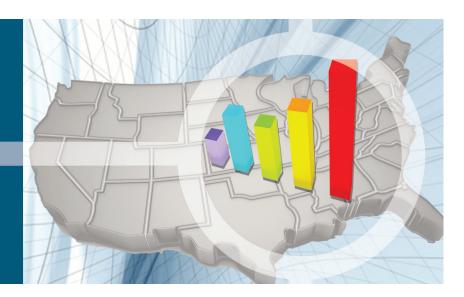
# U.S. Individual Life Insurance Persistency

A Joint Study Sponsored by LIMRA and the Society of Actuaries

Full Report



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## U.S. INDIVIDUAL LIFE INSURANCE PERSISTENCY

# A JOINT STUDY SPONSORED BY LIMRA INTERNATIONAL AND THE SOCIETY OF ACTUARIES





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## **EXECUTIVE SUMMARY**

This report presents the results of the most recent study of individual life insurance lapse experience in the United States, conducted jointly by LIMRA International and the Society of Actuaries (SOA). The observation year for the study is 2004 with partial data for 2005. The study is based on data provided by 39 individual life insurance writers and presents lapse experience for whole life, term life, universal life, and variable universal life plans issued between 1901 and 2005. This report includes results for most key policy and product factors. An Excel spreadsheet containing the supporting information for each figure is also available.

It should be noted that most of the policies that have reached the end of the level premium guarantee during the experience period were priced in the pre-Regulation XXX environment. Many of these products were neither designed nor priced with the same post-guarantee period premium increase that we see in today's term products. Therefore, shock lapse rates at the end of the level premium period may be lower than future results.

#### **Highlights**

- For all individual life insurance products combined, the overall lapse rate for all policy years combined was 4.3 percent on a policy basis and 5.2 percent on a face amount basis, an improvement from 4.7 and 5.7 percent, respectively, for the 2003–2004 experience period.
- The overall lapse rate for whole life plans, all policy years combined, was 3.4 percent on a policy basis and 4.1 percent on a face amount basis for the current study, down from 3.5 and 4.4 percent, respectively, for the prior study.
- The total lapse rate for term insurance, all policy years combined, was 6.6 percent on a policy basis and 5.7 percent on a face amount basis, a decrease from 7.0 on a policy basis and 6.2 percent on a face amount basis from the 2003–2004 experience period. Lapse rates on policies at the end of the guaranteed level premium period shock lapse rates ranged from an average of 22 percent for 5-year level premium term to 37 percent for 10-year level premium term on a policy basis.
- For universal life products, the overall lapse rate for all policy years combined declined to 4.2 percent from 4.6 percent on a policy basis. Lapse rates for all policy years have steadily declined since the 2001–2002 experience study.
- Variable universal life plans covered by the current study had an average lapse rate of 5.2 percent on a policy basis and 5.3 percent on a face amount basis, down from 5.7 percent on a policy basis and 6.4 percent on a face amount basis from the prior study. Overall lapse rates have improved, but have not reached the levels that were seen in the mid-1990s.

### RECOMMENDATIONS

This report examines lapse experience on individual life products for various policy and product factors. The study can be used for industry benchmarking as well as for background information for product development and planning processes.

The data contained in this report can help companies identify factors that impact individual life insurance persistency. However, study participants do not represent the entire industry and differences in results by company may vary dramatically. These results should be used only as a guide or supplement to the experience of the individual carriers. Companies should carefully consider underlying differences such as distribution, product design, product development, and marketing strategy between their own organizations and participants of the current study.

To aid the reader in interpreting the information contained in this report, an Excel spreadsheet providing exposure and lapse information by policy factor and data cell is available.

### **METHODOLOGY**

For purposes of this report, lapse includes termination for nonpayment of premium, insufficient cash value or full surrender of a policy, transfer to reduced paid-up or extended term status, and in most cases, terminations for unknown reason. This is consistent with the definition of lapse applied to other LIMRA and Society of Actuaries experience studies, and allows for better comparison of results over time.

The observation year for the study is 2004 and 2005, with partial data for 2005. Participants were asked to provide information on their entire in-force block. The lapse rates shown are based on 100 percent of policies submitted, except in cases where a company's volume of business was so large or its experience was so different from that of other participants such that overall industry results would be unduly skewed.

It should be noted that not all participants in the study contributed data for their entire in-force block of subsidiaries, product lines, and experience years. In addition, several companies were not able to provide data for all policy and product factors requested. Therefore care should be taken in interpreting results. The number of companies contributing to each lapse factor examined is indicated in the appropriate report section.

The data underlying this report was collected on a policy level, seriatim, basis as this allows for a more detailed analysis of the factors influencing lapse results than studies conducted on an aggregated data basis.

Lapse rates are calculated as follows:

Annualized Policy Lapse Rate = 100 x

Number of Policies Lapsed During the Year

Number of Policies Exposed to Lapse During the Year

The number of policies exposed to lapse is based on the length of time the policy is exposed to the risk of lapsation during the year. Lapses contribute exposure for the full 12 months. Terminations due to death, expiry, maturity, or conversion are not included in the amounts lapsing and contribute to exposure for only the fraction of the policy year they were in-force.

Industry lapse rates are calculated as a weighted average of the experience of all contributing companies; companies with larger in-force blocks will affect the overall results more than companies with smaller in-force blocks. However, results for each policy factor analyzed are also examined at the company level to insure that reported experience is not overly affected by one or more large participant blocks.

Lapse rates are not reported for any data cell for which there were fewer than three companies *or* less than 1,000 policies exposed.

Experience is reported exactly as calculated. No attempt was made to level or smooth results.

## DATA DESCRIPTION AND QUALITY CONTROL

#### **DATA DESCRIPTION**

Data supporting the results of this study was collected jointly with the Society of Actuaries' Individual Life Insurance Experience Committee annual data calls. Both mortality and lapse studies of individual life insurance products are based on these industrywide data collection efforts.

For the 2004–2005 experience study, there were 39 participants with just under \$6 trillion in face amount exposed. Of these participants, 33 provided whole life data, 36 provided term data, 32 provided universal life data, and 18 provided variable universal life data. The participating companies are listed in Appendix A. Tables 1 and 2 below show the policy and face amount exposure by issue year for each product line included in the study. Note that not all participants submitted data for certain affiliated companies, product lines, and observation years.

Table 1
Study Data — Policy Exposure by Issue Year

Issue year	Whole life (33 cos.)	Term life (36 cos.)	Universal life (33 cos.)	Variable universal life (18 cos.)	Total
Pre 1989	19,035,751	804,972	2,471,771	338,078	22,650,572
1989–1993	3,801,168	929,348	1,607,429	617,280	6,955,225
1994–1996	1,641,598	1,044,158	750,943	488,693	3,925,392
1997	472,896	609,647	234,665	157,121	1,474,329
1998	441,824	716,440	203,182	160,141	1,521,587
1999	445,985	1,174,946	198,534	173,756	1,993,221
2000	432,538	906,069	197,379	189,883	1,725,869
2001	511,029	980,337	229,674	159,259	1,880,299
2002	595,679	1,177,680	273,572	122,692	2,169,623
2003	582,240	1,181,228	334,941	94,338	2,192,747
2004	538,253	1,177,443	333,492	105,176	2,154,364
2005	57,537	343,197	68,707	28,334	497,775
Total	28,556,498	11,045,465	6,904,289	2,634,751	49,141,003

Table 2
Study Data — Face Amount Exposure by Issue Year (000s)

Issue year	Whole life (33 cos.)	Term life (36 cos.)	Universal life (33 cos.)	Variable universal life (18 cos.)	Total
Pre 1989	325,176,776,105	55,526,178,985	199,061,711,467	33,870,043,554	613,634,710,111
1989–1993	268,487,164,817	142,073,926,053	159,554,044,057	77,950,892,722	648,066,027,649
1994–1996	124,729,603,368	228,814,777,650	93,567,877,301	72,156,848,802	525,269,107,121
1997	36,507,046,569	155,787,217,185	32,771,471,603	33,083,685,648	258,149,421,005
1998	32,657,298,658	199,076,471,868	34,350,386,485	38,792,556,408	304,876,713,419
1999	32,811,559,005	383,368,895,612	36,900,133,981	48,854,691,449	501,935,280,047
2000	33,234,472,428	293,189,644,128	37,121,211,786	58,976,236,736	422,521,565,078
2001	41,557,526,981	343,827,484,020	41,839,943,793	48,061,659,650	475,286,614,444
2002	66,249,790,404	454,182,822,447	60,225,485,889	42,325,511,297	622,983,610,037
2003	77,830,035,066	493,928,924,106	86,322,351,001	34,488,131,761	692,569,441,934
2004	61,305,789,426	503,802,310,628	92,207,340,390	37,235,112,132	694,550,552,567
2005	9,686,334,373	164,000,228,833	32,154,051,931	11,631,767,737	217,472,382,874
Total	1,110,233,397,200	3,417,578,881,515	906,076,009,684	543,427,137,887	5,977,315,426,286

Table 3 below compares the results of the current study with LIMRA's Annual Life Insurance In-Force Survey. The current data exposure provides a reasonable representation of the industry in terms of face amount and policy exposure distribution by product line.

Table 3
Study Exposure vs. Industry In-Force — Distribution by Product Line

	LIMRA's Annual Life Insurance In-Force Survey		Current Study Exposure Base	
Product Line	Policies	Face Amount	Policies	Face Amount
Whole Life	51.8%	16.6%	58.1%	18.6%
Term	23.9%	52.3%	22.5%	57.2%
UL	14.5%	16.1%	14.0%	15.2%
VUL	9.8%	15.0%	5.4%	9.1%
Total	100.0%	100.0%	100.0%	100.0%

#### U.S. Individual Life Insurance Persistency

The following is a brief description of the exposure data characteristics by product line.

#### Whole Life

- Roughly 9 percent of the policy exposure is in the first five policy years.
- Approximately 40 percent of the policy exposure is in policy year 30 or later.
- The average face amount exposed is \$39,000 for all whole life business.
- The average face amount exposed for new issues is \$119,000.
- Male insureds represent 56 percent of the policy exposure.
- Non-smoker insureds represent 81 percent of the policy exposure.
- The average issue age for all whole life insureds is 27 and for policies in the first year, 29.
- The average attained age of all whole life insureds is 52.
- Single premium whole life policies account for less than ½ percent of all whole life policies and roughly 1 percent exposure by face amount. Not enough data was collected to report on this product line.

#### Term

- For contributions that identified term policies by plan, the term policy exposure base is 32 percent yearly renewable term (YRT), 4 percent 5-year term, 22 percent 10-year level premium term, 12 percent 15-year level premium term, and 30 percent 20-year level premium term.
- The average face amount exposed is \$309,000 for all term business.
- The average face amount exposed for new issues is \$432,000.
- Across all term plans, male insureds represent between 55 and 66 percent of policy exposure.
- For companies that provided smoker class data, across all term plans, non-smokers represent between 89 and 94 percent of the policy exposure.
- The average issue age of term insureds is 39 and for policies in the first year, 40.
- The average attained age for term insureds is 46.

#### Universal Life

- Approximately 14 percent of the policy exposure is in the first two policy years.
- Almost 36 percent of the policy exposure is in the first 10 policy years.
- The average face amount exposed is \$131,000 for universal life business.
- The average face amount exposed for new issues is \$300,000.
- Male insureds represent 59 percent of policy exposure.
- Non-smoker insureds represent 88 percent of the policy exposure.
- The average issue age of universal life insureds is 33.
- The average issue age for policies in the first year is 38.
- The average attained age of all universal life insureds is 46.

#### U.S. Individual Life Insurance Persistency

#### Variable Universal Life

- Roughly 8 percent of the policy exposure is in the first two policy years.
- Approximately 55 percent of the policy exposure is in the first 10 policy years.
- The average face amount exposed is \$207,000.
- The average face amount exposed for new issues is \$358,000.
- Male insureds represent 59 percent of the policy exposure.
- Non-smoker insureds represent 86 percent of the policy exposure.
- The average issue age of all variable universal life insureds is 34.
- The average issue age for policies in the first year is 35.
- The average attained age of all variable universal life insures is 44.

#### **DATA QUALITY CHECKS**

For quality control purposes the following checks were performed for each individual company data submission.

- ➤ Total Record Count by Experience Year For each company, the total number of policy records and the associated total face amount submitted for each study experience year is compared to A.M. Best's annual statement information to determine whether the participating carrier had provided a full or partial in-force sample.
- ➤ Total Record Count by Product Line (by Plan) For each company, the total in-force policy records and associated face amount were sorted by plan and then compared to LIMRA Annual Life Insurance In-Force Survey results. LIMRA's Annual Life Insurance In-Force Survey shows total policies, face amount, and annual premium in-force for each year by major product line. Any discrepancies by plan were then investigated and reconciled.
- ➤ New Issue Record Counts (by Plan) For each company, the number of newly issued policies submitted and the total associated face amount were sorted by plan and then compared to LIMRA's Annual Life Insurance Sales Report results. LIMRA's Annual Life Insurance Sales Survey collects total policies, premium and face amount sold by calendar year. Again, any discrepancies by plan were investigated and reconciled.
- ➤ Total Lapse Rates by Company and by Product Line (by Plan) For each company, lapse rates are calculated by plan and policy year and then compared to results from the previous study, if available. Differences are noted and discussed with individual company data contacts.
- ➤ Lapse Rates by Policy Year and Product Line (by Plan) For each company, a spreadsheet showing lapse rates by plan and policy year is provided. The data contacts are asked to review the results and report any discrepancies between the industry study and the results of their own organization's experience study.

