*Full Report*


# U.S. Individual Life Insurance Persistency

## A Joint Study Sponsored by the Society of Actuaries and LIMRA

**Cathy Ho**
Product Research
(860) 285-7794
cho@limra.com

**Nancy S. Muise, CLU**
Product Research
nmuise@limra.com

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**Cathy Ho**
Product Research
860-285-7794
cho@limra.com

**Nancy S. Muise, CLU**
Product Research

**Reviewers**
Tatiana Berezin
Anna Hart
Tony Phipps

**SOA**
Jack Luff
Cindy MacDonald
Korrel Rosenberg

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# Overview

This report presents the results of individual life insurance lapse experience in the United States between observation years 2007 and 2009. This study was conducted jointly by LIMRA and the Society of Actuaries (SOA) and was based on data provided by 27 life insurance writers. We present the lapse experience for whole life, term life, universal life and variable universal life plans issued between 1910 and 2009. Results for most key policy and product factors are examined.

Note that many of the term policies that reach the end of the level premium guarantee period during the experience period were priced in the pre-Regulation XXX environment, where products were neither designed nor priced with the same post-guarantee period premium increases seen in today's term products. Therefore, shock lapse rates at the end of the level premium term period may be lower than future results.

***Highlights***

- The overall annual policy lapse rate was 4.5% annually, up from 4.2% in the 2005–2007 study and also up from the 4.3% in the 2004–2005 study. Lapse rates on a face amount basis also increased to 5.7%, up from 5.2% in the 2005–2007 study. Increase in lapse rates occurred most significantly in the first three policy years. This increase is likely a result of the swing in the economy during the period of the study.
- The whole life policy lapse rate was 3.1% annually, up slightly from 3.0% in the 2005–2007 study but still down from 3.4% in the 2004–2005 study. Lapse rate on a face amount basis was 4.1%, up from the 3.7% in the 2005–2007 study but equal to the 2004–2005 study.
- The term life policy lapse rate was 6.9 % annually, up from the 6.4% in 2005–2007, and up from 6.6% in the 2004–2005 study. The first year lapse rates increased to 11.2% for all term plans, up from 7.5% in the 2005–2007 study. Shock lapse rates for level premium guarantee term plans continue to be high, with shock lapse rates of 43.3% on a policy basis for 10-year level premium term plans in the eleventh policy year.
- Universal life policy lapse rate was 4.5% annually, down slightly from the 4.6% 2005–2007 study but up from the 4.2% in the 2004–2005 study. The lapse rate on a face amount basis was 5.9%, up from the 4.6% from the 2005–2007 study.
- The variable universal life policy lapse rate was 6.2% annually, up from the 4.8% 2005–2007 study, and up from 5.2% in the 2004–2005 study. Lapse rate on a face amount basis were 6.9 % annually, up from 5.0% in 2005–2007, and up from 5.3% in the 2004–2005 study.

**LAPSE DEFINITION** 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 terminations for unknown reason. This is consistent with the definition of lapse applied to other LIMRA and the Society of Actuaries experience studies.

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# Recommendations

This report examines lapse experience on individual life products for various policy types 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, as well as to validate lapse assumptions. While the study contributors represent a sizable portion of the life insurance industry, they do not represent the entire industry and differences in results by company may vary. 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 the contributing companies.

To aid the reader in interpreting the information contained in this report, a spreadsheet providing exposure and lapse information by policy factor and data cell is available on both the LIMRA and the SOA websites (www.limra.com and www.soa.org).

# Data Description

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

The observation years in the study were 2007 to 2009, with partial data for 2009. Contributing companies were asked to provide information on their entire in-force block at the policy level. A portion of contributors provided two full policy (or anniversary) years of data, while others provided data for calendar years 2007 and 2008. All policies were converted to policy year for analysis.

It should be noted that not all contributing companies in the study contributed data for their entire inforce block of subsidiaries, product lines, and experience years. In addition, several companies were not able to provide data for all policies and product factors requested. Because of this, data is not reported for any cell for which there were fewer than three companies ***or*** less than 1,000 policies exposed. All available data is report in the spreadsheet mentioned in the above section, however, not all results are shown in this report.

***Data Exposure***

The 2007–2009 persistency experience study data was just under $13 trillion in face amount exposed from 27 contributing companies. Companies with submissions from multiple subsidiaries were counted as one company. Of these contributors, 26 provided whole life data, 27 provided term life data, 25 provided universal life data and 19 provided variable universal life data. Names of contributing companies are listed at the end of this report.

Table 1 compares the results of the current study with LIMRA's Annual Life Insurance Inforce Survey. The current study's data exposure provides similar representation of the industry in terms of face amount and policy exposure distribution by product line.

**Table 1 —**
**Study Exposure and Industry Inforce**

| | LIMRA's Annual Life Insurance Inforce Survey | | Current Persistency Study Exposure Base | |
|---|---|---|---|---|
| | Policies | Face Amount | Policies | Face Amount |
| Whole Life | 51% | 18% | 53% | 16% |
| Term | 28% | 55% | 26% | 58% |
| Universal Life | 16% | 16% | 15% | 16% |
| Variable Universal Life | 5% | 11% | 6% | 10% |

Tables 2 and 3 below summarize the policy and face amount exposures by issue year for each product line included in this study. Note that not all contributing companies submitted data for all affiliated companies, product lines and observations years.

**Table 2 —**
**Policy Exposure by Issue Year**

| Issue Year | Whole Life (26 cos.) | Term Life (27 cos.) | Universal Life (25 cos.) | Variable Universal and Variable Life (19 cos.) | Total (27 cos.) |
|---|---|---|---|---|---|
| Pre 1989 | 30,280,481 | 1,198,779 | 3,890,526 | 751,032 | 36,120,118 |
| 1989 – 1993 | 6,212,623 | 1,593,526 | 2,651,967 | 842,146 | 11,300,262 |
| 1994 – 1998 | 4,246,667 | 3,436,821 | 2,043,550 | 1,329,671 | 11,056,709 |
| 1999 –2003 | 4,128,704 | 7,723,434 | 2,016,085 | 1,524,889 | 15,393,112 |
| 2004 | 852,004 | 1,906,871 | 580,675 | 212,847 | 3,552,397 |
| 2005 | 778,736 | 1,979,311 | 642,217 | 185,808 | 3,586,072 |
| 2006 | 818,137 | 2,153,655 | 640,776 | 190,697 | 3,803,265 |
| 2007 | 853,400 | 2,440,751 | 656,388 | 201,314 | 4,151,853 |
| 2008 | 562,011 | 1,465,225 | 415,233 | 102,619 | 2,545,088 |
| 2009 | 123,697 | 320,097 | 96,144 | 16,579 | 556,517 |
| **Total** | **48,856,460** | **24,218,470** | **13,633,560** | **5,357,602** | **92,066,093** |

**Table 3 —**
**Face Amount Exposure by Issue Year (000,000s)**

| Issue Year | Whole Life (26 cos.) | Term Life (27 cos.) | Universal Life (25 cos.) | Variable Universal and Variable Life (19 cos.) | Total (27 cos.) |
|---|---|---|---|---|---|
| Pre 1989 | 488,154 | 74,706 | 300,598 | 71,013 | 934,471 |
| 1989 – 1993 | 450,276 | 193,418 | 227,975 | 119,913 | 991,582 |
| 1994 – 1998 | 339,320 | 682,387 | 203,365 | 270,148 | 1,495,220 |
| 1999 – 2003 | 371,308 | 2,372,365 | 358,028 | 470,220 | 3,571,921 |
| 2004 | 91,639 | 733,479 | 145,375 | 77,670 | 1,048,163 |
| 2005 | 94,143 | 781,199 | 176,414 | 71,010 | 1,122,766 |
| 2006 | 102,111 | 879,540 | 214,035 | 78,387 | 1,274,073 |
| 2007 | 101,493 | 1,022,743 | 199,616 | 88,643 | 1,412,495 |
| 2008 | 59,513 | 636,922 | 134,863 | 49,975 | 881,273 |
| 2009 | 11,874 | 167,707 | 43,101 | 8,732 | 231,414 |
| **Total** | **2,109,831** | **7,544,466** | **2,003,370** | **1,305,711** | **12,963,378** |

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### *Data Characteristics*

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

**Table 4 —**
**Exposure Data Characteristics for Permanent Products**

| | Whole Life | Universal Life | Variable Universal Life |
|---|---|---|---|
| Policy exposure in policy years 1 – 2 | 4% | 10% | 7% |
| Policy exposure in policy years 1 – 5 | 9% | 23% | 18% |
| Policy exposure in policy years 1 – 10 | 17% | 38% | 47% |
| Policy exposure in policy years 30 and later | 42% | — | — |
| Average face amount exposed | $43,000 | $147,000 | $250,000 |
| Average face amount exposed of new issues | $111,000 | $293,000 | $455,000 |
| Average issue age | 27 | 33 | 35 |
| Average issue age of new issues | 28 | 34 | 31 |
| Average attained age | 54 | 46 | 46 |
| Male insured represented in the policy exposure | 55% | 56% | 59% |
| Non-smoker insureds represented in the policy exposure | 69% | 85% | 86% |

— Less than 1%

**Table 5 —**
**Exposure Data Characteristics for Term Products**

| | YRT | 10-Year LPT | 15-Year LPT | 20-Year LPT | All Term† |
|---|---|---|---|---|---|
| Policy exposure base | 14% | 16% | 5% | 28% | 100% |
| Average face amount exposed | $279,000 | $354,000 | $380,000 | $411,000 | $312,000 |
| Average face amount exposed of new issues | $562,000 | $545,000 | $528,000 | $461,000 | $413,000 |
| Average issue age | 34 | 43 | 46 | 40 | 38 |
| Average issue age of new issues | 32 | 46 | 47 | 39 | 37 |
| Male insured represented in the policy exposure | 55% | 65% | 65% | 59% | 59% |
| Non-smoker insureds represented in the policy exposure | 84% | 88% | 93% | 93% | 87% |

YRT — Yearly Renewable Term
LPT — Level Premium Term
† Also includes other LPT not shown, decreasing term, and other term products not separable into these plans

### *Data Quality Checks*

For quality control purposes, the following checks were performed.

