

**Report**  
**of the**  
**Society of Actuaries**  
**Group Life Insurance**  
**Experience Committee**

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# **2005 Group Term Life Waiver Reserve Table**

## **Abstract**

Disabled lives reserves for waiver of premium (waiver) claims represent significant liabilities for group life insurers who, for the past 35 years, have relied on the 1970 Intercompany Group Life Disability Experience Table (the 1970 Table, which is also known as the Krieger Table) as the valuation basis. In 2002, the Society of Actuaries' (SOA) Group Life Experience Committee initiated a project on behalf of the industry to update this experience study. As a result of this effort, the Committee developed the 2005 Group Term Life Waiver Reserve Table (2005 Table). This paper includes an overview of the process and the related findings from this work.

Although the previous table has been the "de facto" valuation standard, it was not formally adopted by the NAIC. At the present time, the Committee does not intend to pursue adoption of this table by the NAIC for statutory or any other reporting purposes.

## Introduction

There were several compelling reasons to develop a new experience study and valuation table, not the least of which was that 35 years is a long interval for any study. Mortality improvements for the insured and general populations have been well documented, but it was not clear what the trend would be for disabled lives. The composition of the workforce has also changed since the 1950s and 1960s when the data for the 1970 study were developed. Because there was relatively little female exposure (Krieger estimated 15%), the 1970 study results were presented on a unisex basis. In contrast, female composition for the 2005 study was 39%, and we are pleased to be able to present results separately for males and females.

The Committee wanted the new table to represent a broad cross-section of the industry and solicited data from nearly every group life carrier. Twenty-four companies contributed, but the Committee had to exclude data from six for various reasons. Exhibit 1 presents the distribution of exposed lives by contributing carrier on a blind basis and consists of significantly more exposure than the 1970 study. At nearly 750,000 life-years of experience and \$30 billion of face amount, it encompasses six times the number of life-years and 60 times the face amount of the 1970 study.

The 2005 Table covers waiver claims open at some point during the 10-year period of January 1, 1993 through December 31, 2002. Exposure starts after a 9-month elimination period, which remains the most common elimination period used within the industry. Although some companies provided data for earlier durations, there was insufficient data to develop results for a six-month elimination period.

There was also insufficient data to support the analysis of other characteristics, e.g., diagnosis, approval date and reported date. The Committee had also discussed requesting data on waiver definition, type of group and industry, which we dropped from the final request for data since we expected that most companies would be unable to provide group-level data on waiver. The final request for data is posted on the SOA website ([www.soa.org](http://www.soa.org)).

The 2005 Table uses the same structure as the 1970 Table, namely separate "Select" and "Ultimate" tables. Claims in the first ten years form the Select Table, which is constructed using two variables: age at disability and duration of disability. Claims in durations beyond the first ten years form the Ultimate Table, which is based on one variable: attained age. The study measured death rates and recovery rates by both number of lives and amount of insurance (volume); however, since both sets of results were similar, the lives information was the basis for the 2005 Table as it was for the 1970 Table. Only lives data are presented here.

Many of the results in the following tables are presented in the form of actual-to-expected (A/E) ratios. The expected values are the graduated experience rates, i.e., no margin, shown in the 1970 study. These values are in Appendix 2A for mortality and 2B for recoveries. Because Krieger was a unisex table, the expected values for deaths and

recoveries are the same for males and females. Also, the 2005 Table has been expanded in the Select period for central ages 67 and 72.

The aggregate actual-to-expected ratios (select and ultimate combined) for the study are 56% for deaths and 102% for recoveries. These ratios are similar to the adjustments that a number of companies are currently implementing to adjust termination rates from the 1970 Table in the valuation of current liabilities.

The Committee reviewed raw experience rates and smoothed them to develop graduated experience values. The Committee strove to ensure that the averages (across duration and age) of the graduated rates stayed relatively close to the averages observed in the raw data. There was a great desire to reflect the raw data to the extent the data were credible.

After the results were smoothed, the Committee developed margins to create a valuation table, the 2005 Table, based on this study. For this Table, the Committee selected margins of 25% for deaths and 35% for recoveries, i.e., death rates are multiplied by 125% and recoveries are multiplied by 65%. There is a higher margin for recoveries because there was more variance among companies for recoveries than for deaths. Exhibit 1 presents the aggregate A/E ratios by contributor on a blind basis. The margin of 25% for deaths covers 97% and 98% of the exposure in the select and ultimate periods, respectively. The margin of 35% for recoveries covers 96% and 85% of the exposure in the select and ultimate periods, respectively. These margins are similar to the 1970 Table's margins, which were 30% for mortality and 40% for recoveries (i.e., death rates were multiplied by 130% and recovery rates were multiplied by 60%, for constructing the reserve factors).

The Committee wishes to acknowledge the following seventeen companies that contributed data used in constructing the 2005 Table:

- Aetna
- American United Life Insurance Company
- Assurant (formerly Fortis Benefits)
- Connecticut General Life Insurance
- Florida Combined Life Insurance Company
- Fort Dearborn Life Insurance Company
- Guardian Life Insurance Company of America
- Hartford Life Insurance Company
- Metropolitan Life Insurance Company
- Minnesota Mutual Life Insurance Company
- Principal Life Insurance Company
- Prudential Life Insurance Company
- Reliance Standard Life Insurance Company
- Standard Insurance Company
- Symetra (formerly Safeco)
- United of Omaha Life Insurance Company
- UNUMProvident

The Committee also wishes to acknowledge the following companies who contributed data, which we were not able to use for a variety of reasons:

- CNA
- CUNA Mutual Insurance Society
- Humana
- Jefferson-Pilot Financial
- Lafayette Life Insurance Company
- Liberty Mutual Group

## Death and Recovery Rates

The following exhibits present the data on death and recovery rates:

- Exhibit 1: A/E ratios for deaths and recoveries by company, Select and Ultimate, no margin
- Exhibit 2: A/E ratios for deaths and recoveries by age and sex, Select, no margin
- Exhibit 3: A/E ratios for deaths and recoveries by age and sex, Ultimate, no margin
- Exhibit 4: graduated death rates, males and females, Select, no margin
- Exhibit 4A: Exhibit 4 data as a percentage of 1970 rates
- Exhibit 5: graduated recovery rates, males and females, Select, no margin
- Exhibit 5A: Exhibit 5 as a percentage of 1970 rates
- Exhibit 6: graduated death and recovery rates, males and females, Ultimate, no margin
- Exhibit 6A: graduated Ultimate death and recovery rates as a percentage of 1970 rates

The A/E ratios in exhibits 2 and 3 show lower, i.e., more favorable, A/E ratios for deaths for females than for males. This result is not surprising since the expected values are unisex (but predominantly male) and female mortality generally is lower than male mortality, even for disabled lives. Both exhibits also show higher, i.e., more favorable, rates of recovery for females than males.

The Committee reviewed raw experience rates and smoothed them to develop graduated experience values, using 2<sup>nd</sup> degree polynomial trend lines and other spreadsheet application tools in Excel, as well as some manual adjustments. In some cases, we used the slope of the 1970 Table.

Exhibit 4 presents the Committee's graduated death rates without margin for the Select period, for males and females. Exhibit 4A presents the Exhibit 4 death rates as a percentage of the 1970 Study data, again without margin. The death rates are relatively flat for males between the ages of 30 and 55, compared to the 1970 Table, although the raw data for females follow a slope similar to that of the 1970 Table.

Exhibits 5 and 5A present similar information for recoveries. As expected, the recoveries decrease with age and duration as they did in the prior study.

There was far less exposure data available at the youngest and oldest age bands. This was expected since there are relatively few longer-term disabilities at young ages and many contracts require that disability begin prior to age 60. Because of a lack of data on recoveries at the younger ages, the Committee opted to use the slope of the recovery rates from the 1970 Table to set the rates for age 22 and set rates for age 17 equal to those for age 22.

Exhibit 6 presents the Committee's graduated death and recovery rates without margin for the Ultimate period for males and females. Recoveries for both males and females end at age 79, which is four years later than the 1970 Study. Recoveries in the Ultimate period have significantly increased from those of the prior study. Again, due to insufficient mortality data, the Committee used the 1970 Table to develop the slope of the graduated death rates for ages above 82.

#### **Graphs:**

Graphs 1A-14A and 1B-14B present additional data on death and recovery rates.

Graphs 1A – 5A present mortality rates across various ages for a single duration.

Graphs 6A – 14A present mortality rates across durations for a single age group.

Graphs 1B – 5B present recovery rates across various ages for a single duration.

Graphs 6B – 14B present recovery rates across durations for a single age group.

The legend for each graph is the same:

- “Female - Actual,” the actual mortality/recovery rate for females
- “Female - Fitted,” the graduated rate for females
- “Male - Actual,” the actual rate for males
- “Male - Fitted,” the graduated rate for males
- “Krieger,” the experience rate from the 1970 Study, which was unisex

## Reserve Levels

For group life waiver claims, reserves are calculated as the actuarial present value of future claims (rather than as the actuarial present value of the waived premiums, which is the more typical approach for individual life).

The Committee calculated reserve factors (reserve per \$1000 of face amount) for a variety of bases to quantify the differences between the 2005 and 1970 tables using a common discount rate of 4.5%. We developed a full set of reserve factors for males and females for the 2005 Table and on a unisex basis for the 1970 Table, with and without margins, for several representative plans of benefits: benefits terminate at age 65, lifetime benefits and benefits reduce to 65% at age 65 and to 50% at age 70.

Each of the following exhibits contains three sets of reserve factors: 2005 female, 2005 male and 1970 unisex:

- Exhibit 7 reserve factors for waiver terminating at age 65 with margins
- Exhibit 8 same as Exhibit 7 without margins
- Exhibit 9 reserve factors for lifetime benefits without margins
- Exhibit 10 reserve factors 65% at age 70, 50% at age 75 without margins

Exhibits 7A – 10A show the percentage differences of the 2005 reserve factors for females and males versus those on the 1970 basis.

These Exhibits clearly show the difference that sex-specific rates make. Exhibit 7A presents a direct comparison of the reserve levels between the 1970 Valuation Table and the 2005 Valuation Table with margin. The 2005 reserves for young males in the early durations are actually higher than the 1970 reserves because the actual mortality rates were higher than the smoothed 1970 rates. The rates for males quickly dropped below the prior table's death rates (see Exhibit 4 and Appendix 2A of the 1970 study). Nonetheless, some 2005 Male Valuation and Basic Reserves (no margin) are higher in the first two years of disability than those in the 1970 Table. Exhibit 8A exhibits the same pattern as Exhibit 7A. In both Exhibits 7A and 8A, male and female reserves exhibit large reserve decreases relative to the prior Exhibit's reserves for central age 32 and older. Exhibits 9 and 10 show similar results for the other benefit plans on a no-margin basis.

In order to evaluate the aggregate impact of the 2005 reserves tables, we calculated reserves for all study amounts data for disabled lives with attained ages between 20 and 65, separately for Select and Ultimate. We calculated reserves for all of these claims using two common waiver provisions: benefits terminate at age 65 and lifetime benefits. Exhibits 11 and 11A summarize the reserves calculated based on the 2005 Table and the 1970 Table, both with and without margins.

## Conclusion

This paper has presented the Committee's Group Term Life Waiver Reserve Table (2005 Table) and described the process used to develop it. While the Committee recognizes that many carriers in the industry already adjust the results of the prior study for their own experience, we felt it important to create tables reflective of mortality and morbidity improvements, as well as current claims adjudication practices. The Committee also felt strongly that creating gender-specific tables would enable companies to assess the impact of gender on their liabilities. Individual companies may wish to adjust the death and recovery rates as necessary to the extent they have credible data or believe that their practices differ from others in the industry.

The SOA website ([www.soa.org](http://www.soa.org)) has a copy of an Excel workbook with the new death and recovery rates. Companies wishing to adjust the death and recovery rates can calculate customized reserve factors using a separate Excel workbook that will also be provided on the website.

Companies may also obtain further information by contacting the chairperson of this committee.

### Group Life Insurance Experience Committee

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**Exhibit 1**  
**A/E By Lives by Company, Males/Females Combined, No Margin**  
**Select Period (duration 9 months to 10 years)**

Company	Deaths	Recoveries
1	48%	93%
2	67%	43%
3 *	37%	127%
4	74%	108%
5	54%	97%
6	71%	145%
7 *	64%	163%
8	63%	126%
9	78%	168%
10	43%	43%
11 *	41%	65%
12	65%	78%
13	51%	91%
14	63%	68%
15	51%	69%
16	66%	107%
17	56%	97%
Total Select	59%	98%

The margin of 25% on deaths covers 97% of the exposure in the Select Period.  
Similarly, the 35% margin on recoveries covers 96% of the exposure.

\* These companies had fewer than 15,000 life-years of exposure.

**Ultimate Period (duration 11+years)**

Company	Deaths	Recoveries
1	47%	125%
2 **	59%	163%
3 **	59%	250%
4 **	72%	278%
5 **	47%	344%
8 **	65%	496%
9 **	56%	187%
11 **	55%	205%
12	63%	106%
13	49%	277%
14	54%	156%
15	55%	159%
16	57%	261%
17	53%	58%
Total Ultimate	53%	174%

The margin of 25% on deaths covers 98% of the exposure in the Ultimate Period.  
Similarly, the 35% margin on recoveries covers 85% of the exposure.

\*\* These companies had fewer than 10,000 life-years of exposure.

**Grand Total**

	Deaths	Recoveries
All Companies	56%	102%

## Exhibit 2

### A/E By Lives by Age Group, No Margin

Select Period (duration 9 months to 10 years)

Age Range	Exposed Lives		A/E Death		A/E Recovery	
	Male	Female	Male	Female	Male	Female
16-19	79	57	176%	85%	51%	47%
20-24	1,195	980	130%	82%	70%	93%
25-29	3,860	4,344	119%	58%	75%	97%
30-34	9,728	10,613	102%	50%	73%	91%
35-39	16,609	18,522	76%	43%	76%	85%
40-44	25,171	26,579	67%	45%	80%	95%
45-49	36,447	33,959	63%	50%	88%	107%
50-54	50,545	39,141	62%	54%	96%	135%
55-59	58,882	38,334	63%	56%	144%	205%
60-64	5,296	3,068	64%	59%	389%	420%
65-69	225	203	109%	66%	858%	970%
70-74	28	32	201%	114%	2332%	2404%
Total Select	208,064	175,832	66%	51%	89%	107%

## Exhibit 3

### A/E By Lives by Age Group, No Margin

Ultimate Period (duration 11+years)

Age Range	Exposed Lives		A/E Death		A/E Recovery	
	Male	Female	Male	Female	Male	Female
30-34	209	81	28%	0%	12%	130%
35-39	922	726	66%	51%	142%	185%
40-44	2,760	2,111	56%	39%	137%	167%
45-49	5,307	4,052	50%	45%	121%	186%
50-54	9,133	6,170	55%	42%	143%	148%
55-59	14,333	8,142	62%	53%	142%	155%
60-64	22,996	10,552	63%	46%	92%	94%
65-69	35,115	13,308	57%	41%	273%	419%
70-74	45,646	14,766	55%	42%	126%	135%
75+	65,299	20,735	55%	43%	1006%	900%
Total Ultimate	201,720	80,643	56%	43%	155%	177%
Total Select and Ultimate	409,784	256,475	60%	49%	93%	110%

**Exhibit 4**  
**Graduated Death Rates(1,000Q[X]), No Margin**  
 Select Period (duration 9 months to 10 years)

**MALES**

**PROBABILITY OF DEATH (1,000Q[X]+T) - SELECT PERIOD**

Central Age =>	17	22	27	32	37	42	47	52	57	62	67	72
Year of Dis.												
1 (4th qtr.)	17	20	20	23	28	28	28	30	31	37	34	31
2 (1st qtr.)	21	23	24	29	30	30	30	30	30	30	27	24
2 (2nd qtr.)	22	24	24	30	28	28	27	27	27	27	26	23
2 (3rd qtr.)	25	27	27	27	21	21	22	22	23	23	23	20
2 (4th qtr.)	27	31	30	26	18	18	18	18	17	17	17	17
2 (annual)	83.9	92.3	93.9	101.7	89.5	90.7	91.2	92.1	92.3	92.7	89.1	80.9
3	30	45	55	56	57	58	59	60	65	67	69	73
4	18	26	48	48	49	50	50	50	55	57	59	62
5	12	18	33	39	40	41	42	42	45	47	52	55
6	12	18	30	33	34	35	36	37	42	43	55	61
7	12	18	22	25	26	27	28	30	39	42	57	63
8	12	18	20	23	25	26	27	29	44	46	62	68
9	12	18	18	19	23	25	27	32	45	48	65	75
10	12	18	15	17	19	22	27	34	45	50	70	81

**FEMALES**

**PROBABILITY OF DEATH (1,000Q[X]+T) - SELECT PERIOD**

Central Age =>	17	22	27	32	37	42	47	52	57	62	67	72
Year of Dis.												
1 (4th qtr.)	10	12	16	17	18	21	25	27	29	32	30	28
2 (1st qtr.)	9	11	14	16	16	19	24	26	27	29	26	23
2 (2nd qtr.)	9	11	14	16	16	17	23	25	25	26	25	22
2 (3rd qtr.)	8	10	13	15	15	17	20	21	22	22	22	19
2 (4th qtr.)	8	9	12	13	13	14	16	17	16	16	16	16
2 (annual)	30.6	36.8	48.1	55.1	55.5	62.5	78.0	83.7	85.2	88.5	85.0	76.8
3	15	23	29	30	32	35	42	52	53	54	61	64
4	12	17	20	21	23	25	32	39	44	45	51	54
5	8	15	19	20	21	23	25	30	36	41	45	47
6	8	13	14	14	16	19	24	28	36	39	48	50
7	8	11	12	13	14	19	24	28	35	40	51	53
8	8	11	12	13	14	18	23	27	35	41	55	57
9	8	10	12	13	14	16	23	27	33	42	59	62
10	8	9	11	12	14	16	23	27	32	42	63	67

**Exhibit 4A**  
**Graduated Death Rates(1,000Q[X]), No Margin**  
 Select Period (duration 9 months to 10 years)

**MALES**

Ratio To 1970(Krieger) Mortality

Central Age =>	17	22	27	32	37	42	47	52	57	62	67	72
Year of Dis.												
1 (4th qtr.)	131%	87%	53%	47%	49%	46%	47%	54%	66%	97%	108%	129%
2 (1st qtr.)	191%	121%	83%	81%	71%	67%	67%	67%	73%	86%	82%	81%
2 (2nd qtr.)	244%	185%	120%	115%	93%	85%	77%	77%	79%	87%	85%	79%
2 (3rd qtr.)	357%	270%	180%	142%	91%	81%	79%	76%	79%	82%	81%	69%
2 (4th qtr.)	450%	344%	231%	163%	95%	82%	75%	69%	63%	61%	58%	55%
2 (annual)	289%	205%	159%	116%	87%	79%	75%	73%	74%	80%	77%	72%
3	167%	150%	134%	108%	90%	81%	74%	71%	73%	74%	73%	75%
4	113%	104%	145%	112%	96%	85%	76%	70%	68%	70%	66%	65%
5	75%	75%	106%	100%	85%	75%	68%	61%	56%	58%	58%	57%
6	75%	78%	107%	94%	79%	70%	62%	54%	53%	54%	61%	62%
7	75%	86%	88%	81%	68%	60%	51%	46%	50%	49%	59%	59%
8	75%	86%	83%	79%	69%	63%	53%	47%	57%	51%	60%	59%
9	75%	90%	82%	68%	66%	63%	56%	53%	58%	51%	60%	60%
10	75%	100%	79%	63%	58%	56%	59%	59%	58%	52%	62%	62%

**FEMALES**

Ratio To 1970(Krieger) Mortality

Central Age =>	17	22	27	32	37	42	47	52	57	62	67	72
Year of Dis.												
1 (4th qtr.)	77%	52%	42%	35%	32%	34%	42%	48%	62%	84%	95%	117%
2 (1st qtr.)	82%	58%	48%	44%	38%	42%	53%	58%	66%	83%	79%	78%
2 (2nd qtr.)	100%	85%	70%	62%	53%	52%	66%	71%	74%	84%	82%	75%
2 (3rd qtr.)	114%	100%	87%	79%	65%	65%	71%	72%	76%	79%	77%	66%
2 (4th qtr.)	133%	100%	92%	81%	68%	64%	67%	65%	59%	57%	54%	52%
2 (annual)	106%	82%	82%	63%	54%	54%	64%	66%	69%	76%	73%	68%
3	83%	77%	71%	58%	51%	49%	53%	61%	60%	60%	65%	65%
4	75%	68%	61%	49%	45%	42%	48%	55%	54%	55%	57%	57%
5	50%	63%	61%	51%	45%	42%	40%	43%	45%	51%	50%	49%
6	50%	57%	50%	40%	37%	38%	41%	41%	46%	49%	53%	51%
7	50%	52%	48%	42%	37%	42%	44%	43%	45%	47%	53%	50%
8	50%	52%	50%	45%	39%	44%	45%	44%	45%	46%	53%	49%
9	50%	50%	55%	46%	40%	40%	48%	45%	42%	45%	54%	50%
10	50%	50%	58%	44%	42%	41%	50%	47%	41%	43%	56%	51%

