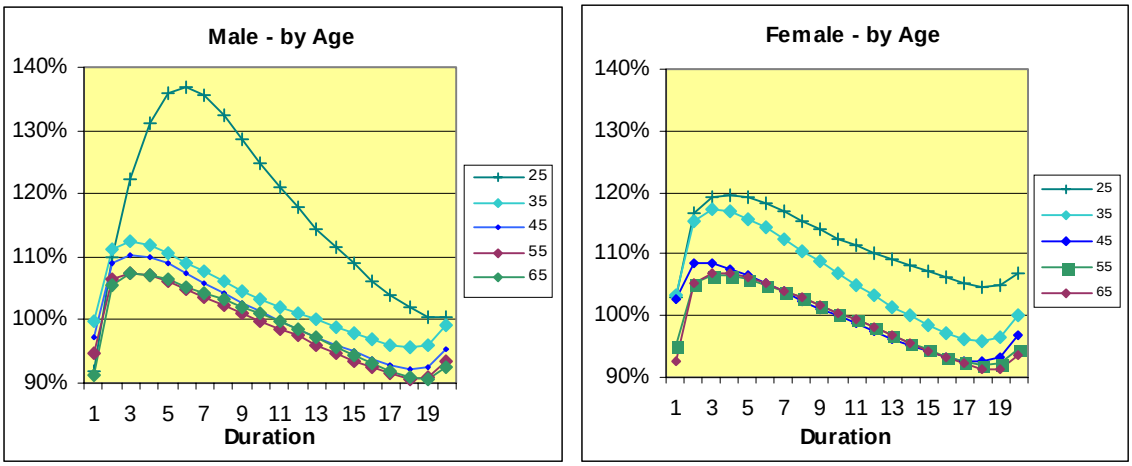
As these values show, using reserves calculated without a lapse assumption is the conservative approach. As a result, we opted for the simpler approach of ignoring lapses.

For Universal life we felt that a lapse rate similar to that for term insurance was appropriate. However, the model that was available to us was somewhat limited and did not allow for easy consideration of lapse rates. As a result, we used an 8.5% interest rate assumption to simulate the effect of a 4.5% interest rate and a 4% lapse rate.

Analysis by Cell

As noted above, the analysis by cell compares statutory reserves produced by the new table to the check reserves. This comparison is done on a cell by cell basis for each duration but only on an ultimate basis. Results of the comparison to the check reserves for term insurance are shown below.

Charts D-3a – D-3b
Comparison of Statutory Reserves Based on the New Table and Check Reserves for20 Year Level Premium Term Insurance



For both men and women, statutory reserves using the new table are higher than the check reserves in most of the early durations and a little lower at the later durations. This effect is more pronounced at the younger ages and for males.

The following table shows comparative results for a model of a block of term business. This model is described in Appendix F. For each cell in the model, reserves were calculated for a block of business determined by assuming 5% sales increases and 4% lapse each year. All the cells in the block were then weighted together using the sales distribution statistics obtained from LIMRA and the results were analyzed after various time periods.

Table D-3
Comparison of Statutory Reserves Based on the New Table and Check Reserves for 20 Year Level Premium Term Insurance

	male	female	both
After 5 years	107.5%	107.4%	107.5%
After 10 years	104.6%	104.6%	104.6%
After 15 years	101.5%	102.0%	101.6%
After 20 years	100.8%	101.1%	100.9%

This analysis shows that the reserves produced by the proposed table are greater than the check reserves for the block of term insurance. Additional detail of the results of the testing of term insurance can be found in tables D-9 and D-10.

Results for permanent insurance are summarized below.

Chart D-4a
Comparison of Statutory Reserves Based on the New Table and Check Reserves for Whole Life Insurance