- **Records by Experience Year** — For each company, the total number of policy records and associated face amount submitted for each study experience year was compared to the annual statement information to determine whether the contributing carrier had provided a full or partial inforce sample.
- **Records by Product Line** — For each company, the total inforce policy records and associated face amounts for each product line were compared to LIMRA's Annual Life Insurance Inforce Survey results. LIMRA's Annual Life Insurance Inforce Survey collects policies, face amounts, and annual premium inforce for each year by product line.
- **New Issues** — For each company, the number of newly issued policies and face amounts within each observation year were compared to LIMRA's Annual Life Insurance Sales Survey. LIMRA's Annual Life Insurance Sales Survey collects policies, face amounts, and annual premiums sold for each calendar year by product line.
- **Lapse Rates by Company and by Product Line** — For each company, lapse rates were calculated by plan and policy year, and provided to each company. Results were compared to prior studies when available. Differences were noted and discussed with individual company data contacts. The data contacts were also asked to review the results and report any discrepancies between the industry study and the results of their own experience study.

# Overall Results

This report presents the results of the individual life insurance lapse experience study in the United States for observation years 2007–2009. This study was conducted jointly by LIMRA and the SOA. Twenty-seven individual life insurance companies participated. For this report, subsidiaries were not counted as separate companies.

Lapse experience for whole life, term, universal life, and variable universal life plans issued between 1910 and 2009 are presented. 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 on the LIMRA and SOA websites.

The overall policy lapse rate was 4.5% annually, up from 4.2% in the 2005–2007 study and also up from 4.3% in the prior study (2004–2005 Persistency Study). The increase in the overall policy lapse rate was a result primarily of increases in early policy years (Figure 1). Some of the variation between studies can be attributed to differences in the underlying data contributors. Additionally, the economic swings during this study period likely contributed to the increased lapse rates. The U.S. economy was rapidly expanding in 2007, with the Dow Jones Industrial Average hitting over 13,000 but then dropping to about 8,000 in late 2008 as a recession started. The economic conditions worsened as the housing prices plummeted and unemployment rates soared.

While increases in early policy year lapse rates occurred for all products, the most significant increases were whole life and term products. More details are shown in the respective sections.

**Figure 1 —**
**Current Study versus Prior Study Policy Lapse Rates**

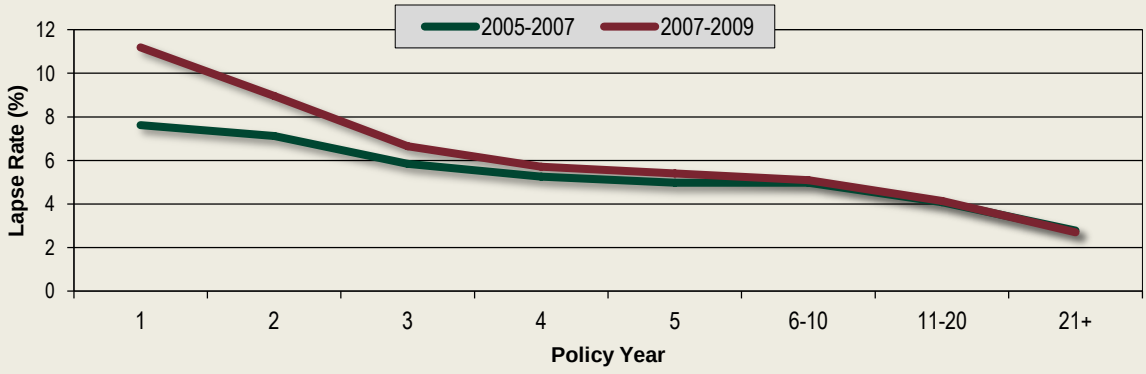
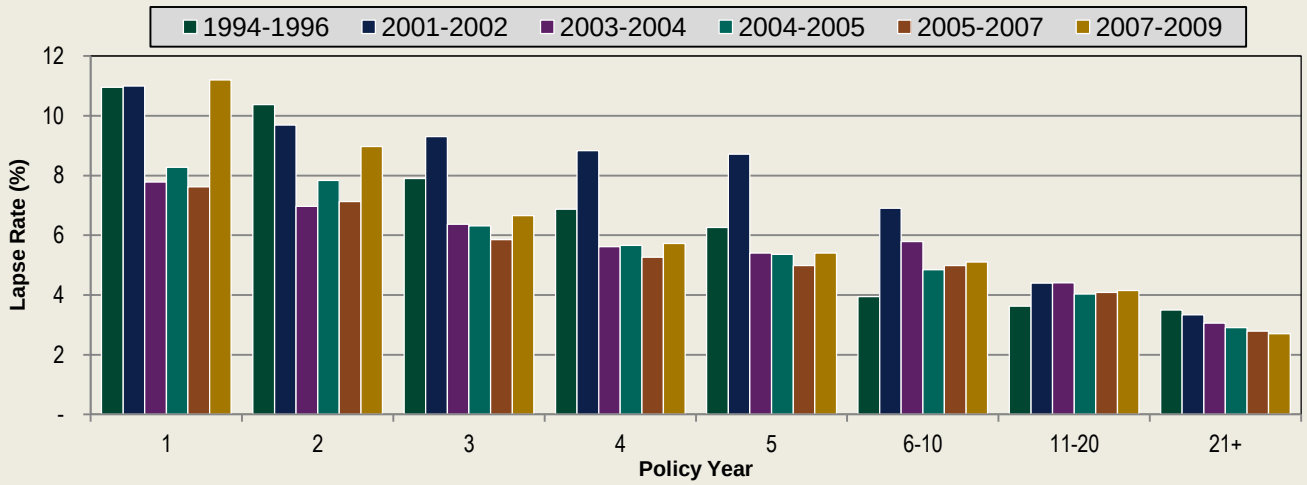


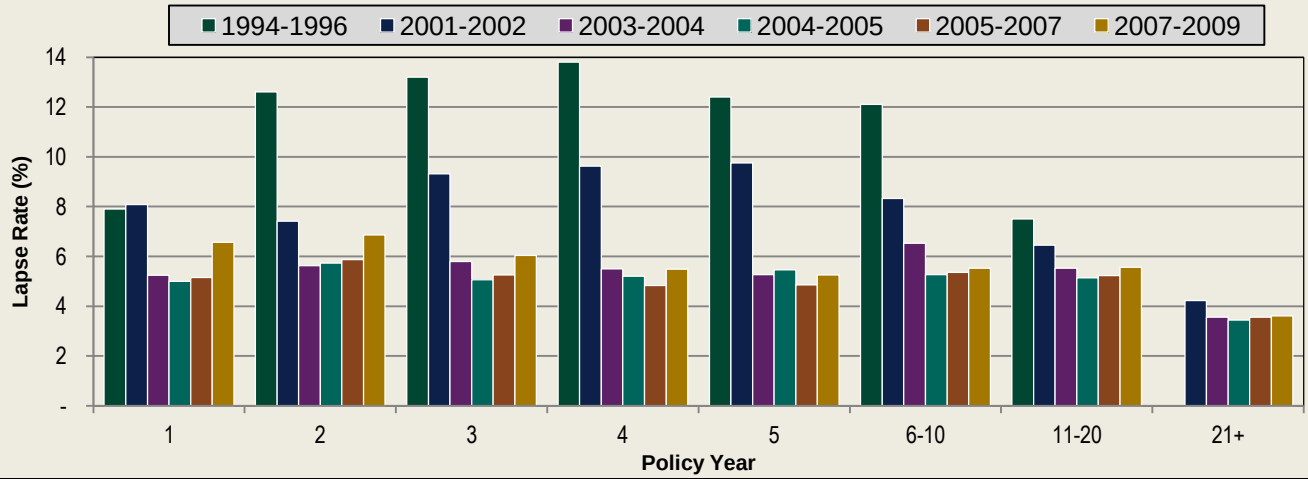
Figure 2 compares the policy lapse rates of the current study to five prior studies. While overall lapse rates have increased slightly in most policy years, the increase is most noticeable in the first three durations. Lapse rates between policy years six and 20 are still higher than the experience in the 1990s. This was due in part to high lapse rates at the end of the level premium period on level premium term products. The higher lapse rates in these policy years is expected to continue, if not increase, as the longer level premium term policies (e.g., 20-year level premium term) reach the end of the level premium period.