**Exhibit 5**  
**Graduated Recovery Rates(1,000Q[X]), No Margin**  
 Select Period (duration 9 months to 10 years)

**MALES**

**PROBABILITY OF RECOVERY (1,000Q[X]+T) - SELECT PERIOD**

Central Age =>	17	22	27	32	37	42	47	52	57	62	67	72
Year of Dis.												
1 (4th qtr.)	61	61	50	41	39	30	23	15	12	8	6	5
2 (1st qtr.)	58	58	48	40	36	25	21	13	11	8	7	5
2 (2nd qtr.)	53	53	43	35	34	24	19	12	10	7	6	5
2 (3rd qtr.)	49	49	40	33	32	23	15	11	9	6	5	4
2 (4th qtr.)	43	43	36	30	29	22	13	10	7	5	4	3
2 (annual)	182.5	182.0	151.6	125.9	119.9	87.1	63.9	43.5	35.2	24.8	21.1	16.4
3	171	171	139	113	83	71	58	36	23	16	12	11
4	154	154	116	87	67	55	40	27	17	14	9	8
5	125	125	92	67	56	45	27	21	13	11	8	7
6	76	76	65	55	48	37	21	14	10	10	7	6
7	60	60	54	48	43	32	17	12	8	8	5	4
8	53	53	48	43	36	25	16	10	8	6	3	2
9	43	43	41	38	31	21	13	8	7	5	2	1
10	38	38	35	32	23	17	10	7	6	4	2	0

**FEMALES**

**PROBABILITY OF RECOVERY (1,000Q[X]+T) - SELECT PERIOD**

Central Age =>	17	22	27	32	37	42	47	52	57	62	67	72
Year of Dis.												
1 (4th qtr.)	94	94	77	63	44	38	26	25	20	13	10	8
2 (1st qtr.)	71	71	59	49	41	34	25	23	18	13	11	9
2 (2nd qtr.)	59	59	48	39	38	30	22	21	15	11	9	7
2 (3rd qtr.)	53	53	44	36	35	26	18	17	12	9	7	6
2 (4th qtr.)	46	46	38	32	31	23	14	13	9	6	5	4
2 (annual)	207.8	207.2	172.9	144.1	134.3	105.7	74.5	69.7	51.3	37.2	30.7	25.1
3	199	199	162	132	108	91	65	49	31	22	17	15
4	193	193	145	109	85	68	45	35	21	18	11	9
5	164	164	120	88	67	53	33	23	18	16	12	10
6	101	101	86	73	55	41	27	17	15	15	10	8
7	75	75	67	60	47	34	25	14	12	12	8	6
8	62	62	56	50	40	28	23	13	11	9	5	3
9	49	49	46	43	35	24	19	11	9	7	3	1
10	42	42	38	35	29	18	11	8	8	5	3	0

**Exhibit 5A**  
**Graduated Recovery Rates(1,000Q[X]), No Margin**  
 Select Period (duration 9 months to 10 years)

**MALES**

Ratio To 1970(Krieger) Recovery

Central Age =>	17	22	27	32	37	42	47	52	57	62	67	72
Year of Dis.												
1 (4th qtr.)	58%	68%	69%	69%	80%	79%	92%	94%	150%	160%	144%	150%
2 (1st qtr.)	56%	66%	68%	68%	73%	69%	88%	87%	157%	160%	168%	150%
2 (2nd qtr.)	52%	62%	61%	61%	71%	67%	79%	80%	143%	140%	144%	150%
2 (3rd qtr.)	49%	58%	59%	59%	68%	66%	65%	79%	129%	120%	120%	120%
2 (4th qtr.)	45%	52%	55%	55%	63%	65%	59%	71%	100%	100%	96%	90%
2 (annual)	54%	62%	63%	63%	71%	69%	75%	81%	135%	131%	189%	159%
3	53%	69%	70%	70%	62%	72%	92%	100%	135%	133%	131%	132%
4	60%	74%	72%	72%	66%	77%	91%	117%	142%	140%	146%	150%
5	67%	84%	82%	82%	85%	100%	104%	131%	163%	157%	155%	162%
6	63%	84%	98%	98%	102%	100%	95%	100%	167%	167%	168%	180%
7	75%	95%	113%	112%	123%	114%	94%	100%	160%	160%	158%	171%
8	96%	110%	120%	119%	124%	104%	107%	91%	160%	150%	138%	150%
9	102%	116%	132%	131%	124%	100%	100%	80%	175%	167%	171%	300%
10	127%	136%	146%	145%	115%	113%	100%	88%	200%	200%	200%	0%

**FEMALES**

Ratio To 1970(Krieger) Recovery

Central Age =>	17	22	27	32	37	42	47	52	57	62	67	72
Year of Dis.												
1 (4th qtr.)	90%	104%	107%	107%	90%	100%	104%	156%	250%	260%	240%	240%
2 (1st qtr.)	68%	81%	83%	83%	84%	94%	104%	153%	257%	260%	264%	270%
2 (2nd qtr.)	58%	69%	69%	68%	79%	83%	92%	140%	214%	220%	216%	210%
2 (3rd qtr.)	54%	62%	65%	64%	74%	74%	78%	121%	171%	180%	168%	180%
2 (4th qtr.)	48%	56%	58%	58%	67%	68%	64%	93%	129%	120%	120%	120%
2 (annual)	61%	71%	72%	72%	80%	84%	88%	129%	197%	196%	275%	243%
3	62%	81%	81%	81%	81%	93%	103%	136%	182%	183%	185%	180%
4	75%	93%	90%	90%	83%	96%	102%	152%	175%	180%	178%	169%
5	88%	111%	107%	107%	102%	118%	127%	144%	225%	229%	232%	231%
6	84%	111%	130%	130%	117%	111%	123%	121%	250%	250%	240%	240%
7	94%	119%	140%	140%	134%	121%	139%	117%	240%	240%	253%	257%
8	113%	129%	140%	139%	138%	117%	153%	118%	220%	225%	231%	225%
9	117%	132%	148%	148%	140%	114%	146%	110%	225%	233%	257%	300%
10	140%	150%	158%	159%	145%	120%	110%	100%	267%	250%	300%	0%

**Exhibit 6**  
**Graduated Rates(1,000Q[X]), No Margin**  
**Ultimate Period (Durations 11 years and beyond)**

Attained Age	Male		Female	
	Recovery	Death	Recovery	Death
27	25	10	25	8
28	25	10	25	8
29	25	10	25	8
30	25	11	25	9
31	25	11	25	9
32	25	11	25	9
33	25	11	26	9
34	25	11	27	9
35	25	12	29	10
36	25	12	31	10
37	25	12	33	10
38	24	12	32	10
39	23	13	31	11
40	23	14	30	11
41	22	15	28	12
42	22	15	27	12
43	21	15	27	12
44	20	16	27	13
45	19	16	26	14
46	18	17	26	14
47	17	17	26	15
48	17	18	24	15
49	17	19	22	15
50	16	20	20	16
51	16	21	18	16
52	16	22	17	16
53	15	24	16	18
54	14	25	15	19
55	12	26	14	20
56	11	28	12	22
57	10	29	11	23
58	9	31	10	24
59	8	33	10	25
60	7	34	9	25
61	6	35	9	26
62	5	37	8	27
63	5	39	8	28
64	5	40	8	30
65	5	42	7	31
66	5	44	7	32
67	5	45	7	32
68	4	47	6	34
69	3	48	4	36

**Exhibit 6 (Continued)**  
**Graduated Ultimate Rates(1,000Q[X])**  
**Ultimate Period (Durations 11 years and beyond)**

Attained Age	Male		Female	
	Recovery	Death	Recovery	Death
70	3	51	3	38
71	2	52	2	40
72	1	53	1	42
73	1	58	1	46
74	1	62	1	50
75	1	66	1	54
76	1	70	1	59
77	1	74	1	63
78	1	76	1	64
79	1	79	1	65
80	0	80	0	66
81	0	83	0	67
82	0	86	0	67
83	0	91	0	71
84	0	97	0	75
85	0	103	0	79
86	0	109	0	84
87	0	115	0	89
88	0	122	0	94
89	0	129	0	99
90	0	137	0	105
91	0	146	0	112
92	0	156	0	120
93	0	168	0	129
94	0	182	0	140
95	0	199	0	153
96	0	224	0	172
97	0	268	0	206
98	0	359	0	276
99	0	1000	0	1000



**Exhibit 6A**  
**Graduated Rates(1,000Q[X]), No Margin, as a Percentage of 1970 Table**  
**Ultimate Period (Durations 11 years and beyond)**

Attained Age	Male		Female	
	Recovery	Death	Recovery	Death
27	125%	63%	125%	50%
28	125%	63%	125%	50%
29	125%	63%	125%	50%
30	125%	69%	125%	56%
31	125%	69%	125%	56%
32	132%	65%	132%	53%
33	132%	65%	137%	53%
34	132%	65%	142%	53%
35	132%	71%	153%	59%
36	132%	71%	163%	59%
37	139%	67%	183%	56%
38	133%	63%	178%	53%
39	135%	62%	182%	52%
40	135%	61%	176%	48%
41	138%	63%	175%	50%
42	138%	58%	169%	46%
43	131%	54%	169%	43%
44	133%	53%	180%	43%
45	127%	52%	173%	45%
46	129%	53%	186%	44%
47	121%	52%	186%	45%
48	121%	53%	171%	44%
49	131%	53%	169%	42%
50	123%	54%	154%	43%
51	133%	55%	150%	42%
52	133%	56%	142%	41%
53	136%	60%	145%	45%
54	140%	60%	150%	45%
55	133%	60%	156%	47%
56	138%	62%	150%	49%
57	143%	63%	157%	50%
58	129%	65%	143%	50%
59	133%	66%	167%	50%
60	117%	65%	150%	48%
61	120%	64%	180%	47%
62	100%	64%	160%	47%
63	100%	63%	160%	45%
64	125%	61%	200%	45%
65	167%	60%	233%	44%
66	250%	59%	350%	43%
67	250%	58%	350%	41%
68	200%	57%	300%	41%
69	300%	55%	400%	41%

**Exhibit 6A (Continued)**  
**Graduated Rates(1,000Q[X]), No Margin, as a Percentage of 1970 Table**  
**Ultimate Period (Durations 11 years and beyond)**

Attained Age	Male		Female	
	Recovery	Death	Recovery	Death
70	300%	56%	300%	42%
71	200%	55%	200%	42%
72	100%	53%	100%	42%
73	100%	56%	100%	44%
74	100%	56%	100%	45%
75	100%	57%	100%	47%
76		58%		49%
77		58%		49%
78		56%		47%
79		55%		45%
80		53%		43%
81		52%		42%
82		50%		39%
83		50%		39%
84		51%		39%
85		51%		39%
86		51%		39%
87		51%		39%
88		51%		39%
89		51%		39%
90		51%		39%
91		51%		39%
92		51%		39%
93		51%		39%
94		51%		39%
95		51%		39%
96		51%		39%
97		51%		39%
98		51%		39%
99		100%		100%























**Exhibit 9 - Part 1**  
**Lifetime Benefits**  
**2005 Basic Reserves (no margin) 4.5%, 100% Deaths 100% Recovery**  
**FEMALES**  
**Central Age at Disablement**

<b>Duration From Disablement</b>	<b>22</b>	<b>27</b>	<b>32</b>	<b>37</b>	<b>42</b>	<b>47</b>	<b>52</b>	<b>57</b>	<b>62</b>
<b>0.75</b>	108	148	182	218	270	347	402	458	507
<b>1.00</b>	109	147	181	215	268	343	400	457	504
<b>1.25</b>	108	146	180	214	267	341	399	456	502
<b>1.50</b>	106	143	175	213	265	337	397	455	501
<b>1.75</b>	104	139	171	211	263	334	396	454	500
<b>2</b>	102	136	168	209	261	331	395	454	501
<b>3</b>	107	139	173	217	272	341	402	460	508
<b>4</b>	120	151	184	228	286	351	411	467	518
<b>5</b>	135	161	193	239	299	363	422	478	531
<b>6</b>	144	171	206	251	312	374	432	488	545
<b>7</b>	153	181	218	265	324	386	443	499	559
<b>8</b>	161	190	229	278	337	399	454	510	572
<b>9</b>	168	198	240	290	350	411	465	522	584
<b>10</b>	175	206	251	302	362	421	475	534	596
<b>11</b>	180	215	260	314	374	431	487	548	607
<b>12</b>	186	224	270	326	386	442	498	561	617
<b>13</b>	192	232	281	338	398	453	510	573	627
<b>14</b>	199	242	291	350	410	464	522	585	636
<b>15</b>	206	251	302	362	421	475	534	596	645
<b>16</b>	215	260	314	374	431	487	548	607	653
<b>17</b>	224	270	326	386	442	498	561	617	661
<b>18</b>	232	281	338	398	453	510	573	627	670
<b>19</b>	242	291	350	410	464	522	585	636	679
<b>20</b>	251	302	362	421	475	534	596	645	689
<b>21</b>	260	314	374	431	487	548	607	653	699
<b>22</b>	270	326	386	442	498	561	617	661	710
<b>23</b>	281	338	398	453	510	573	627	670	721
<b>24</b>	291	350	410	464	522	585	636	679	733
<b>25</b>	302	362	421	475	534	596	645	689	744
<b>26</b>	314	374	431	487	548	607	653	699	756
<b>27</b>	326	386	442	498	561	617	661	710	768
<b>28</b>	338	398	453	510	573	627	670	721	781
<b>29</b>	350	410	464	522	585	636	679	733	795
<b>30</b>	362	421	475	534	596	645	689	744	809
<b>31</b>	374	431	487	548	607	653	699	756	824
<b>32</b>	386	442	498	561	617	661	710	768	841
<b>33</b>	398	453	510	573	627	670	721	781	859
<b>34</b>	410	464	522	585	636	679	733	795	879
<b>35</b>	421	475	534	596	645	689	744	809	902
<b>36</b>	431	487	548	607	653	699	756	824	927
<b>37</b>	442	498	561	617	661	710	768	841	957
<b>38</b>	453	510	573	627	670	721	781	859	-
<b>39</b>	464	522	585	636	679	733	795	879	-
<b>40</b>	475	534	596	645	689	744	809	902	-
<b>41</b>	487	548	607	653	699	756	824	927	-
<b>42</b>	498	561	617	661	710	768	841	957	-



**Exhibit 9 - Part 2**  
**Lifetime Benefits**  
**2005 Basic Reserves (no margin) 4.5%, 100% Deaths 100% Recovery**  
**MALES**  
**Central Age at Disablement**

<b>Duration From Disablement</b>	<b>22</b>	<b>27</b>	<b>32</b>	<b>37</b>	<b>42</b>	<b>47</b>	<b>52</b>	<b>57</b>	<b>62</b>
<b>0.75</b>	202	251	293	320	364	416	468	519	557
<b>1.00</b>	201	251	292	317	361	414	464	516	551
<b>1.25</b>	197	249	287	312	356	410	460	514	549
<b>1.50</b>	190	244	279	307	351	407	456	512	547
<b>1.75</b>	179	236	272	306	349	405	455	511	546
<b>2</b>	162	224	263	305	349	404	455	512	548
<b>3</b>	159	222	264	305	352	411	459	515	551
<b>4</b>	171	220	263	305	355	417	466	521	558
<b>5</b>	187	225	264	308	361	423	474	530	569
<b>6</b>	196	226	266	314	369	431	483	540	583
<b>7</b>	203	232	273	324	381	442	496	552	597
<b>8</b>	208	239	281	334	393	454	509	562	610
<b>9</b>	213	246	292	345	404	467	521	572	622
<b>10</b>	216	255	302	356	416	478	532	582	634
<b>11</b>	223	264	313	368	429	490	542	593	645
<b>12</b>	231	274	323	379	442	501	551	603	654
<b>13</b>	239	283	334	391	454	511	562	614	663
<b>14</b>	246	293	345	404	467	522	572	624	672
<b>15</b>	255	302	356	416	478	532	582	634	681
<b>16</b>	264	313	368	429	490	542	593	645	689
<b>17</b>	274	323	379	442	501	551	603	654	698
<b>18</b>	283	334	391	454	511	562	614	663	707
<b>19</b>	293	345	404	467	522	572	624	672	716
<b>20</b>	302	356	416	478	532	582	634	681	726
<b>21</b>	313	368	429	490	542	593	645	689	736
<b>22</b>	323	379	442	501	551	603	654	698	746
<b>23</b>	334	391	454	511	562	614	663	707	755
<b>24</b>	345	404	467	522	572	624	672	716	765
<b>25</b>	356	416	478	532	582	634	681	726	775
<b>26</b>	368	429	490	542	593	645	689	736	785
<b>27</b>	379	442	501	551	603	654	698	746	796
<b>28</b>	391	454	511	562	614	663	707	755	807
<b>29</b>	404	467	522	572	624	672	716	765	818
<b>30</b>	416	478	532	582	634	681	726	775	830
<b>31</b>	429	490	542	593	645	689	736	785	843
<b>32</b>	442	501	551	603	654	698	746	796	857
<b>33</b>	454	511	562	614	663	707	755	807	872
<b>34</b>	467	522	572	624	672	716	765	818	889
<b>35</b>	478	532	582	634	681	726	775	830	908
<b>36</b>	490	542	593	645	689	736	785	843	931
<b>37</b>	501	551	603	654	698	746	796	857	957
<b>38</b>	511	562	614	663	707	755	807	872	-
<b>39</b>	522	572	624	672	716	765	818	889	-
<b>40</b>	532	582	634	681	726	775	830	908	-
<b>41</b>	542	593	645	689	736	785	843	931	-
<b>42</b>	551	603	654	698	746	796	857	957	-





**Exhibit 9 - Part 3**  
**Lifetime Benefits**  
**1970 Basic Reserves (no margin) 4.5%, 100% Deaths 100% Recovery**  
**UNISEX**  
**Central Age at Disablement**

<b>Duration From Disablement</b>	<b>22</b>	<b>27</b>	<b>32</b>	<b>37</b>	<b>42</b>	<b>47</b>	<b>52</b>	<b>57</b>	<b>62</b>
<b>0.75</b>	147	221	292	354	424	503	572	638	660
<b>1.00</b>	142	209	276	337	408	490	562	632	657
<b>1.25</b>	140	203	269	330	402	486	559	630	657
<b>1.50</b>	143	204	269	330	402	485	559	630	658
<b>1.75</b>	149	209	274	334	405	488	560	630	659
<b>2</b>	156	215	281	341	411	492	563	632	660
<b>3</b>	184	242	307	364	430	507	572	639	668
<b>4</b>	218	273	333	389	449	521	582	647	678
<b>5</b>	246	297	351	406	460	529	589	654	688
<b>6</b>	264	311	365	419	472	537	597	660	700
<b>7</b>	279	324	379	431	484	546	605	667	710
<b>8</b>	290	336	392	443	497	557	615	676	719
<b>9</b>	300	348	405	456	510	568	627	684	728
<b>10</b>	310	360	417	468	522	580	639	693	737
<b>11</b>	319	372	427	479	534	592	651	703	746
<b>12</b>	328	383	438	490	546	604	663	712	755
<b>13</b>	338	395	448	500	557	615	674	720	763
<b>14</b>	348	406	458	511	569	628	684	729	772
<b>15</b>	360	417	468	522	580	639	693	737	780
<b>16</b>	372	427	479	534	592	651	703	746	788
<b>17</b>	383	438	490	546	604	663	712	755	796
<b>18</b>	395	448	500	557	615	674	720	763	804
<b>19</b>	406	458	511	569	628	684	729	772	812
<b>20</b>	417	468	522	580	639	693	737	780	819
<b>21</b>	427	479	534	592	651	703	746	788	826
<b>22</b>	438	490	546	604	663	712	755	796	833
<b>23</b>	448	500	557	615	674	720	763	804	840
<b>24</b>	458	511	569	628	684	729	772	812	847
<b>25</b>	468	522	580	639	693	737	780	819	853
<b>26</b>	479	534	592	651	703	746	788	826	860
<b>27</b>	490	546	604	663	712	755	796	833	866
<b>28</b>	500	557	615	674	720	763	804	840	873
<b>29</b>	511	569	628	684	729	772	812	847	880
<b>30</b>	522	580	639	693	737	780	819	853	887
<b>31</b>	534	592	651	703	746	788	826	860	894
<b>32</b>	546	604	663	712	755	796	833	866	902
<b>33</b>	557	615	674	720	763	804	840	873	911
<b>34</b>	569	628	684	729	772	812	847	880	921
<b>35</b>	580	639	693	737	780	819	853	887	932
<b>36</b>	592	651	703	746	788	826	860	894	945
<b>37</b>	604	663	712	755	796	833	866	902	957
<b>38</b>	615	674	720	763	804	840	873	911	-
<b>39</b>	628	684	729	772	812	847	880	921	-
<b>40</b>	639	693	737	780	819	853	887	932	-
<b>41</b>	651	703	746	788	826	860	894	945	-
<b>42</b>	663	712	755	796	833	866	902	957	-



**Exhibit 10 - Part 1**  
**65% at age 70, 50% at 75**  
**2005 Basic Reserves (no margin) 4.5%, 100% Deaths 100% Recovery**  
**FEMALES**  
**Central Age at Disablement**