## **OVERALL RESULTS**

This report presents the results of the individual life insurance lapse experience study in the United States for observation years 2004 and 2005. This study is conducted jointly by LIMRA International and the Society of Actuaries. The study is based on data provided by 39 individual life insurance companies and presents lapse experience for whole life, term, universal life, and variable universal life insurance plans issued between 1901 and 2005. This report highlights results for most key policy and product factors. An Excel spreadsheet containing the supporting source lapse rates for each figure is available upon request.

For all individual life insurance products combined, early policy year lapse rates have increased slightly from the prior study but remain near 10-year lows, (Figure 1). This continues to be driven in part by lower earlier year lapse rates on level premium term plans. On a policy basis, the overall average lapse rate improved from the 2003–2004 experience study, dropping from 4.7 percent to 4.3 percent. Some of the variation in lapse experience between exposure periods can be attributed to differences in the underlying data contributors; however, the impact of these differences appears to be relatively minor.

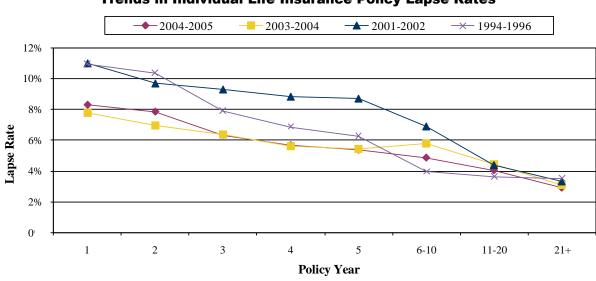


Figure 1
Trends in Individual Life Insurance Policy Lapse Rates

On a face amount basis, lapse rates improved across most policy years, (Figure 2). Total individual life lapse rates by face amount were fairly level during 2004 and 2005, averaging around 5.2 percent overall versus 5.7 percent in the prior study.

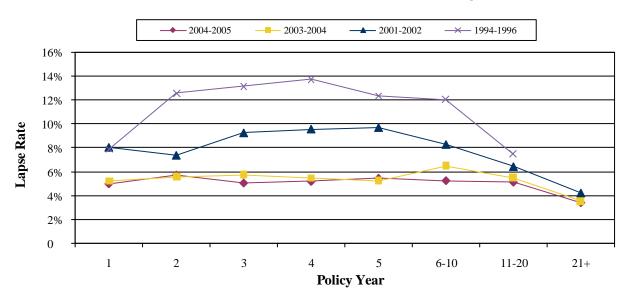


Figure 2
Trends in Individual Life Insurance Face Amount Lapse Rates

During the earlier policy years, policies with smaller face amounts lapse more frequently while larger policies tend to lapse in later policy years (Figure 3). This trend can be seen across all products. During the early policy years, lapses are more likely to result from buyer's remorse or additional price comparison shopping. However, lapses during later policy years are more likely due to replacement or full surrender.

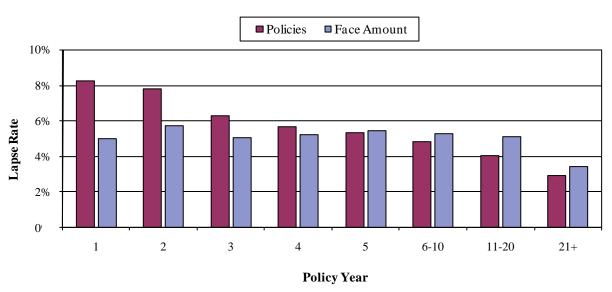


Figure 3
Individual Life Insurance Lapse Rates

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## WHOLE LIFE INSURANCE

The overall lapse rate for whole life plans combined, based on data from 33 contributors, was 3.4 percent on a policy basis and 4.1 percent on a face amount basis for experience period 2004–2005. This is down slightly from 3.5 and 4.4 percent, respectively, for the experience period 2003–2004. Figure 4 below shows whole life policy lapses by duration over the past decade. First-year lapse rates have decreased most recently while lapse rates in policy years 2 through 4 have increased, following closer to historical levels. For the most part, lapse rates after policy year 5 converge toward 2.5 percent.

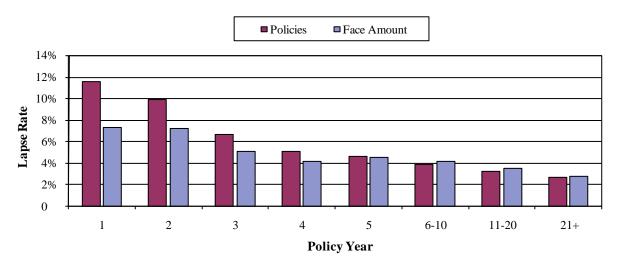
-2004-2005 2003-2004 2001-2002 <del>×</del> 1994-1996 14% 12% 10% Lapse Rate 8% 6% 4% 2% 0 1 2 3 5 6-10 11 - 2021 +**Policy Year** 

Figure 4

Trends in Whole Life Insurance Policy Lapse Rates

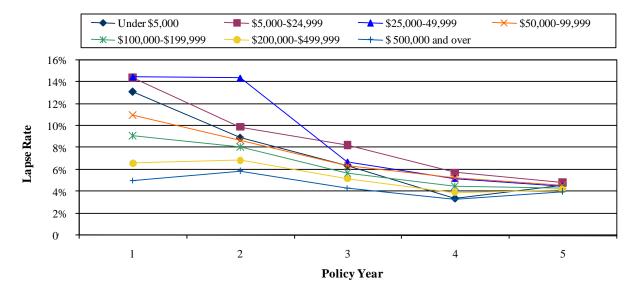
The average face amount exposed for the experience period 2004–2005 was just under \$39,000, a small decrease from 2003–2004. However, new issues carried an average face value of \$119,000, a notable decrease from \$143,000 for the prior study. This is due in part to the change in participating whole life carriers. Consistent with the overall results for individual life insurance, during the early policy years, smaller whole life policies tend to lapse more often than larger policies (Figure 5). This trend tends to reverse in later policy years.

Figure 5
Whole Life Insurance Lapse Rates



Looking at lapse rates by policy size groupings confirms that smaller policies have considerably higher first-year lapse rates (Figure 6). And the gap begins to close after the first few policy years.

Figure 6
Whole Life Lapse Rates by Policy Size — Policy Years 1–5



After the first five years, most of the lapse rates settle between 2 and 5 percent (Figure 7). However, similar to previous studies, the lapse rates for policies with face amounts less than \$5,000 remain significantly higher than other policy size groups. Table 4 below indicates the amount of exposure for each policy size group.

Figure 7
Whole Life Lapse Rates by Policy Size — Policy Years 6 and Later

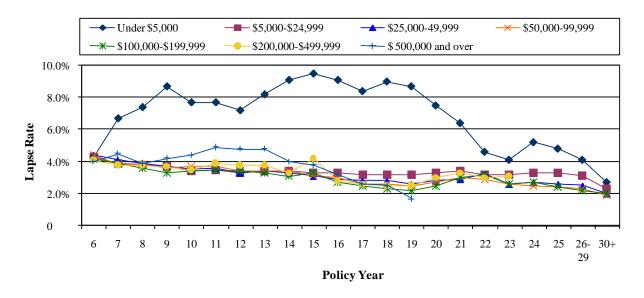


Table 4
Whole Life Exposure by Policy Size Group

Policy Size	Percent of Policy Exposure
Under \$5,000	21%
\$5,000-\$24,999	45%
\$25,000-\$49,999	14%
\$50,000-99,999	9%
\$100,000-199,999	7%
\$200,000-499,999	3%
\$ 500,000 and over	1%
Total	100%

The remainder of this section examines other factors most likely to affect lapse experience for whole life plans. These factors include gender, issue age, attained age, premium payment mode, risk class, smoking status, and underwriting method.

#### **GENDER**

The whole life exposure base is 56 percent male and 44 percent female on a policy basis. On a face amount basis, the exposure base is 66 percent male and 34 percent female, a slight shift from male exposures compared to the prior study. This was due to a small decrease in average face amount exposed for males and a small increase for females. The average face amount exposed for males is \$45,000 while average for females is \$30,000. Overall, the policy lapse rates for males and females are about the same, with lapse rates for females slightly higher in the first few years and a bit lower in later years (Figure 8). A similar trend shows for lapse rates on a face amount basis (Figure 9).

Figure 8
Whole Life Policy Lapse Rates by Gender

**Includes 32 Companies** 

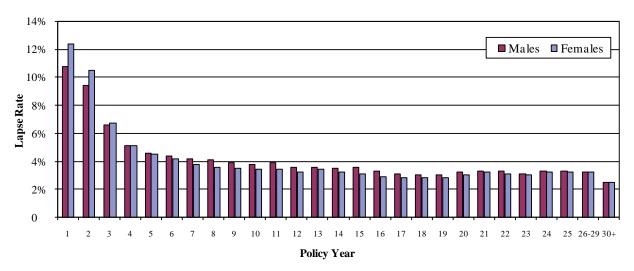
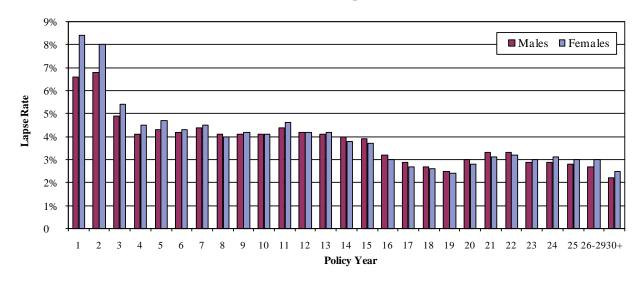


Figure 9
Whole Life Face Amount Lapse Rates by Gender

**Includes 32 Companies** 



#### **ISSUE AGE**

By issue age cohort, the whole life exposure base breaks down as follows:

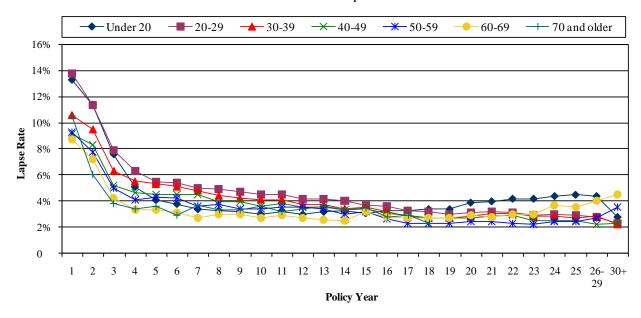
Table 5
Whole Life Policy Exposure by Issue Age Cohort

Issue Age	Average Face Amount Exposed	Percent of Policy Exposure
Under 20	\$18,000	33%
20-29	\$27,000	24%
30-39	\$57,000	20%
40-49	\$66,000	13%
50-59	\$66,000	7%
60-69	\$61,000	3%
70 and older	\$78,000	<1%
Total	\$39,000	100%

Consistent with the results of prior studies, lapse rates for permanent insurance products show an inverse relationship to age at issue in the first few years of the policy. Policies issued under age 30 have the highest lapse rates in the first three years. However, after the first five years, most of the lapse rates settle between 2 and 6 percent (Figure 10).

Figure 10
Whole Life Policy Lapse Rates by Issue Age Group

**Includes 31 Companies** 



#### **ATTAINED AGE**

By attained age cohort, the whole life exposure base breaks down as follows:

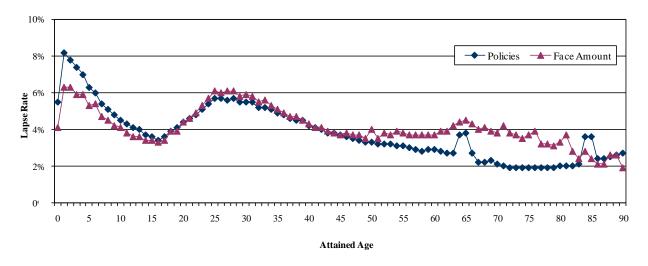
Table 6
Whole Life Policy Exposure by Attained Age Cohort

Attained Age	Average Face Amount Exposed	Percent of Policy Exposure
Under 20	\$37,400	9%
20-29	\$36,000	7%
30-39	\$58,000	10%
40-49	\$60,000	15%
50-59	\$46,000	20%
60-69	\$32,000	16%
70 and older	\$17,000	23%
Total	\$39,000	100%

Figure 11 shows lapse rates by attained age on a policy and face amount basis. Consistent with past industry studies of individual life insurance lapse experience; after attained age 25, rates of lapsation generally decrease as the insured ages. For ages between 50 and 80, higher face amount policies are more likely to lapse than smaller policies. And there appears to be a variance in lapses around age 65, where we would expect to see the impact of retirement.