**Figure 2 —**
**Trends in Policy Lapse Rates**




On a face amount basis, overall lapse rates averaged 5.7% annually, an increase from 5.2% in the 2004–2005 study. Lapse rates increased slightly in most policy years, but most noticeably in the first three policy years (Figure 3).

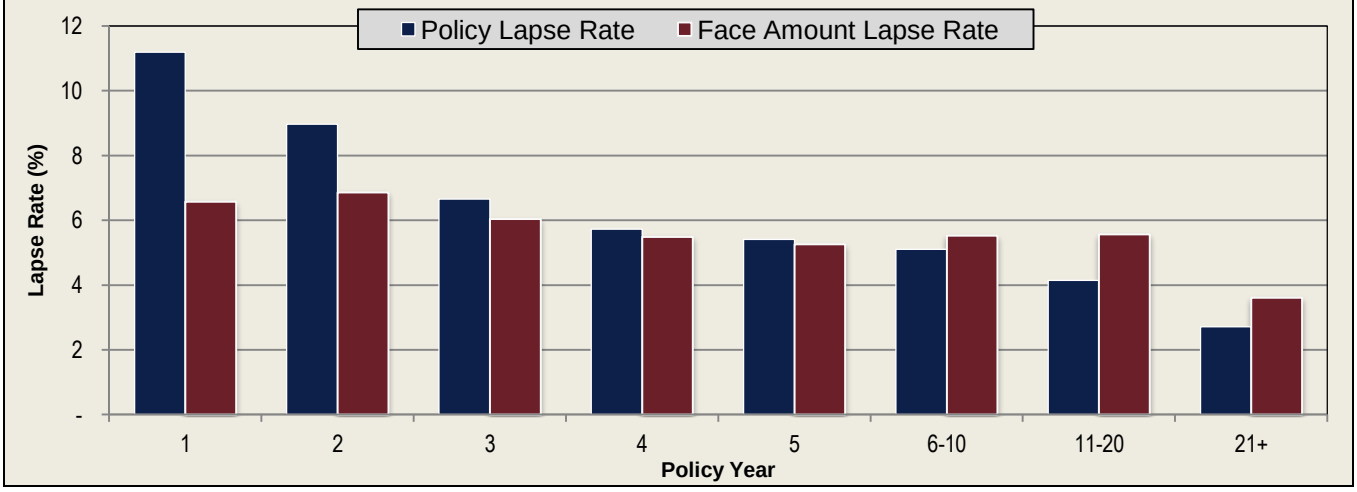
**Figure 3 —**
**Trends in Face Amount Lapse Rate**



During early policy years, smaller policies have a greater tendency to lapse, causing policy lapse rates to be higher than face amount lapse rates in those years (Figure 4). Traditionally, lapses for these policies are more a function of socioeconomic factors, likely due to buyer's remorse or additional price comparison shopping. In the case of buyers of smaller policies, lower discretionary income is a probable cause of higher lapse rates in early policy years. With the economic downturn during this study period, these policyholders would have reacted quickly from the financial strains by lapsing the policy.

However, in later policy years, face amount lapse rates are higher as more weight is given to lapses of larger policies. This trend can be seen across all products. After the early years, buyers of smaller policies are more likely to hold on to their policies as the only form of life protection and possible savings.

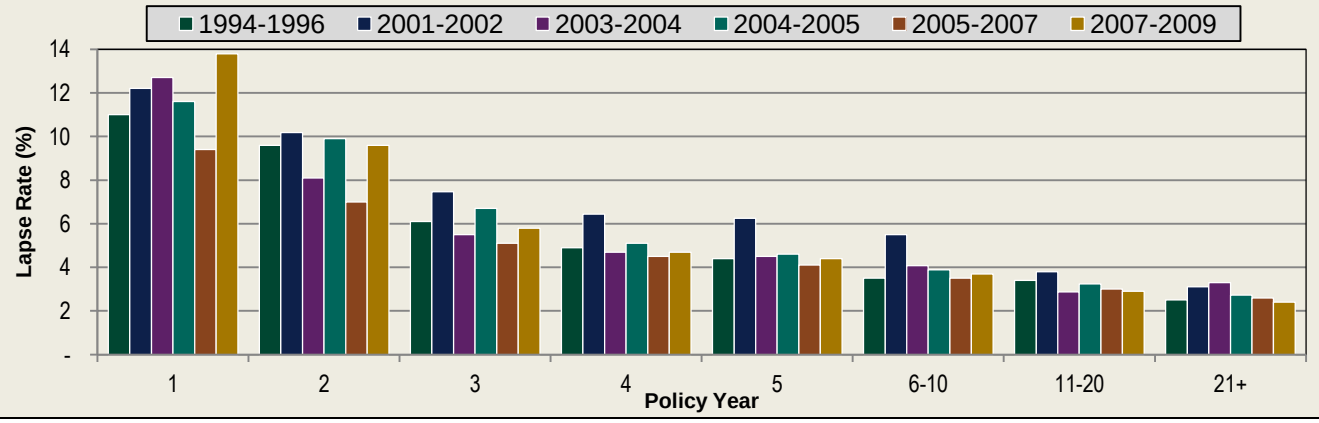
**Figure 4 —**
**Individual Life Insurance Lapse Rates**



# Whole Life

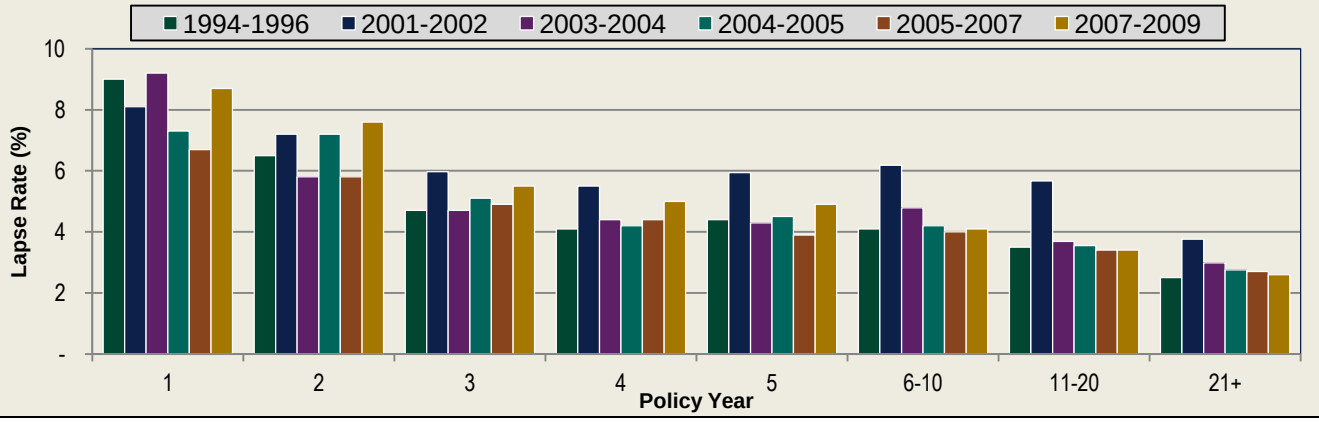
Whole life data shown in this section were based on data from 26 contributors. Lapse rates for whole life have generally decreased over the past few studies. However, the lapse rates were higher in this current study. The overall policy lapse rate was 3.1% annually, up slightly from 3.0% in the 2005–2007 study, and down slightly from the 3.4% in the 2004–2005 study. Current lapse rates were higher in almost all durations compared to the prior study, with the most significant increase in the first year (Figure 5). The strong economy during 2005–2007 may have decreased whole life lapse rates for that study period, while the poor economy during 2008 to 2009 was the likely reason for increased lapse rates for this study.