<b>Duration From Disablement</b>	<b>22</b>	<b>27</b>	<b>32</b>	<b>37</b>	<b>42</b>	<b>47</b>	<b>52</b>	<b>57</b>	<b>62</b>
<b>0.75</b>	106	145	176	207	252	317	356	387	398
<b>1.00</b>	107	144	175	204	248	311	351	381	388
<b>1.25</b>	106	142	172	202	246	307	347	376	380
<b>1.50</b>	104	138	168	199	243	301	342	371	372
<b>1.75</b>	102	135	163	196	239	296	338	365	366
<b>2</b>	99	131	159	194	237	292	335	363	362
<b>3</b>	104	133	163	199	243	295	331	356	351
<b>4</b>	115	143	171	207	252	299	332	351	344
<b>5</b>	129	151	178	214	260	305	334	349	337
<b>6</b>	137	160	189	224	269	311	336	347	331
<b>7</b>	145	168	199	234	277	316	338	343	323
<b>8</b>	151	176	208	244	285	322	339	339	312
<b>9</b>	157	182	216	253	293	327	341	336	314
<b>10</b>	164	189	224	262	301	330	341	332	316
<b>11</b>	168	196	231	270	308	334	341	328	317
<b>12</b>	173	203	239	278	315	336	341	321	316
<b>13</b>	178	210	247	286	321	338	339	312	314
<b>14</b>	183	217	254	293	326	340	336	315	318
<b>15</b>	189	224	262	301	330	341	332	316	322
<b>16</b>	196	231	270	308	334	341	328	317	326
<b>17</b>	203	239	278	315	336	341	321	316	330
<b>18</b>	210	247	286	321	338	339	312	314	335
<b>19</b>	217	254	293	326	340	336	315	318	339
<b>20</b>	224	262	301	330	341	332	316	322	344
<b>21</b>	231	270	308	334	341	328	317	326	350
<b>22</b>	239	278	315	336	341	321	316	330	355
<b>23</b>	247	286	321	338	339	312	314	335	361
<b>24</b>	254	293	326	340	336	315	318	339	366
<b>25</b>	262	301	330	341	332	316	322	344	372
<b>26</b>	270	308	334	341	328	317	326	350	378
<b>27</b>	278	315	336	341	321	316	330	355	384
<b>28</b>	286	321	338	339	312	314	335	361	390
<b>29</b>	293	326	340	336	315	318	339	366	397
<b>30</b>	301	330	341	332	316	322	344	372	404
<b>31</b>	308	334	341	328	317	326	350	378	412
<b>32</b>	315	336	341	321	316	330	355	384	420
<b>33</b>	321	338	339	312	314	335	361	390	429
<b>34</b>	326	340	336	315	318	339	366	397	439
<b>35</b>	330	341	332	316	322	344	372	404	451
<b>36</b>	334	341	328	317	326	350	378	412	464
<b>37</b>	336	341	321	316	330	355	384	420	478
<b>38</b>	338	339	312	314	335	361	390	429	-
<b>39</b>	340	336	315	318	339	366	397	439	-
<b>40</b>	341	332	316	322	344	372	404	451	-
<b>41</b>	341	328	317	326	350	378	412	464	-
<b>42</b>	341	321	316	330	355	384	420	478	-



**Exhibit 10 - Part 2**  
**65% at age 70, 50% at 75**  
**2005 Basic Reserves (no margin) 4.5%, 100% Deaths 100% Recovery**  
**MALES**  
**Central Age at Disablement**

<b>Duration From Disablement</b>	<b>22</b>	<b>27</b>	<b>32</b>	<b>37</b>	<b>42</b>	<b>47</b>	<b>52</b>	<b>57</b>	<b>62</b>
<b>0.75</b>	201	248	288	311	349	389	423	449	443
<b>1.00</b>	199	248	286	307	345	385	416	442	430
<b>1.25</b>	195	245	281	301	338	379	409	435	422
<b>1.50</b>	188	240	272	295	331	374	403	430	414
<b>1.75</b>	176	232	264	293	329	371	399	425	408
<b>2</b>	159	219	255	292	328	368	397	423	404
<b>3</b>	155	215	254	289	326	369	392	414	387
<b>4</b>	166	212	251	286	325	368	390	406	374
<b>5</b>	181	215	250	286	327	368	390	403	365
<b>6</b>	189	215	250	288	331	370	390	400	358
<b>7</b>	194	220	255	296	338	376	394	398	349
<b>8</b>	199	225	261	303	345	382	399	392	337
<b>9</b>	203	231	269	310	352	388	401	385	338
<b>10</b>	205	238	277	318	360	393	401	376	340
<b>11</b>	211	246	285	327	368	397	399	366	339
<b>12</b>	217	254	294	335	375	400	395	354	336
<b>13</b>	224	262	302	344	382	401	391	339	332
<b>14</b>	231	270	310	352	388	402	384	340	336
<b>15</b>	238	277	318	360	393	401	376	340	341
<b>16</b>	246	285	327	368	397	399	366	339	345
<b>17</b>	254	294	335	375	400	395	354	336	349
<b>18</b>	262	302	344	382	401	391	339	332	354
<b>19</b>	270	310	352	388	402	384	340	336	358
<b>20</b>	277	318	360	393	401	376	340	341	363
<b>21</b>	285	327	368	397	399	366	339	345	368
<b>22</b>	294	335	375	400	395	354	336	349	373
<b>23</b>	302	344	382	401	391	339	332	354	378
<b>24</b>	310	352	388	402	384	340	336	358	383
<b>25</b>	318	360	393	401	376	340	341	363	388
<b>26</b>	327	368	397	399	366	339	345	368	393
<b>27</b>	335	375	400	395	354	336	349	373	398
<b>28</b>	344	382	401	391	339	332	354	378	403
<b>29</b>	352	388	402	384	340	336	358	383	409
<b>30</b>	360	393	401	376	340	341	363	388	415
<b>31</b>	368	397	399	366	339	345	368	393	421
<b>32</b>	375	400	395	354	336	349	373	398	428
<b>33</b>	382	401	391	339	332	354	378	403	436
<b>34</b>	388	402	384	340	336	358	383	409	444
<b>35</b>	393	401	376	340	341	363	388	415	454
<b>36</b>	397	399	366	339	345	368	393	421	465
<b>37</b>	400	395	354	336	349	373	398	428	478
<b>38</b>	401	391	339	332	354	378	403	436	-
<b>39</b>	402	384	340	336	358	383	409	444	-
<b>40</b>	401	376	340	341	363	388	415	454	-
<b>41</b>	399	366	339	345	368	393	421	465	-
<b>42</b>	395	354	336	349	373	398	428	478	-



**Exhibit 10 - Part 3**  
**65% at age 70, 50% at 75**  
**1970 Basic Reserves (no margin) 4.5%, 100% Deaths 100% Recovery**  
**UNISEX**  
**Central Age at Disablement**

<b>Duration From Disablement</b>	<b>22</b>	<b>27</b>	<b>32</b>	<b>37</b>	<b>42</b>	<b>47</b>	<b>52</b>	<b>57</b>	<b>62</b>
<b>0.75</b>	147	220	289	349	415	487	543	585	557
<b>1.00</b>	141	207	272	331	398	472	531	576	549
<b>1.25</b>	139	201	266	323	391	466	525	570	542
<b>1.50</b>	142	202	265	323	390	464	522	566	537
<b>1.75</b>	148	206	269	327	392	465	522	564	533
<b>2</b>	154	212	276	333	397	468	523	562	529
<b>3</b>	182	238	301	354	413	477	525	558	515
<b>4</b>	215	268	325	377	428	486	527	553	502
<b>5</b>	242	290	342	391	436	489	526	546	487
<b>6</b>	260	304	354	402	445	493	525	538	469
<b>7</b>	273	316	366	412	453	496	524	528	445
<b>8</b>	284	327	378	422	462	501	524	517	414
<b>9</b>	294	338	390	432	472	506	524	503	412
<b>10</b>	303	349	400	441	480	511	524	487	407
<b>11</b>	310	359	409	449	487	516	523	469	401
<b>12</b>	319	370	418	458	494	520	519	445	393
<b>13</b>	328	380	426	465	501	522	512	414	382
<b>14</b>	338	390	434	473	507	524	502	412	386
<b>15</b>	349	400	441	480	511	524	487	407	390
<b>16</b>	359	409	449	487	516	523	469	401	394
<b>17</b>	370	418	458	494	520	519	445	393	398
<b>18</b>	380	426	465	501	522	512	414	382	402
<b>19</b>	390	434	473	507	524	502	412	386	406
<b>20</b>	400	441	480	511	524	487	407	390	410
<b>21</b>	409	449	487	516	523	469	401	394	413
<b>22</b>	418	458	494	520	519	445	393	398	417
<b>23</b>	426	465	501	522	512	414	382	402	420
<b>24</b>	434	473	507	524	502	412	386	406	423
<b>25</b>	441	480	511	524	487	407	390	410	427
<b>26</b>	449	487	516	523	469	401	394	413	430
<b>27</b>	458	494	520	519	445	393	398	417	433
<b>28</b>	465	501	522	512	414	382	402	420	437
<b>29</b>	473	507	524	502	412	386	406	423	440
<b>30</b>	480	511	524	487	407	390	410	427	444
<b>31</b>	487	516	523	469	401	394	413	430	447
<b>32</b>	494	520	519	445	393	398	417	433	451
<b>33</b>	501	522	512	414	382	402	420	437	455
<b>34</b>	507	524	502	412	386	406	423	440	460
<b>35</b>	511	524	487	407	390	410	427	444	466
<b>36</b>	516	523	469	401	394	413	430	447	472
<b>37</b>	520	519	445	393	398	417	433	451	478
<b>38</b>	522	512	414	382	402	420	437	455	-
<b>39</b>	524	502	412	386	406	423	440	460	-
<b>40</b>	524	487	407	390	410	427	444	466	-
<b>41</b>	523	469	401	394	413	430	447	472	-
<b>42</b>	519	445	393	398	417	433	451	478	-





**Exhibit 9A - Part 1**  
**Lifetime**  
**Comparison of 2005 Reserves versus 1970 Reserves (Basic Table)**  
**FEMALES**  
**Central Age at Disablement**

<b>Duration From Disablement</b>	<b>22</b>	<b>27</b>	<b>32</b>	<b>37</b>	<b>42</b>	<b>47</b>	<b>52</b>	<b>57</b>	<b>62</b>
<b>0.75</b>	-27%	-33%	-38%	-39%	-36%	-31%	-30%	-28%	-23%
<b>1.00</b>	-23%	-29%	-34%	-36%	-34%	-30%	-29%	-28%	-23%
<b>1.25</b>	-23%	-28%	-33%	-35%	-34%	-30%	-29%	-28%	-24%
<b>1.50</b>	-26%	-30%	-35%	-36%	-34%	-31%	-29%	-28%	-24%
<b>1.75</b>	-30%	-33%	-37%	-37%	-35%	-32%	-29%	-28%	-24%
<b>2</b>	-35%	-37%	-40%	-39%	-36%	-33%	-30%	-28%	-24%
<b>3</b>	-42%	-42%	-44%	-40%	-37%	-33%	-30%	-28%	-24%
<b>4</b>	-45%	-45%	-45%	-41%	-36%	-33%	-29%	-28%	-24%
<b>5</b>	-45%	-46%	-45%	-41%	-35%	-31%	-28%	-27%	-23%
<b>6</b>	-45%	-45%	-44%	-40%	-34%	-30%	-28%	-26%	-22%
<b>7</b>	-45%	-44%	-42%	-39%	-33%	-29%	-27%	-25%	-21%
<b>8</b>	-45%	-43%	-42%	-37%	-32%	-28%	-26%	-25%	-21%
<b>9</b>	-44%	-43%	-41%	-36%	-31%	-28%	-26%	-24%	-20%
<b>10</b>	-43%	-43%	-40%	-35%	-31%	-28%	-26%	-23%	-19%
<b>11</b>	-43%	-42%	-39%	-34%	-30%	-27%	-25%	-22%	-19%
<b>12</b>	-43%	-42%	-38%	-33%	-29%	-27%	-25%	-21%	-18%
<b>13</b>	-43%	-41%	-37%	-32%	-29%	-26%	-24%	-20%	-18%
<b>14</b>	-43%	-40%	-36%	-32%	-28%	-26%	-24%	-20%	-18%
<b>15</b>	-43%	-40%	-35%	-31%	-28%	-26%	-23%	-19%	-17%
<b>16</b>	-42%	-39%	-34%	-30%	-27%	-25%	-22%	-19%	-17%
<b>17</b>	-42%	-38%	-33%	-29%	-27%	-25%	-21%	-18%	-17%
<b>18</b>	-41%	-37%	-32%	-29%	-26%	-24%	-20%	-18%	-17%
<b>19</b>	-40%	-36%	-32%	-28%	-26%	-24%	-20%	-18%	-16%
<b>20</b>	-40%	-35%	-31%	-28%	-26%	-23%	-19%	-17%	-16%
<b>21</b>	-39%	-34%	-30%	-27%	-25%	-22%	-19%	-17%	-15%
<b>22</b>	-38%	-33%	-29%	-27%	-25%	-21%	-18%	-17%	-15%
<b>23</b>	-37%	-32%	-29%	-26%	-24%	-20%	-18%	-17%	-14%
<b>24</b>	-36%	-32%	-28%	-26%	-24%	-20%	-18%	-16%	-13%
<b>25</b>	-35%	-31%	-28%	-26%	-23%	-19%	-17%	-16%	-13%
<b>26</b>	-34%	-30%	-27%	-25%	-22%	-19%	-17%	-15%	-12%
<b>27</b>	-33%	-29%	-27%	-25%	-21%	-18%	-17%	-15%	-11%
<b>28</b>	-32%	-29%	-26%	-24%	-20%	-18%	-17%	-14%	-11%
<b>29</b>	-32%	-28%	-26%	-24%	-20%	-18%	-16%	-13%	-10%
<b>30</b>	-31%	-28%	-26%	-23%	-19%	-17%	-16%	-13%	-9%
<b>31</b>	-30%	-27%	-25%	-22%	-19%	-17%	-15%	-12%	-8%
<b>32</b>	-29%	-27%	-25%	-21%	-18%	-17%	-15%	-11%	-7%
<b>33</b>	-29%	-26%	-24%	-20%	-18%	-17%	-14%	-11%	-6%
<b>34</b>	-28%	-26%	-24%	-20%	-18%	-16%	-13%	-10%	-5%
<b>35</b>	-28%	-26%	-23%	-19%	-17%	-16%	-13%	-9%	-3%
<b>36</b>	-27%	-25%	-22%	-19%	-17%	-15%	-12%	-8%	-2%
<b>37</b>	-27%	-25%	-21%	-18%	-17%	-15%	-11%	-7%	0%
<b>38</b>	-26%	-24%	-20%	-18%	-17%	-14%	-11%	-6%	
<b>39</b>	-26%	-24%	-20%	-18%	-16%	-13%	-10%	-5%	
<b>40</b>	-26%	-23%	-19%	-17%	-16%	-13%	-9%	-3%	
<b>41</b>	-25%	-22%	-19%	-17%	-15%	-12%	-8%	-2%	
<b>42</b>	-25%	-21%	-18%	-17%	-15%	-11%	-7%	0%	

**Exhibit 9A - Part 2**  
**Lifetime**  
**Comparison of 2005 Reserves versus 1970 Reserves (Basic Table)**  
**MALES**  
**Central Age at Disablement**

<b>Duration From Disablement</b>	<b>22</b>	<b>27</b>	<b>32</b>	<b>37</b>	<b>42</b>	<b>47</b>	<b>52</b>	<b>57</b>	<b>62</b>
<b>0.75</b>	37%	13%	1%	-10%	-14%	-17%	-18%	-19%	-16%
<b>1.00</b>	41%	20%	6%	-6%	-11%	-16%	-17%	-18%	-16%
<b>1.25</b>	40%	22%	7%	-5%	-11%	-16%	-18%	-18%	-16%
<b>1.50</b>	33%	20%	4%	-7%	-13%	-16%	-18%	-19%	-17%
<b>1.75</b>	20%	13%	-1%	-8%	-14%	-17%	-19%	-19%	-17%
<b>2</b>	4%	4%	-6%	-10%	-15%	-18%	-19%	-19%	-17%
<b>3</b>	-14%	-8%	-14%	-16%	-18%	-19%	-20%	-19%	-18%
<b>4</b>	-22%	-20%	-21%	-22%	-21%	-20%	-20%	-19%	-18%
<b>5</b>	-24%	-24%	-25%	-24%	-21%	-20%	-19%	-19%	-17%
<b>6</b>	-26%	-27%	-27%	-25%	-22%	-20%	-19%	-18%	-17%
<b>7</b>	-27%	-28%	-28%	-25%	-21%	-19%	-18%	-17%	-16%
<b>8</b>	-28%	-29%	-28%	-25%	-21%	-18%	-17%	-17%	-15%
<b>9</b>	-29%	-29%	-28%	-24%	-21%	-18%	-17%	-16%	-15%
<b>10</b>	-30%	-29%	-27%	-24%	-20%	-18%	-17%	-16%	-14%
<b>11</b>	-30%	-29%	-27%	-23%	-20%	-17%	-17%	-16%	-14%
<b>12</b>	-30%	-29%	-26%	-23%	-19%	-17%	-17%	-15%	-13%
<b>13</b>	-29%	-28%	-25%	-22%	-18%	-17%	-17%	-15%	-13%
<b>14</b>	-29%	-28%	-25%	-21%	-18%	-17%	-16%	-14%	-13%
<b>15</b>	-29%	-27%	-24%	-20%	-18%	-17%	-16%	-14%	-13%
<b>16</b>	-29%	-27%	-23%	-20%	-17%	-17%	-16%	-14%	-13%
<b>17</b>	-29%	-26%	-23%	-19%	-17%	-17%	-15%	-13%	-12%
<b>18</b>	-28%	-25%	-22%	-18%	-17%	-17%	-15%	-13%	-12%
<b>19</b>	-28%	-25%	-21%	-18%	-17%	-16%	-14%	-13%	-12%
<b>20</b>	-27%	-24%	-20%	-18%	-17%	-16%	-14%	-13%	-11%
<b>21</b>	-27%	-23%	-20%	-17%	-17%	-16%	-14%	-13%	-11%
<b>22</b>	-26%	-23%	-19%	-17%	-17%	-15%	-13%	-12%	-11%
<b>23</b>	-25%	-22%	-18%	-17%	-17%	-15%	-13%	-12%	-10%
<b>24</b>	-25%	-21%	-18%	-17%	-16%	-14%	-13%	-12%	-10%
<b>25</b>	-24%	-20%	-18%	-17%	-16%	-14%	-13%	-11%	-9%
<b>26</b>	-23%	-20%	-17%	-17%	-16%	-14%	-13%	-11%	-9%
<b>27</b>	-23%	-19%	-17%	-17%	-15%	-13%	-12%	-11%	-8%
<b>28</b>	-22%	-18%	-17%	-17%	-15%	-13%	-12%	-10%	-8%
<b>29</b>	-21%	-18%	-17%	-16%	-14%	-13%	-12%	-10%	-7%
<b>30</b>	-20%	-18%	-17%	-16%	-14%	-13%	-11%	-9%	-6%
<b>31</b>	-20%	-17%	-17%	-16%	-14%	-13%	-11%	-9%	-6%
<b>32</b>	-19%	-17%	-17%	-15%	-13%	-12%	-11%	-8%	-5%
<b>33</b>	-18%	-17%	-17%	-15%	-13%	-12%	-10%	-8%	-4%
<b>34</b>	-18%	-17%	-16%	-14%	-13%	-12%	-10%	-7%	-3%
<b>35</b>	-18%	-17%	-16%	-14%	-13%	-11%	-9%	-6%	-3%
<b>36</b>	-17%	-17%	-16%	-14%	-13%	-11%	-9%	-6%	-2%
<b>37</b>	-17%	-17%	-15%	-13%	-12%	-11%	-8%	-5%	0%
<b>38</b>	-17%	-17%	-15%	-13%	-12%	-10%	-8%	-4%	
<b>39</b>	-17%	-16%	-14%	-13%	-12%	-10%	-7%	-3%	
<b>40</b>	-17%	-16%	-14%	-13%	-11%	-9%	-6%	-3%	
<b>41</b>	-17%	-16%	-14%	-13%	-11%	-9%	-6%	-2%	
<b>42</b>	-17%	-15%	-13%	-12%	-11%	-8%	-5%	0%	





**Exhibit 10A - Part 1**  
**65% at Age 70, 50% at Age 75**  
**Comparison of 2005 Reserves versus 1970 Reserves (Basic Table)**  
**FEMALES**  
**Central Age at Disablement**