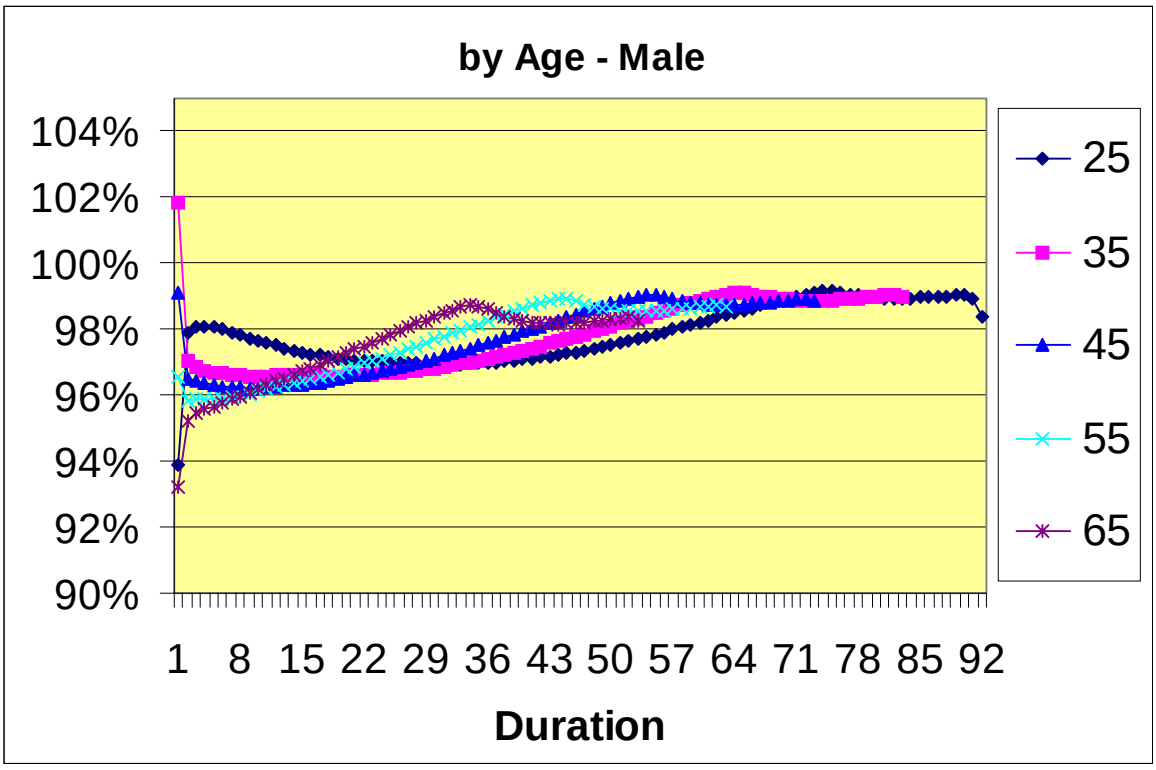
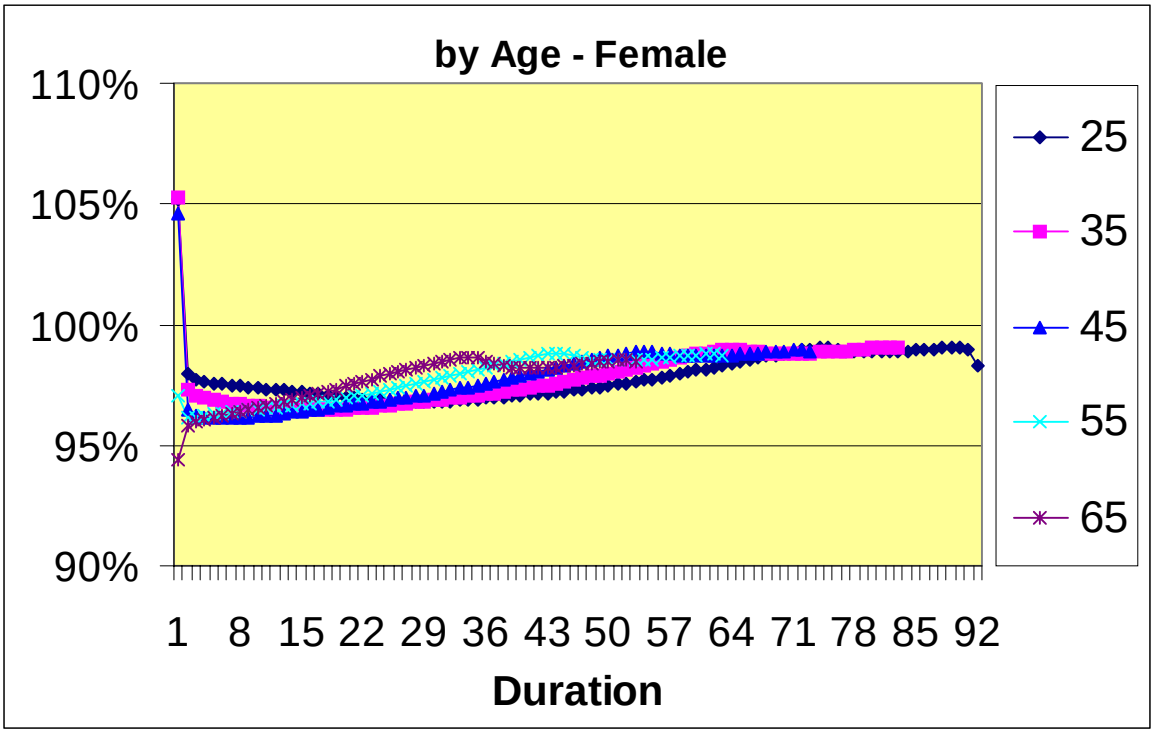


Chart D-4b
Comparison of Statutory Reserves Based on the New Table and Check Reserves for Whole Life Insurance



For permanent insurance, the statutory reserves produced using the new table are slightly lower than the check reserves. Ratios range from 95% to 99% for both males and females with the lower numbers at the early durations and the higher numbers at the higher durations. The following table shows comparison results on an overall basis based on a model office calculation like that outlined above for term insurance.

Table D-4
Comparison of Statutory Reserves Based on the New Table and Check Reserves for Whole Life

	male	female	both
After 10 years	96.5%	96.5%	96.5%
After 20 years	96.6%	96.7%	96.6%
After 30 years	96.7%	96.8%	96.7%
After 40 years	96.8%	96.9%	96.9%

While these ratios are less than 100%, they are acceptable since the whole life check reserves assume that there are no lapses. As shown later in this section (see Table D-6 and the paragraph following it), had the 85th percentile lapse assumption (4%) been included in the determination of the whole life check reserves, then the statutory reserves would be at least as large as the check reserves. Additional detail of the results of the testing of whole life insurance can be found in tables D-7 and D-8.

Results for the UL with level premium to zero are shown below. This plan has reserves that are calculated and then compared to the cash value. The greater of the two is held. For a typical plan, the cash value floor takes over at a relatively early duration. Before that, reserves produced by the new table are substantially higher than the check reserves.