Figure 11
Whole Life Lapse Rates by Attained Age

**Includes 33 Companies** 



#### PREMIUM PAYMENT MODE

For the 15 companies that provided data by premium payment mode for the current study, annual premium payment business represents 40 percent of the policy exposure, semi-annual business represents 7 percent, quarterly business represents 10 percent, and monthly business represent 44 percent. Consistent with prior studies, lapse rates increase with the number of premium payments made each year (Figures 12 and 13). One exception is policies paid on a monthly basis. This category appears to contain more policies paid through electronic fund transfer methods and other automatic methods than other payment modes. The automatic nature of these transactions tends to lead to improved policy persistency for the monthly premium payment mode.

Figure 12
Whole Life Policy Lapse Rates by Premium Payment Mode

**Includes 15 Companies** 

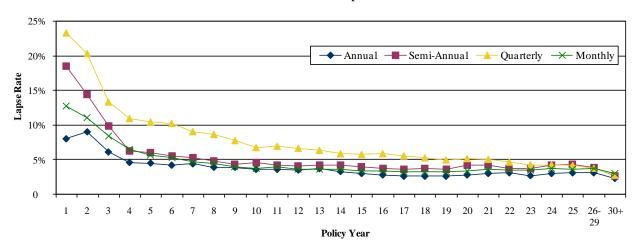
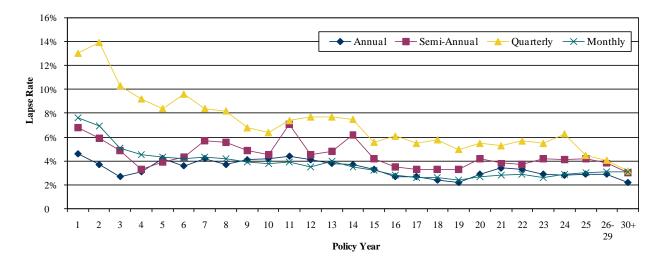


Figure 13
Whole Life Face Amount Lapse Rates by Premium Payment Mode

**Includes 15 Companies** 



#### **RISK CLASS**

Twelve companies contributed whole life data split by risk class category. Similar to past studies, the preferred risk class carries a significantly higher average face amount compared to standard and substandard risk class policies. The distribution of exposure by risk class is provided in Table 7.

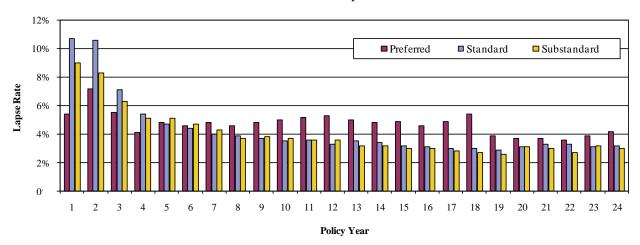
Table 7
Whole Life Policy Exposure by Risk Class

Risk Class	Average Face Amount Exposed	Percent of Policy Exposure
Preferred risks	\$177,000	5%
Standard risks	\$30,000	89%
Substandard risks	\$45,000	6%
Total	\$38,000	100%

With the exception of the first four policy years, the three risk classes exhibit similar lapse rates, with standard and substandard trending closely in later years (Figure 14). While the preferred class displays lower lapse rates in the first four years, lapse rates drift higher after year 7. This could be the tendency of policies with higher face amounts lapsing in later policy years.

Figure 14
Whole Life Policy Lapse Rates by Risk Class

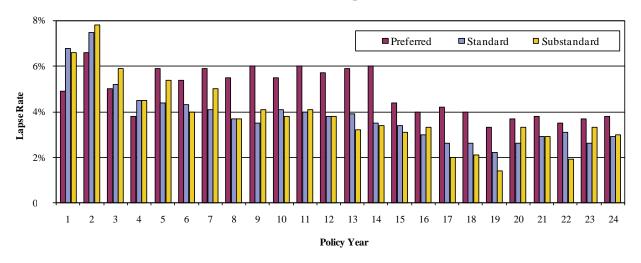
**Includes 12 Companies** 



The experience is also consistent on a face amount basis, (Figure 15).

Figure 15
Whole Life Face Amount Lapse Rates by Risk Class

**Includes 12 Companies** 



### **SMOKING STATUS**

The whole life policy exposure for the current study is 81 percent nonsmoker. Smokers exhibit much higher lapse rates than nonsmokers during the first few years; but after duration six, there is little variance between smoker and nonsmoker experience (Figure 16). A similar pattern is also seen on the face amount basis (Figure 17).

Figure 16
Whole Life Policy Lapse Rates by Smoking Status

Includes 30 Companies

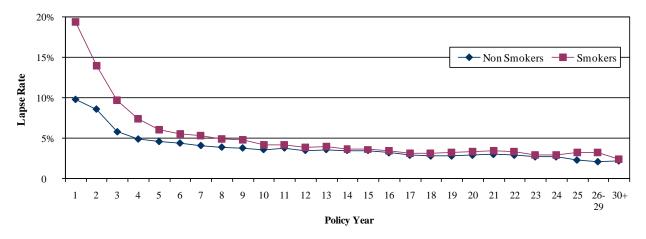
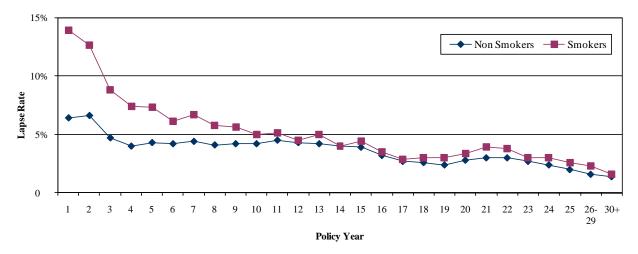


Figure 17
Whole Life Face Amount Lapse Rates by Smoking Status

Includes 30 Companies



#### **UNDERWRITING METHOD**

The whole life policy exposure base for the current study consists of 68 percent non-medical, 14 percent medical, 7 percent simplified issue, and 12 percent paramedical. Consistent with past studies, whole life policies issued with full medical or paramedical underwriting exhibit the lowest rates of lapsation, but the difference exists only in the early durations. Whole life policies issued on a non-medical basis (using a traditional non-medical questionnaire with a complete set of medical history questions) or on a simplified issue basis (with less than full non-medical screening) typically have higher premiums and experience higher rates of lapsation during earlier policy years (Figure 18). These trends are also present on a face amount basis, (Figure 19).

Figure 18
Whole Life Policy Lapse Rates by Underwriting Method

**Includes 21 Companies** 

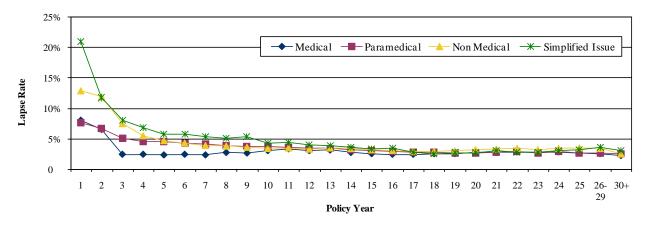
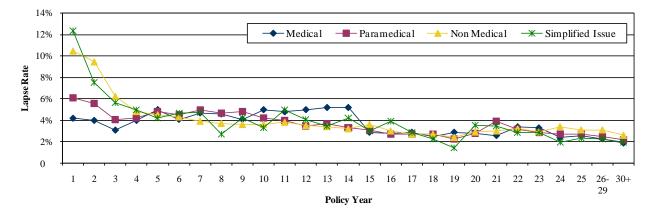


Figure 19
Whole Life Face Amount Lapse Rates by Underwriting Method

**Includes 21 Companies** 

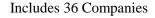


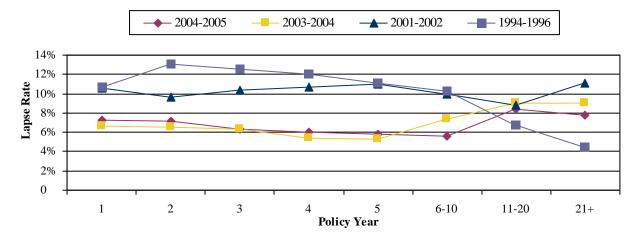
## TERM LIFE INSURANCE

This chapter examines lapse experience for term insurance products in total as well as by plan. Thirty-six companies provided data on term business in total, but not all companies provided details on the plan type. These companies are included only in the examination of total term lapse results.

Total lapse rates for term insurance for all products and all policy years combined was 6.6 percent on a policy basis and 5.7 percent on a face amount basis for 2004–2005. Figure 20 below shows policy lapse rates by policy year over the past decade. Term lapse rates have improved significantly over 1990s' levels for the first 10 policy years. This is due to the increase of level premium term business over the past decade. For policy years 11 and later, lapse rates have increased significantly over 1990's levels, reflecting the impact of shock lapse rates for level premium term plans. Similar patterns emerge on a face amount basis (Figure 21).

Figure 20
Trends in Term Insurance Policy Lapse Rates (All Plans Combined)





-2004-2005 2003-2004 2001-2002 <del>×</del> 1995-1996 14% 12% Lapse Rate %8 %8 %8 4% 2% 0 2 1 3 6-10 11-20 21+ **Policy Year** 

Figure 21
Trends in Term Insurance Face Amount Lapse Rates (All Plans Combined)

#### PREMIUM GUARANTEE PERIOD

Table 8 details the exposure distribution for the 29 insurers that provided term insurance data split by plan. With the exception of 5-year level premium term, average first-year face amount per policy increased from the prior study. And average total face amount exposed increased across all term products.

Table 8
Term Exposure by Plan

Plan	Average First-Year Face Amount Exposed	Average Total Face Amount Exposed	Percent of Term Policy Exposure
YRT	\$417,000	\$251,000	32%
5-yr term	\$130,000	\$145,000	4%
10-yr term	\$493,000	\$352,000	22%
15-yr term	\$440,000	\$326,000	12%
20-yr term	\$491,000	\$391,000	30%

While total lapse rates for all term products decreased from the prior study, the first-year lapse rate for YRT increased from 9.0 to 10.3 percent and 5-year level premium term deteriorated from 8.9 to 21.9 percent due to unfavorable experience of a handful of companies. With the exception of 5-year level premium term, first-year lapse rates decrease as the length of the premium guarantee lengthens (Table 9). Similarly, persistency for the first five years increases as the length of the premium guarantee increases (Table 10).

Table 9
Term First-Year Lapse Rates by Plan

Plan	First-Year Policy Lapse Rates	First-Year Face Amount Lapse Rates
YRT	10.3%	7.6%
5-yr term	21.9%	13.6%
10-yr term	6.7%	5.5%
15-yr term	4.8%	4.0%
20-yr term	5.1%	4.0%

Table 10
Term Five-Year Persistency by Plan

Plan	Policy Basis	Face Amount Basis
YRT	60.4%	66.9%
5-yr term	43.5%	52.5%
10-yr term	72.0%	72.6%
15-yr term	79.8%	81.0%
20-yr term	77.9%	80.7%

Term plans with the longest premium guarantee periods (15- and 20-year level term) have the lowest initial lapse rates, while YRT and 5-year level term products have the higher lapse rates (Figure 22).

→ YRT — 5 year term · 10 year level premium term → 15 year level premium term → 20 year level premium term 25% 20% Lapse Rate 15% 10% 5% 0 2 1 3 4 5 6 7 8

**Policy Year** 

Figure 22

Term Policy Lapse Rates by Level Premium Period — Policy Years 1–8

Lapse rates are relatively level by duration, with the exception of the years around the end of the premium guarantee period where shock lapses occur (Figure 23).

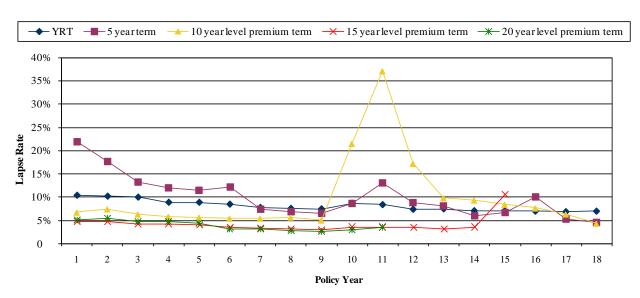


Figure 23
Term Policy Lapse Rates by Level Premium Period — All Policy Years

Looking at term product experience by policy size, for YRT plans, policies with face amounts under \$200,000 are more likely to lapse in the first few policy years than policies with higher face amounts. After policy year 5, lapse rates for all face amounts settle between 6 and 10 percent (Figure 24).

YRT Lapse Rates by Policy Size -Under \$200,000 \$200,000-\$499,999 \$500,000 and over 16% 14% 12% 10% Lapse Rate 6% 4% 2% 0 10 11 12 13 14 15 16 Policy Year

Figure 24

Some of the five-year term plans included in this study have level premiums during each successive 5-year period. Others are re-entry term products, also known as select and ultimate term, which allow customers the option to continue coverage at lower select rates, with new underwriting, for an additional 5-year period. Five-year term products show a spike in lapsation every five years coinciding with the policy re-entry periods (Figure 25).