<b>Duration From Disablement</b>	<b>22</b>	<b>27</b>	<b>32</b>	<b>37</b>	<b>42</b>	<b>47</b>	<b>52</b>	<b>57</b>	<b>62</b>
<b>0.75</b>	-27%	-34%	-39%	-41%	-39%	-35%	-34%	-34%	-29%
<b>1.00</b>	-24%	-31%	-36%	-38%	-38%	-34%	-34%	-34%	-29%
<b>1.25</b>	-24%	-29%	-35%	-38%	-37%	-34%	-34%	-34%	-30%
<b>1.50</b>	-27%	-31%	-37%	-38%	-38%	-35%	-35%	-35%	-31%
<b>1.75</b>	-31%	-35%	-39%	-40%	-39%	-36%	-35%	-35%	-31%
<b>2</b>	-36%	-38%	-42%	-42%	-40%	-38%	-36%	-36%	-31%
<b>3</b>	-43%	-44%	-46%	-44%	-41%	-38%	-37%	-36%	-32%
<b>4</b>	-46%	-47%	-47%	-45%	-41%	-39%	-37%	-37%	-32%
<b>5</b>	-47%	-48%	-48%	-45%	-40%	-38%	-36%	-36%	-31%
<b>6</b>	-47%	-47%	-47%	-44%	-39%	-37%	-36%	-36%	-29%
<b>7</b>	-47%	-47%	-46%	-43%	-39%	-36%	-36%	-35%	-27%
<b>8</b>	-47%	-46%	-45%	-42%	-38%	-36%	-35%	-34%	-25%
<b>9</b>	-46%	-46%	-45%	-41%	-38%	-35%	-35%	-33%	-24%
<b>10</b>	-46%	-46%	-44%	-41%	-37%	-35%	-35%	-32%	-22%
<b>11</b>	-46%	-46%	-43%	-40%	-37%	-35%	-35%	-30%	-21%
<b>12</b>	-46%	-45%	-43%	-39%	-36%	-35%	-34%	-28%	-20%
<b>13</b>	-46%	-45%	-42%	-39%	-36%	-35%	-34%	-25%	-18%
<b>14</b>	-46%	-44%	-41%	-38%	-36%	-35%	-33%	-24%	-18%
<b>15</b>	-46%	-44%	-41%	-37%	-35%	-35%	-32%	-22%	-17%
<b>16</b>	-46%	-43%	-40%	-37%	-35%	-35%	-30%	-21%	-17%
<b>17</b>	-45%	-43%	-39%	-36%	-35%	-34%	-28%	-20%	-17%
<b>18</b>	-45%	-42%	-39%	-36%	-35%	-34%	-25%	-18%	-17%
<b>19</b>	-44%	-41%	-38%	-36%	-35%	-33%	-24%	-18%	-16%
<b>20</b>	-44%	-41%	-37%	-35%	-35%	-32%	-22%	-17%	-16%
<b>21</b>	-43%	-40%	-37%	-35%	-35%	-30%	-21%	-17%	-15%
<b>22</b>	-43%	-39%	-36%	-35%	-34%	-28%	-20%	-17%	-15%
<b>23</b>	-42%	-39%	-36%	-35%	-34%	-25%	-18%	-17%	-14%
<b>24</b>	-41%	-38%	-36%	-35%	-33%	-24%	-18%	-16%	-13%
<b>25</b>	-41%	-37%	-35%	-35%	-32%	-22%	-17%	-16%	-13%
<b>26</b>	-40%	-37%	-35%	-35%	-30%	-21%	-17%	-15%	-12%
<b>27</b>	-39%	-36%	-35%	-34%	-28%	-20%	-17%	-15%	-11%
<b>28</b>	-39%	-36%	-35%	-34%	-25%	-18%	-17%	-14%	-11%
<b>29</b>	-38%	-36%	-35%	-33%	-24%	-18%	-16%	-13%	-10%
<b>30</b>	-37%	-35%	-35%	-32%	-22%	-17%	-16%	-13%	-9%
<b>31</b>	-37%	-35%	-35%	-30%	-21%	-17%	-15%	-12%	-8%
<b>32</b>	-36%	-35%	-34%	-28%	-20%	-17%	-15%	-11%	-7%
<b>33</b>	-36%	-35%	-34%	-25%	-18%	-17%	-14%	-11%	-6%
<b>34</b>	-36%	-35%	-33%	-24%	-18%	-16%	-13%	-10%	-5%
<b>35</b>	-35%	-35%	-32%	-22%	-17%	-16%	-13%	-9%	-3%
<b>36</b>	-35%	-35%	-30%	-21%	-17%	-15%	-12%	-8%	-2%
<b>37</b>	-35%	-34%	-28%	-20%	-17%	-15%	-11%	-7%	0%
<b>38</b>	-35%	-34%	-25%	-18%	-17%	-14%	-11%	-6%	
<b>39</b>	-35%	-33%	-24%	-18%	-16%	-13%	-10%	-5%	
<b>40</b>	-35%	-32%	-22%	-17%	-16%	-13%	-9%	-3%	
<b>41</b>	-35%	-30%	-21%	-17%	-15%	-12%	-8%	-2%	
<b>42</b>	-34%	-28%	-20%	-17%	-15%	-11%	-7%	0%	

**Exhibit 10A - Part 2**  
**65% at Age 70, 50% at Age 75**  
**Comparison of 2005 Reserves versus 1970 Reserves (Basic Table)**  
**MALES**  
**Central Age at Disablement**

<b>Duration From Disablement</b>	<b>22</b>	<b>27</b>	<b>32</b>	<b>37</b>	<b>42</b>	<b>47</b>	<b>52</b>	<b>57</b>	<b>62</b>
<b>0.75</b>	37%	13%	0%	-11%	-16%	-20%	-22%	-23%	-20%
<b>1.00</b>	41%	20%	5%	-7%	-14%	-18%	-22%	-23%	-22%
<b>1.25</b>	40%	22%	6%	-7%	-14%	-19%	-22%	-24%	-22%
<b>1.50</b>	32%	19%	3%	-9%	-15%	-19%	-23%	-24%	-23%
<b>1.75</b>	19%	12%	-2%	-10%	-16%	-20%	-24%	-25%	-24%
<b>2</b>	3%	3%	-8%	-12%	-17%	-21%	-24%	-25%	-24%
<b>3</b>	-15%	-10%	-16%	-19%	-21%	-23%	-25%	-26%	-25%
<b>4</b>	-23%	-21%	-23%	-24%	-24%	-24%	-26%	-27%	-25%
<b>5</b>	-25%	-26%	-27%	-27%	-25%	-25%	-26%	-26%	-25%
<b>6</b>	-27%	-29%	-29%	-28%	-26%	-25%	-26%	-26%	-24%
<b>7</b>	-29%	-30%	-30%	-28%	-25%	-24%	-25%	-25%	-22%
<b>8</b>	-30%	-31%	-31%	-28%	-25%	-24%	-24%	-24%	-19%
<b>9</b>	-31%	-32%	-31%	-28%	-25%	-23%	-24%	-24%	-18%
<b>10</b>	-32%	-32%	-31%	-28%	-25%	-23%	-23%	-23%	-17%
<b>11</b>	-32%	-32%	-30%	-27%	-24%	-23%	-24%	-22%	-16%
<b>12</b>	-32%	-31%	-30%	-27%	-24%	-23%	-24%	-20%	-15%
<b>13</b>	-32%	-31%	-29%	-26%	-24%	-23%	-24%	-18%	-13%
<b>14</b>	-32%	-31%	-28%	-26%	-23%	-23%	-23%	-17%	-13%
<b>15</b>	-32%	-31%	-28%	-25%	-23%	-23%	-23%	-17%	-13%
<b>16</b>	-32%	-30%	-27%	-24%	-23%	-24%	-22%	-16%	-13%
<b>17</b>	-31%	-30%	-27%	-24%	-23%	-24%	-20%	-15%	-12%
<b>18</b>	-31%	-29%	-26%	-24%	-23%	-24%	-18%	-13%	-12%
<b>19</b>	-31%	-28%	-26%	-23%	-23%	-23%	-17%	-13%	-12%
<b>20</b>	-31%	-28%	-25%	-23%	-23%	-23%	-17%	-13%	-11%
<b>21</b>	-30%	-27%	-24%	-23%	-24%	-22%	-16%	-13%	-11%
<b>22</b>	-30%	-27%	-24%	-23%	-24%	-20%	-15%	-12%	-11%
<b>23</b>	-29%	-26%	-24%	-23%	-24%	-18%	-13%	-12%	-10%
<b>24</b>	-28%	-26%	-23%	-23%	-23%	-17%	-13%	-12%	-10%
<b>25</b>	-28%	-25%	-23%	-23%	-23%	-17%	-13%	-11%	-9%
<b>26</b>	-27%	-24%	-23%	-24%	-22%	-16%	-13%	-11%	-9%
<b>27</b>	-27%	-24%	-23%	-24%	-20%	-15%	-12%	-11%	-8%
<b>28</b>	-26%	-24%	-23%	-24%	-18%	-13%	-12%	-10%	-8%
<b>29</b>	-26%	-23%	-23%	-23%	-17%	-13%	-12%	-10%	-7%
<b>30</b>	-25%	-23%	-23%	-23%	-17%	-13%	-11%	-9%	-6%
<b>31</b>	-24%	-23%	-24%	-22%	-16%	-13%	-11%	-9%	-6%
<b>32</b>	-24%	-23%	-24%	-20%	-15%	-12%	-11%	-8%	-5%
<b>33</b>	-24%	-23%	-24%	-18%	-13%	-12%	-10%	-8%	-4%
<b>34</b>	-23%	-23%	-23%	-17%	-13%	-12%	-10%	-7%	-3%
<b>35</b>	-23%	-23%	-23%	-17%	-13%	-11%	-9%	-6%	-3%
<b>36</b>	-23%	-24%	-22%	-16%	-13%	-11%	-9%	-6%	-2%
<b>37</b>	-23%	-24%	-20%	-15%	-12%	-11%	-8%	-5%	0%
<b>38</b>	-23%	-24%	-18%	-13%	-12%	-10%	-8%	-4%	
<b>39</b>	-23%	-23%	-17%	-13%	-12%	-10%	-7%	-3%	
<b>40</b>	-23%	-23%	-17%	-13%	-11%	-9%	-6%	-3%	
<b>41</b>	-24%	-22%	-16%	-13%	-11%	-9%	-6%	-2%	
<b>42</b>	-24%	-20%	-15%	-12%	-11%	-8%	-5%	0%	







## Exhibit 11

### Comparison of Aggregate Reserves on 2005 and 1970 Bases

Data: Reserves calculated on all exposures in 2005 Study with attained ages 20 - 64

Assumed Benefit: Waiver terminate at 65

VALUATION	Male	Female	Total
<b>2005 Valuation Reserves (25% margin in mortality, 35% in recovery)</b>			
Select	3,173,211,481	1,677,862,652	4,851,074,133
Ultimate	348,443,729	149,703,139	498,146,869
Total	3,521,655,211	1,827,565,791	5,349,221,002
<b>1970 Valuation Reserves (30% margin in mortality, 40% in recovery)</b>			
Select	4,700,953,662	3,143,723,727	7,844,677,389
Ultimate	534,237,378	293,199,733	827,437,111
Total	5,235,191,041	3,436,923,460	8,672,114,501
<b>Ratio of 2005 / 1970 Valuation</b>			
Select	68%	53%	62%
Ultimate	65%	51%	60%
Total	67%	53%	62%
<b>BASIC (No Margin)</b>			
	Male	Female	Total
<b>2005 Reserves (Basic Table)</b>			
Select	2,543,459,263	1,310,423,629	3,853,882,892
Ultimate	281,822,861	119,302,671	401,125,531
Total	2,825,282,124	1,429,726,300	4,255,008,423
<b>1970 Reserves (Basic Table)</b>			
Select	3,731,559,239	2,483,370,873	6,214,930,113
Ultimate	427,407,754	235,189,093	662,596,847
Total	4,158,966,994	2,718,559,966	6,877,526,960
<b>Ratio of 2005 / 1970 Basic</b>			
Select	68%	53%	62%
Ultimate	66%	51%	61%
Total	68%	53%	62%

## Exhibit 11A

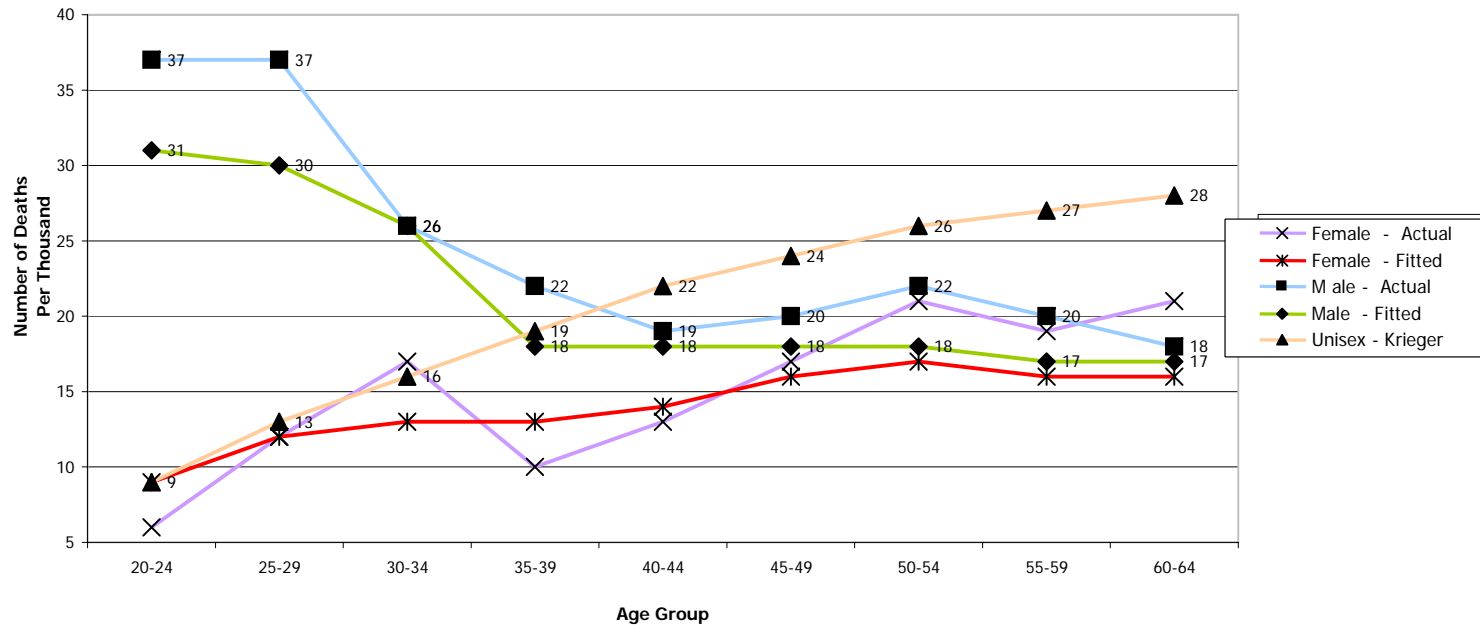
### Comparison of Aggregate Reserves on 2005 and 1970 Bases

Data: Reserves calculated on all exposures in 2005 Study with attained ages 20 - 64

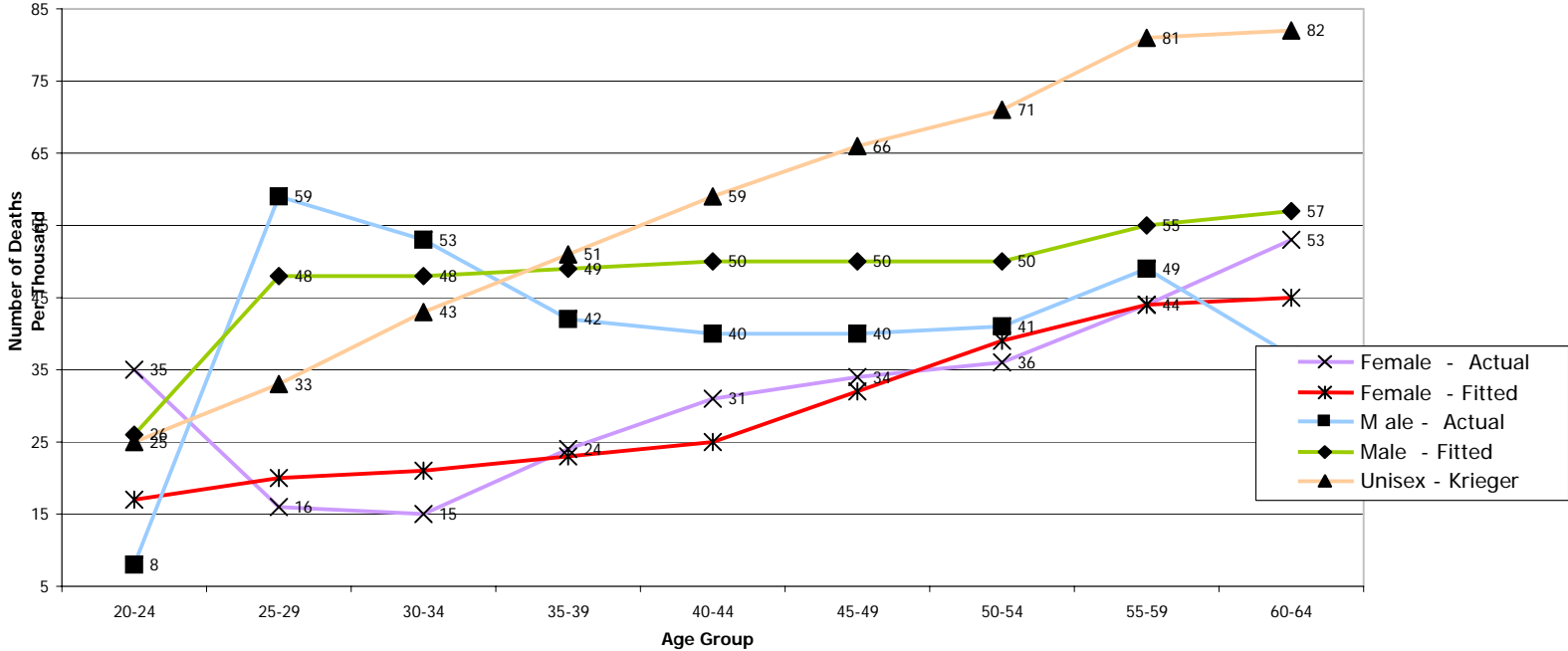
Assumed Benefit: Lifetime Waiver

VALUATION	Male	Female	Total
<b>2005 Valuation Reserves (25% margin in mortality, 35% in recovery)</b>			
Select	6,132,655,429	3,212,184,146	9,344,839,574
Ultimate	843,042,473	367,426,818	1,210,469,291
Total	6,975,697,902	3,579,610,963	10,555,308,865
<b>1970 Valuation Reserves (30% margin in mortality, 40% in recovery)</b>			
Select	7,486,493,250	4,555,573,953	12,042,067,203
Ultimate	1,025,096,626	508,080,907	1,533,177,533
Total	8,511,589,876	5,063,654,860	13,575,244,736
<b>Ratio of 2005 / 1970 Basic</b>			
Select	82%	71%	78%
Ultimate	82%	72%	79%
Total	82%	71%	78%
<b>2005 Reserves (Basic Table)</b>			
Select	5,375,484,496	2,725,406,134	8,100,890,630
Ultimate	756,390,086	322,323,884	1,078,713,970
Total	6,131,874,582	3,047,730,017	9,179,604,600
<b>1970 Reserves (Basic Table)</b>			
Select	6,604,095,091	3,957,903,169	10,561,998,260
Ultimate	929,923,712	457,565,520	1,387,489,232
Total	7,534,018,803	4,415,468,689	11,949,487,492
<b>Ratio of 2005 / 1970 Basic</b>			
Select	81%	69%	77%
Ultimate	81%	70%	78%
Total	81%	69%	77%

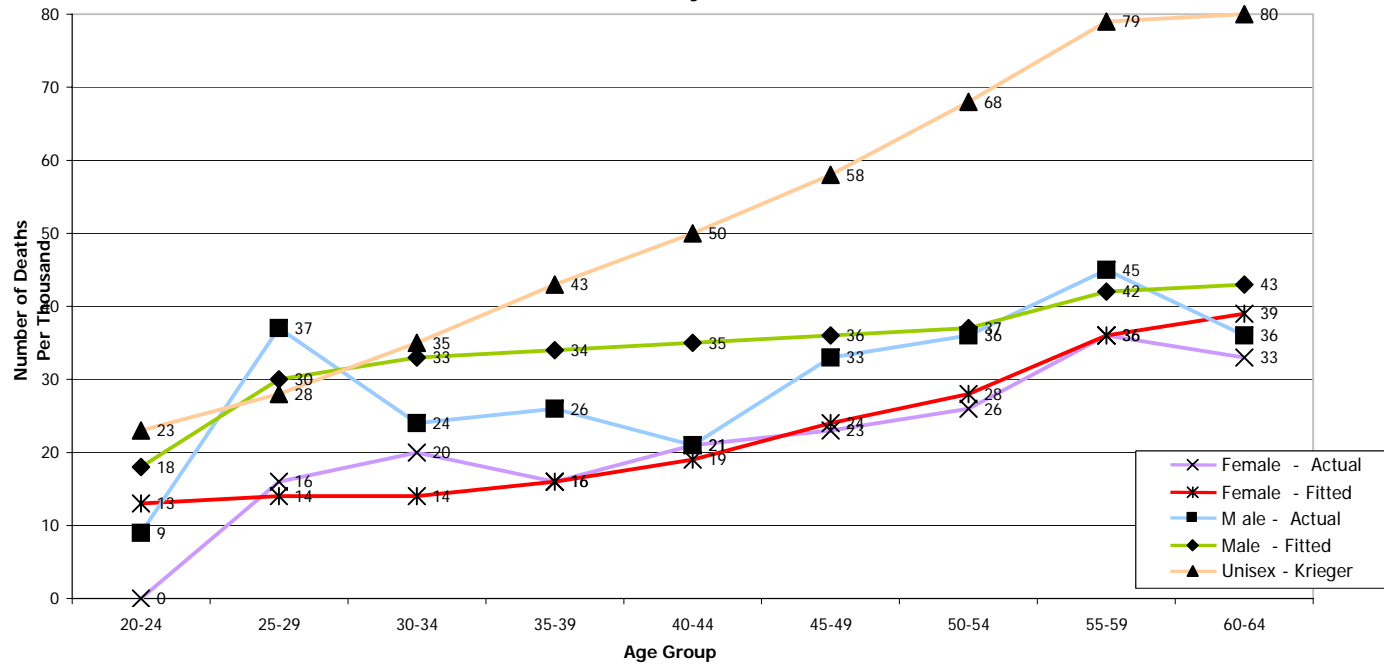
**GRAPH 1A**  
**Mortality at Duration Yr2 Q4**