Chart D-5a
Comparison of Statutory Reserves Based on the New Table and Check Reserves for UL with a Level Premium to Produce a Zero Value at Age 100

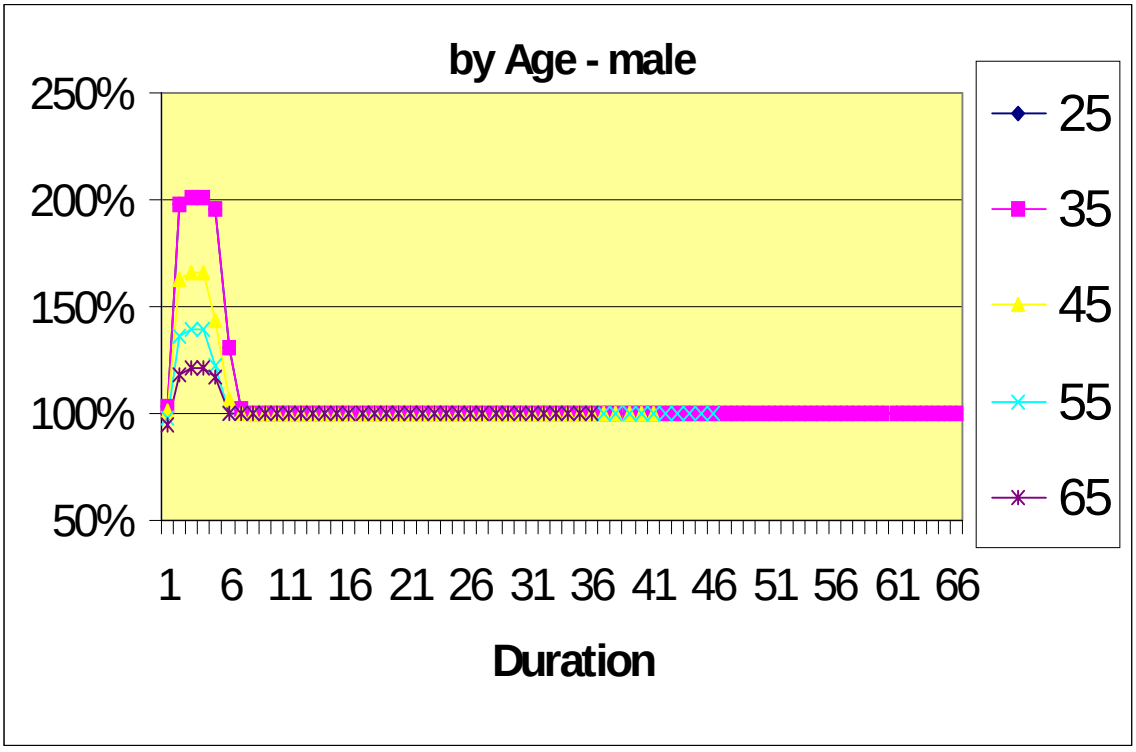
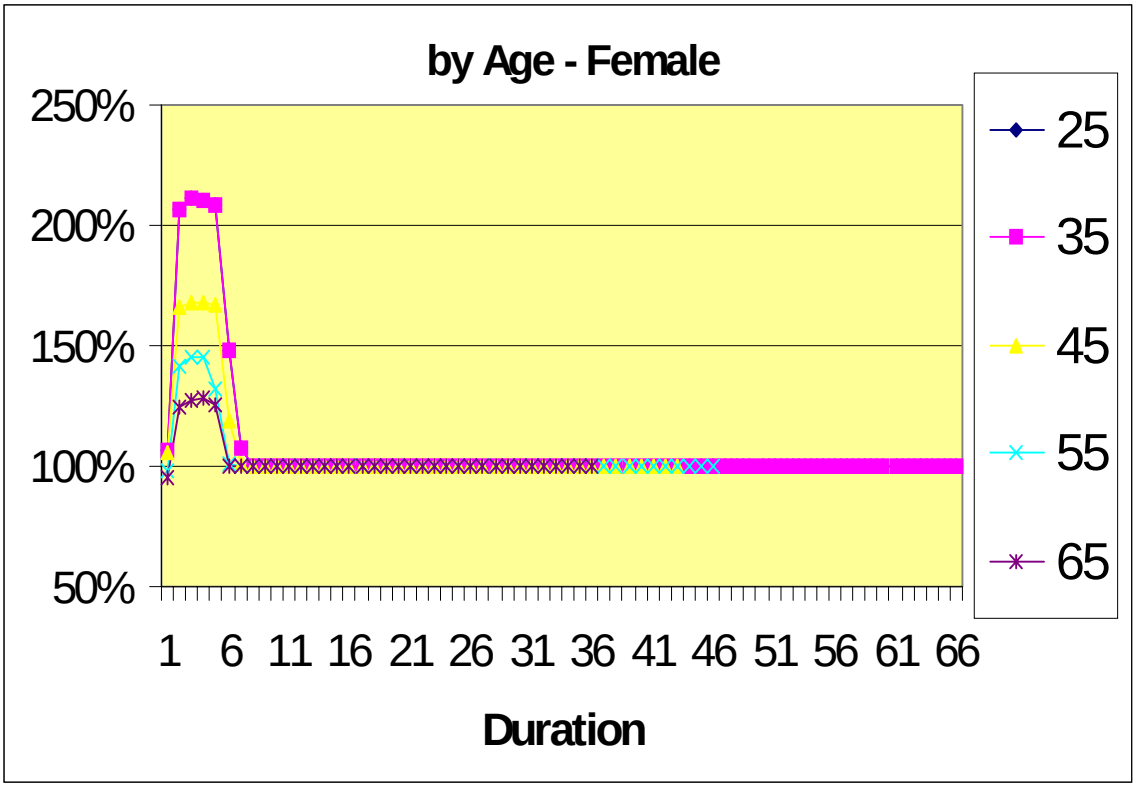


Chart D-5b
Comparison of Statutory Reserves Based on the New Table and Check reserves for UL with a Level Premium to Produce a Zero Value at Age 100



The following table shows the reserves for a block of UL on a level premium to zero basis.

Table D-5
Comparison of Statutory Reserves Based on the New Table and Check Reserves for UL with a Level Premium to Produce a Zero Value at Age 100

	male	female	both
After 10 years	110.0%	114.3%	111.2%
After 20 years	103.0%	104.1%	103.4%
After 30 years	101.9%	102.5%	102.1%
After 40 years	101.5%	102.0%	101.7%

The UL on a level premium to zero basis check reserves are lower than the statutory reserves using the proposed 2001 CSO table. Additional detail on UL with a level premium to zero is shown in tables D-11 and D-12.