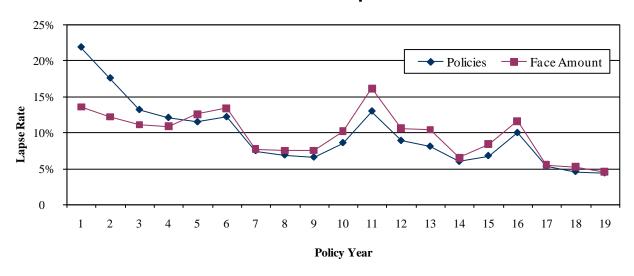


Figure 25 5-Year Level Term Lapse Rates

For 10-year level premium term policies, lapse rates are relatively level by duration during the premium guarantee period, generally between 5 and 7 percent. Shock lapse rates average 37 percent for policy year 11 on a policy basis and 43 percent on a face amount basis. There does appear to be variations in shock lapse rates by policy size. Policies with face amounts under \$200,000 exhibited shock lapse rates around 33 percent in policy Year 11 while policies with face amounts in excess of \$200,000 experienced shock lapse rates in the rate of 43 to 46 percent (Figure 26).

It is important to point out that the level premium term products included in this study were designed and priced with the post-guarantee period premium levels of 10 to 15 years ago. Therefore, future post-level premium-period shock lapse rates are likely to be higher than the results shown in the current study.

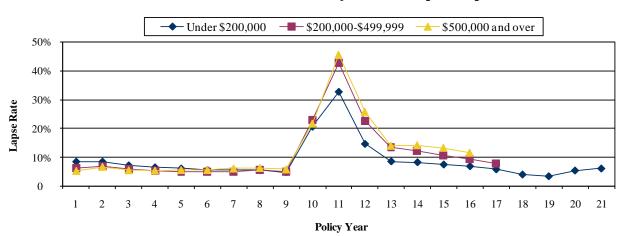
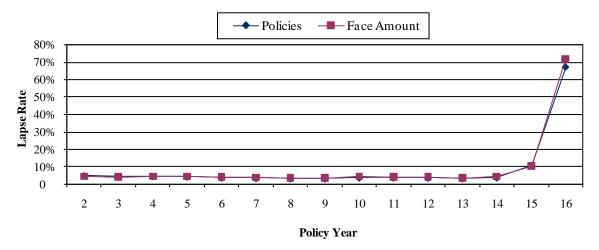


Figure 26
10-Year Level Premium Term Lapse Rates by Policy Size

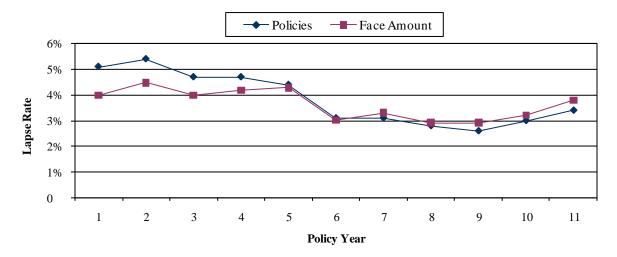
Lapse rates for 15-year level premium term business also exhibit a level pattern by duration, with rates hovering around 4 percent during the level premium period (Figure 27). Shock lapse rates are much higher than the 10-year level premium term products, averaging 67 percent in policy year 16 on a policy basis and 72 percent on a face amount basis.

Figure 27
15-Year Level Premium Term Lapse Rates



For the 20-year term policies, only a handful of carriers report in-force beyond policy Year 11 (Figure 28). Lapse results near the expiration of the level premium guarantee period are unknown.

Figure 28
20-Year Level Premium Term Lapse Rates



The remainder of this section examines factors most likely to affect lapse experience for term insurance plans. These factors include gender, issue age, attained age, premium payment mode, risk class, smoking status, and underwriting method.

## **G**ENDER

The term exposure distributed by gender is as follows:

Table 11

Term Plans — Distribution of Exposure by Gender

	Policy Basis			Amount asis
Plan	Males	Females	Males	Females
YRT	58%	42%	70%	30%
5-yr term	55%	45%	66%	34%
10-yr term	66%	34%	79%	21%
15-yr term	64%	36%	76%	24%
20-yr term	59%	41%	71%	29%

# YRT by Gender

For YRT business, females exhibit slightly lower rates of policy lapsation than males across most policy years (Figure 29). Results are similar on a face amount basis (Figure 30).

Figure 29
YRT Policy Lapse Rates by Gender

**Includes 24 Companies** 

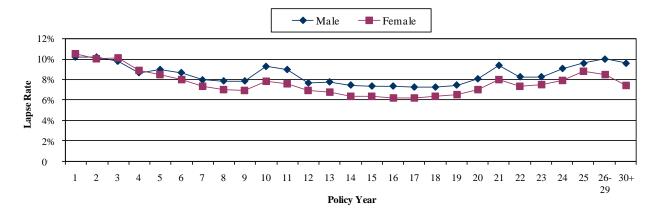
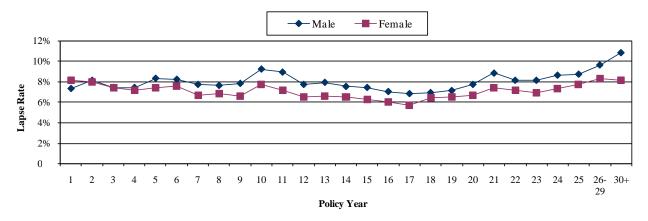


Figure 30
YRT Face Amount Lapse Rates by Gender

**Includes 24 Companies** 



## 10-Year Level Premium Term by Gender

For 10-year level premium policies, lapse rates are similar for males and females (Figures 31 and 32), with the exception of shock lapse rates. In policy years 10 to 12, lapse rates for males are higher than females, on both a policy and face amount basis. This same trend also occurs in the 5-year and 15-year level premium term plans.

Figure 31
10-Year Level Premium Term Policy Lapse Rates by Gender

**Includes 29 Companies** 

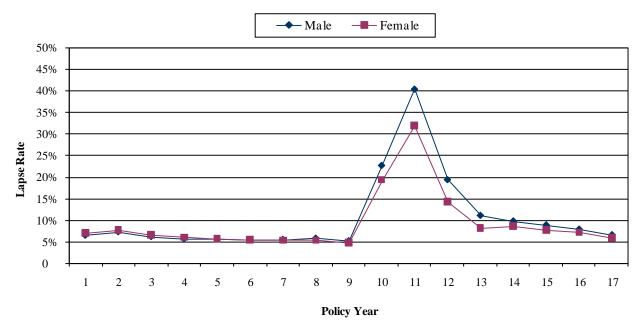
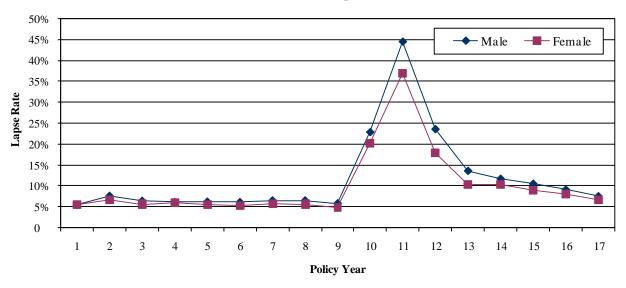


Figure 32

10-Year Level Premium Term Face Amount Lapse Rates by Gender

**Includes 29 Companies** 



## 20-Year Level Premium Term by Gender

Like the 10-year level premium term business, there is little distinction in policy lapse experience by gender for the 20-year level premium term products (Figures 33 and 34).

Figure 33
20-Year Level Premium Term Policy Lapse Rates by Gender

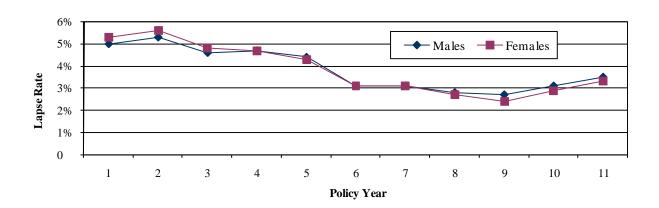
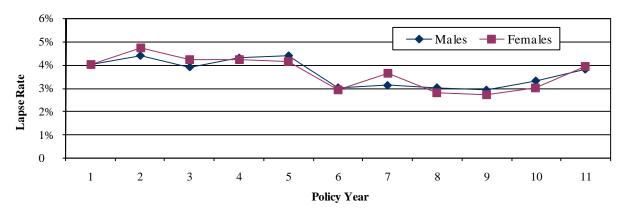


Figure 34
20-Year Level Premium Term Face Amount Lapse Rates by Gender

**Includes 26 Companies** 



## **ISSUE AGE**

## YRT by Issue Age Cohort

The YRT exposure base by issue age cohort breaks down as follows:

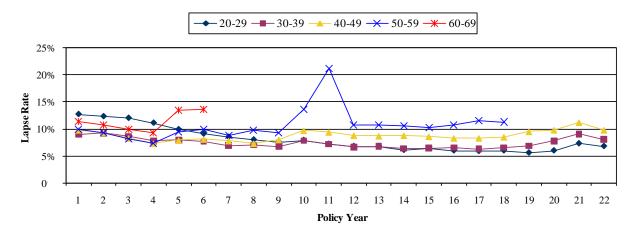
Table 12
YRT Policy Exposure by Issue Age Cohort

Issue Age	Average Face Amount Exposed	Percent of Policy Exposure
20-29	\$179,000	24%
30-39	\$294,000	49%
40-49	\$291,000	21%
50-59	\$244,000	5%
60-69	\$252,000	<1%
Total	\$264,000	100%

As opposed to permanent life insurance products, term insurance policies issued to individuals aged 60 and older exhibit the highest rates of lapsation (Figure 35). For policy Years 5 and later, there is a more noticeable pattern of increased rates of lapse with increased age at issue.

Figure 35
YRT Policy Lapse Rates by Issue Age Cohort

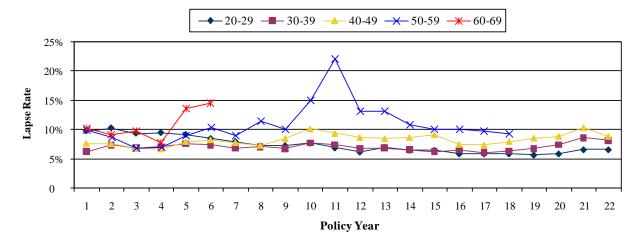
**Includes 24 Companies** 



A similar pattern is also seen on a face amount basis (Figure 36).

Figure 36
YRT Face Amount Lapse Rates by Issue Age Cohort

**Includes 24 Companies** 



## 10-Year Level Premium Term by Issue Age Cohort

For 10-year level term, the distribution of exposure by issue age is as follows:

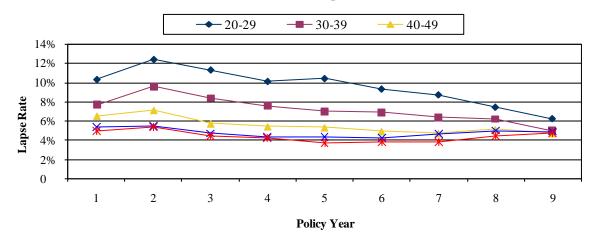
Table 13
10-Year Level Premium Term Exposure by Issue Age Cohort

Issue Age	Average Face Amount Exposed	Percent of Policy Exposure
20-29	\$221,000	9%
30-39	\$344,000	27%
40-49	\$406,000	31%
50-59	\$382,000	24%
60-69	\$307,000	9%
Total	\$358,000	100%

For the 10-year level premium term business, during the first nine policy years, the pattern of lapses by issue age group is similar to the pattern seen on permanent life insurance blocks of business (Figure 37). The younger issue age groups experience higher lapse rates.

Figure 37
10-Year Level Premium Term
Policy Lapse Rates by Issue Age Cohort — Policy Years 1–9

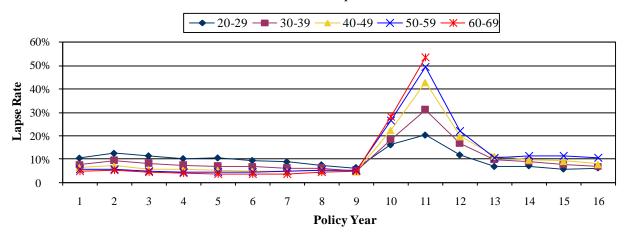
**Includes 29 Companies** 



This pattern reverses itself at the end of the level premium guarantee period (Figure 38). Specifically in policy years 10 to 12, the oldest ages experience the highest level of shock lapse. This is most likely due to the more significant increase in premium for older ages at the end of the level premium guarantee period.

Figure 38
10-Year Level Premium Term
Policy Lapse Rates by Issue Age Cohort — All Durations

Includes 29 Companies



Results are similar on a face amount basis (Figures 39 and 40).