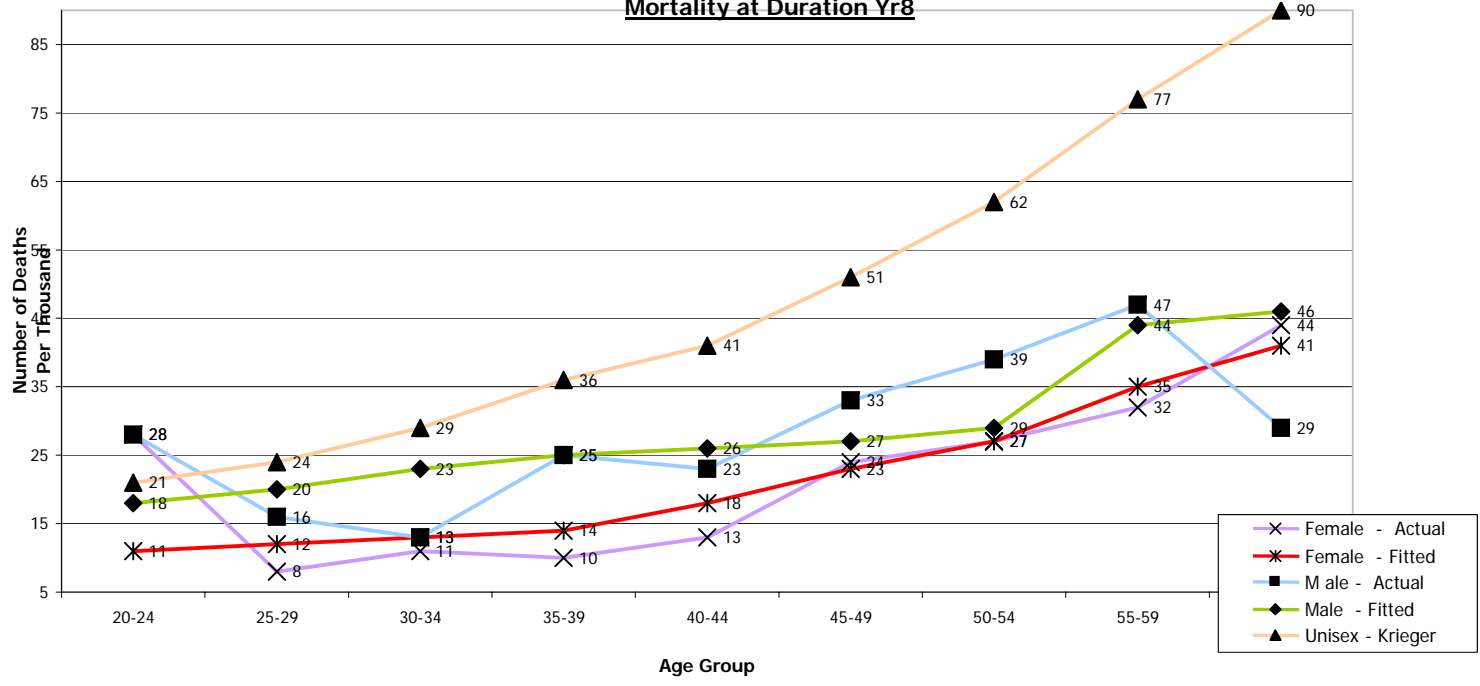
**GRAPH 2A**  
**Mortality at Duration Yr4**



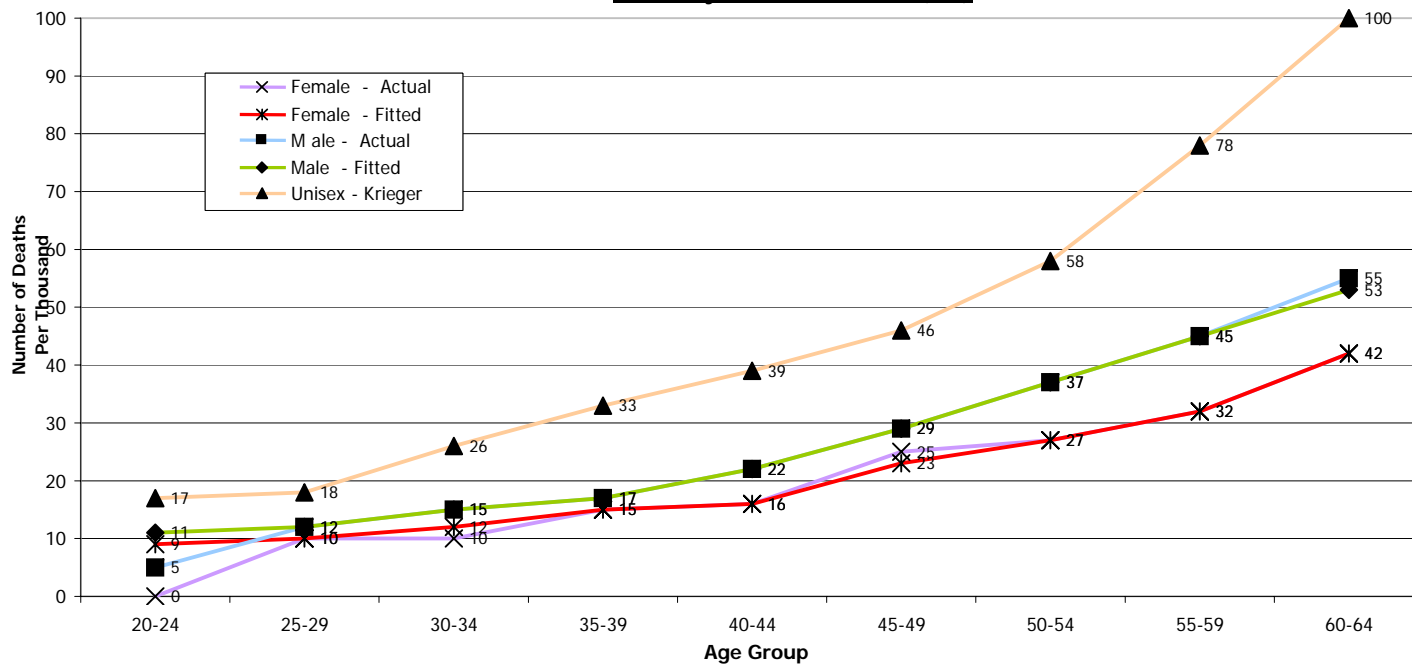
**GRAPH 3A**  
**Mortality at Duration Yr6**



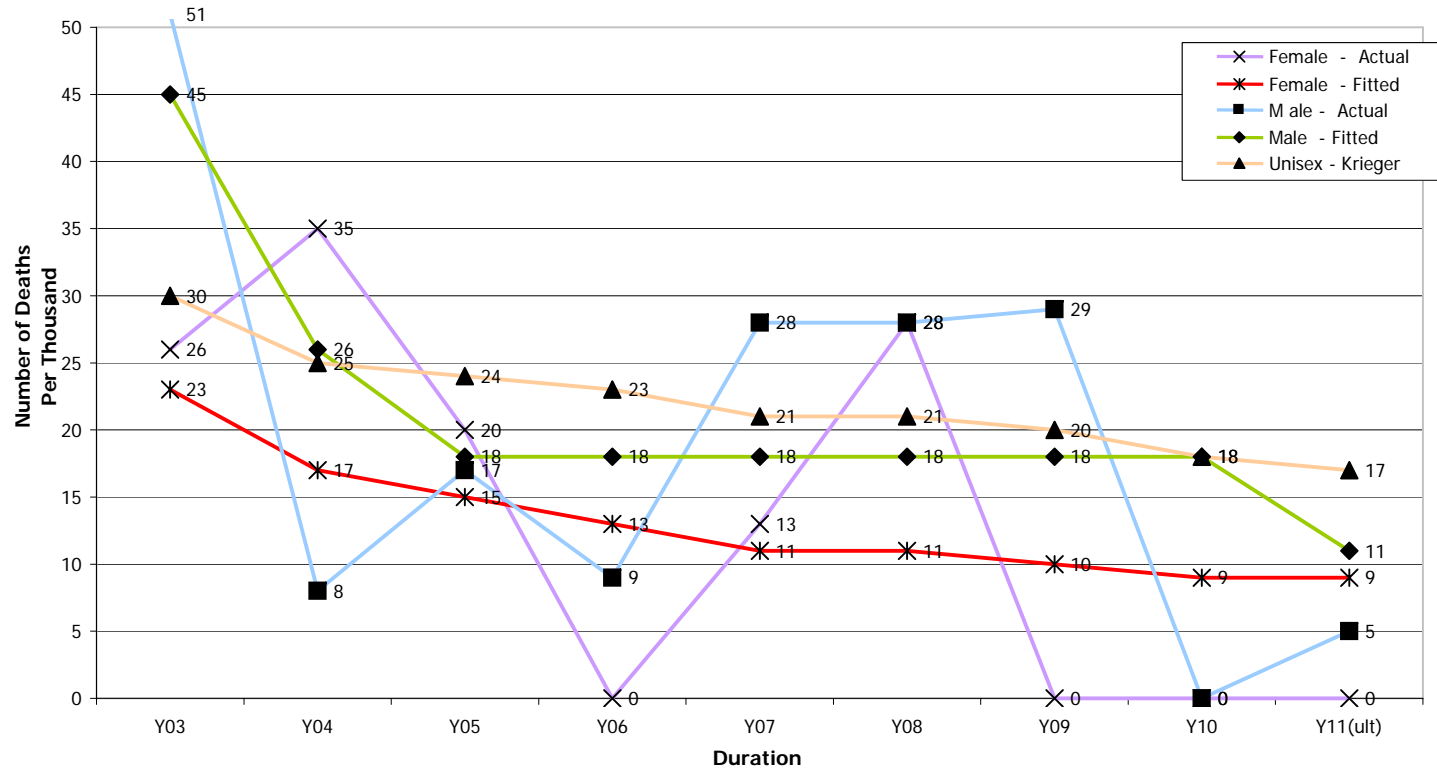
**GRAPH 4A**  
**Mortality at Duration Yr8**



**GRAPH 5A**  
**Mortality at Duration Yr11(Uit)**

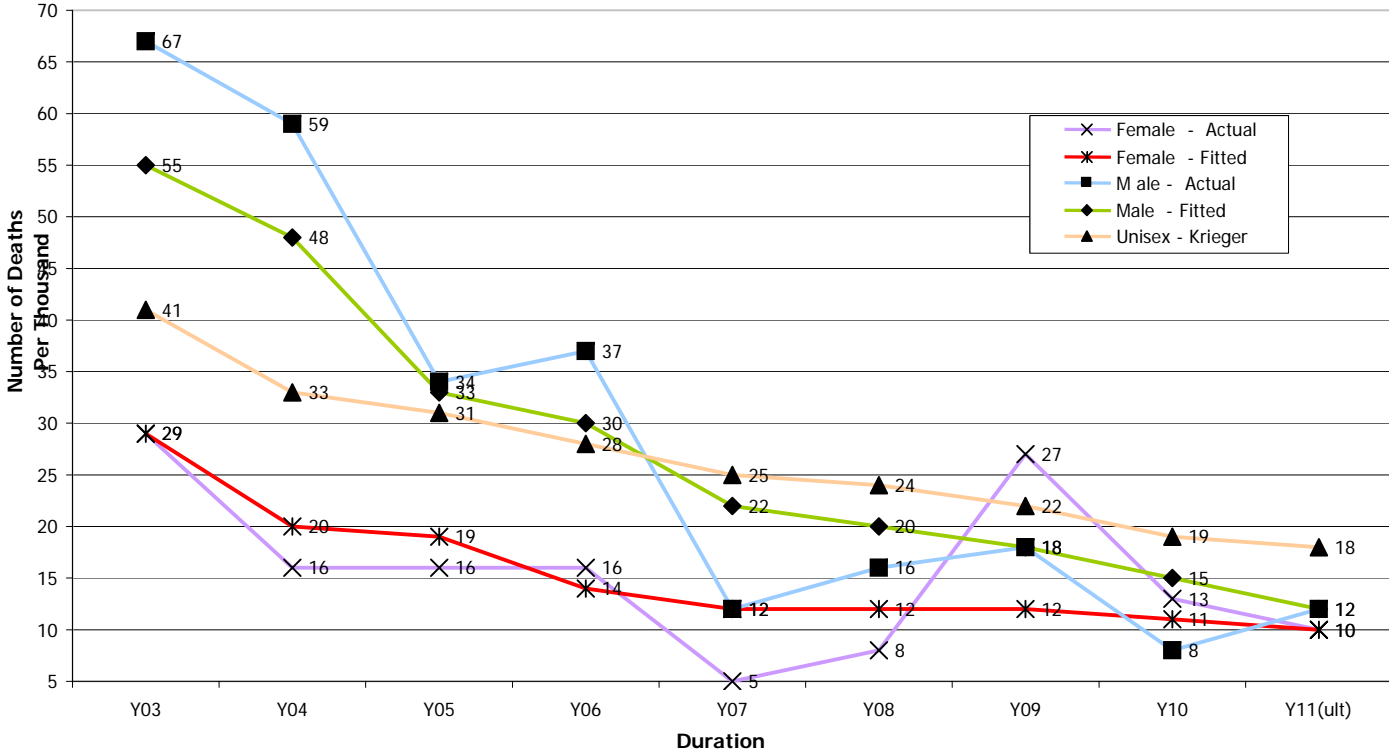


**GRAPH 6A**  
**Mortality at Age Group 20-24**

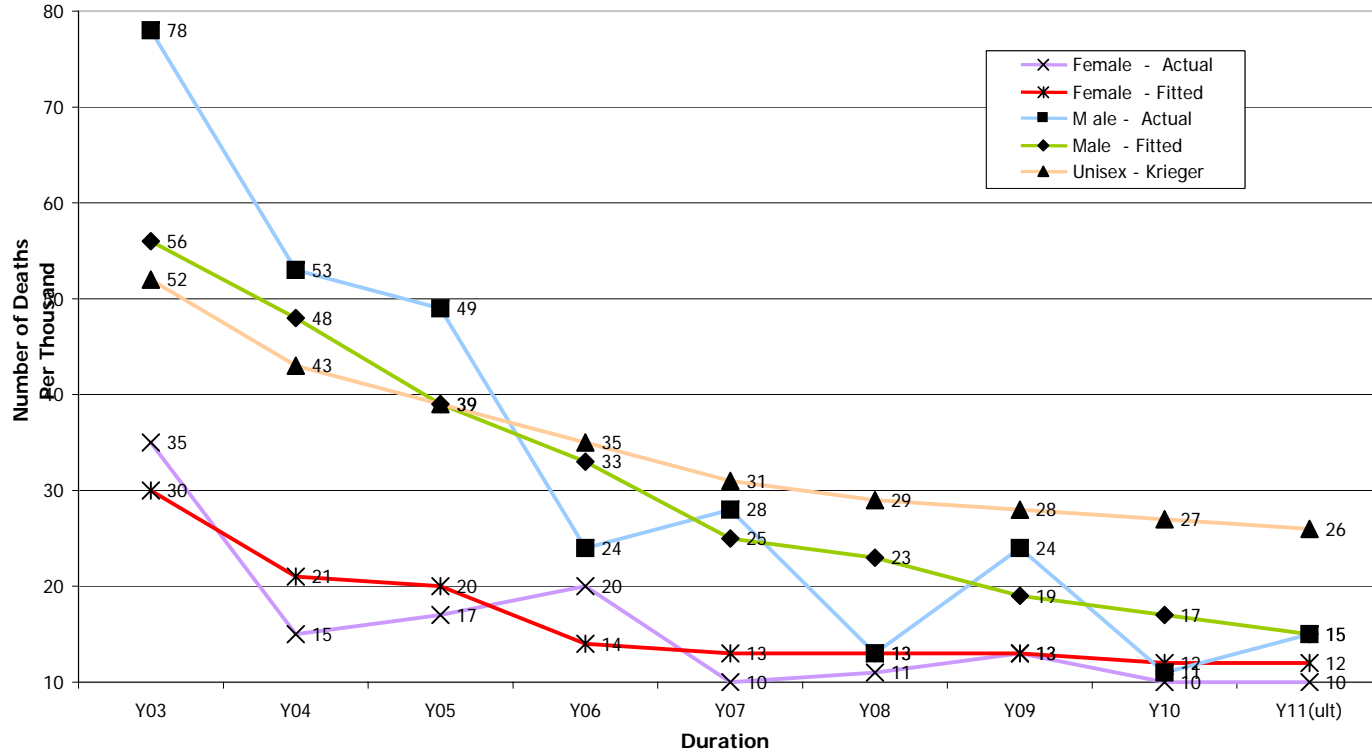




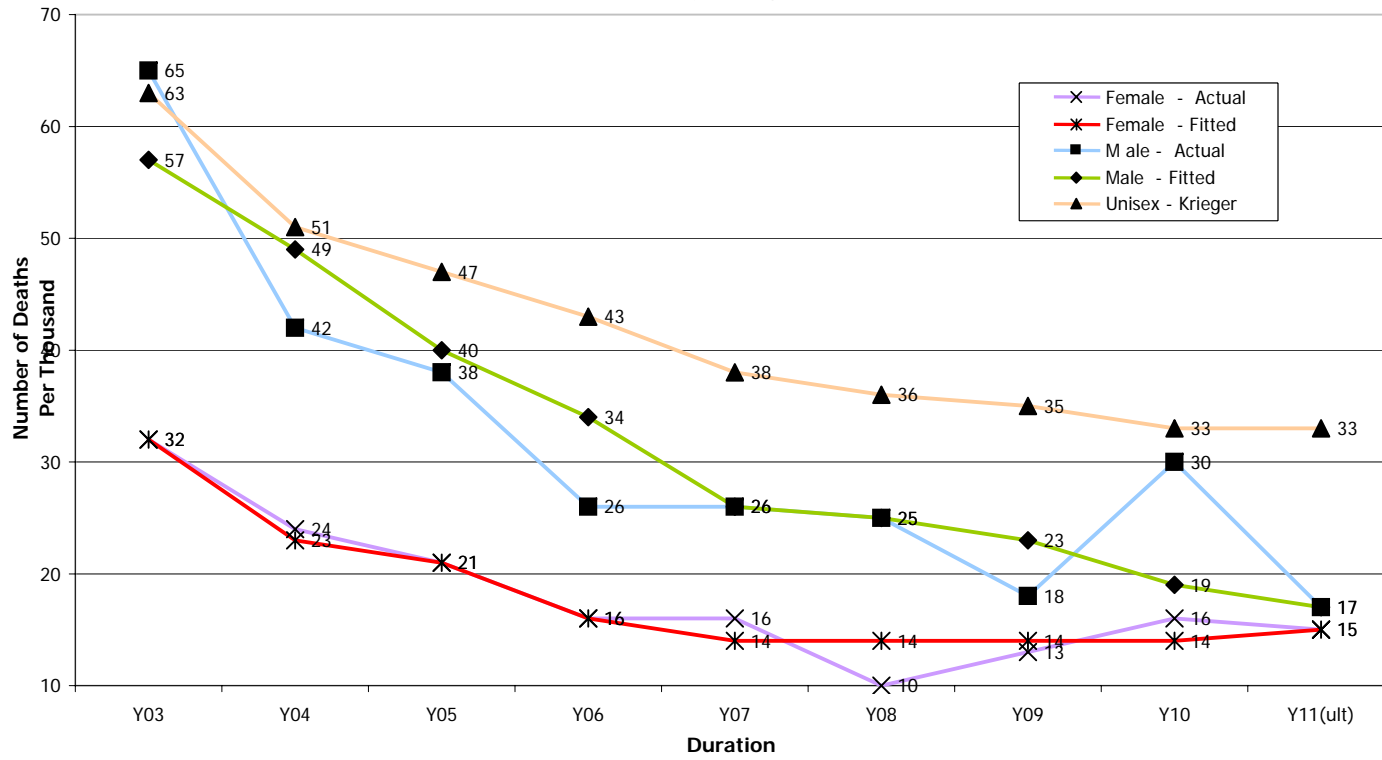
**GRAPH 7A**  
**Mortality at Age Group 25-29**