The task force also considered the sufficiency of the new table for other forms of UL. In general, as the premium goes up from the level premium to zero, without the addition of any "no lapse" guarantee, the cash value floor will come into play earlier but statutory reserves should still exceed the check reserves prior to that time. As the premium goes down from the level premium to zero, the reserve comparisons will tend toward those for term insurance, reverting to the cash value when the surrender charge wears off. In either case, the statutory reserves will exceed the check reserves.

The addition of a "no lapse" guarantee adds a significant complication. The task force attempted comparisons of values for a product with a "no lapse" guarantee to age 100 but we were unable to do a computation of the check reserves that considered both lapse and the cash values available on lapse. (This factor can be significant when the cash value floor does not form the basis for the reserve, which is common during the first 20 – 25 durations of this type of policy.) We did make calculations using 8.5% interest instead of 4.5% to approximate the impact of a 4% lapse rate. Under these conditions, the statutory reserves calculated under XXX were well in excess of the check reserves.

Sensitivity Testing

The testing also showed how experience for individual factors needed to change to produce check reserves that are equal to statutory reserves produced by the new table. Table D-6 summarizes the results of this sensitivity testing performed on individual factors. While keeping two of the factors constant at the 85th percentile, the table shows the percentile of the remaining factor that results in the check reserve being equal to the statutory reserve. This testing was done using the model office distribution shown in Appendix F to aggregate results. Results are shown for 20 years after first issue.

Table D-6
Maximum Deviations in Experience, with Others at the 85 Percentile Level that Produces Check Reserves Equal to Statutory Reserves

	Mortality		Interest		Lapse	
	Value	Pct'ile	Value	Pct'ile	Value	Pct'ile
Whole Life	109%	67.4%	4.80%	81.4%	4.00%	84.1%
20 Year Term	121%	85.3%	0.00%	99.5%	3.60%	86.7%

As an example, consider whole life. As shown in Table D-4, the ratio of statutory reserves to check reserves for whole life is 96.6% after 20 years. In order to increase this ratio to 100% while holding the interest and lapse check reserve assumptions constant (4.50% interest and no lapses), the check reserve mortality assumption must be reduced from 120% VBT (the 85th percentile) to 109% VBT (the 67th percentile). Likewise, holding the mortality and lapse check reserve assumptions constant (120% VBT and no lapses), the check reserve interest assumption needs to be increased from 4.50% (the 85th percentile) to 4.80% (the 81st percentile) in order for the statutory reserves to equal or exceed the check reserves. Finally, holding mortality at 120% VBT and interest at 4.50% requires a lapse rate assumption of 4% (that used for term insurance) for the statutory reserves to be at least as big as the check reserves.

For term, the new table produces reserves that can handle a small increase in mortality or decrease in lapse rates beyond the 85th percentile. In this analysis, term reserves are relatively insensitive to changes in interest rates.

Conclusion

Based on this analysis, we conclude that the reserves produced by the new table are sufficient for most companies, most of the time. For 20 year level premium term insurance, the statutory reserves exceeded the check reserves by a small margin on a model office basis. While the same cannot be said for whole life, the shortage was small and can easily be covered by a modest improvement in the interest assumption or by including lapses in the calculation. For UL, the statutory reserves produced by the new table were always greater than or equal to the check reserves.

Table D-7
Comparison of Tabular Mean Reserves Using the Proposed 2001 CSO and Check Reserves

Plan: Whole Life Gender: male Smoking Status composite Table: Ultimate

	Age 25			Age 35			Age 45			Age 55			Age 65		
	Statutory	Check		Statutory	Check		Statutory	Check		Statutory	Check		Statutory	Check	
Duration	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio
1	0.524	0.558	93.9%	0.592	0.581	101.9%	1.293	1.305	99.1%	2.973	3.080	96.5%	7.805	8.370	93.2%
5	22.829	23.282	98.1%	37.166	38.431	96.7%	57.085	59.262	96.3%	88.489	92.270	95.9%	136.781	142.989	95.7%
10	57.032	58.402	97.7%	90.466	93.672	96.6%	137.203	142.591	96.2%	204.724	213.022	96.1%	298.826	310.583	96.2%
15	98.965	101.704	97.3%	152.115	157.458	96.6%	226.600	235.198	96.3%	328.123	340.347	96.4%	456.119	471.602	96.7%
20	148.765	153.227	97.1%	223.971	231.885	96.6%	324.797	336.475	96.5%	453.330	468.351	96.8%	595.447	612.146	97.3%
25	206.368	212.719	97.0%	304.147	314.599	96.7%	429.047	443.265	96.8%	574.865	591.334	97.2%	706.917	722.647	97.8%
30	273.506	282.137	96.9%	392.216	405.057	96.8%	534.824	550.624	97.1%	682.520	698.679	97.7%	785.622	798.435	98.4%
35	348.418	359.284	97.0%	485.714	500.439	97.1%	637.498	653.772	97.5%	768.649	783.077	98.2%	842.630	853.611	98.7%
40	430.706	443.652	97.1%	580.581	596.329	97.4%	728.447	743.804	97.9%	829.462	840.963	98.6%	883.556	899.228	98.3%
45	518.064	532.614	97.3%	672.666	688.458	97.7%	801.210	814.591	98.4%	873.511	883.105	98.9%	919.443	936.581	98.2%
50	606.703	622.051	97.5%	754.234	768.872	98.1%	852.586	863.140	98.8%	905.133	917.946	98.6%	950.273	966.717	98.3%
55	692.743	707.979	97.8%	819.492	832.097	98.5%	889.799	898.486	99.0%	932.862	946.476	98.6%			
60	768.955	782.980	98.2%	865.569	875.460	98.9%	916.513	927.708	98.8%	956.683	969.493	98.7%			
65	829.930	841.949	98.6%	898.944	907.030	99.1%	939.939	951.636	98.8%						
70	872.981	882.394	98.9%	922.903	933.130	98.9%	960.064	970.940	98.9%						
75	904.165	911.838	99.2%	943.913	954.502	98.9%									
80	926.551	936.182	99.0%	961.962	971.745	99.0%									
85	946.180	956.115	99.0%												
90	962.701	972.195	99.0%												