Figure 39 10-Year Level Premium Term Face Amount Lapse Rates by Issue Age Group — Policy Years 1–9

**Includes 29 Companies** 

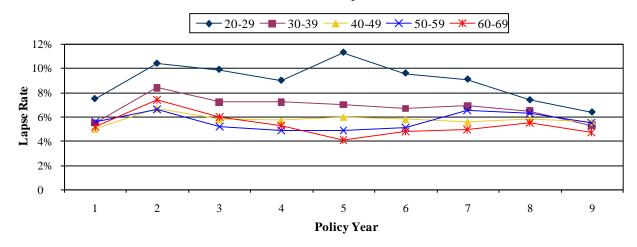
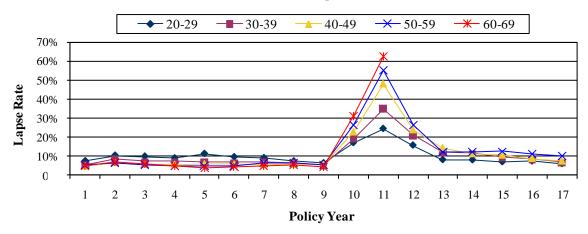


Figure 40
10-Year Level Premium Term
Face Amount Lapse Rates by Issue Age Group

**Includes 29 Companies** 



### 20-Year Level Premium Term by Issue Age Cohort

The distribution of exposure by issue age for 20-year level premium term is as follows:

Table 14
20-Year Level Premium Term Exposure by Issue Age Cohort

Issue Age	Average Face Amount Exposed	Percent of Policy Exposure
20-29	\$281,000	9%
30-39	\$429,000	39%
40-49	\$424,000	34%
50-59	\$317,000	16%
60-69	\$261,000	2%
Total	\$393,000	100%

The 20-year level premium term shows an emerging pattern of experience similar to the 10-year level term plans (Figures 41 and 42). Through Year 10, policy lapse rates decrease with increasing issue age. Due to the lack of data, it is unclear whether the pattern reverses itself in later years.

Figure 41
20-Year Level Premium Term
Policy Lapse Rates by Issue Age Group

Includes 26 Companies

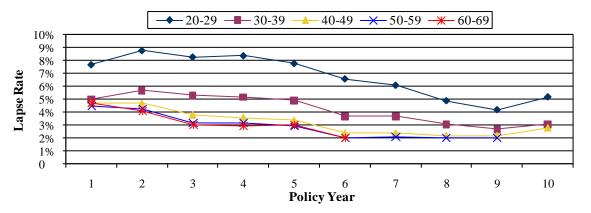
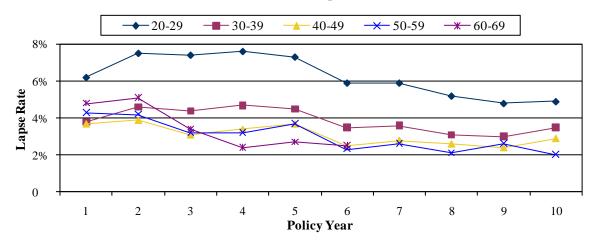


Figure 42
20-Year Level Premium Term
Face Amount Lapse Rates by Issue Age Group

**Includes 26 Companies** 

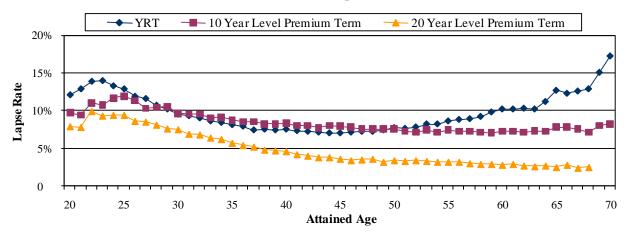


#### **ATTAINED AGE**

Figure 43 shows lapse rates for various attained ages by plan. Twenty-year level premium term experienced significantly lower rates of lapsation than other term products, particularly after attained age 25. Only the YRT plans show a material increase in lapse rates at typical retirement ages, as seen with whole life business.

Figure 43
Term Policy Lapse Rates by Attained Age

**Includes 26 Companies** 



#### PREMIUM PAYMENT MODE

For the sixteen contributors that provided data by premium payment mode, the term insurance policy exposure is as follows:

Table 15
Term Policy Exposure by Premium Payment Mode

Premium Payment Mode	Average Face Amount Exposed	Percent of Policy Exposure
Annual	\$410,000	23%
Semi Annual	\$312,000	6%
Quarterly	\$275,000	17%
Monthly	\$287,000	54%
Total	\$314,000	100%

For permanent life insurance products, lapse rates generally increase with the number of premium payments made each year. For term products, semi-annual policies exhibit slightly lower rates of lapse than their annual-pay counterparts (Figure 44). This result is largely driven by the YRT business (Figure 45).

Figure 44

Term Policy Lapse Rates by Premium Payment Mode — All Plans Combined

Includes 16 Companies

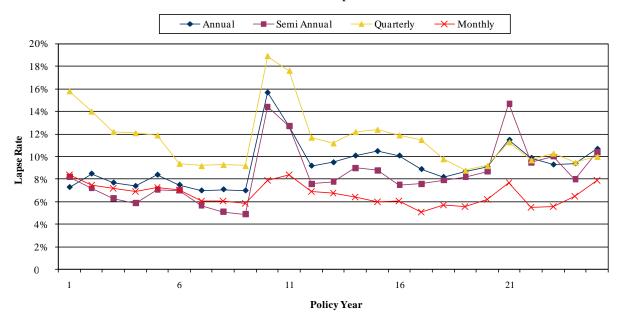
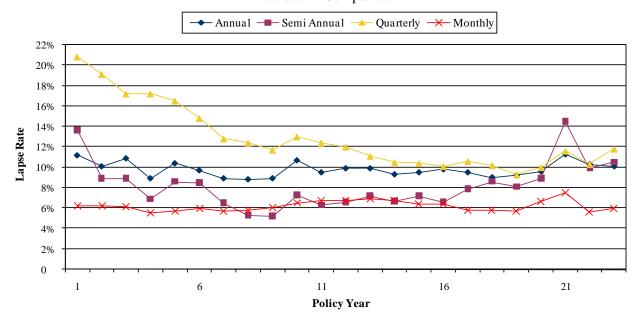


Figure 45
YRT Policy Lapse Rates by Premium Payment Mode

Includes 11 Companies



For the 10-year and 20-year level premium term blocks, a similar pattern to permanent life insurance products emerges. Products with more frequent premium payment generally coincide with higher rates of lapsation, with the exception of the monthly business (Figures 46 and 47).

Figure 46
10-Year Level Premium Term
Policy Lapse Rates by Premium Payment Mode

Includes 11 Companies

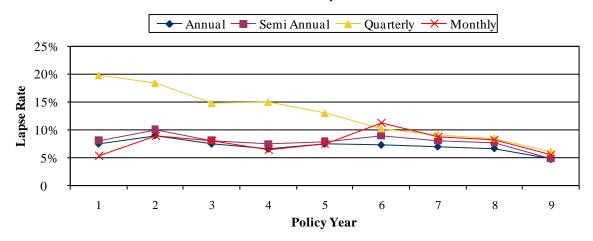
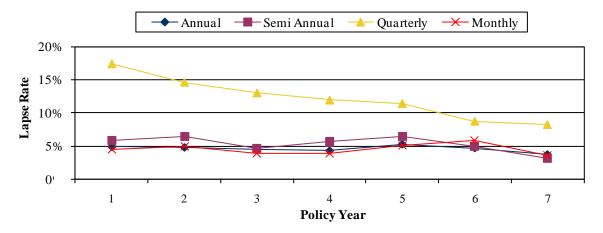


Figure 47
20-Year Level Premium Term
Policy Lapse Rates by Premium Payment Mode

**Includes 9 Companies** 



#### **RISK CLASS**

Thirteen companies contributed data split by risk class. The distribution of exposure by risk class is as follows:

Table 16
Term Policy Exposure by Risk Class

Risk Class	Average Face Amount Exposed	Percent of Policy Exposure
Standard Risks	\$343,000	37%
Preferred Risks	\$263,000	58%
Substandard Risks	\$291,000	5%
Total	\$294,000	100%

Term policies classified as preferred risk at issue have the lowest lapse rates during the first eight policy years (Figure 48). After policy year 8, this trend reverses with a spike in policy years 10 and 11 due to the shock lapse from 10-year level premium term.

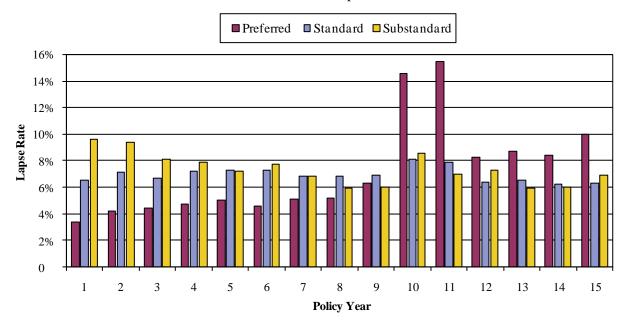
Figure 48
Term Policy Lapse Rates by Risk Class

**Includes 13 Companies** ■ Preferred ■Standard ■Substandard 16% 14% 12% Lapse Rate 10% 8% 6% 4% 2% 0 2 3 5 8 9 10 11 12 13 15 1 6 **Policy Year** 

The relationships are similar on a face amount basis but with a larger discrepancy in lapse rates for standard and substandard risks during the first two policy years (Figure 49).

Figure 49
Term Face Amount Lapse Rates by Risk Class

**Includes 13 Companies** 



#### **SMOKING STATUS**

Twenty-three companies contributed data split by smoking status.

#### YRT by Smoking Status

For YRT plans, the distribution of exposure by smoking status is presented in Table 17. Compared with the prior study, average face amount exposed for smokers increased while policy exposure decreased slightly.

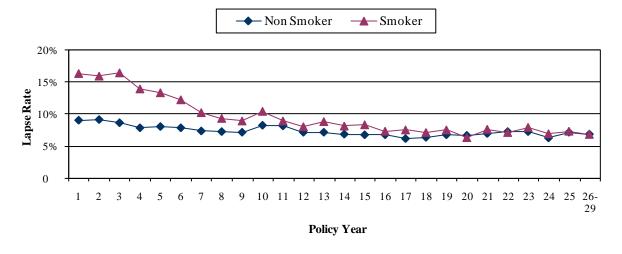
Table 17
YRT Policy Exposure by Smoking Status

Smoking Status	Average Face Amount Exposed	Percent of Policy Exposure
Smokers	\$162,000	11%
Non-smokers	\$282,000	89%
Total	\$268.000	100%

Smokers lapse more often in earlier policy years (Figure 50). For term insurance buyers, price is often the key consideration in the purchase and retention of a policy. It is possible that smokers either find their policies too expensive to maintain or they may shop for more competitive rates. However, after duration 11, lapse rates for smokers and non-smokers show similar experience.

Figure 50
YRT Policy Lapse Rates by Smoking Status

**Includes 23 Companies** 



## 10-Year Level Premium Term by Smoking Status

For 10-year level premium term plans, the distribution of exposure by smoking status is presented in Table 18.

Table 18
10-Year Term Policy Exposure by Smoking Status

Smoking Status	Average Face Amount Exposed	Percent of Policy Exposure
Smokers	\$240,000	11%
Non Smokers	\$367,000	89%
Total	\$354,000	100%

The trends seen in YRT plans are consistent across all term insurance product designs. The differences in smoker and non-smoker lapse rates converge faster for 10-year level premium term than YRT (Figures 51 and 52), with almost identical shock lapse rates in policy years 10 and 11.

Figure 51
10-Year Term Policy Lapse Rates by Smoking Status

Includes 29 Companies

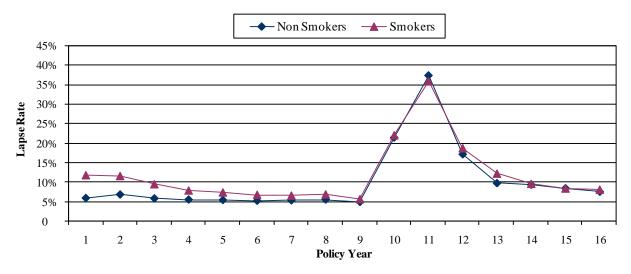
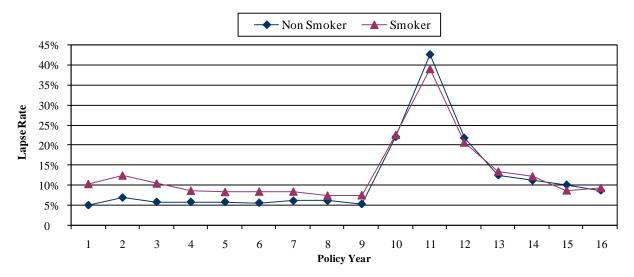


Figure 52
10-Year Term Face Amount Lapse Rates by Smoking Status

Includes 29 Companies



## 20-Year Level Premium Term by Smoking Status

Twenty-six companies contributed data split by smoker status for 20-year level premium term. Average face amounts exposed for both smoker and non-smoker increased from the prior study, with a small increase in non-smoker policy exposure. The distribution of exposure is as follows:

Table 19
20-Year Term Policy Exposure by Smoking Status

Smoking Status	Average Face Amount Exposed	Percent of Policy Exposure
Smokers	\$213,000	6%
Non-smokers	\$403,000	94%
Total	\$391,000	100%

Similar to the 10-year level term business, the difference in lapse experience between smokers and non-smokers is very distinct in earlier policy years (Figures 53 and 54).