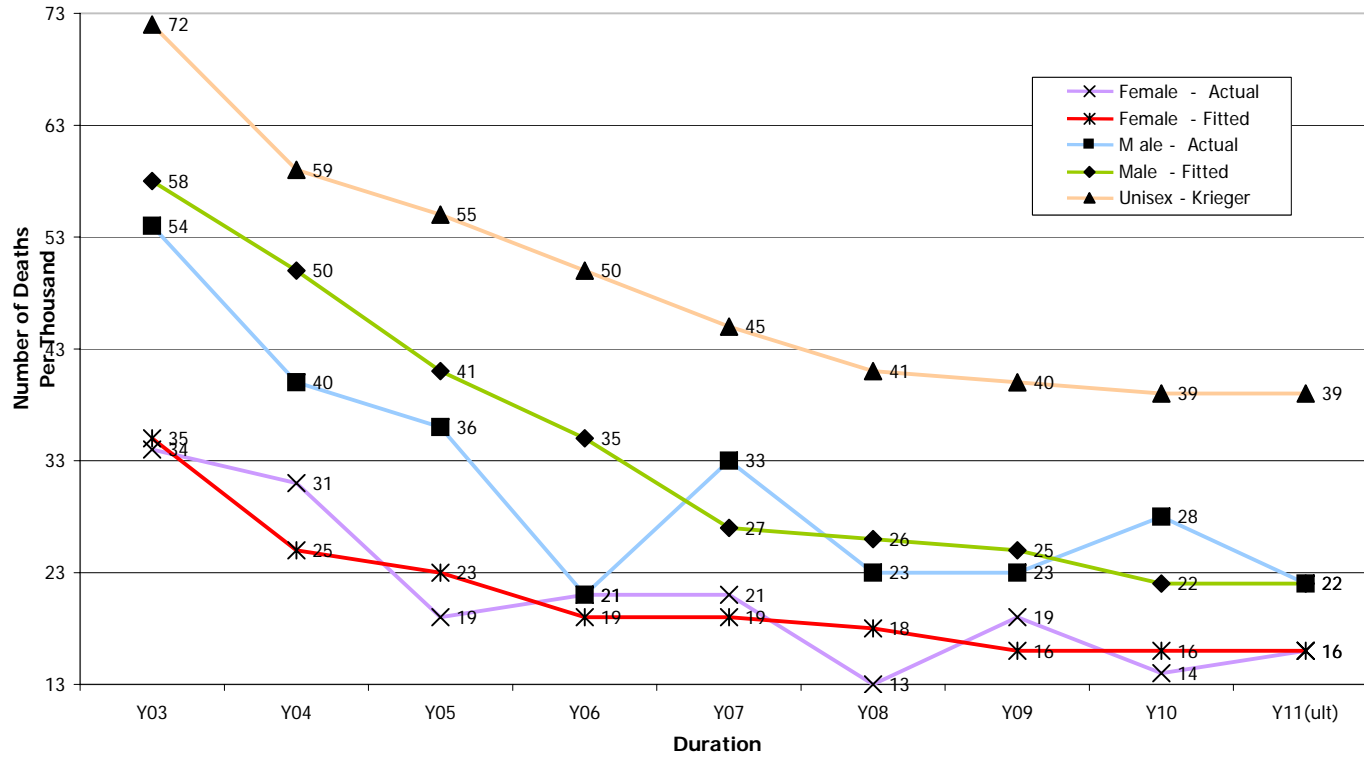
**GRAPH 8A**  
**Mortality at Age Group 30-34**



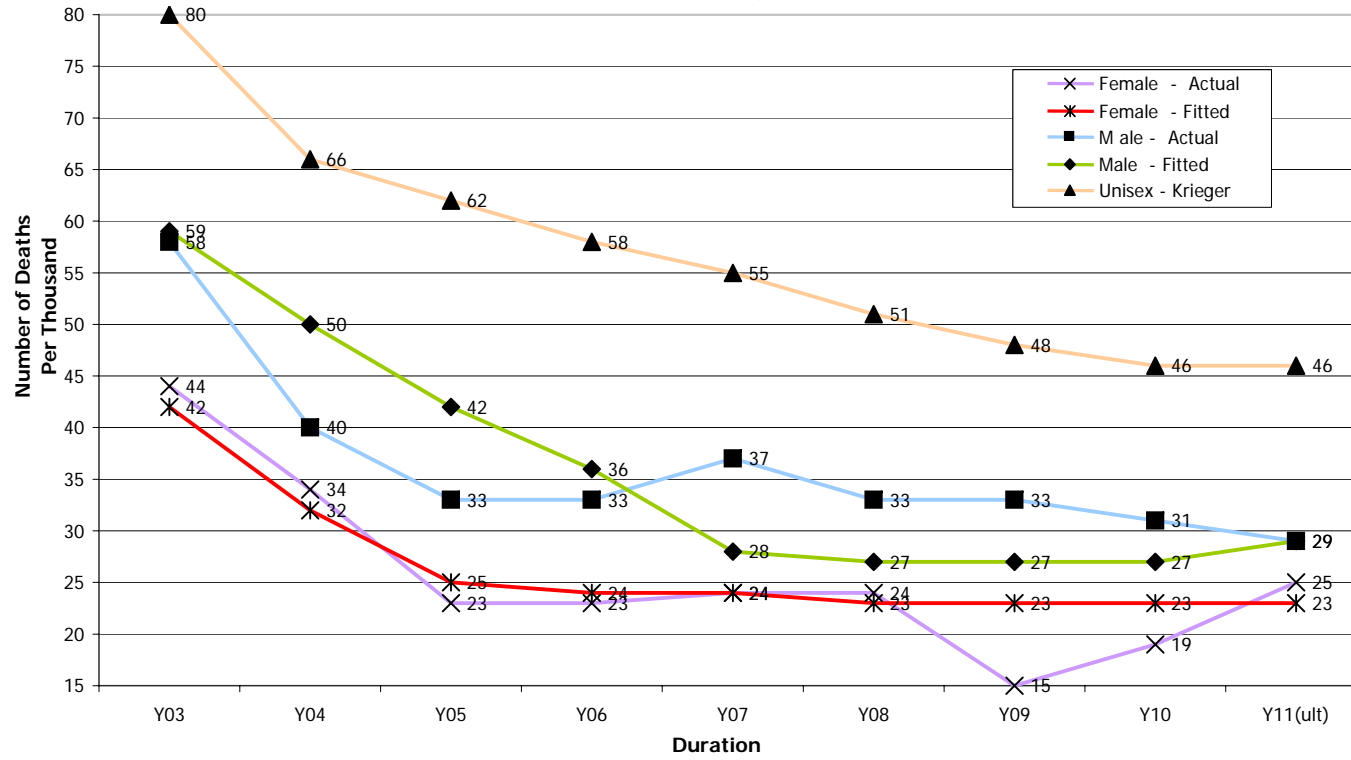
**GRAPH 9A**  
**Mortality at Age Group 35-39**



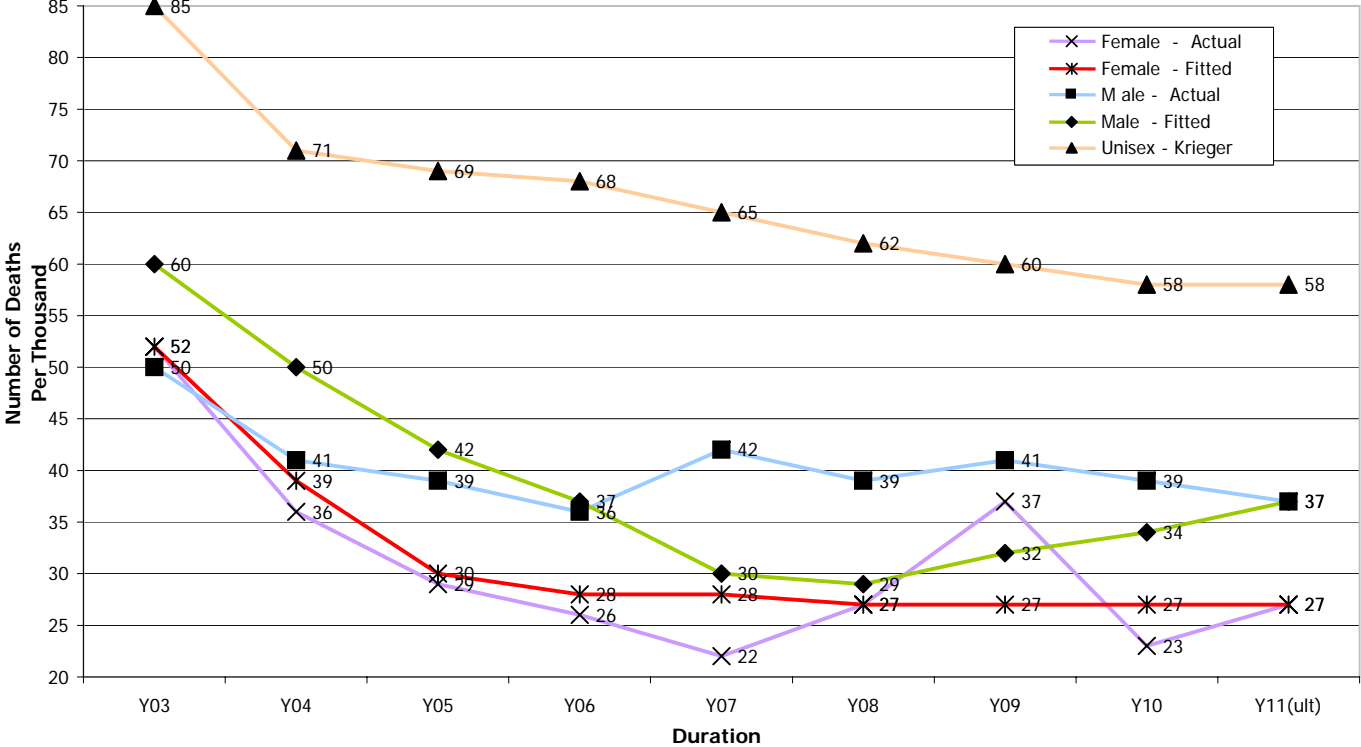
**GRAPH 10A**  
**Mortality at Age Group 40-44**



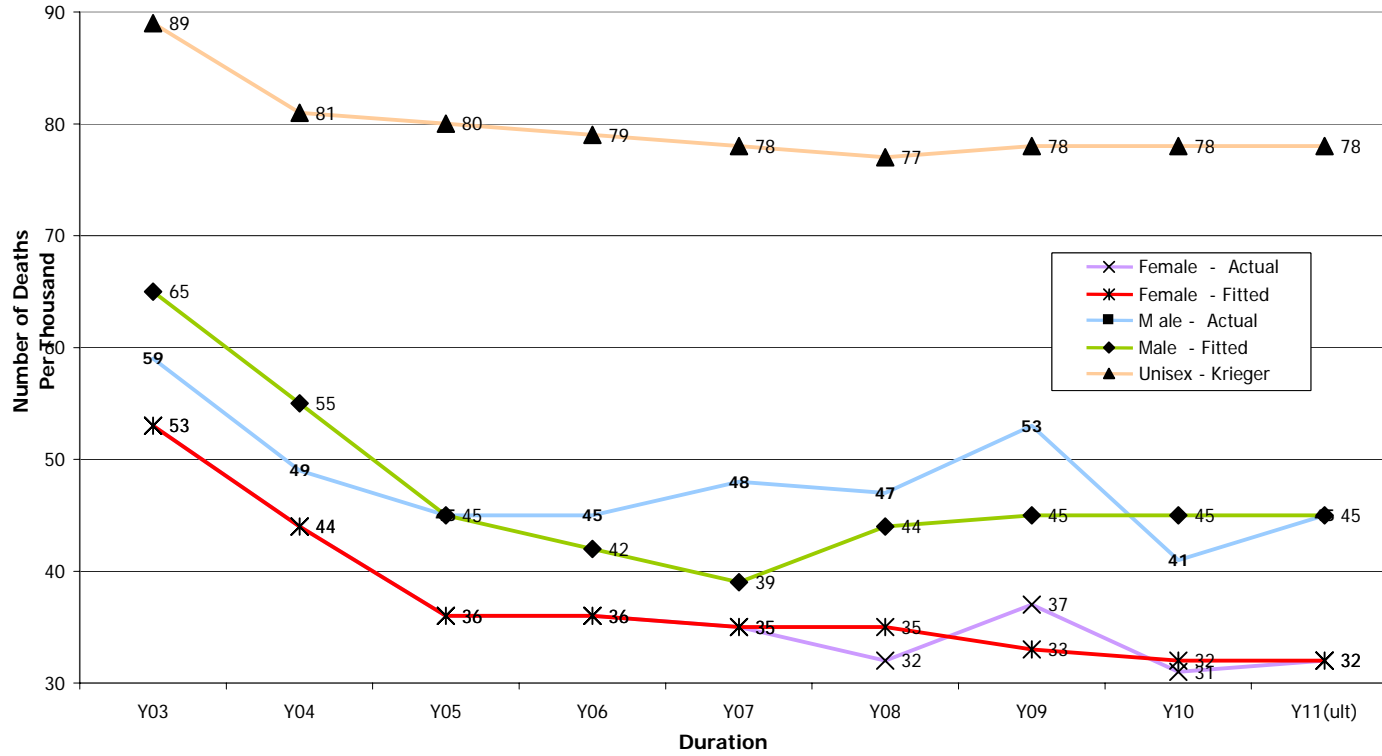
**GRAPH 11A**  
**Mortality at Age Group 45-49**



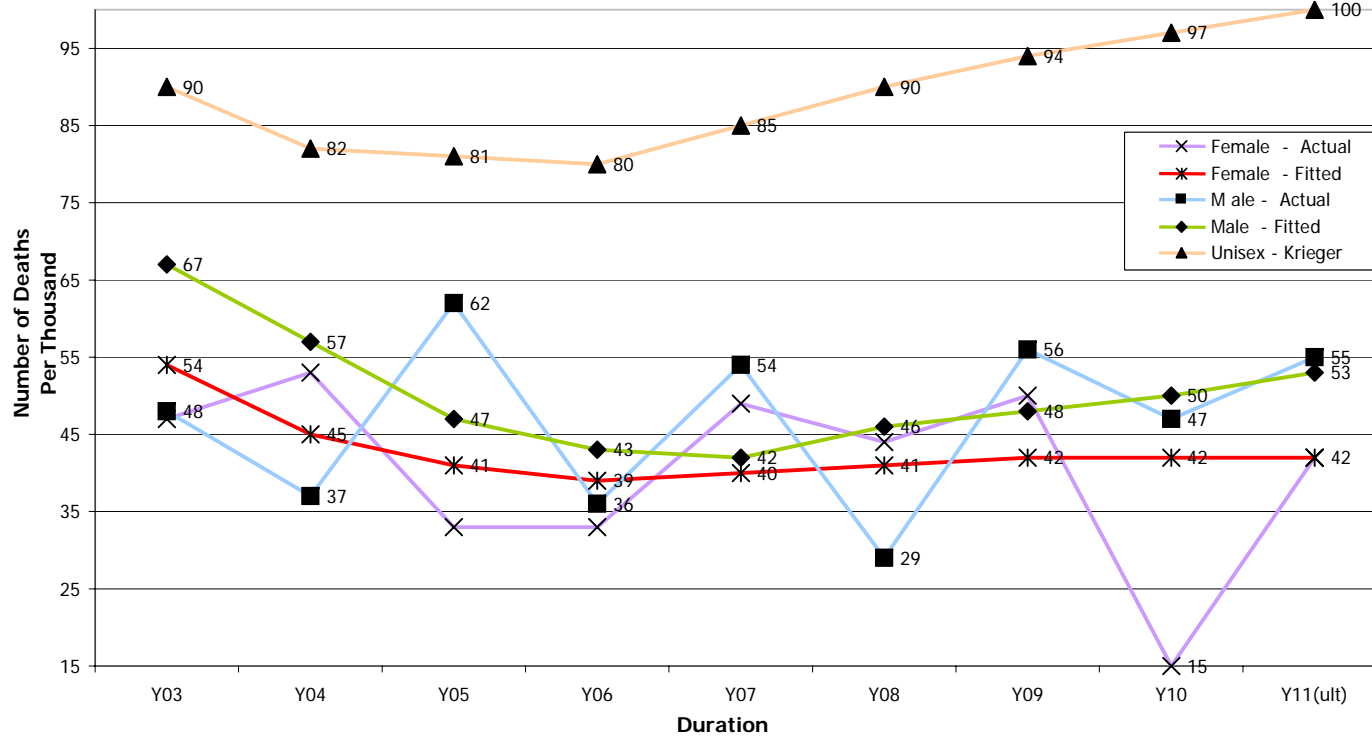
**GRAPH 12A**  
**Mortality at Age Group 50-54**