Table D-8
Comparison of Tabular Mean Reserves Using the Proposed 2001 CSO and Check Reserves

Plan: Whole Life Gender: female Smoking Status composite Table: Ultimate

	Age 25			Age 35			Age 45			Age 55			Age 65		
	Statutory	Check		Statutory	Check		Statutory	Check		Statutory	Check		Statutory	Check	
Duration	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio
1	0.524	0.558	93.9%	0.592	0.581	101.9%	1.293	1.305	99.1%	2.973	3.080	96.5%	7.805	8.370	93.2%
5	22.829	23.282	98.1%	37.166	38.431	96.7%	57.085	59.262	96.3%	88.489	92.270	95.9%	136.781	142.989	95.7%
10	57.032	58.402	97.7%	90.466	93.672	96.6%	137.203	142.591	96.2%	204.724	213.022	96.1%	298.826	310.583	96.2%
15	98.965	101.704	97.3%	152.115	157.458	96.6%	226.600	235.198	96.3%	328.123	340.347	96.4%	456.119	471.602	96.7%
20	148.765	153.227	97.1%	223.971	231.885	96.6%	324.797	336.475	96.5%	453.330	468.351	96.8%	595.447	612.146	97.3%
25	206.368	212.719	97.0%	304.147	314.599	96.7%	429.047	443.265	96.8%	574.865	591.334	97.2%	706.917	722.647	97.8%
30	273.506	282.137	96.9%	392.216	405.057	96.8%	534.824	550.624	97.1%	682.520	698.679	97.7%	785.622	798.435	98.4%
35	348.418	359.284	97.0%	485.714	500.439	97.1%	637.498	653.772	97.5%	768.649	783.077	98.2%	842.630	853.611	98.7%
40	430.706	443.652	97.1%	580.581	596.329	97.4%	728.447	743.804	97.9%	829.462	840.963	98.6%	883.556	899.228	98.3%
45	518.064	532.614	97.3%	672.666	688.458	97.7%	801.210	814.591	98.4%	873.511	883.105	98.9%	919.443	936.581	98.2%
50	606.703	622.051	97.5%	754.234	768.872	98.1%	852.586	863.140	98.8%	905.133	917.946	98.6%	950.273	966.717	98.3%
55	692.743	707.979	97.8%	819.492	832.097	98.5%	889.799	898.486	99.0%	932.862	946.476	98.6%			
60	768.955	782.980	98.2%	865.569	875.460	98.9%	916.513	927.708	98.8%	956.683	969.493	98.7%			
65	829.930	841.949	98.6%	898.944	907.030	99.1%	939.939	951.636	98.8%						
70	872.981	882.394	98.9%	922.903	933.130	98.9%	960.064	970.940	98.9%						
75	904.165	911.838	99.2%	943.913	954.502	98.9%									
80	926.551	936.182	99.0%	961.962	971.745	99.0%									
85	946.180	956.115	99.0%												

Table D-9
Comparison of Tabular Mean Reserves Using the Proposed 2001 CSO and Check Reserves

Plan: 20 Yr Term Gender: male Smoking Status composite Table: Ultimate

	Age 25			Age 35			Age 45			Age 55			Age 65		
	Statutory	Check		Statutory	Check		Statutory	Check		Statutory	Check		Statutory	Check	
Duration	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio
1	0.524	0.569	92.0%	0.592	0.593	99.8%	1.293	1.331	97.1%	2.973	3.142	94.6%	7.805	8.542	91.4%
2	0.800	0.729	109.8%	1.920	1.726	111.2%	4.684	4.303	108.9%	12.021	11.308	106.3%	30.134	28.539	105.6%
3	1.038	0.849	122.3%	3.242	2.884	112.4%	7.969	7.217	110.4%	20.831	19.367	107.6%	52.361	48.820	107.3%
4	1.262	0.961	131.2%	4.545	4.064	111.8%	11.187	10.164	110.1%	29.458	27.483	107.2%	74.323	69.419	107.1%
5	1.506	1.109	135.7%	5.805	5.247	110.6%	14.383	13.205	108.9%	37.934	35.717	106.2%	95.800	90.118	106.3%
6	1.781	1.302	136.8%	7.017	6.430	109.1%	17.516	16.298	107.5%	46.201	44.023	104.9%	116.460	110.557	105.3%
7	2.085	1.538	135.5%	8.158	7.585	107.6%	20.525	19.381	105.9%	54.060	52.185	103.6%	135.914	130.308	104.3%
8	2.403	1.815	132.4%	9.196	8.672	106.0%	23.322	22.359	104.3%	61.225	59.870	102.3%	153.896	149.080	103.2%
9	2.720	2.116	128.5%	10.098	9.655	104.6%	25.825	25.131	102.8%	67.433	66.754	101.0%	170.273	166.740	102.1%
10	3.026	2.425	124.8%	10.825	10.486	103.2%	27.961	27.604	101.3%	72.525	72.634	99.8%	184.908	183.163	101.0%
11	3.316	2.737	121.2%	11.338	11.114	102.0%	29.632	29.665	99.9%	76.604	77.630	98.7%	197.542	198.078	99.7%
12	3.568	3.031	117.7%	11.620	11.512	100.9%	30.736	31.182	98.6%	79.790	81.887	97.4%	207.738	211.000	98.5%
13	3.765	3.289	114.5%	11.653	11.656	100.0%	31.219	32.074	97.3%	81.843	85.115	96.2%	214.861	221.196	97.1%
14	3.890	3.486	111.6%	11.463	11.577	99.0%	31.090	32.337	96.1%	82.392	86.852	94.9%	218.037	227.608	95.8%
15	3.919	3.599	108.9%	11.086	11.313	98.0%	30.345	31.954	95.0%	81.065	86.603	93.6%	216.114	228.806	94.5%
16	3.841	3.614	106.3%	10.471	10.796	97.0%	28.890	30.791	93.8%	77.328	83.661	92.4%	207.802	223.120	93.1%
17	3.633	3.496	103.9%	9.547	9.932	96.1%	26.480	28.528	92.8%	70.542	77.154	91.4%	191.426	208.306	91.9%
18	3.256	3.195	101.9%	8.215	8.592	95.6%	22.774	24.705	92.2%	60.123	66.231	90.8%	164.979	181.538	90.9%
19	2.677	2.662	100.6%	6.376	6.634	96.1%	17.435	18.844	92.5%	45.571	50.071	91.0%	125.998	139.154	90.5%
20	1.502	1.495	100.5%	3.291	3.321	99.1%	8.666	9.091	95.3%	22.381	23.930	93.5%	60.990	66.002	92.4%