**Figure 5 —**
**Trends in Whole Life Insurance Policy Lapse Rates**



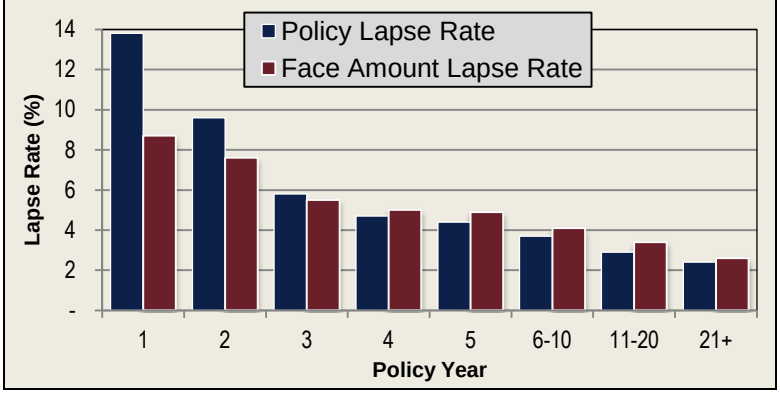

The overall lapse rates on a face amount basis increased in a similar fashion, from 3.7% annually in the 2005–2007 study, to 4.1% in the current study (Figure 6). For the most part, annual lapse rates after the first few policy years begin to slowly converge toward 2.7% on both a face amount and policy basis.

**Figure 6 —**
**Trends in Whole Life Insurance Face Amount Lapse Rates**



The average face amount for new issues has stayed relatively constant, $111,000 in the current study compared to $110,000 in the prior study. However, the average face amount for new issue lapses declined. $70,000 in the current study compared to $78,000 in the prior study. The average face amount exposed in the current study for all whole life was $43,000, an increase from the $37,000 average face amount exposed in the 2005–2007 study.

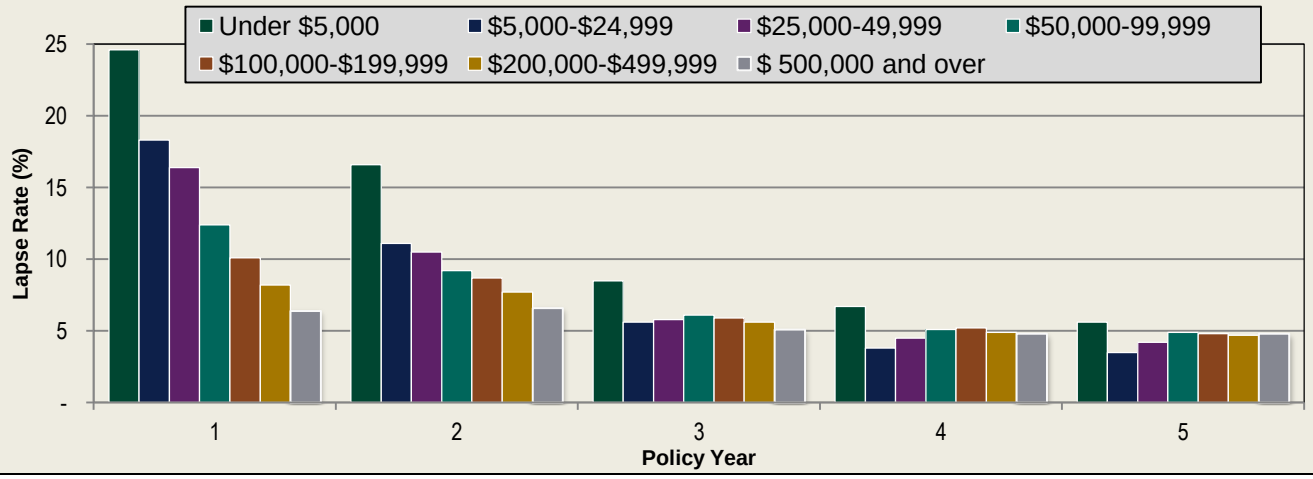
**Figure 7 —**
**Whole Life Insurance Lapse Rates**




Consistent with the overall individual life results, during the early policy years, smaller face amount whole life policies tend to lapse more frequently than larger policies (Figure 7). Lapse rates in early policy years increased due to the economic downturn, causing many of the smaller policies to lapse. For later policy years, larger face amount policies tend to lapse more frequently.

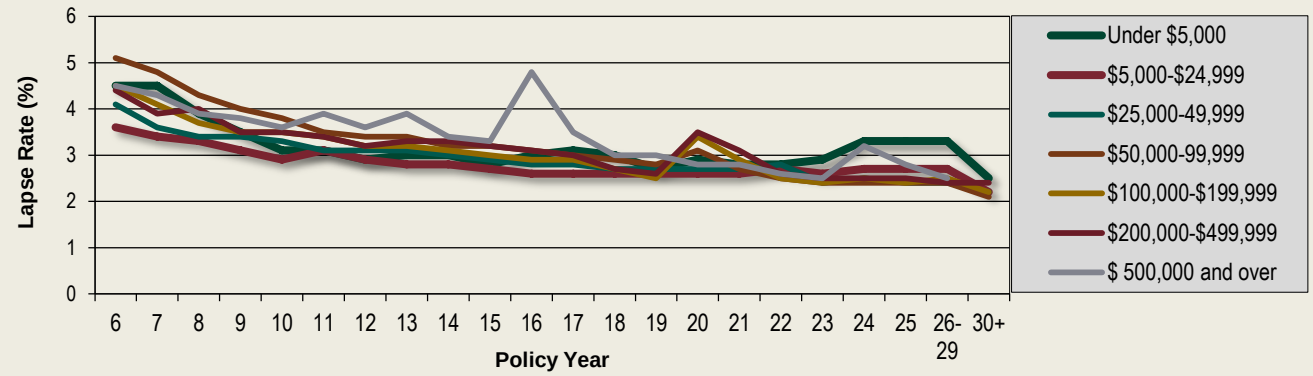
When grouped by policy size, smaller policies have considerably higher lapse rates in the first two policy years (Figure 8). By policy year three, the difference between lapse rates for the various policy size groups is less significant.

**Figure 8 —**
**Whole Life Insurance Policy Lapse Rates by Policy Size — Policy Year 1 to 5**



After policy year five, lapse rates for most policy size groups quickly settle down below four percent. The exceptions are the policies with face amount less than $5,000 and the larger face amount policies. Larger sized policies, face amounts greater than $100,000, have more volatile lapse rates during policy years 10 through 25. These policies are more likely to be surrendered or converted during retirement or mature at older ages. Ultimate lapse rates for policies with face amounts less than $5,000 remain above 3% until well after policy year 30, while most policies fall below the 3% mark by policy year 25.

**Figure 9 —**
**Whole Life Insurance Policy Lapse Rates by Policy Size**




While Figure 7 showed that face amount lapse rates were higher compared to policy lapse rates in later policy years, it is not visible when separated into policy size groups in Figure 9. This is because even within each policy size group, the average face amount of lapsed policies is slightly higher than the average face amount exposed, Table 6. The distribution of exposures by policy size has stayed relatively stable over the past three studies, with policies under $25,000 accounting for the majority of whole life exposure.

**Table 6 —**
**Whole Life Exposure by Policy Size Group**

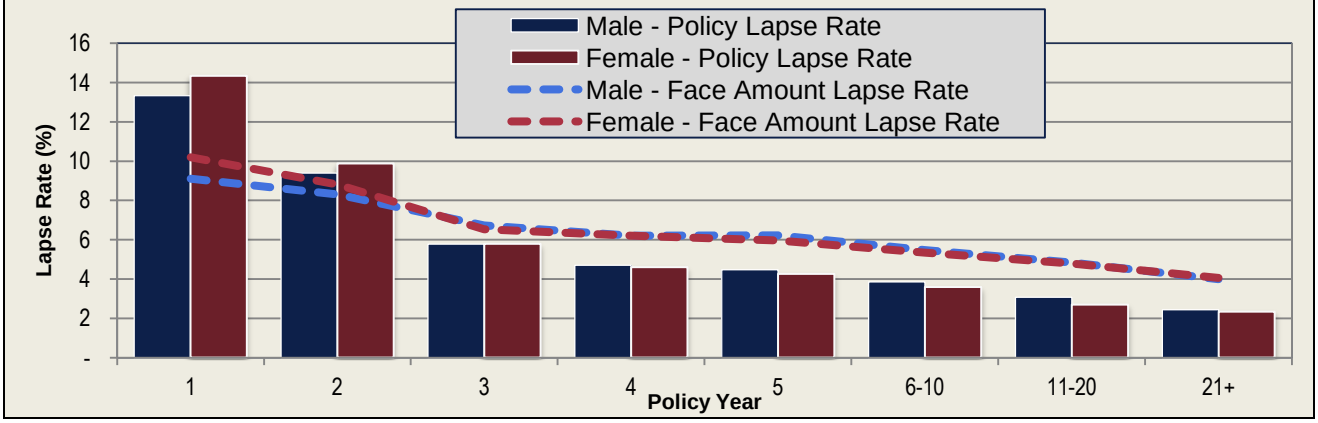
| Policy Size | Average Face Amount Exposed | Percent of Policy Exposure | Average Face Amount Lapsed |
|---|---|---|---|
| Under $5,000 | $1,600 | 20% | $1,700 |
| $5,000–$24,999 | $9,800 | 45% | $10,400 |
| $25,000–$49,000 | $27,000 | 15% | $28,000 |
| $50,000–$99,999 | $55,000 | 9% | $56,000 |
| $100,000–199,999 | $112,000 | 7% | $113,000 |
| $200,000–$499,999 | $264,000 | 3% | $265,000 |
| $500,000 and over | $981,000 | 1% | $1,044,000 |
| **Total** | **$43,000** | **100%** | $56,000 |

## Gender

The whole life exposure base was comprised of 55% male and 45% female on a policy basis. Consistent with prior studies, the male exposure base was higher on a face amount basis, with 64% male and 36% female. This split has been slowly declining over the past five studies as a more even distribution of recent buyers offsets the male majority of the older policies. For new issues, the exposure base was 50% male on a policy basis.