**GRAPH 13A**  
**Mortality at Age Group 55-59**

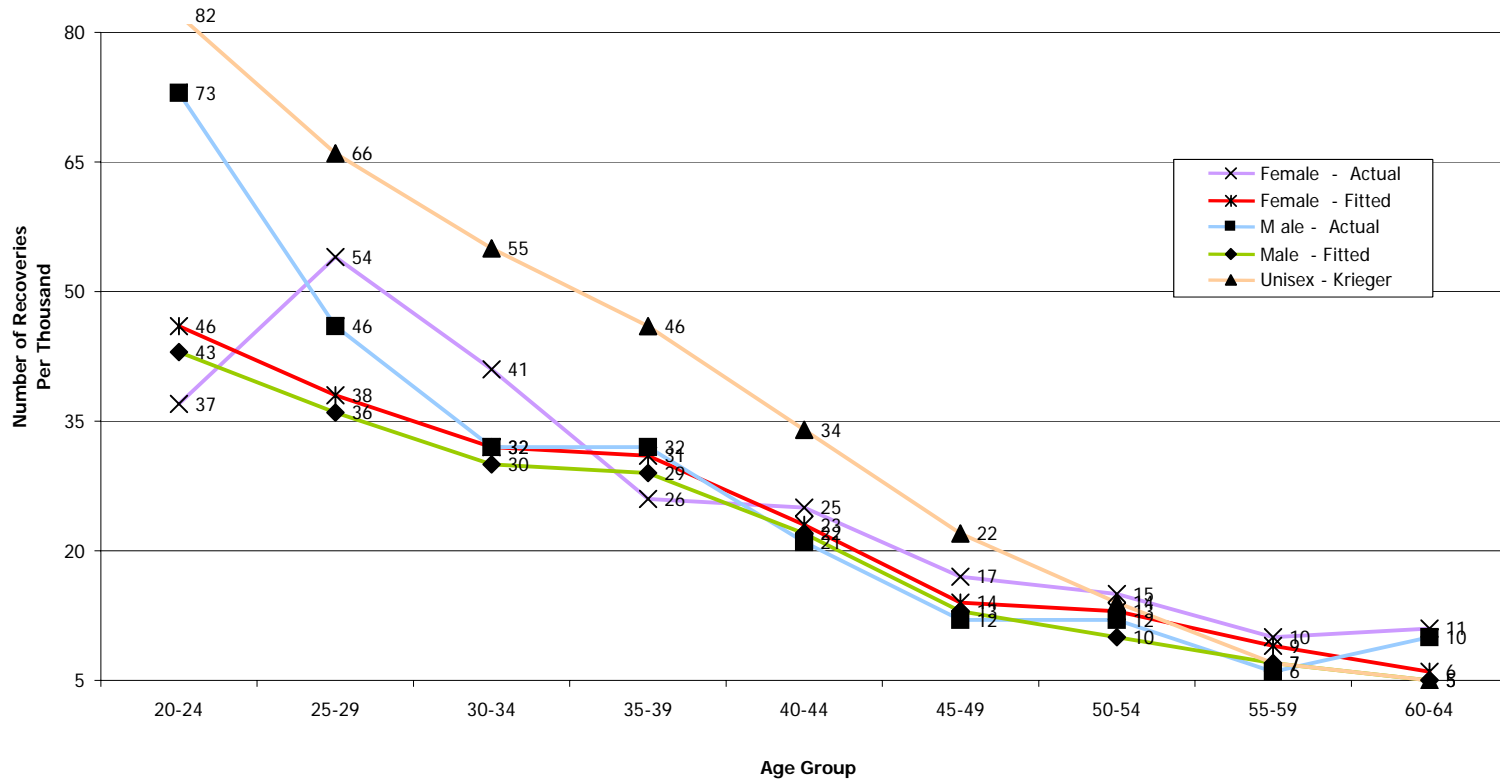


**GRAPH 14A**  
**Mortality at Age Group 60-64**

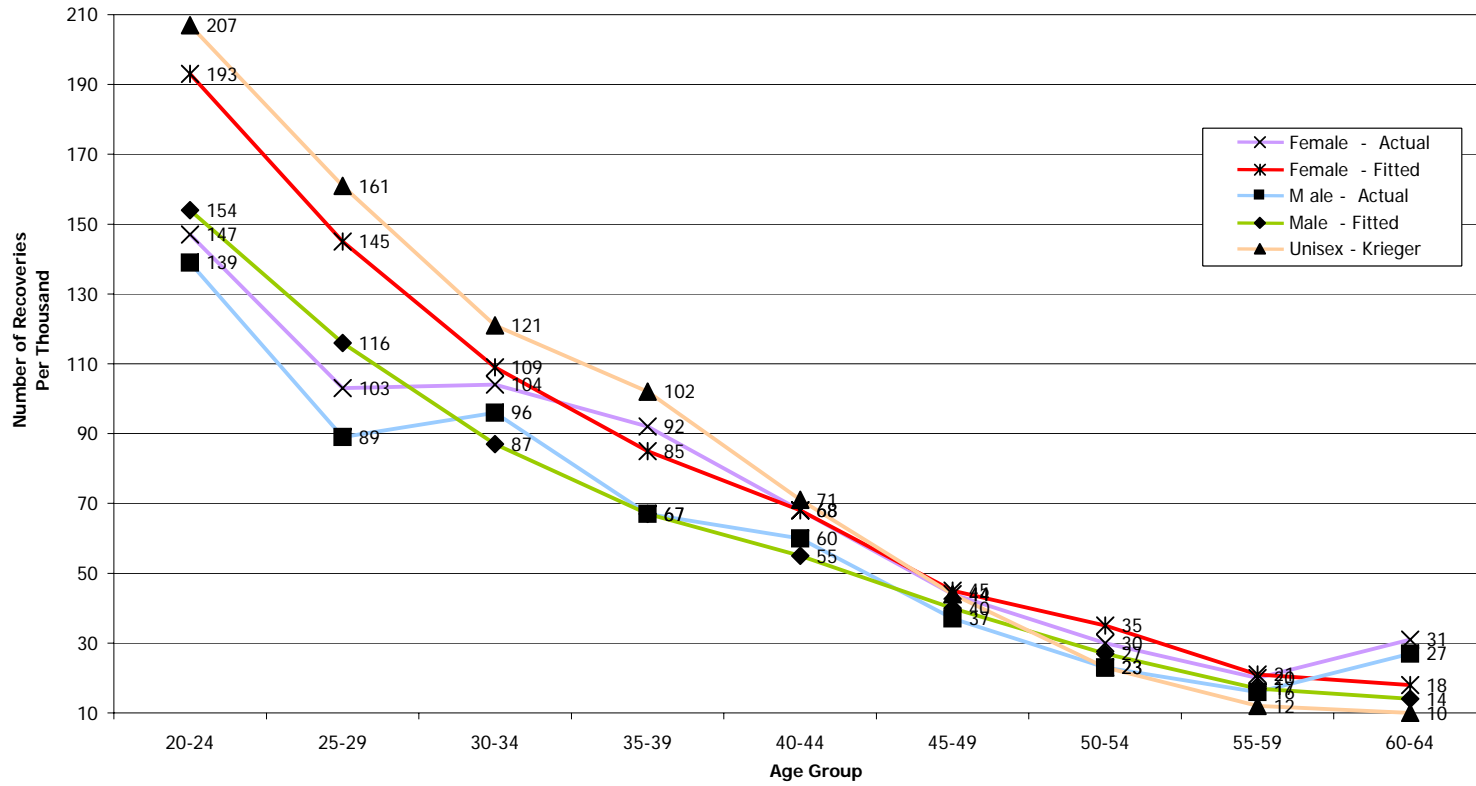




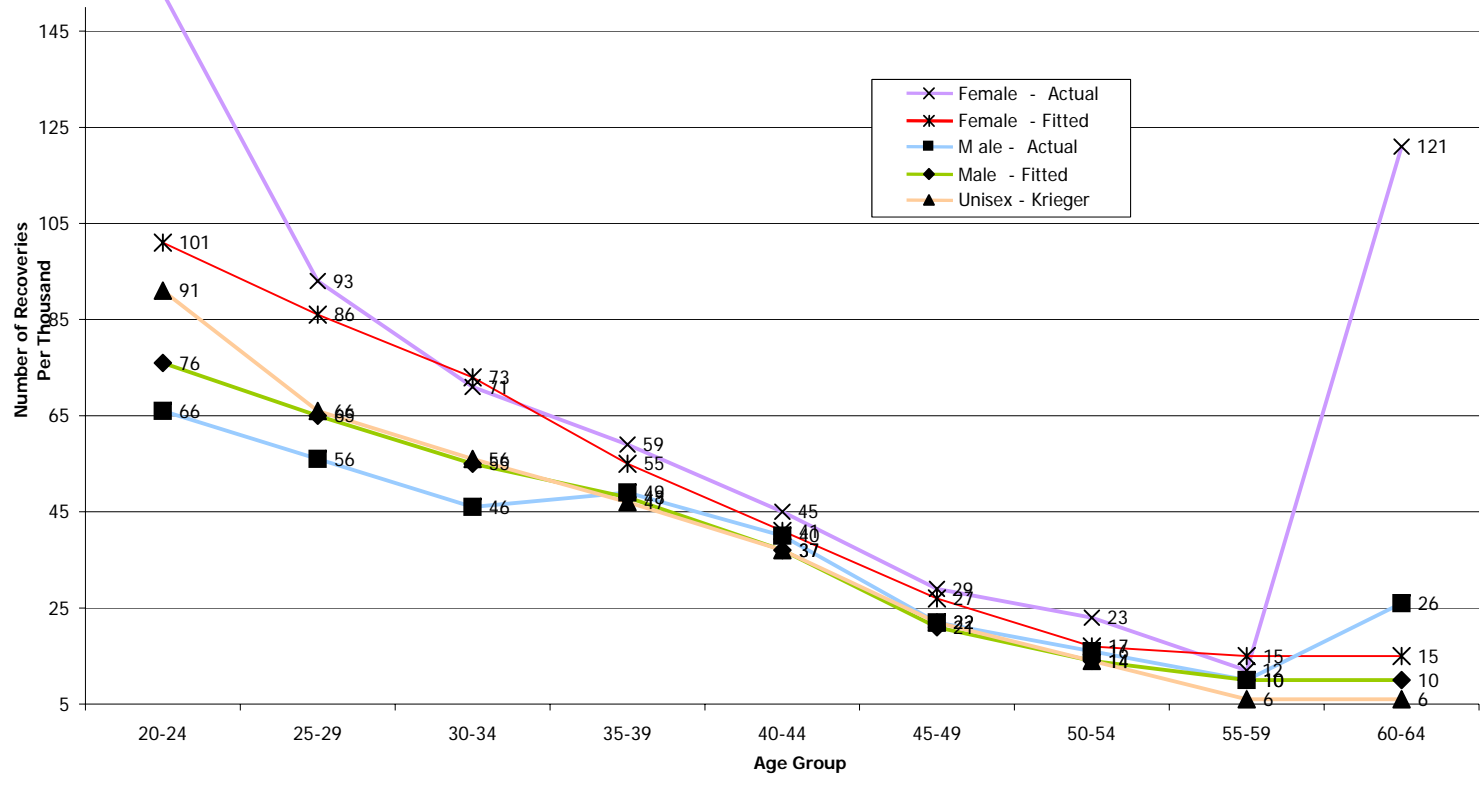
**GRAPH 1B**  
**Recoveries at Duration Yr2 Q4**



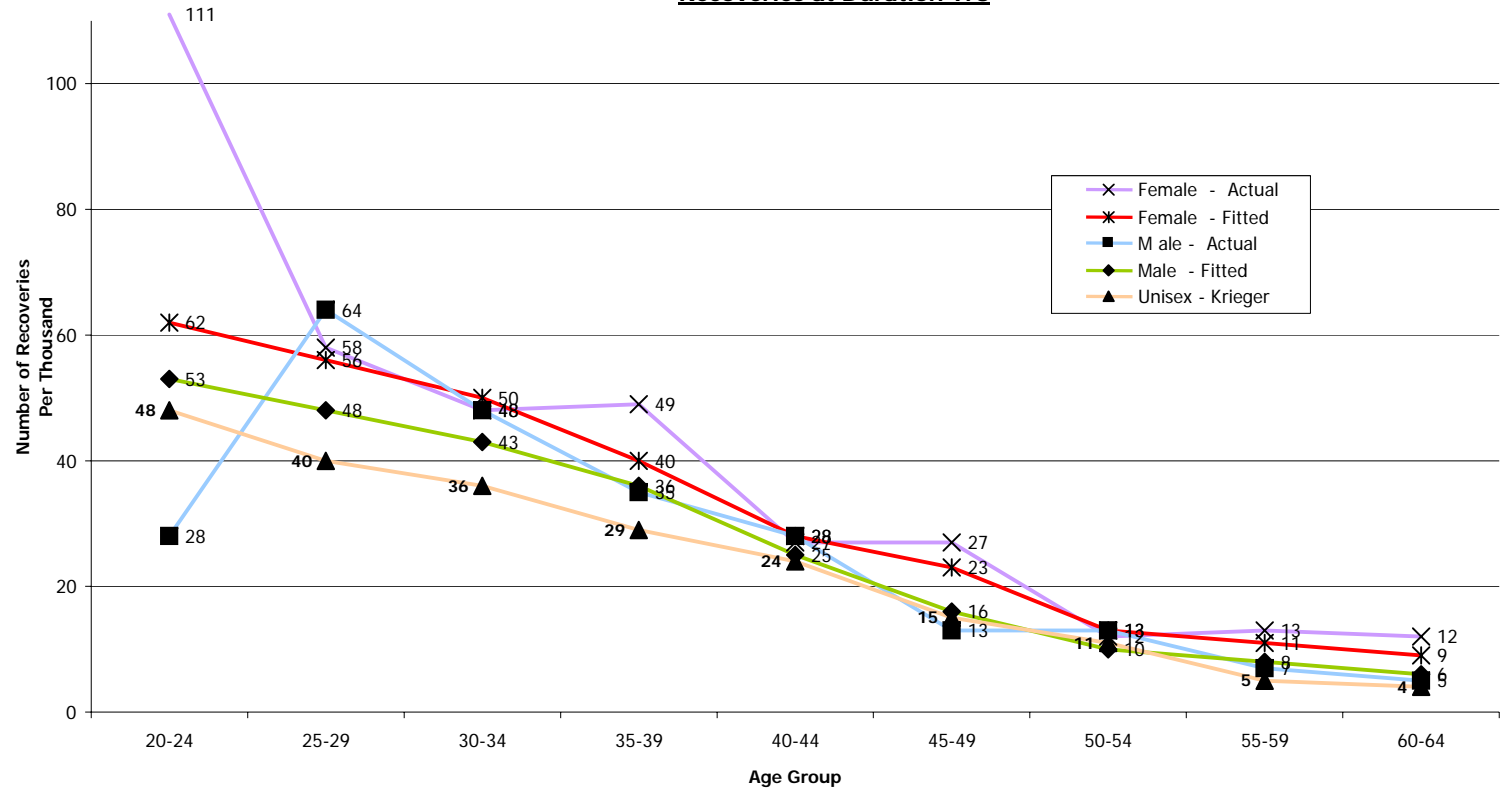
**GRAPH 2B**  
**Recoveries at Duration Yr4**



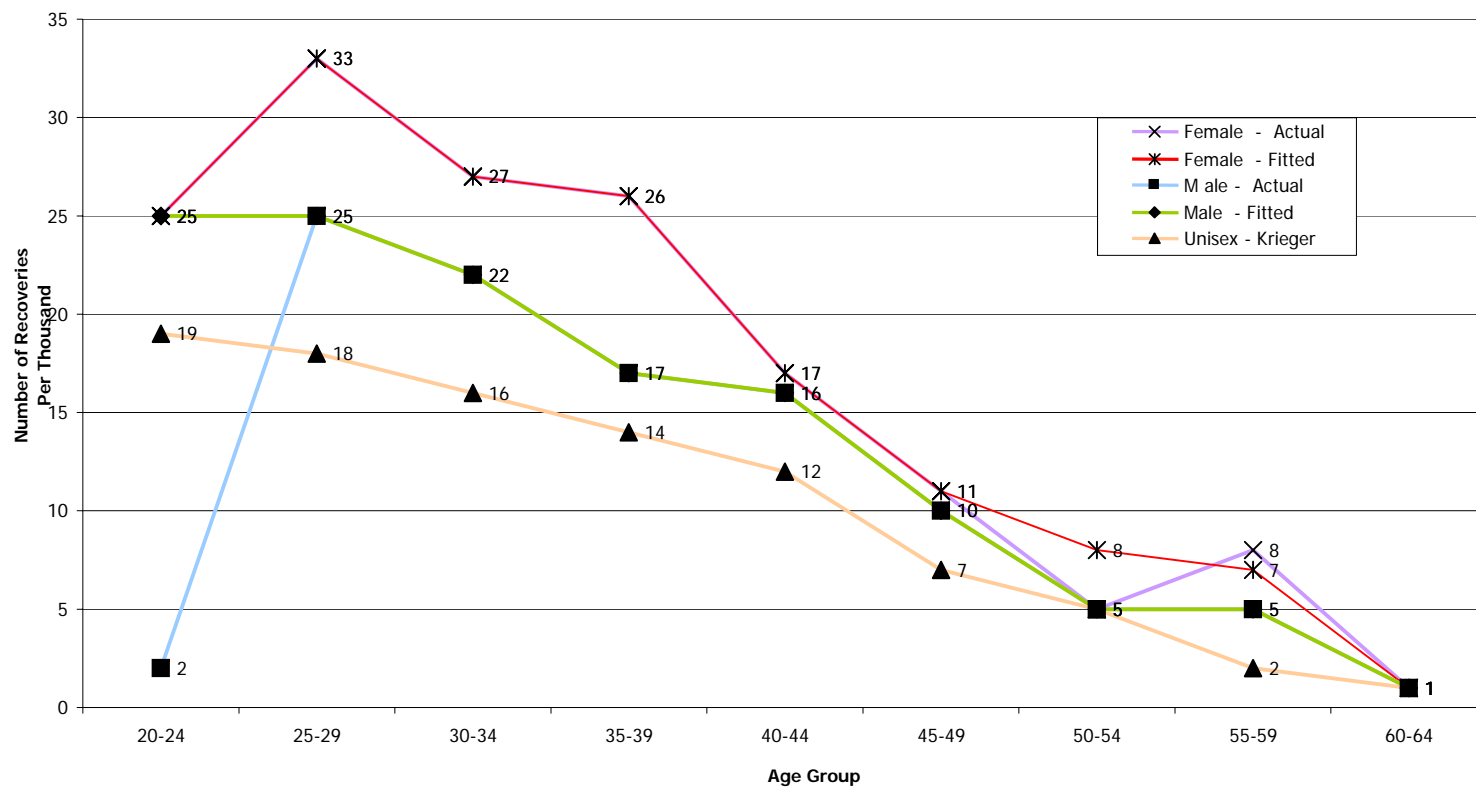
**GRAPH 3B**  
**Recoveries at Duration Yr6**



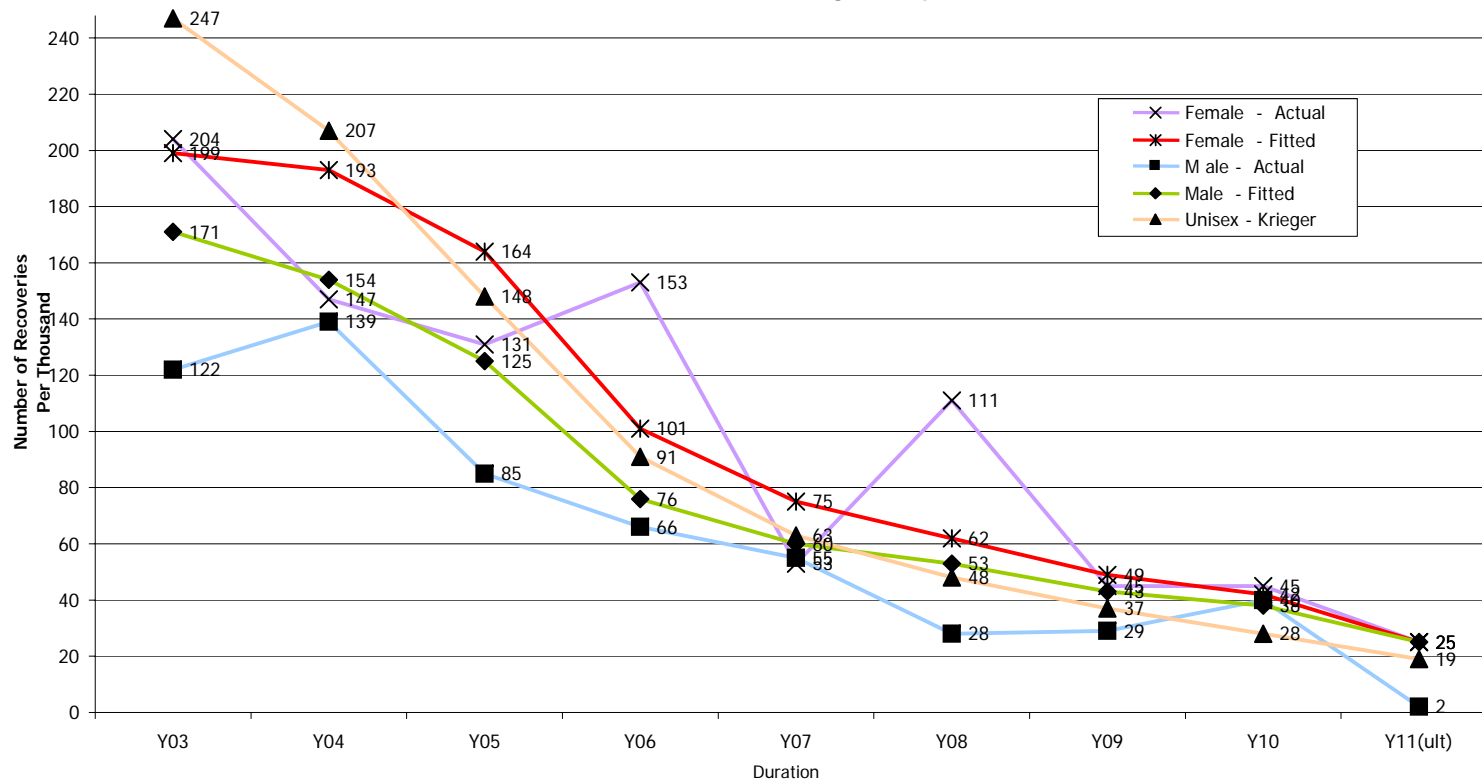
**GRAPH 4B**  
**Recoveries at Duration Yr8**



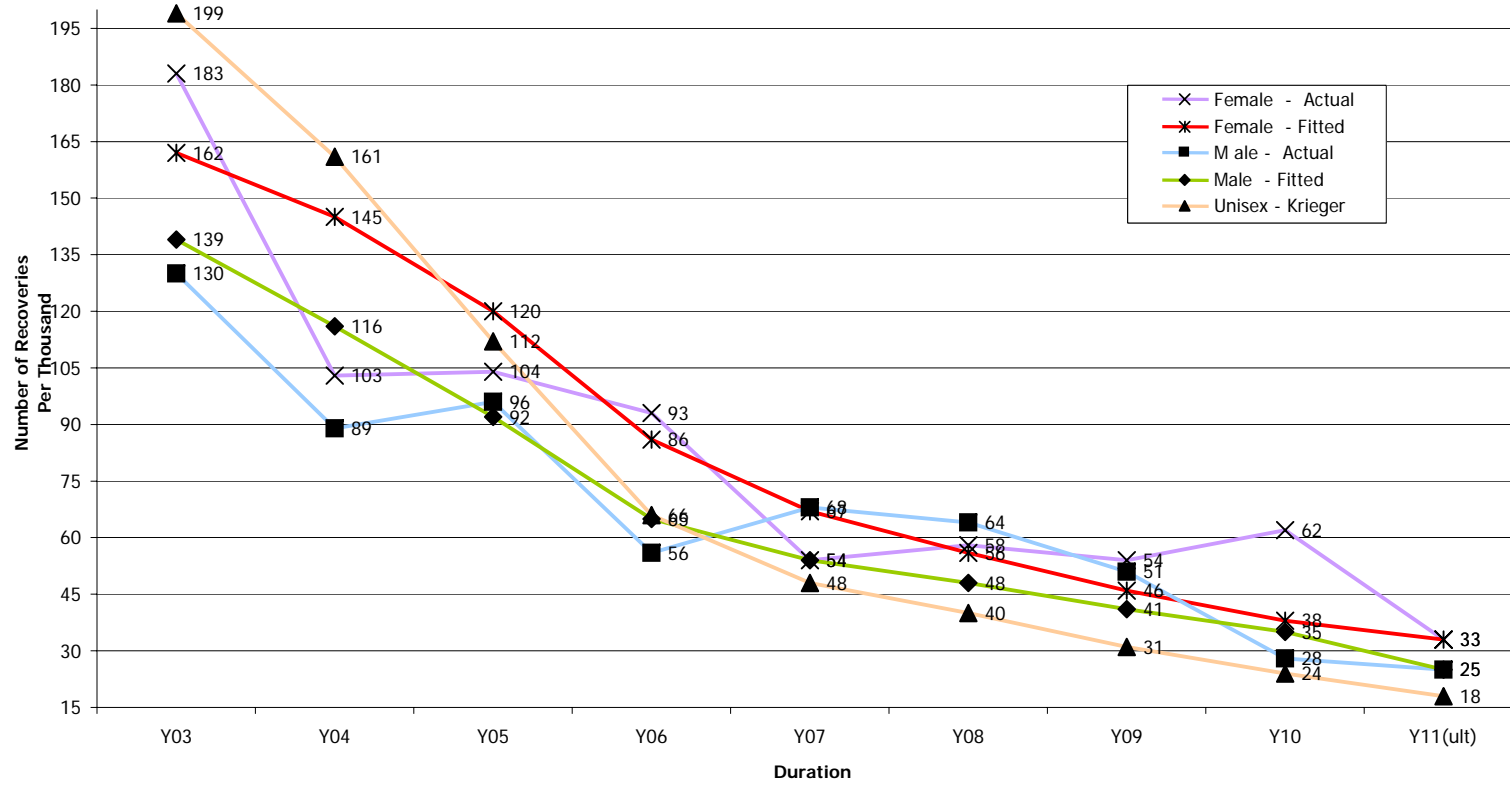
**GRAPH 5B**  
**Recoveries at Duration Yr11(Uit)**