Table D-10
Comparison of Tabular Mean Reserves Using the Proposed 2001 CSO and Check Reserves

Plan: 20 Yr Term Gender: female Smoking Status composite Table: Ultimate

	Age 25			Age 35			Age 45			Age 55			Age 65		
	Statutory	Check		Statutory	Check		Statutory	Check		Statutory	Check		Statutory	Check	
Duration	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio
1	0.524	0.569	92.0%	0.592	0.593	99.8%	1.293	1.331	97.1%	2.973	3.142	94.6%	7.805	8.542	91.4%
2	0.800	0.729	109.8%	1.920	1.726	111.2%	4.684	4.303	108.9%	12.021	11.308	106.3%	30.134	28.539	105.6%
3	1.038	0.849	122.3%	3.242	2.884	112.4%	7.969	7.217	110.4%	20.831	19.367	107.6%	52.361	48.820	107.3%
4	1.262	0.961	131.2%	4.545	4.064	111.8%	11.187	10.164	110.1%	29.458	27.483	107.2%	74.323	69.419	107.1%
5	1.506	1.109	135.7%	5.805	5.247	110.6%	14.383	13.205	108.9%	37.934	35.717	106.2%	95.800	90.118	106.3%
6	1.781	1.302	136.8%	7.017	6.430	109.1%	17.516	16.298	107.5%	46.201	44.023	104.9%	116.460	110.557	105.3%
7	2.085	1.538	135.5%	8.158	7.585	107.6%	20.525	19.381	105.9%	54.060	52.185	103.6%	135.914	130.308	104.3%
8	2.403	1.815	132.4%	9.196	8.672	106.0%	23.322	22.359	104.3%	61.225	59.870	102.3%	153.896	149.080	103.2%
9	2.720	2.116	128.5%	10.098	9.655	104.6%	25.825	25.131	102.8%	67.433	66.754	101.0%	170.273	166.740	102.1%
10	3.026	2.425	124.8%	10.825	10.486	103.2%	27.961	27.604	101.3%	72.525	72.634	99.8%	184.908	183.163	101.0%
11	3.316	2.737	121.2%	11.338	11.114	102.0%	29.632	29.665	99.9%	76.604	77.630	98.7%	197.542	198.078	99.7%
12	3.568	3.031	117.7%	11.620	11.512	100.9%	30.736	31.182	98.6%	79.790	81.887	97.4%	207.738	211.000	98.5%
13	3.765	3.289	114.5%	11.653	11.656	100.0%	31.219	32.074	97.3%	81.843	85.115	96.2%	214.861	221.196	97.1%
14	3.890	3.486	111.6%	11.463	11.577	99.0%	31.090	32.337	96.1%	82.392	86.852	94.9%	218.037	227.608	95.8%
15	3.919	3.599	108.9%	11.086	11.313	98.0%	30.345	31.954	95.0%	81.065	86.603	93.6%	216.114	228.806	94.5%
16	3.841	3.614	106.3%	10.471	10.796	97.0%	28.890	30.791	93.8%	77.328	83.661	92.4%	207.802	223.120	93.1%
17	3.633	3.496	103.9%	9.547	9.932	96.1%	26.480	28.528	92.8%	70.542	77.154	91.4%	191.426	208.306	91.9%
18	3.256	3.195	101.9%	8.215	8.592	95.6%	22.774	24.705	92.2%	60.123	66.231	90.8%	164.979	181.538	90.9%
19	2.677	2.662	100.6%	6.376	6.634	96.1%	17.435	18.844	92.5%	45.571	50.071	91.0%	125.998	139.154	90.5%
20	1.502	1.495	100.5%	3.291	3.321	99.1%	8.666	9.091	95.3%	22.381	23.930	93.5%	60.990	66.002	92.4%

Table D-11
Comparison of Tabular Mean Reserves Using the Proposed 2001 CSO and Check Reserves

Plan: UL – Level Premium to Zero Gender: male Smoking Status composite Table: Ultimate