Figure 53
20-Year Term Policy Lapse Rates by Smoking Status

**Includes 26 Companies** 

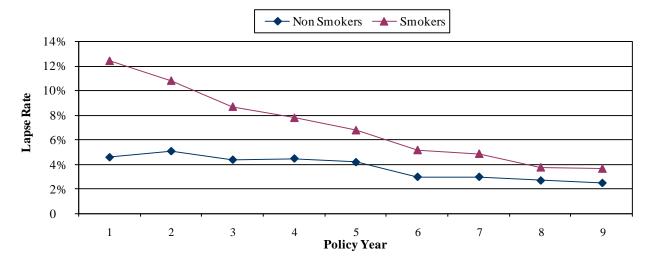
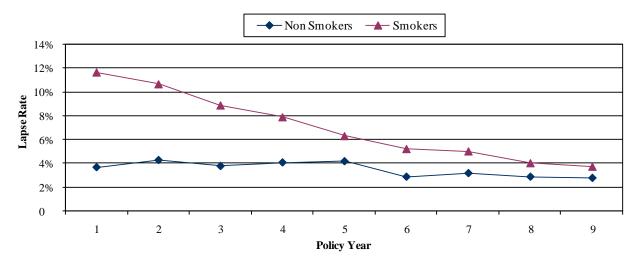


Figure 54
20-Year Term Face Amount Lapse Rates by Smoking Status

Includes 26 Companies



#### **UNDERWRITING METHOD**

## YRT by Underwriting Method

For YRT plans, the distribution of exposure by underwriting method is as follows:

Table 20
YRT Policy Exposure by Underwriting Method

Underwriting Method	Average Face Amount Exposed	Percent of Policy Exposure
Full Medical Underwriting	\$446,000	14%
Paramedical Underwriting	\$337,000	45%
Non-Medical Underwriting	\$119,000	41%
Total	\$264,000	100%

For YRT plans, the non-medical underwriting method exhibits much higher lapse rates in early years compared to medical and paramedical underwriting methods (Figures 55 and 56). However, this trend reverses after policy Year 4. Paramedical and medical businesses include policies with larger face amounts, which are more likely to be shopped-around and subsequently replaced in later policy years.

Figure 55
YRT Policy Lapse Rates by Underwriting Method

Includes 16 Companies

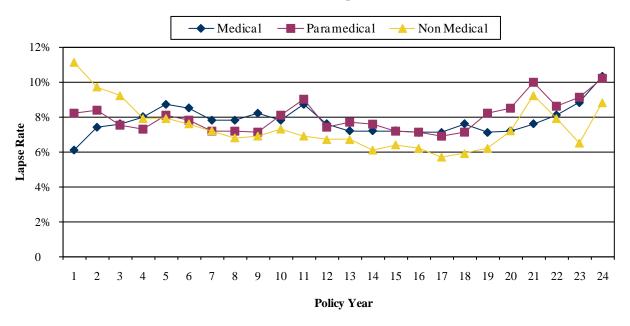
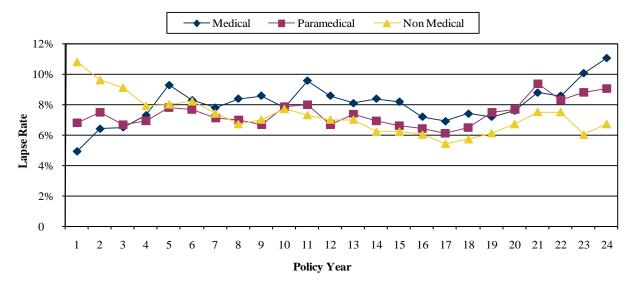


Figure 56
YRT Face Amount Lapse Rates by Underwriting Method

Includes 16 Companies



# 10-Year Level Premium Term by Underwriting Method

For 10-year level premium term plans, the distribution of exposure by underwriting method is as follows:

Table 21

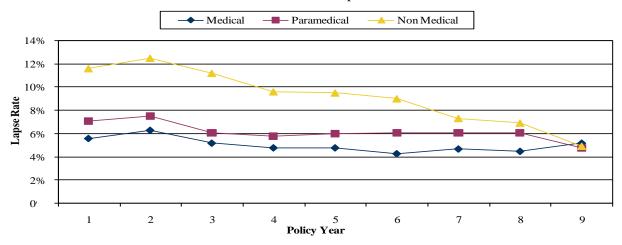
10-Year Term Policy Exposure by Underwriting Method

Underwriting Method	Average Face Amount Exposed	Percent of Policy Exposure
Full Medical Underwriting	\$444,000	30%
Paramedical Underwriting	\$319,000	53%
Non-Medical Underwriting	\$118,000	17%
Total	\$322,000	100%

For the 10-year level premium term business in the premium guarantee period, lapse rates tend to decrease as the underwriting process becomes more rigorous (Figure 57).

Figure 57 10-Year Term Policy Lapse Rates by Underwriting Method — First 9 Policy Years

**Includes 18 Companies** 

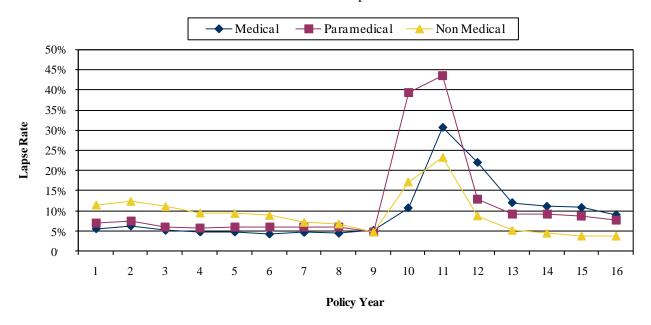


However, that trend appears to reverse itself toward the end of the level premium guarantee period (Figure 58). Shock lapse rates are greater for medical and paramedical underwriting methods compared to the non-medical underwriting method (43 percent for paramedical, 31 percent for medical, and 23 percent for non-medical in policy Year 11). This occurs on both a policy and face amount basis due to the increase in premium rates after policy Year 10 having a greater impact on higher face amount policies. It is also likely that these policyholders are able to attain more competitive rates at the end of the level guarantee period. However, this also shows greater persistency on policies with less rigorous underwriting methods.

Figure 58

10-Year Term Policy Lapse Rates by Underwriting Method — Shock Lapses

**Includes 18 Companies** 



## 20-Year Level Premium Term by Underwriting Method

Sixteen companies contributed data split for 20-year level premium term by underwriting method. Average face amounts exposed for full medical and paramedical underwriting increased from the prior study, with a significant shift in policy exposure from non-medical to paramedical. The distribution of exposure is as follows:

Table 22
20-Year Term Policy Exposure by Underwriting Method

Underwriting Method	Average Face Amount Exposed	Percent of Policy Exposure
Full Medical Underwriting	\$419,000	35%
Paramedical Underwriting	\$414,000	54%
Non-Medical Underwriting	\$193,000	12%
Total	\$390,000	100%

Similar to other term products, the 20-year level premium term plans show a pattern of declining lapse rates in earlier policy years, as the underwriting process becomes more rigorous. This is consistent on a policy and face amount basis (Figures 59 and 60).

Figure 59
20-Year Term Policy Lapse Rates by Underwriting Method

Includes 16 Companies

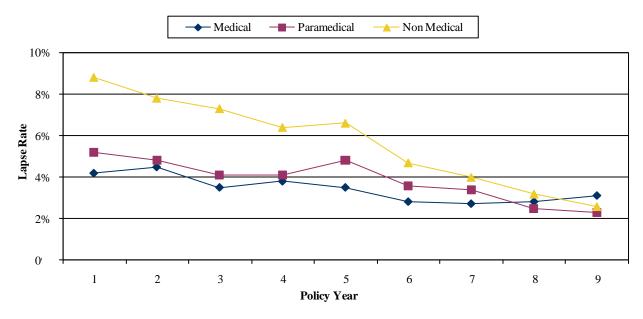
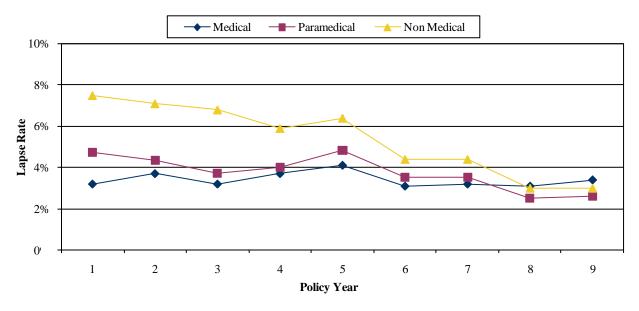


Figure 60
20-Year Term Face Amount Lapse Rates by Underwriting Method

Includes 16 Companies



# Universal Life Insurance

This chapter examines lapse experience for universal life insurance policies. The underlying data consists mostly of traditional current assumption universal life product designs. However, a portion of the policies covered by the observation period of the study were issued with the strong no-lapse guarantees that have become popular in the universal life marketplace over the past several years.

On a policy basis, the overall lapse rate for universal life products for all policy years combined declined to 4.2 percent, for the experience period 2004–2005, from 4.6 percent for the experience period 2003–2004. On a face amount basis, results were similar with the overall lapse rates, declining to 4.2 percent for the current study, from 4.5 percent.

Figure 61 shows the trend in policy lapse rates by duration for universal life plans since the mid-1990s. There has been a steady decrease in lapse rates since the 2001–2002 study.

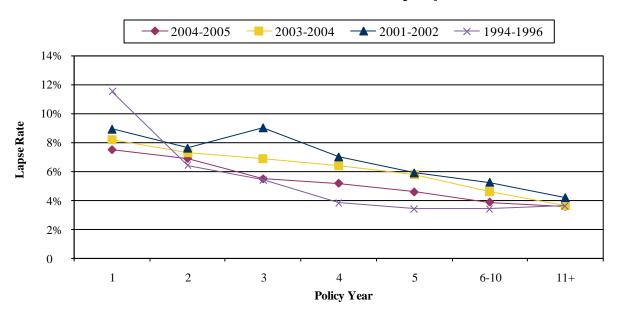
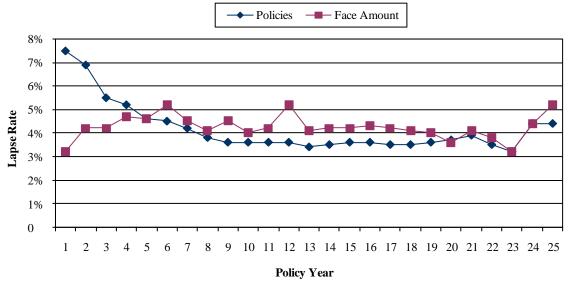


Figure 61

Trends in Universal Life Insurance Policy Lapse Rates

For the first four policy years, lapse rates are lower on a face amount basis than on a policy basis (Figure 62). After duration 5, lapse rates on policies with higher face amounts increase slightly.

Figure 62 Universal Life Insurance Lapse Rates



For the 33 individual life companies that provided universal life data, the average face amount exposed was \$131,000 (Table 23). For new issues, the average policy size was \$300,000, up considerably from the \$234,000 for the prior study.

Table 23
Universal Life Exposure by Policy Size

Policy Size	Average Face Amount Exposed	Percent of Policy Exposure
Under \$15,000	\$9,700	2%
\$15,000-\$49,999	\$26,000	24%
\$50,000-\$99,999	\$55,000	39%
\$100,000-299,999	\$137,000	29%
\$300,000-499,999	\$358,000	2%
\$500,000 and over	\$1,302,000	4%
Total	\$132,000	100%

While lapse rates overall are lower than prior studies, policies with lower face amounts have seen the most significant improvement for the 2004–2005 experience period. However, consistent with prior industry studies, smaller policies continue to have higher lapse rates in earlier policy years. After policy Year 5, this trend ends and lapses for most face amounts, settling between 3 and 6 percent (Figure 63).

----\$15K-\$49K \$50K-99K → 100K-299K → 300K-499K → 500K and over 14% 12% 10% Lapse Rate 8% 6% 4% 2% 0 12 14 15 16 Policy Year

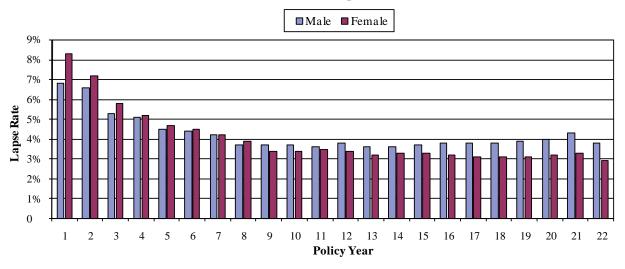
Figure 63
Universal Life Lapse Rates by Policy Size

#### **GENDER**

Universal life policies are distributed 59 percent male, up from 57 percent in the 2003–2004 experience period. By face amount, exposure is distributed 64 percent male, down from 66 percent in the prior study. The average face amount for males stayed at \$145,000 while the average face amount for females increased from \$103,000 to \$114,000. On a policy basis, rates of lapsation for female universal life policyholders are higher than males during the first couple of policy years (Figure 64). After year 8, lapses for females are consistently lower than for males.