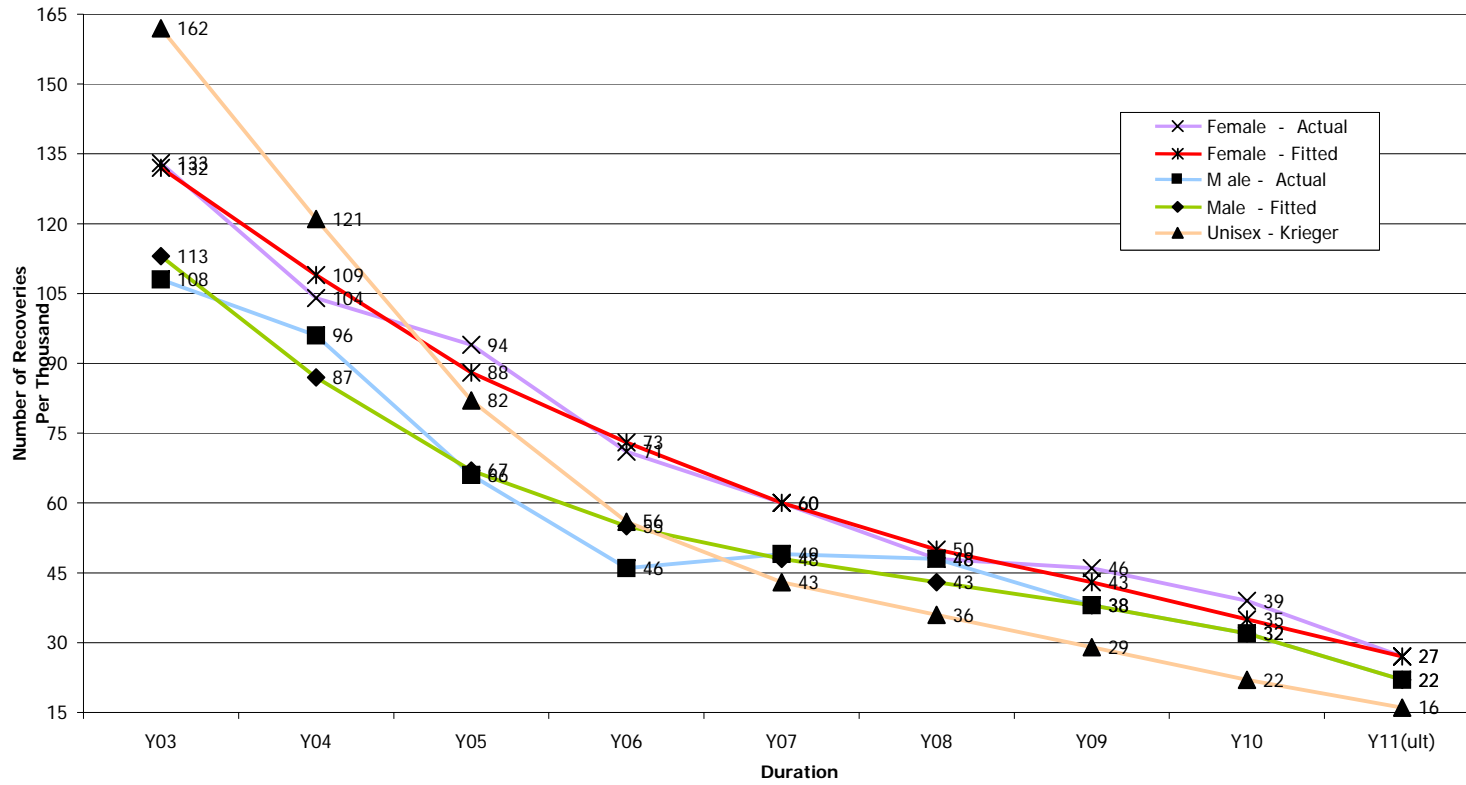
**GRAPH 6B**  
**Recoveries at Age Group 20-24**



**GRAPH 7B**  
**Recoveries at Age Group 25-29**

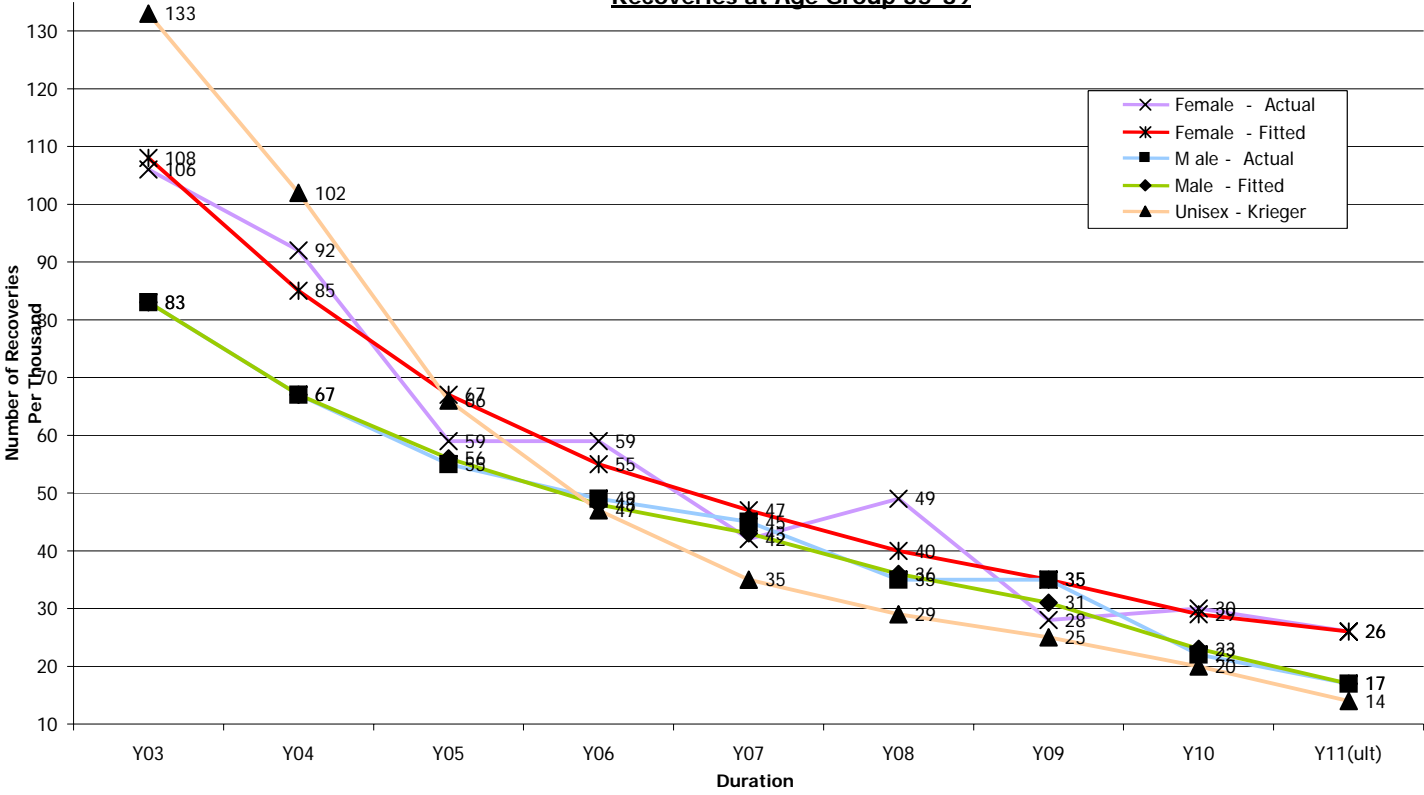


**GRAPH 8B**  
**Recoveries at Age Group 30-34**

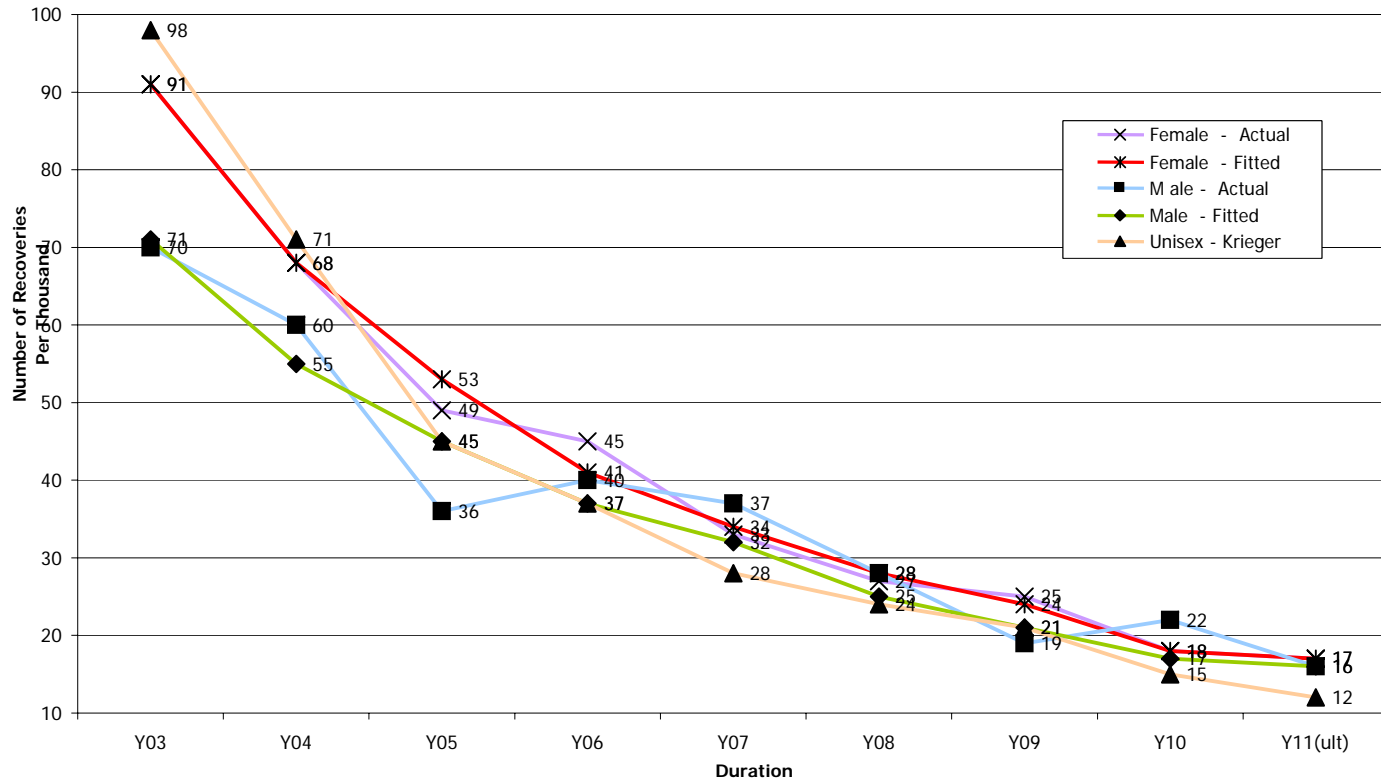




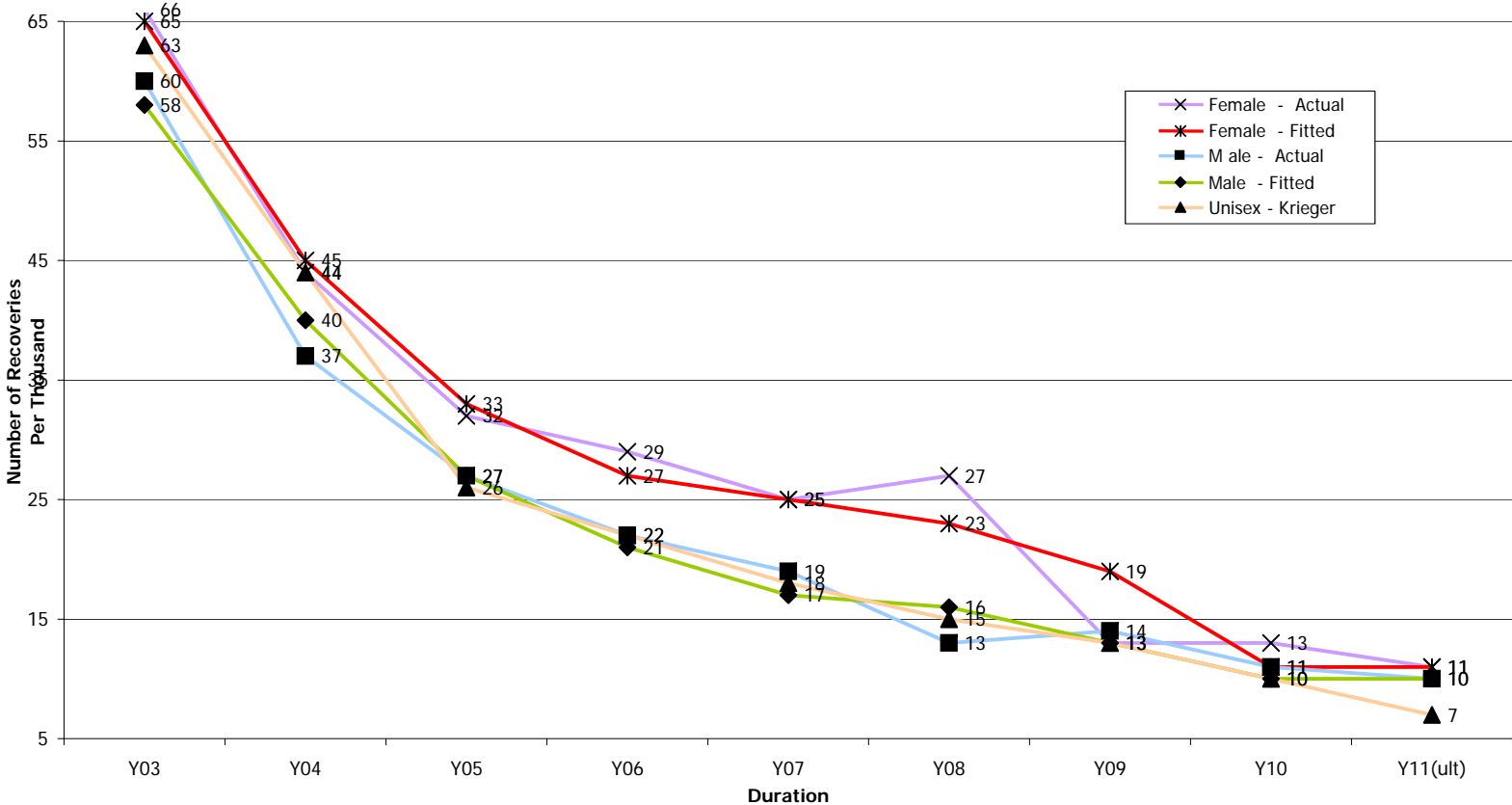
**GRAPH 9B**  
**Recoveries at Age Group 35-39**



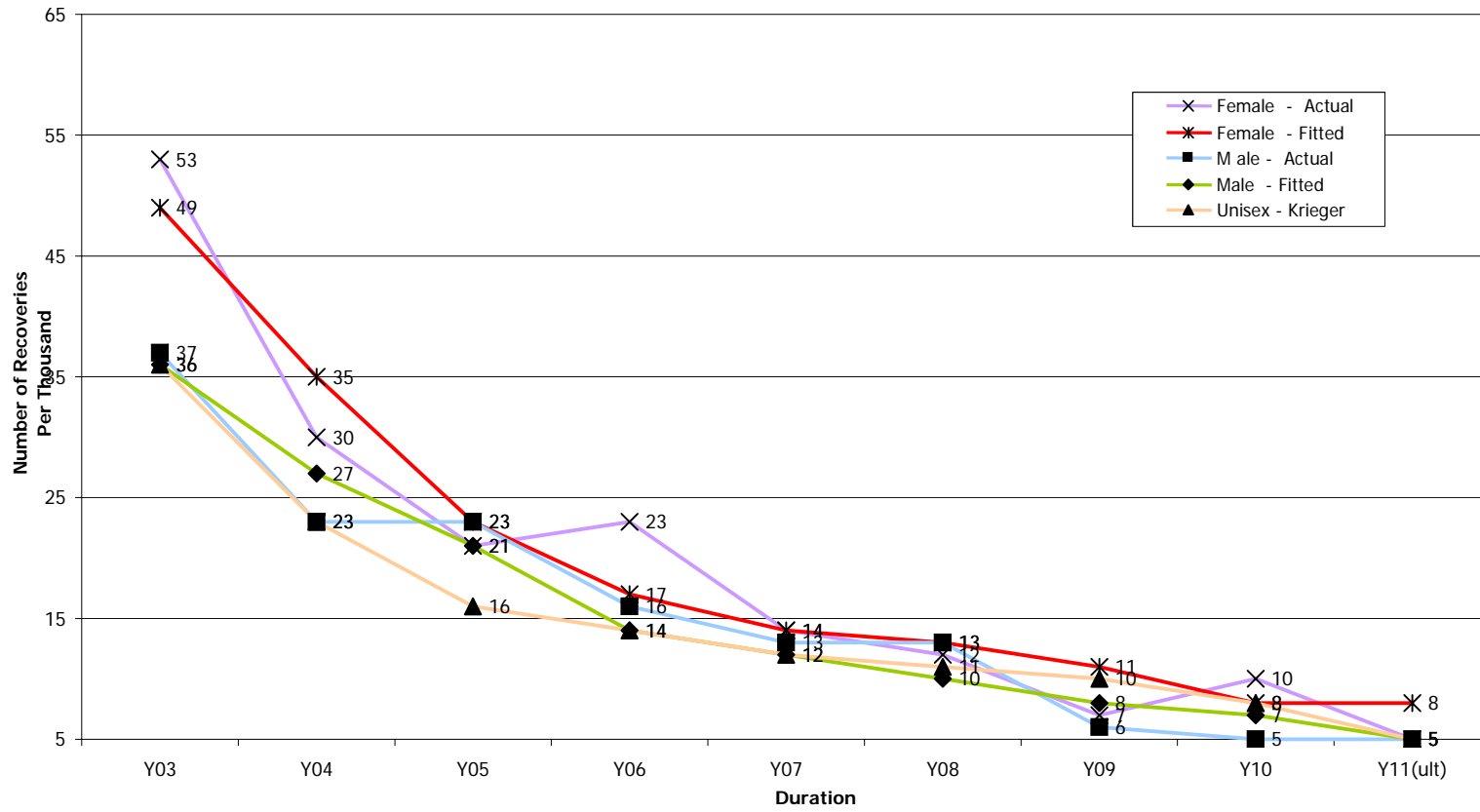
**GRAPH 10B**  
**Recoveries at Age Group 40-44**



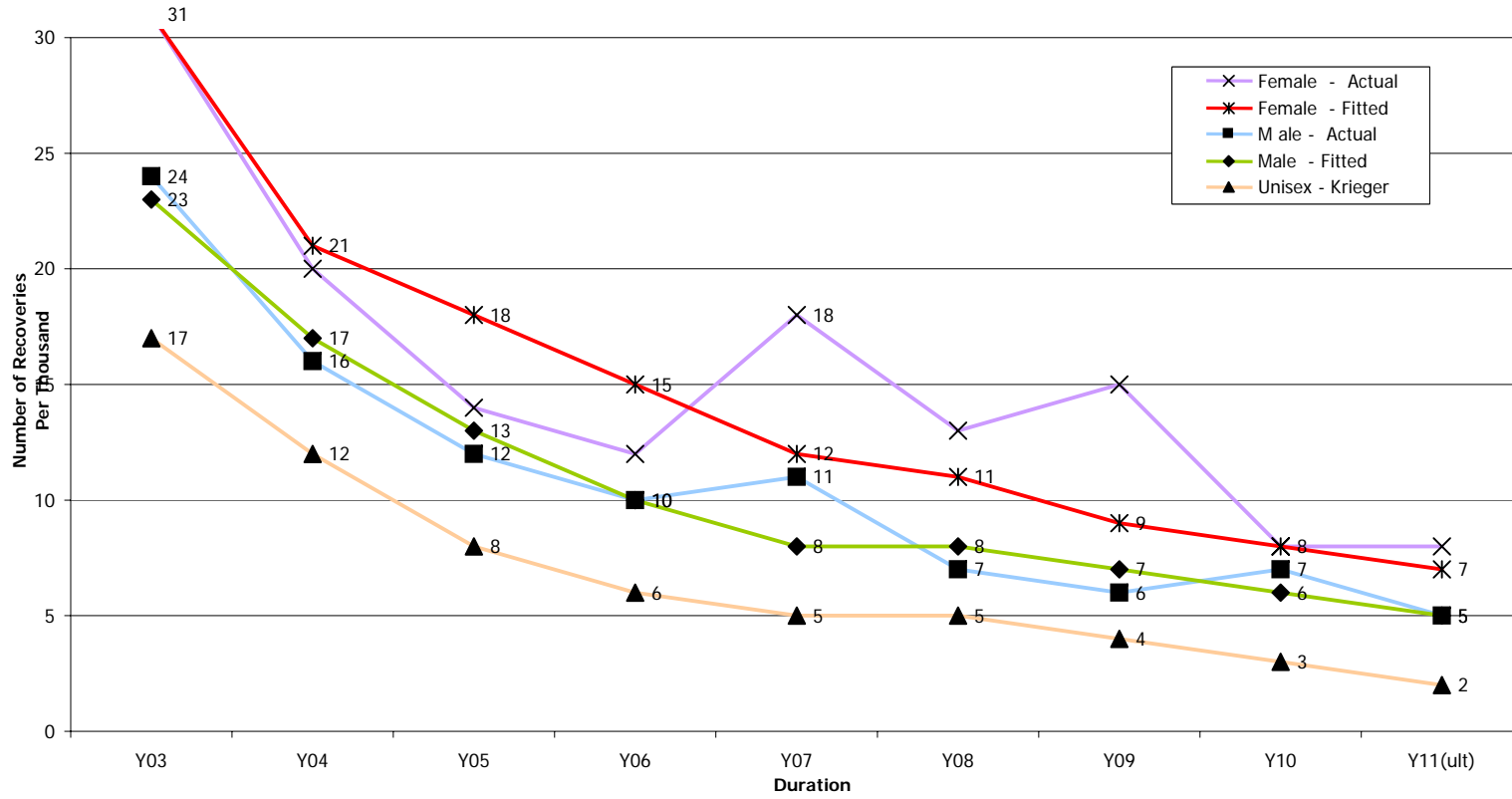
**GRAPH 11B**  
**Recoveries at Age Group 45-49**



**GRAPH 12B**  
**Recoveries at Age Group 50-54**



**GRAPH 13B**  
**Recoveries at Age Group 55-59**



**GRAPH 14B**  
**Recoveries at Age Group 60-64**