	Age 25			Age 35			Age 45			Age 55			Age 65		
	Statutory	Check		Statutory	Check		Statutory	Check		Statutory	Check		Statutory	Check	
Duration	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio
1	0.206	0.199	103.6%	0.206	0.199	103.6%	0.503	0.499	100.9%	1.228	1.254	98.0%	3.119	3.292	94.7%
5	11.734	5.979	196.2%	11.734	5.979	196.2%	20.348	14.152	143.8%	33.018	26.921	122.6%	43.396	37.030	117.2%
10	39.545	39.545	100.0%	39.545	39.545	100.0%	69.995	69.995	100.0%	111.961	111.961	100.0%	134.009	134.009	100.0%
15	75.454	75.454	100.0%	75.454	75.454	100.0%	124.352	124.352	100.0%	187.649	187.649	100.0%	224.587	224.587	100.0%
20	116.892	116.892	100.0%	116.892	116.892	100.0%	183.582	183.582	100.0%	259.761	259.761	100.0%	301.123	301.123	100.0%
25	166.705	166.705	100.0%	166.705	166.705	100.0%	253.131	253.131	100.0%	341.070	341.070	100.0%	359.584	359.584	100.0%
30	226.662	226.662	100.0%	226.662	226.662	100.0%	326.120	326.120	100.0%	425.261	425.261	100.0%	376.940	376.940	100.0%
35	298.147	298.147	100.0%	298.147	298.147	100.0%	411.685	411.685	100.0%	508.198	508.198	100.0%	315.652	315.652	100.0%
40	375.958	375.958	100.0%	375.958	375.958	100.0%	508.683	508.683	100.0%	584.577	584.577	100.0%			
45	471.147	471.147	100.0%	471.147	471.147	100.0%	619.411	619.411	100.0%	629.737	629.737	100.0%			
50	587.207	587.207	100.0%	587.207	587.207	100.0%	743.250	743.250	100.0%						
55	727.697	727.697	100.0%	727.697	727.697	100.0%	910.217	910.217	100.0%						
60	917.334	917.334	100.0%	917.334	917.334	100.0%									
65	1226.359	1226.359	100.0%	1226.359	1226.359	100.0%									

Table D-12
Comparison of Tabular Mean Reserves Using the Proposed 2001 CSO and Check Reserves

Plan: UL – Level Premium to Zero Gender: female Smoking Status composite Table: Ultimate

	Age 25			Age 35			Age 45			Age 55			Age 65		
	Statutory	Check		Statutory	Check		Statutory	Check		Statutory	Check		Statutory	Check	
Duration	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio	Reserve	Reserve	Ratio
1	0.158	0.148	106.6%	0.158	0.148	106.6%	0.346	0.327	105.9%	0.974	0.992	98.1%	2.090	2.188	95.6%
5	9.699	4.651	208.5%	9.699	4.651	208.5%	16.904	10.151	166.5%	24.677	18.701	132.0%	31.752	25.322	125.4%
10	31.718	31.718	100.0%	31.718	31.718	100.0%	54.410	54.410	100.0%	86.332	86.332	100.0%	118.960	118.960	100.0%
15	59.725	59.725	100.0%	59.725	59.725	100.0%	96.301	96.301	100.0%	149.705	149.705	100.0%	199.920	199.920	100.0%
20	91.698	91.698	100.0%	91.698	91.698	100.0%	142.621	142.621	100.0%	216.775	216.775	100.0%	270.289	270.289	100.0%
25	130.802	130.802	100.0%	130.802	130.802	100.0%	199.917	199.917	100.0%	290.376	290.376	100.0%	319.287	319.287	100.0%
30	177.968	177.968	100.0%	177.968	177.968	100.0%	267.227	267.227	100.0%	365.291	365.291	100.0%	320.561	320.561	100.0%
35	236.842	236.842	100.0%	236.842	236.842	100.0%	342.976	342.976	100.0%	426.491	426.491	100.0%	213.841	213.841	100.0%
40	307.186	307.186	100.0%	307.186	307.186	100.0%	424.407	424.407	100.0%	460.994	460.994	100.0%			
45	388.838	388.838	100.0%	388.838	388.838	100.0%	503.446	503.446	100.0%	437.664	437.664	100.0%			
50	482.173	482.173	100.0%	482.173	482.173	100.0%	575.228	575.228	100.0%						
55	584.826	584.826	100.0%	584.826	584.826	100.0%	618.502	618.502	100.0%						
60	695.785	695.785	100.0%	695.785	695.785	100.0%									
65	828.881	828.881	100.0%	828.881	828.881	100.0%									

Appendix E

Overall Impact of Proposed 2001 CSO Table

The proposed 2001 CSO table produces reserves that are different from those produced by the existing valuation standard, the 1980 CSO table. To facilitate comparison of reserves based on these two tables, the model office described in Appendix F was used to aggregate results overall and for various segments of business. A comparison of reserves produced by these two tables is shown below.

Table E-1
Reserves Produced by the Proposed 2001 CSO Table
Divided by Reserves Produced by the 1980 CSO Table
(aggregated results)

	After 10 years	After 20 years
Overall	78.0%	81.4%
Gender		
Male	75.5%	79.3%
Female	84.6%	86.5%
Plan		
Whole Life	84.8%	86.0%
20 Year Term	67.1%	67.5%
UL – Level Premium to Zero	94.3%	98.1%
Age		
25	80.2%	84.1%
35	74.2%	79.1%
45	76.9%	80.5%
55	78.3%	81.1%
65	81.9%	84.2%

This shows that overall reserves will be lower under the proposed table by about 20%. It also shows:

- The reduction will be larger for males than for females, reflecting the larger reduction in mortality rates for males.
- Term insurance will see the largest reductions, followed by whole life. The level premium to zero UL plan shows the smallest reductions because reserves cannot be less than cash values and the cash value takes over the reserve, typically by the 6th to 8th duration under both the old and new tables. We did not compare UL Model Regulation reserves for higher premium UL plans, because the cash value takes over the reserve at even

earlier durations. After this happens, reserves under either table will be the same.