The average face amount exposed for males was $51,000, while the average for females was $34,000. These averages have fluctuated slightly over past studies, mainly due to the change in contributing whole life carriers. 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 modestly lower in some later policy years. Figure 10 shows both policy and face amount lapse rates by gender.

**Figure 10 —**
**Whole Life Insurance Lapse Rates by Gender**



## Issue Age

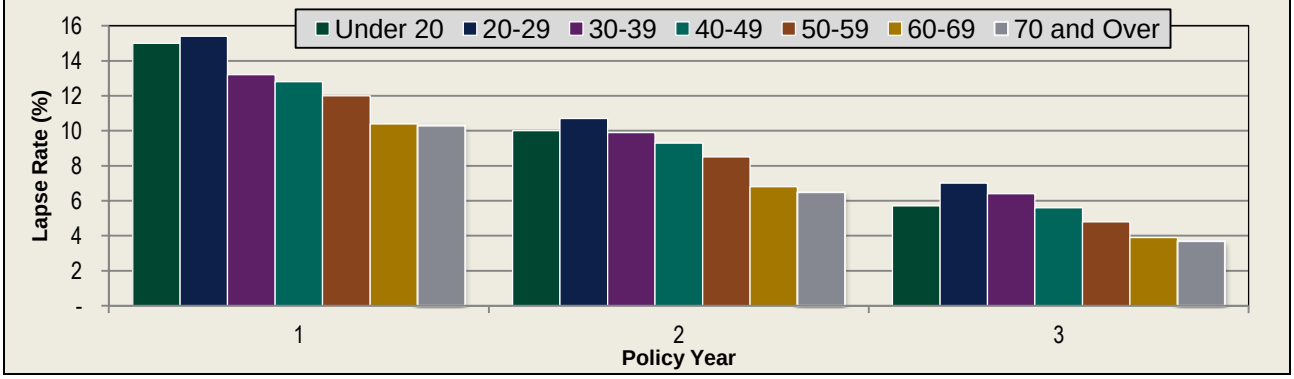
Much like prior studies, the distribution of the current study's exposure base was skewed towards the younger issue age cohorts (Table 7). Policies issued to insureds under age 30 represent over half of the total whole life exposure. As with prior studies, early policy year lapse rates for permanent insurance products are generally higher for younger issue ages (Figure 11).

**Table 7 —**
**Whole Life Policy Exposure by Issue Age Cohort**

| Issue Age | Average Face Amount Exposed | Percent of Policy Exposure |
|---|---|---|
| Under 20 | $20,000 | 34% |
| 20–29 | $30,000 | 23% |
| 30–39 | $65,000 | 19% |
| 40–49 | $74,000 | 13% |
| 50–59 | $71,000 | 7% |
| 60–69 | $63,000 | 3% |
| 70 and older | $66,000 | 1% |
| **Total** | **$43,000** | **100%** |

Historically, policies issued between the ages of 20 and 29 had the highest policy lapse rates of the various issue age groups in the first few policy years. This trend continues with this study (Figure 11).

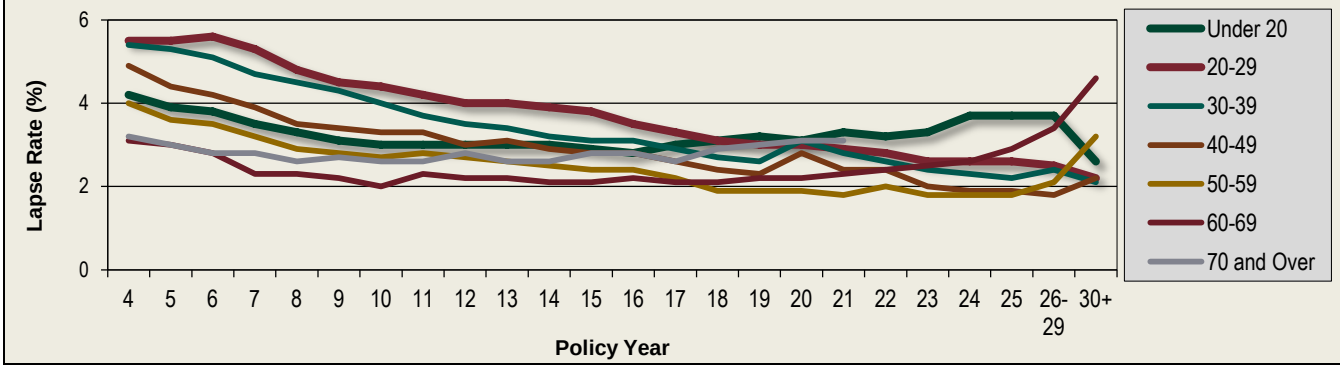
**Figure 11 —**
**Whole Life Insurance Policy Lapse Rates by Issue Age Cohort — Policy Year 1 to 3**




For policies with issue ages under 20, one of two patterns emerge, depending on the mix of contributing whole life carriers. In the current study and prior studies, the lapse pattern mimics those issued between the ages of 30 and 59. This occurs when the under issue age 20 cohort was more weighted with infant and young juvenile policies, where the parents or older relatives are paying policy premiums. If the cohort mix contained greater number of older juvenile policies, where the insured is more likely paying the premiums, the lapse pattern is

closer to policies with issue ages of 20 to 29. Regardless of issue age, after policy year three, lapse rates converge towards 2% for most issue age cohorts (Figure 12). For policy years 26 and later, lapse rates for issues age 50 and greater begin to increase as surrenders, conversions and maturities increase at older ages.

**Figure 12 —**
**Whole Life Insurance Policy Lapse Rates by Issue Age Cohort**




## Attained Age

Unlike the distribution of issue age cohorts, the exposure base by attained age cohorts leans towards older ages. Over 60% of the current whole life exposure base has attained ages of 50 or older (Table 8). This disparity is due to the significant portion of older policies. As with the 2005–2007 report, 42% of the whole life exposure base continues to be in policy year 30 or later.

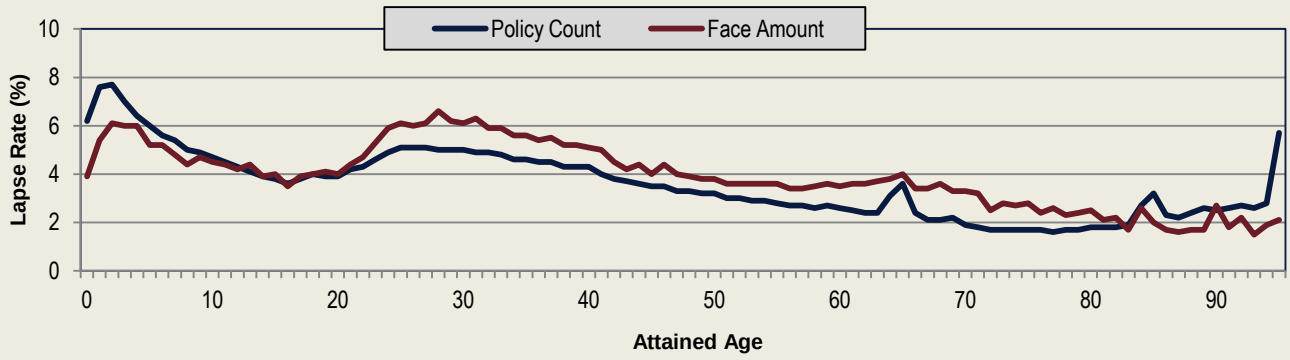
**Table 8 —**
**Whole Life Policy Exposure by Attained Age Cohort**

| Attained Age | Average Face Amount Exposed | Percent of Policy Exposure |
|---|---|---|
| Under 20 | $46,000 | 8% |
| 20–29 | $42,000 | 7% |
| 30–39 | $63,000 | 9% |
| 40–49 | $69,000 | 13% |
| 50–59 | $53,000 | 19% |
| 60–69 | $37,000 | 18% |
| 70 and older | $20,000 | 26% |
| **Total** | **$43,000** | **100%** |

Figure 13 shows lapse rates by attained age on a policy and face amount basis. Unlike issue age trends, attained age lapse rates for infant and juvenile policies are higher than lapse rates of older juvenile policies. This is due to fact that many of the policies with attained age under 10 are still in the first couple policy years, where lapse rates are high. While those with attained age between 10 and 20 are a blend of new and older issue policies.