Figure 64
Universal Life Policy Lapse Rates by Gender

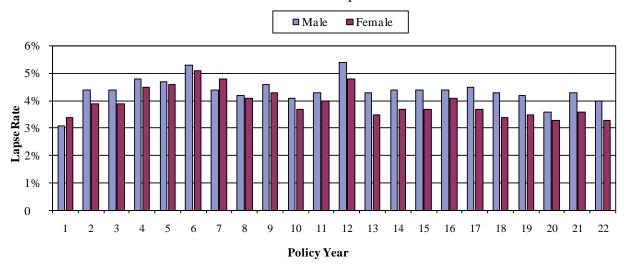
**Includes 33 Companies** 



On a face amount basis, women exhibit lower lapse rates than their male counterparts for all policy durations after year 1 (Figure 65).

Figure 65
Universal Life Face Amount Lapse Rates by Gender

**Includes 33 Companies** 



#### **ISSUE AGE**

By issue age cohort, the universal life exposure base breaks down as follows:

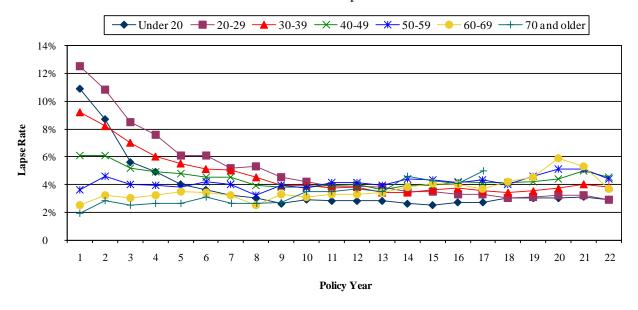
Table 24
Universal Life Policy Exposure by Issue Age Cohort

Issue Age	Average Face Amount Exposed	Percent of Policy Exposure
Under 20	\$45,000	21%
20-29	\$83,000	18%
30-39	\$125,000	24%
40-49	\$167,000	19%
50-59	\$211,000	11%
60-69	\$252,000	5%
70 and older	\$454,000	2%
Total	\$132,000	100%

Like whole life products, universal life insurance lapse rates generally decrease with increasing age at issue, particularly during the first 10 years (Figure 66). The exception to this is for policyholders under age 20 at issue, whose policies are generally purchased by older relatives — that lapse experience trends more closely to issue age groups 30–39 and 40–49.

Figure 66
Universal Life Policy Lapse Rates by Issue Age Group

**Includes 33 Companies** 



#### **ATTAINED AGE**

By attained age cohort, the universal life exposure base breaks down as follows:

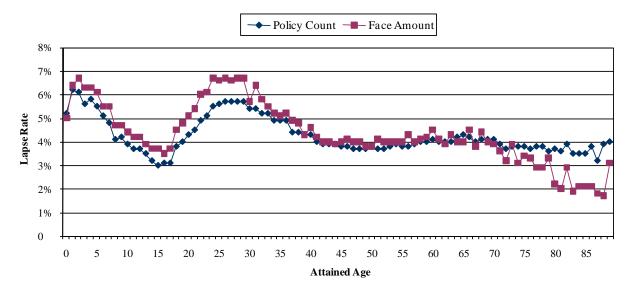
Table 25
Universal Life Policy Exposure by Attained Age Cohort

Attained Age	Average Face Amount Exposed	Percent of Policy Exposure
Under 20	\$45,000	11%
20-29	\$57,000	10%
30-39	\$103,000	13%
40-49	\$135,000	21%
50-59	\$156,000	23%
60-69	\$174,000	13%
70 and older	\$215,000	9%
Total	\$131,000	100%

Figure 67 shows lapse rates by attained age for universal life plans included in the current study. Consistent with past industry studies of individual life insurance experience; persistency for permanent life insurance products generally improves as the policyholder ages.

Figure 67
Universal Life Policy Lapse Rates by Attained Age

**Includes 34 Companies** 



#### **RISK CLASS**

Eighteen companies contributed universal life data split by risk class. The distribution of exposure by risk class is as follows:

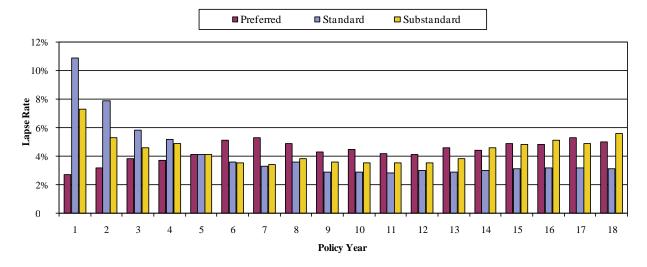
Table 26
Universal Life Policy Exposure by Risk Class

Risk Class	Average Face Amount Exposed	Percent of Policy Exposure
Preferred Risks	\$385,000	14%
Standard Risks	\$89,000	82%
Substandard Risks	\$230,000	4%
Total	\$137,000	100%

Overall substandard UL policies exhibit a greater rate of lapse — 4.7 percent on a policy basis — than policies issued on either a standard or preferred basis — 4.2 percent and 4.4 percent respectively (Figure 68). This is due to the high lapse rates in the first few years. However, after policy Year 5, preferred policies begin to exhibit higher lapse rates than standard and substandard policies.

Figure 68
Universal Life Policy Lapse Rates by Risk Class

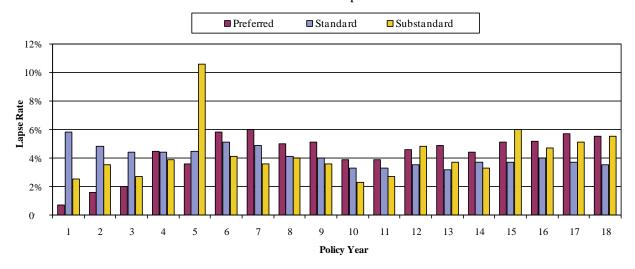
**Includes 18 Companies** 



Experience by risk class is similar on a face amount basis (Figure 69). For policy Year 5, a spike in lapse rates for substandard UL policies is due to poor experience from a few companies.

Figure 69
Universal Life Face Amount Lapse Rates by Risk Class

**Includes 18 Companies** 



### **SMOKING STATUS**

The universal life policy exposure base is 88 percent non-smoker. Consistent with other products, smokers exhibit higher rates of lapse than non-smokers at all durations (Figure 70). The lapse pattern is similar on a face amount basis (Figure 71).

Figure 70
Universal Life Policy Lapse Rates by Smoking Status

**Includes 32 Companies** 

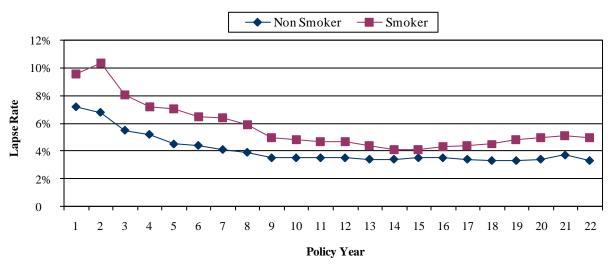
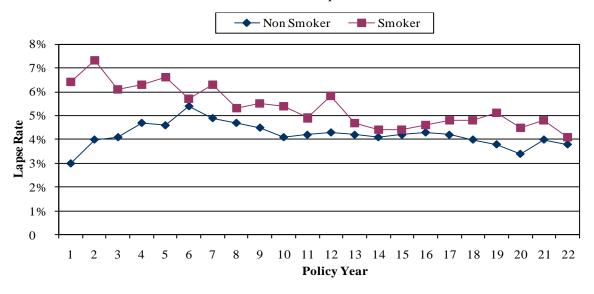


Figure 71
Universal Life Face Amount Lapse Rates by Smoking Status

**Includes 32 Companies** 

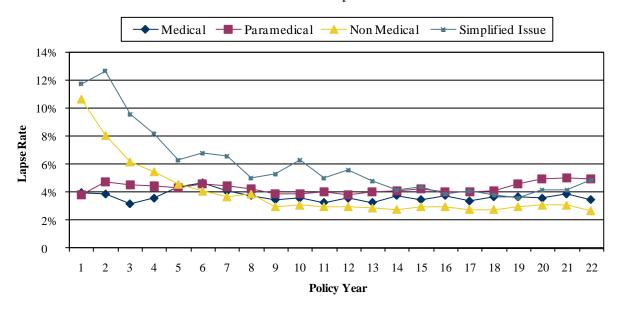


#### **UNDERWRITING METHOD**

The policy exposure underlying the universal life lapse results by underwriting method consist of 66 percent non-medical, 20 percent paramedical, 8 percent medical, and 6 percent simplified issue. In the early durations, universal life policies issued with full medical or paramedical underwriting exhibit lower rates of lapse (Figure 72). Similar to other products, policies issued on a simplified underwriting basis exhibit higher rates of lapsation until the later policy years.

Figure 72
Universal Life Policy Lapse Rates by Underwriting Method

**Includes 22 Companies** 



#### **DEATH BENEFIT OPTION**

For the nine companies that contributed universal life data split by death benefit options, the policy exposure was split 77 percent level death benefit and 23 percent level net amount at risk. Lapse rates for policies that elect a level net amount at risk tend to be higher during the earlier policy years and lower during the later years (Figures 73 and 74).

Figure 73
Universal Life Policy Lapse Rates by Death Benefit Option

**Includes 9 Companies** 

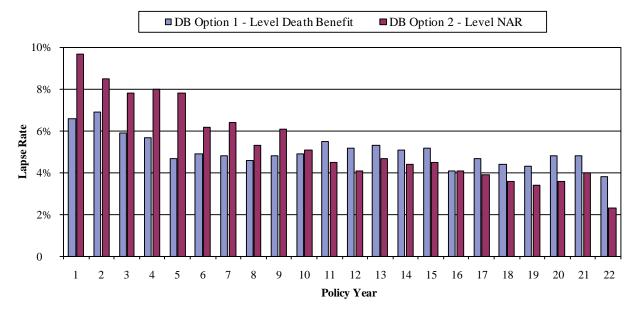
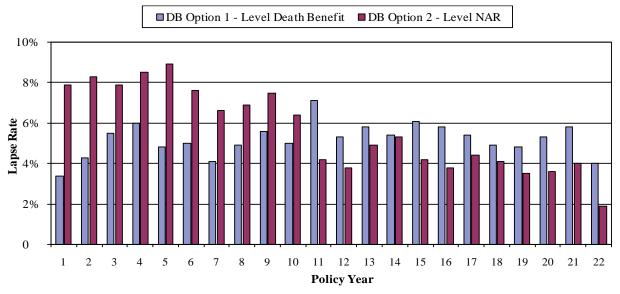


Figure 74
Universal Life Face Amount Lapse Rates by Death Benefit Option

Includes 9 Companies

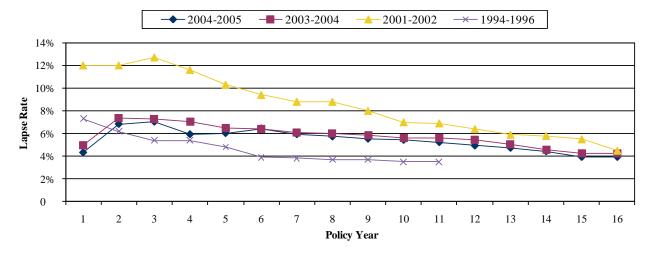


# VARIABLE UNIVERSAL LIFE INSURANCE

This chapter examines lapse experience for variable universal life insurance products based on data submitted by 19 companies.

The overall lapse rate for variable universal life plans is 5.2 percent on a policy basis, down slightly from 5.7 percent for experience period 2003–2004. And, on a face amount basis, the overall lapse rate decreased from 6.4 percent to 5.3 percent. Policy lapse rates by year for variable universal life plans have continued to decline from the 2001–2002 level, but are not yet at the levels that were seen in the mid-1990s (Figure 75).

Figure 75
Trends in Variable Universal Life Insurance Policy Lapse Rates



Lapse rates for variable universal life plans are generally higher on a face amount basis than on a policy basis, indicating a tendency for larger policies to lapse during the most recent experience period (Figure 76).

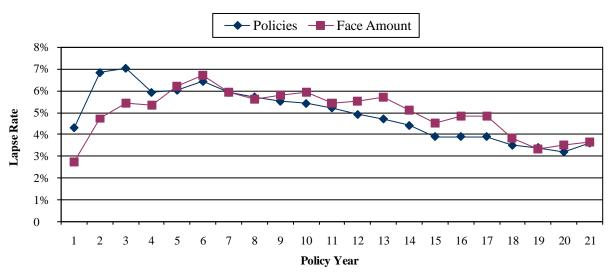


Figure 76
Variable Universal Life Lapse Rates

## **GENDER**

Eighteen companies contributed variable universal life data split by gender, consisting of 59 percent male and 41 percent female, by policy count. On a face amount basis, distribution is split 67 percent male and 33 percent female. The average face amount for males increased from \$213,000, in the prior study, to \$233,000 for 2003–2004. Average face amount for females also increased from \$148,000 to \$168,000. Lapse rates for male variable universal life policyholders are slightly higher than females at most durations (Figures 77 and 78).