- Age 35 will see the biggest reductions while ages 25 and 65 will see the smallest.

The following tables give more details on this comparison.

Table E-2
Reserves Produced by the Proposed 2001 CSO Table
Divided by Reserves Produced by the 1980 CSO Table
(details – after 10 years)

	Age 25	Age 35	Age 45	Age 55	Age 65	All Ages
Male						
Whole Life	80.0%	82.0%	83.5%	86.3%	89.7%	84.1%
20 Year Term	47.0%	57.8%	60.9%	67.3%	77.4%	65.2%
UL – Level Premium to Zero	92.6%	92.6%	93.6%	94.7%	95.7%	94.0%
All Male	77.2%	72.2%	72.2%	76.0%	83.1%	75.5%
Female						
Whole Life	86.1%	86.9%	90.2%	85.1%	80.0%	85.8%
20 Year Term	58.9%	61.7%	92.0%	81.2%	67.1%	76.7%
UL – Level Premium to Zero	94.3%	94.3%	96.4%	95.4%	94.1%	95.0%
All Female	30.0%	36.6%	45.3%	33.6%	26.0%	84.6%
Male and Female Combined						
Whole Life	82.6%	83.6%	85.8%	85.8%	84.9%	84.8%
20 Year Term	50.9%	58.8%	66.2%	69.1%	76.2%	67.1%
UL – Level Premium to Zero	93.3%	93.1%	94.4%	94.9%	95.3%	94.3%
All	80.2%	74.2%	76.9%	78.3%	81.9%	78.0%

Table E-3
Reserves Produced by the Proposed 2001 CSO Table
Divided by Reserves Produced by the 1980 CSO Table
(details – after 10 years)

	Age 25	Age 35	Age 45	Age 55	Age 65	All Ages
Male						
Whole Life	81.2%	83.4%	85.7%	88.8%	93.1%	86.0%
20 Year Term	48.4%	57.5%	61.7%	67.4%	78.0%	65.7%
UL – Level Premium to Zero	97.7%	97.7%	97.7%	98.2%	98.4%	97.9%
All Male	81.8%	76.7%	76.4%	79.5%	86.0%	79.3%
Female						
Whole Life	86.8%	88.9%	89.7%	84.5%	80.6%	86.1%
20 Year Term	56.4%	65.8%	93.4%	79.3%	64.6%	77.0%
UL – Level Premium to Zero	98.2%	98.2%	98.7%	98.5%	98.0%	98.3%
All Female	87.4%	84.8%	92.1%	85.5%	80.1%	86.5%
Male and Female Combined						
Whole Life	83.6%	85.2%	87.1%	86.9%	86.7%	86.0%
20 Year Term	51.0%	59.5%	67.0%	68.9%	76.3%	67.5%
UL – Level Premium to Zero	97.9%	97.9%	98.0%	98.2%	98.3%	98.1%
All	84.1%	79.1%	80.5%	81.1%	84.2%	81.4%

Appendix F

Model Office

Various comparisons of reserve values required the use of a model office to aggregate results. The model office used for this purpose starts with a distribution of new sales and then rolls up sales for a number of years. Comparisons are made after a number of years of this growing block, typically 10 or 20 years.

For new sales, the distribution of new business was based on statistics obtained from LIMRA International's 1999 US Buyers Study. The following factors were reflected:

Products: The model incorporates the industry's three major life insurance products:

- Whole Life – whole life was chosen to be representative of all permanent plans.
- Universal Life – a UL plan with a level premium that produces zero cash value at the policy's maturity was used as representative of UL. This is referred to as UL with a level premium to zero.
- Term - 20 year level premium term was chosen to be representative of all term products in the industry. We assumed the product was not renewable after 20 years. Since all reserve calculations used ultimate tables, and deficiency reserves were not considered, XXX was not a factor.

Issue Ages: 25, 35, 45, 55 and 65 for Whole Life and Term; 35, 45, 55 and 65 for UL. (The reserve calculator used did not produce values for age 25. For comparison purposes, UL reserves for age 35 were used for age 25.)

Gender: Male and Female.

The distribution of business used is shown in the following table.

Table F-1
Model Office Business Distribution
Percentages of New Sales

	Age 25	Age 35	Age 45	Age 55	Age 65	All Ages
Male						
Whole Life	3.1%	3.0%	2.7%	1.4%	0.5%	10.7%
20 Year Term	8.1%	15.9%	13.8%	6.4%	1.6%	45.8%
UL – Level Premium to Zero	2.5%	5.9%	5.8%	1.9%	0.8%	10.6%
All Male	13.7%	21.7%	19.0%	9.7%	2.9%	67.1%
Female						
Whole Life	2.7%	1.8%	1.7%	1.4%	0.6%	8.1%
20 Year Term	4.6%	7.0%	5.0%	1.7%	0.3%	18.6%
UL – Level Premium to Zero	2.2%	1.8%	1.2%	0.7%	0.3%	6.2%
All Female	9.4%	10.6%	7.9%	3.8%	1.2%	32.9%
Male and Female Combined						
Whole Life	5.8%	4.8%	4.4%	2.8%	1.1%	18.9%
20 Year Term	12.7%	22.9%	18.8%	8.1%	1.9%	64.3%
UL – Level Premium to Zero	4.7%	4.6%	3.8%	2.6%	1.1%	16.8%
All	23.2%	32.3%	27.0%	13.5%	4.1%	100.0%

The distribution of business based on these factors was used to produce a single year's issues. In addition to comparisons based on a single year of issue, we also rolled several years of issue together to represent the overall reserves of a growing block of business. In doing this we assumed a new sales growth rate of 5% per year and an overall lapse rate of 4%. Values from this growing block were examined after a number of years of issues, usually after 10 years or after 20 years.