Consistent with past studies, after attained age 25, lapse rates generally decrease as the insured ages. For ages between 50 and 80, higher face amount policies are more likely to lapse than smaller policies. However, there are variances in lapses around age 65, where we would expect to see the impact of retirement, and at around age 85.

**Figure 13 —**
**Whole Life Insurance Lapse Rates by Attained Age**




## Premium Payment Mode

For the eleven contributing whole life carriers that provided data by premium payment mode, the distribution of policy exposures and the average face amounts are shown in Table 9. For the past few studies, annual and monthly premium payment modes have made up the majority of the policy exposures.

**Table 9 —**
**Whole Life Policy Exposure by Premium Payment Mode**

| Premium Mode | Average Face Amount Exposed | Percent of Policy Exposure |
|---|---|---|
| Annual | $49,000 | 39% |
| Semi-Annual | $27,000 | 6% |
| Quarterly | $41,000 | 9% |
| Monthly | $37,000 | 44% |
| Other | $58,000 | 2% |
| **Total** | **$42,000** | **100%** |

As with prior studies, lapse rates increase with the number of premium payments made each year (Figures 14 and 15). The one exception is policies paid on a monthly basis. This category consistently includes significantly 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 increased policy persistency for the monthly premium payment mode.

**Figure 14 —**
**Whole Life Insurance Policy Lapse Rates by Premium Payment Mode**

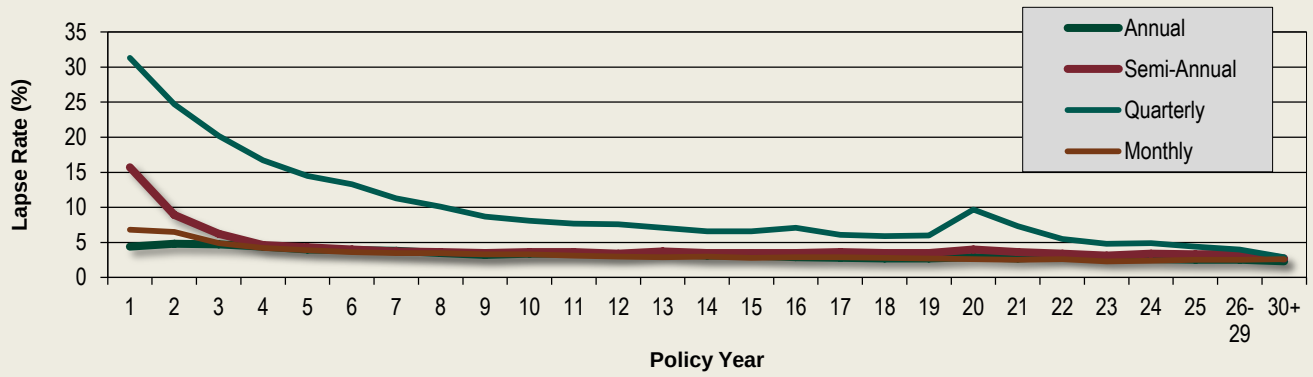
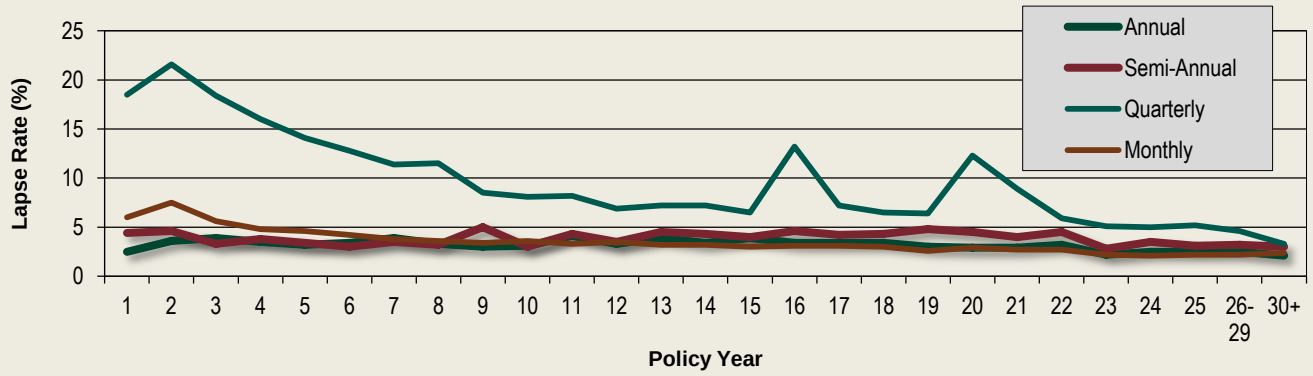



**Figure 15 —**
**Whole Life Insurance Face Amount Lapse Rates by Premium Payment Mode**




With the average face amount exposed at $43,000 in the current whole life data, annual premium payment modes have comparatively larger policies. While policy size is a factor, lapse rates for policies with annual premium payment modes are lower than the lapse rates of larger policies for most policy years. Policy lapse rates by policy size were shown previously in Figure 9.

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## Risk Class

Table 10 gives the average face amounts and distribution of policy exposures for the 19 contributing whole life carriers that provided data by risk class. Regardless of the change in contributing whole life carriers from each study, the distribution of policy exposures by risk class stays more or less the same, with the vast majority of exposure in the standard risk class.

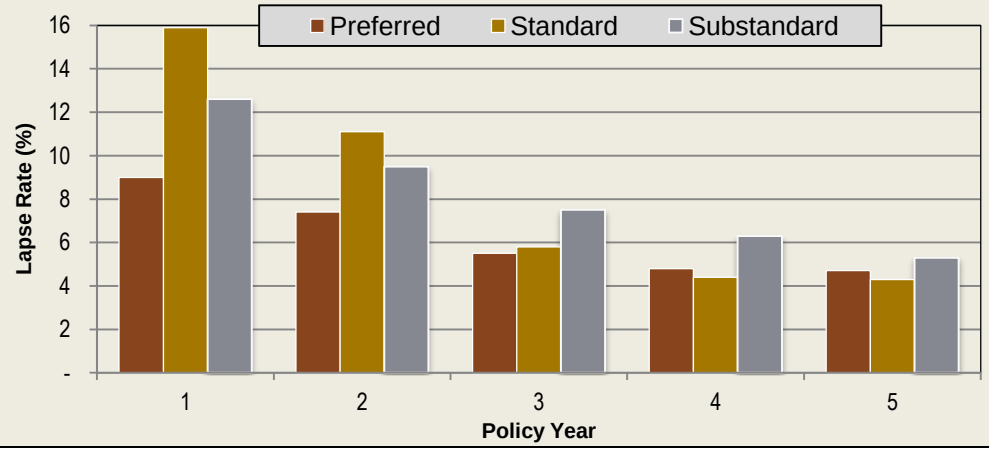
**Table 10 —**
**Whole Life Policy Exposure by Risk Class**

| Risk Class | Average Face Amount Exposed | Percent of Policy Exposure |
|---|---|---|
| Preferred | $189,000 | 7% |
| Standard | $35,000 | 88% |
| Substandard | $50,000 | 5% |

The preferred risk class continues to carry a significantly higher average face amount compared to the standard and substandard risk class policies. The gap between the risk classes increased during the current study. For this study, the average face amount increased for all three risk classes.

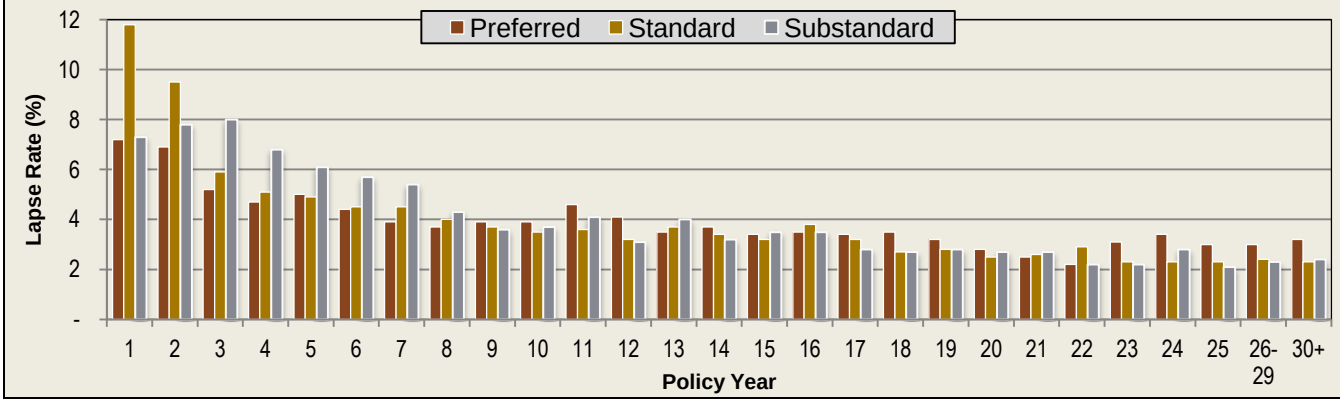
In early policy years, lapse rates for preferred risk class policies tend to be much lower than those with standard and substandard risk (Figure 16). This is partially due to the trend of the larger preferred risk policies having lower lapse rates in early policy years compared to the smaller standard and substandard risk policies. The cheaper cost and best price of preferred risk policies is also a contributing factor to lower lapse rates. Because of the variations of standard risk classes among carriers, the higher lapse rates in early policy years can also be attributed to additional price comparison shopping. Policyholders continue to solicit quotes from other carriers after purchasing, looking for policies with lower premium, while other policyholders might improve their weight and health in hopes of being underwritten as preferred risk by a different insurer.