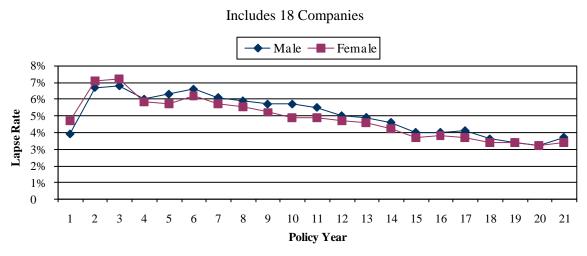


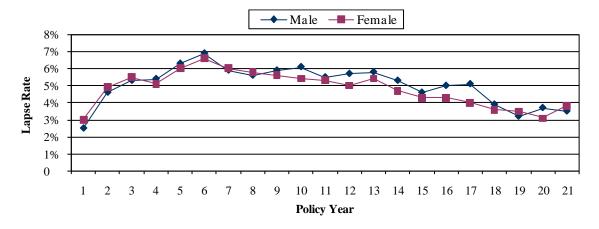
Figure 77
Variable Universal Life Policy Lapse Rates by Gender

71

Figure 78

Variable Universal Life Face Amount Lapse Rates by Gender

Includes 18 Companies



# **ISSUE AGE**

By issue age cohort, the variable universal life exposure base breaks down as follows:

Table 27
Variable Universal Life Policy Exposure by Issue Age Cohort

Issue Age	Average Face Amount Exposed	Percent of Policy Exposure
Under 20	\$90,000	15%
20-29	\$142,000	17%
30-39	\$215,000	30%
40-49	\$263,000	23%
50-59	\$298,000	11%
60-69	\$296,000	3%
70 and older	\$348,000	1%
Total	\$207,000	100%

Like other permanent life insurance products, variable universal life lapse rates generally decrease with increasing age at issue during the first several policy years (Figure 79). This trend appears to reverse by policy year 10, when older issue ages exhibit higher lapse rates.

Figure 79
Variable Universal Life Policy Lapse Rates by Issue Age Group

Includes 18 Companies - Under 20 - - - 20-29 - - 30-39 - - 40-49 - 50-59 - - 60-69 - + 70 and over 10% 9% 8% 7% Lapse Rate 6% 5% 4% 3% 2% 1% 0 10 13 14 16 **Policy Year** 

# **ATTAINED AGE**

By attained age cohort, variable universal life exposure base breaks down as follows:

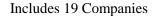
Table 28

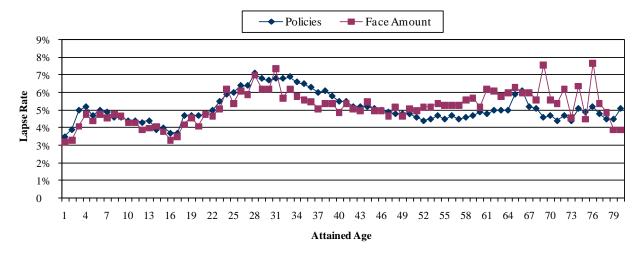
Variable Universal Life Policy Exposure by Attained Age Cohort

Attained Age	Average Face Amount Exposed	Percent of Policy Exposure
Under 20	\$89,000	10%
20-29	\$140,000	7%
30-39	\$212,000	16%
40-49	\$233,000	28%
50-59	\$231,000	24%
60-69	\$229,000	11%
70 and older	\$199,000	4%
Total	\$206,000	100%

Figure 80 shows lapse rates by attained age for variable universal life plans. As with other permanent individual life insurance plans, for ages over 30, the persistency tends to improve significantly with increasing attained age. With variable universal life, there is also an increase in lapses around normal retirement ages. This may be due to the fact that a key market for this product is pre-retirees, as a vehicle to supplement retirement income.

Figure 80
Variable Universal Life Policy Lapse Rates by Attained Age





## **RISK CLASS**

Five companies contributed variable universal life data split by risk class. The distribution of exposure by risk class is as follows:

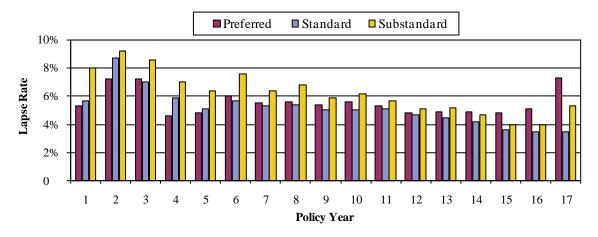
Table 29
Variable Universal Life Policy Exposure by Risk Class

Risk Class	Average Face Amount Exposed	Percent of Policy Exposure	
Preferred Risks	\$276,000	27%	
Standard Risks	\$105,000	68%	
Substandard Risks	\$145,000	6%	
Total	\$153,000	100%	

As with other products, substandard variable universal life policies exhibit a higher lapse rate — 6.0 percent for all policy years combined — than preferred or standard policies, 5.5 and 4.9 percent respectively. Preferred policies exhibit the lowest lapse rates in the earlier policy years but the highest lapse rates in later years (Figure 81). This is most likely due to the increase in lapse rates for higher face amount policies in later policy years, as seen in other permanent life insurance products.

Figure 81 Variable Universal Life Policy Lapse Rates by Risk Class

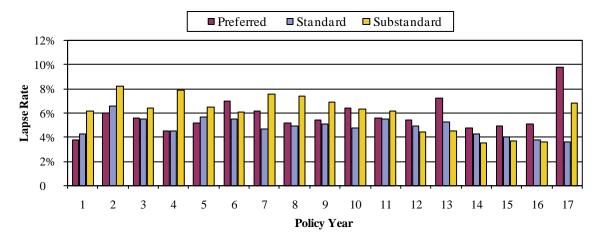
Includes 5 Companies



A similar pattern is also seen on a face amount basis (Figure 82).

Figure 82
Variable Universal Life Face Amount Lapse Rates by Risk Class

Includes 5 Companies



## **SMOKING STATUS**

The variable universal life policy exposure is 86 percent non-smoker. Consistent with other life products, smokers exhibit higher lapse rates than non-smokers during the earlier policy years (Figure 83). However, smokers and non-smokers have similar lapse experience after duration 7. A similar pattern of lapse is seen on a face amount basis (Figure 84).

Figure 83

Variable Universal Life Policy Lapse Rates by Smoking Status

Includes 18 Companies

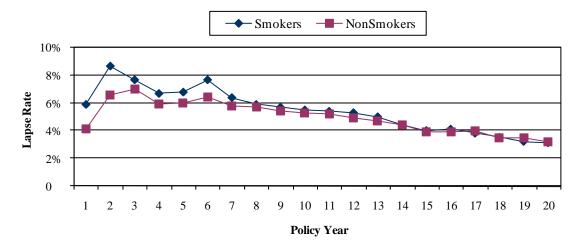
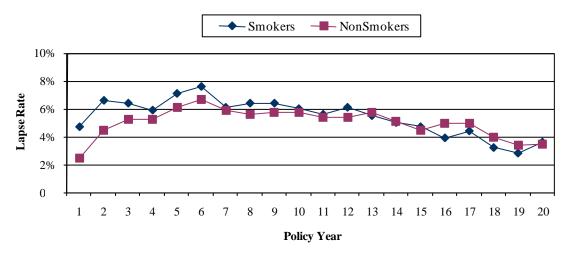


Figure 84

Variable Universal Life Face Amount Lapse Rates by Smoking Status

**Includes 18 Companies** 



# **APPENDIX A: PARTICIPATING COMPANIES**

AAA Life

American United Life

AmerUs

AXA Equitable

**AXA MONY** 

Columbus Life

Farm Family Life

Farm Bureau Financial Services

Fidelity Investments Life

Genworth Financial

Government Personnel Mutual Life

Guardian Life Insurance Company of America

Horace Mann Life

ING Life Companies U.S.

Jackson National Life

John Hancock

MetLife Companies

Minnesota Life

Mutual of Omaha Life

Nationwide Financial

New York Life

Northwestern Mutual

Ohio National Life

Pacific Life

Penn Mutual

Protective Life Corporation

**Prudential Financial** 

State Farm Life

Sun Life

Thrivent Financial

Teachers Insurance & Annuity Association

Transamerica Life

**USAA** Life

Western & Southern Life

# RELATED LINKS

The following links are valid as of 06/01/09.

#### **LIMRA**

Individual Life Insurance Persistency Update (2008)

This study examines individual life insurance persistency experience for 43 participating U.S. companies for observation years 2003 and 2004. The report provides lapse rates separately for traditional whole life, term, universal life, and variable universal life products. Lapse results are reviewed for a variety of policy and product features, which explain some of the variations in experience from one study period to the next.

http://www.limra.com/abstracts/abstract.aspx?fid=5996

Individual Life Insurance Persistency (2006)

This study examines individual life insurance persistency experience for 23 participating U.S. companies. The report provides lapse rates separately for traditional whole life, term, universal life, and variable universal life products. Lapse results are reviewed for a variety of policy and product features, which explain some of the variations in experience from one study period to the next.

http://www.limra.com/abstracts/abstract.aspx?fid=5040

*Individual Life Buyers in the United States* (2007)

This report explores the demographics of buyers in the current individual life market. Among other things, it provides a general overview of who is purchasing individual life: men, women, seniors, and young adults. It reviews who buys the different types of life insurance, differences in buyers purchasing through different distribution channels, and differences in those purchasing large and/or single premium policies.

http://www.limra.com/abstracts/abstract.aspx?fid=5647

Simplified Issue Marketplace (2009)

This report covers a broad range of individual life insurance products and markets and includes product design and underwriting, target markets, sales results, current quotes, and a quick look at the strategic outlook and challenges of the individual life simplified issue market.

http://www.limra.com/abstracts/abstract.aspx?fid=9080

## The Market for Term Insurance (2006)

This report presents an overview of the market for individual term insurance products based on data collected from 37 companies representing approximately 75 percent of term sales in 2005. It examines trends in product design, distribution, sales, reinsurance, and underwriting. In addition, term producers were surveyed regarding their opinions on term insurance products and the market for term insurance, and their responses are discussed.

http://www.limra.com/abstracts/abstract.aspx?fid=5636

### A Universal Challenge: The Future of Flexible Premium Products (2005)

This report presents an overview of the market for universal life (UL) and variable universal life (VUL) products based on data collected from 26 companies representing nearly 70 percent of the UL and VUL sales in 2004, and supplemented by data from LIMRA's Individual life Insurance Sales Survey. Trends in product design, distribution, sales results, and producer compensation are examined.

http://www.limra.com/abstracts/abstract.aspx?fid=4943

## *U.S. Individual Life Insurance Sales, 2009 1st quarter* (2009)

This quarterly report is the earliest and most in-depth source for individual life insurance sales results. It reflects more than 80 percent of ordinary first-year premiums in the United States. Annualized premium, face amount, and policy sales are displayed by product and distribution channel. While survivorship life sales are included, results are also provided separately. A confidential report is available to participating companies.

http://www.limra.com/abstracts/abstract.aspx?fid=10077

## U.S. Individual Life Insurance Sales, 2008 4th quarter (2008)

This report tracks individual life insurance sales results measured by annualized premiums, face amount, and number of policies, with results reported separately for various distribution systems. Contributors include 79 U.S. companies and their subsidiaries. The study tracks separate data for individual products such as universal life, term, variable life, variable universal life, survivorship life, and whole life.

http://www.limra.com/abstracts/abstract.aspx?fid=10012

### U.S. Individual Life Insurance Sales Trends, 1975–2008 (2009)

This report provides industry estimates of individual life insurance sales results measured by annualized premiums, face amount, and policy sales. Annualized premium market share is also displayed by product and distribution channel

http://www.limra.com/abstracts/abstract.aspx?fid=1746

### U.S. Long-Term Care Insurance Persistency Experience (2007)

This report represents the second in a series of studies conducted jointly by LIMRA International and the Society of Actuaries (SOA) Long-Term Care Experience Committee that focuses on long-term care insurance (LTCI) persistency. The study examines voluntary lapse and total termination activity for calendar years 2002 through 2004. Overall, the results indicate that LTCI persistency has continued to increase.

http://www.limra.com/abstracts/abstract.aspx?fid=5633

#### U.S. Long-Term Care Insurance Persistency Experience (2004)

This report represents the first study conducted jointly by LIMRA International and the Society of Actuaries (SOA) Long-Term Care Experience Committee that focuses on long-term care insurance (LTCI) persistency. The study examines voluntary lapse and total termination activity for calendar years 2000 and 2001. Overall, the results indicate that LTCI persistency has continued to improve; however, the current improvement seems to be coming from the individual lines of business rather than the group lines.

http://www.limra.com/abstracts/abstract.aspx?fid=4482

*Individual Disability Income Insurance Lapse Experience* (2004)

This report examines individual disability income lapse experience including both guaranteed renewable and noncancelable business. Eight of the major individual DI writers submitted data representing experience for years 1999 through 2001.

http://www.limra.com/abstracts/abstract.aspx?fid=4661

#### Non-LIMRA

1984-2004 Long-Term Care Intercompany Study

Based on data from 24 participating companies, this report represents the fifth study of Long-Term Care claims.

http://www.soa.org/research/long-term-care/research-ltc-study-1984.aspx

SOA/Milliman Report on Post Level Premium Period Assumptions and Experience for Level Premium Term Plans (2007)

Based on data from 18 participating companies, this report represents the first study of post-level premium period lapse and mortality experience for level premium term plans.

http://www.soa.org/files/pdf/post-level-premiumsurvey-final.pdf



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