**Figure 16 —**
**Whole Life Insurance Policy Lapse Rates by Risk Class**



However, as the policies' size attribute wears off, lapse rates for preferred risk classes become higher than those with standard and substandard risk. The turning point begins in policy year nine. This is more noticeable with lapse rates on a face amount basis due to the weight of the larger preferred risk class policies (Figure 17).

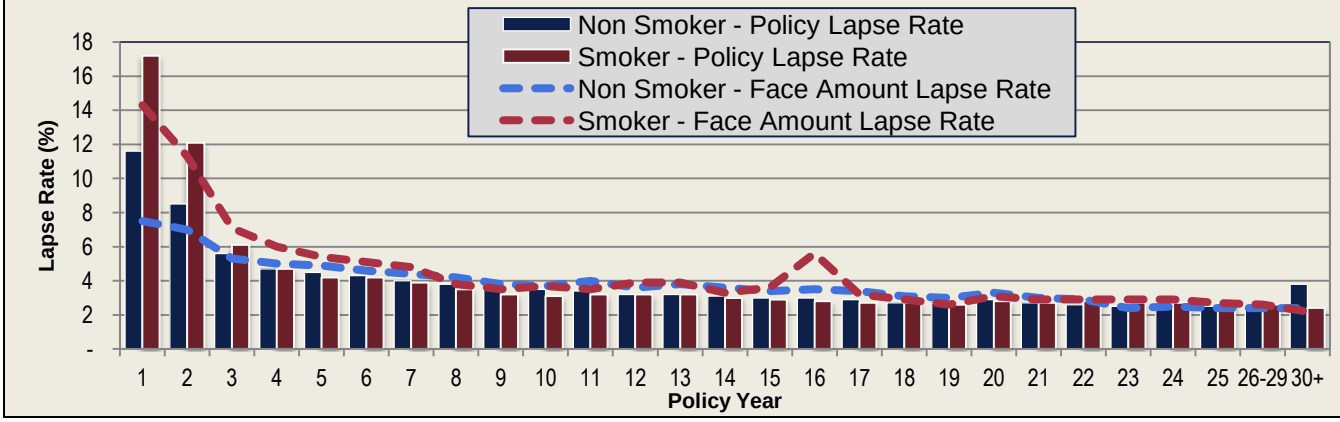
**Figure 17 —**
**Whole Life Insurance Face Amount Lapse Rates by Risk Class**




## Smoking Status

The whole life policy exposure in the current study was 69% nonsmoker. Nonsmokers have declined from 81% in the 2004–2005 study to 75% in the 2005–2007 study. This percentage fluctuates with the change in contributing whole life carriers and their submitted blocks of business. When looking at the same blocks of business in this study and the 2005–2007 study, the nonsmoker percentage generally increased 0–2%. As with prior studies, smokers exhibit much higher lapse rates than nonsmokers during the first few policy years. They then settle into a matching lapse pattern in later years. Figure 18 shows both policy and face amount lapse rates for smoking status. Variance in policy year 16 was due to lapses of larger face amount smoker policies within one company. And the increase in nonsmoker policy lapse rate after 29 years was due to the experience of one company with a higher concentration of older ages and small sized policies.

**Figure 18 —**
**Whole Life Insurance Lapse Rates by Smoking Status**



## Underwriting Method

The whole life policy exposure base in the current study consists of 10% medical, 11% paramedical, 67% non-medical, 3% simplified issue, and 9% guaranteed issue. Consistent with past studies, whole life policies issued on a non-medical basis or on a simplified issue basis typically have higher premiums and experience higher lapse rates during early policy years, while policies issued with full medical or paramedical underwriting exhibit lower policy lapse rates (Figures 19 and 20). However, the difference is significant only in the early policy years.

**Figure 19 —**
**Whole Life Insurance Policy Lapse Rates by Underwriting Method**

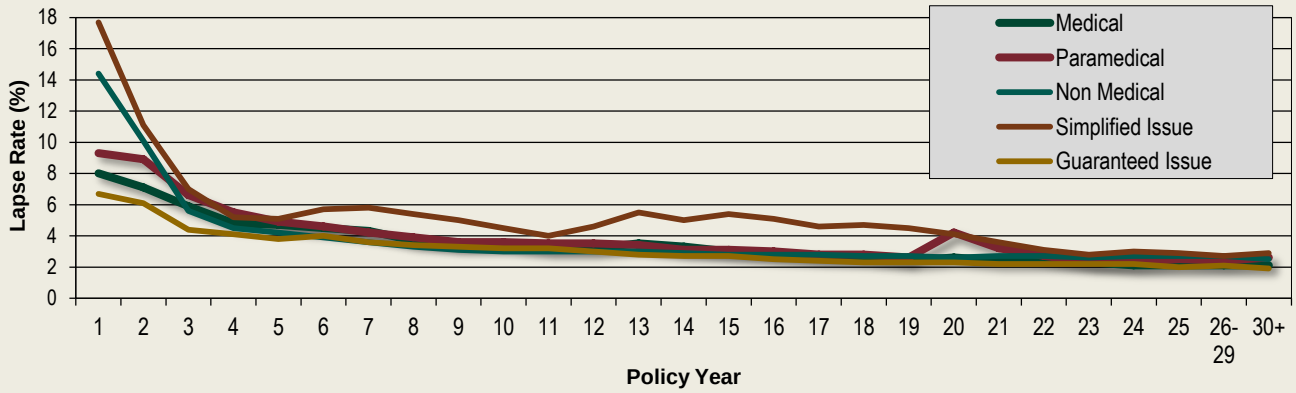
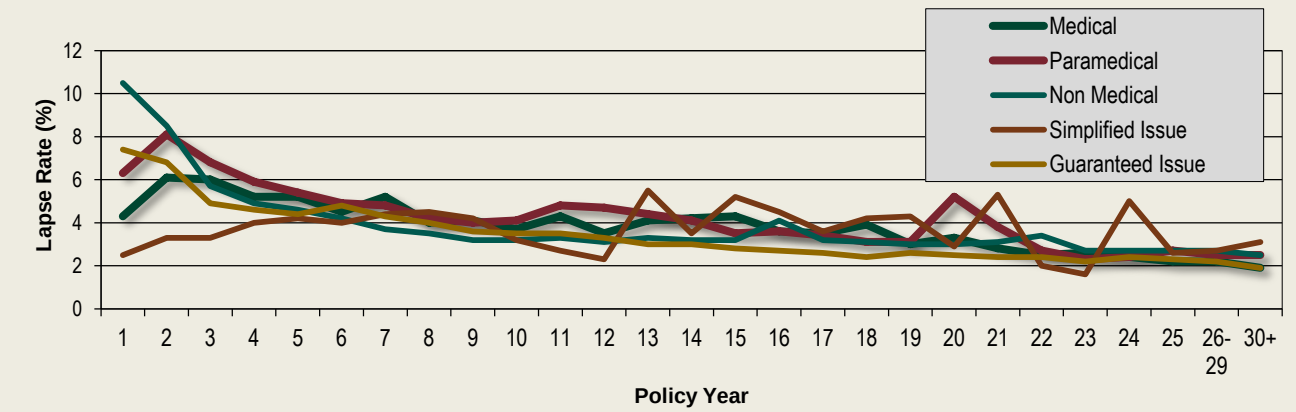



**Figure 20 —**
**Whole Life Insurance Face Amount Lapse Rates by Underwriting Method**



# Term Life

Term life insurance data shown in this section was based on data from 27 contributors. Overall lapse rates for term life insurance had declined steadily over the past few studies. However, similar to other product lines, very early duration lapse rates increased in this study period. Also, the overall annual policy lapse rate in the current study was 6.9% annually, up slightly from 6.4% in the 2005–2007 study and from 6.6% in the 2004–2005 study, but lower than previous years.

Since 2003, term lapse rates in policy years three to ten have decreased significantly due to the increase of guaranteed level premium term business (Figure 21). However, for certain policy years (10 and 15), lapse rates have increased due to the impact of shock lapse rates for these guaranteed level premium term plans. Similar patterns emerge for lapses on a face amount basis (Figure 22).

**Figure 21 —**
**Trends in Term Insurance Policy Lapse Rates**

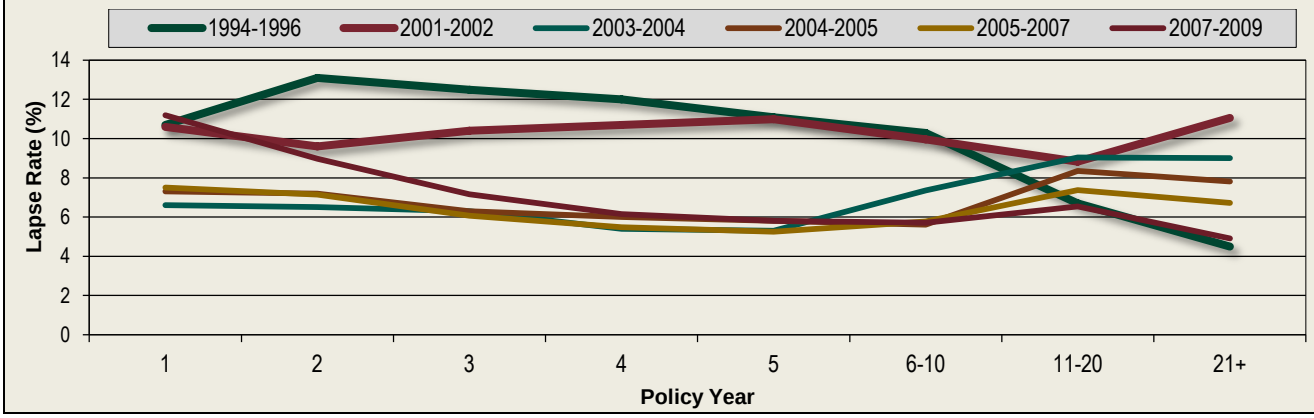
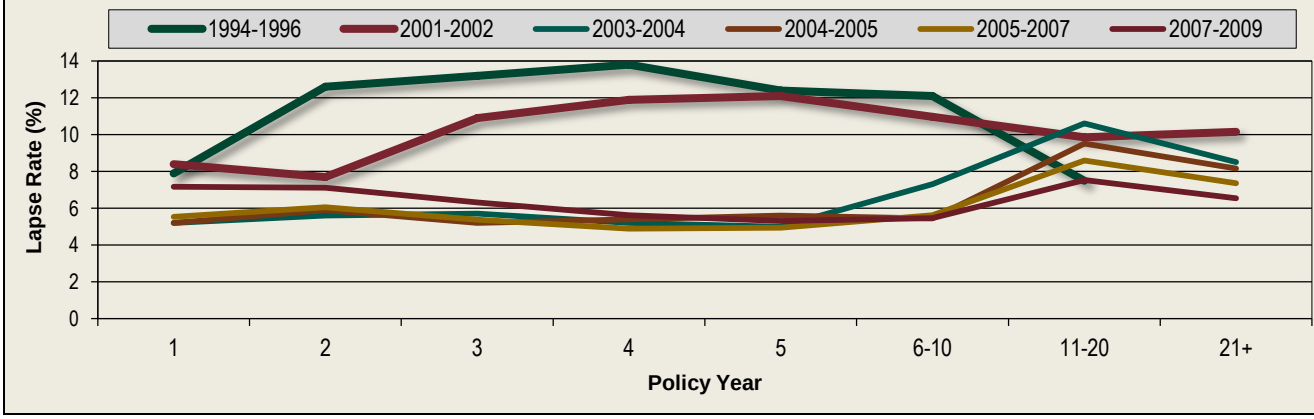



**Figure 22 —**
**Trends in Term Insurance Face Amount Lapse Rates**



## Premium Guarantee Period

Table 11 details the exposure distribution split by plan for the 23 term life insurance carriers that provided data. With the exception of 20-year level premium term plans, the average first year face amount has increased from the prior two studies. The change in 20-year term was caused by the mix of companies represented in the two studies.

**Table 11 —**
**Term Insurance Policy Exposure by Plan**

| Plan | Average First Year Face Amount Exposed | Average Total Face Amount Exposed | Percent of Policy Exposure |
|---|---|---|---|
| YRT | 562,000 | 279,000 | 14% |
| 10 Year | 545,000 | 354,000 | 16% |
| 15 Year | 528,000 | 380,000 | 5% |
| 20 Year | 461,000 | 411,000 | 28% |
| Other Level Term | 266,000 | 214,000 | 22% |

First year lapse rates for term plans increased. Table 12 provides first year lapse rates by term plan in the current study. Face amount lapse rates also increased in the first year. After the first year, lapse rates in this current study are closer to the prior 2005–2007 study. This results in the five-year persistency of these term plans changing to a lesser extent than the first year lapse rates. Table 13 provides five-year persistency by term plans in the current study.

**Table 12 —**
**Term Insurance First Year Lapse Rates by Plan**

| Plan | First Year Policy Lapse Rate | First Year Face Amount Lapse Rate |
|---|---|---|
| YRT | 8.5% | 6.2% |
| 10 Year | 9.9% | 8.0% |
| 15 Year | 8.3% | 5.7% |
| 20 Year | 8.3% | 6.3% |

**Table 13 —**
**Term Insurance Five Year Persistency by Plan**

| Plan | Policy Basis | Face Amount Basis |
|---|---|---|
| YRT | 67% | 70% |
| 10 Year | 65% | 67% |
| 15 Year | 73% | 76% |
| 20 Year | 72% | 76% |

As with past studies, term plans with the longest premium guarantee periods (15- and 20-year) have the lowest lapse rates in early policy years (Figure 23). Lapse rates are relatively level by duration, with the exception of the years around the end of the level premium guarantee period where shock lapses occur, as depicted in Figure 24.

**Figure 23 —**
**Term Insurance Policy Lapse Rates by Level Premium Period — Policy Years 1–8**

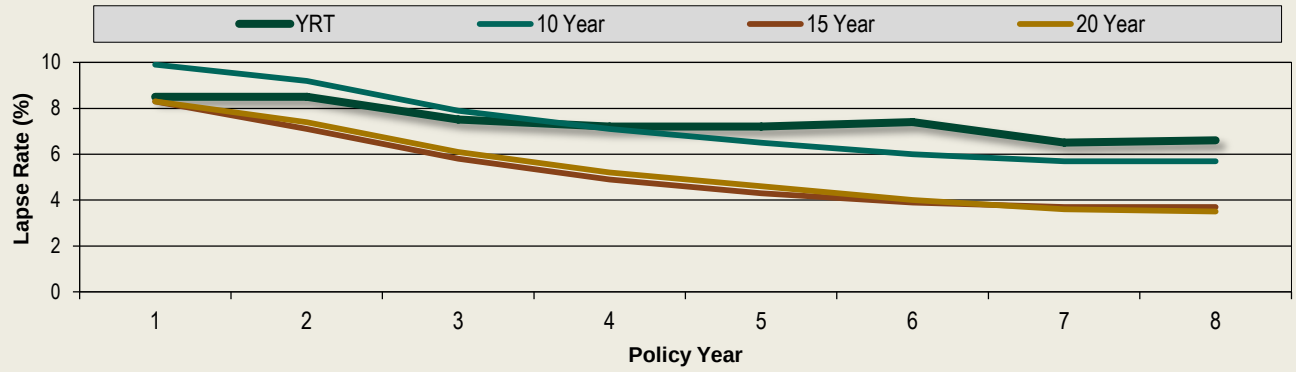
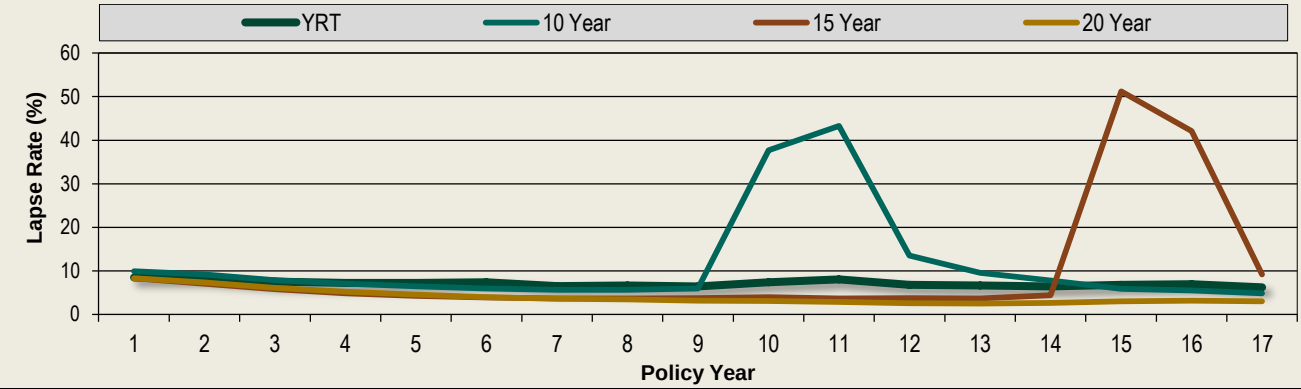
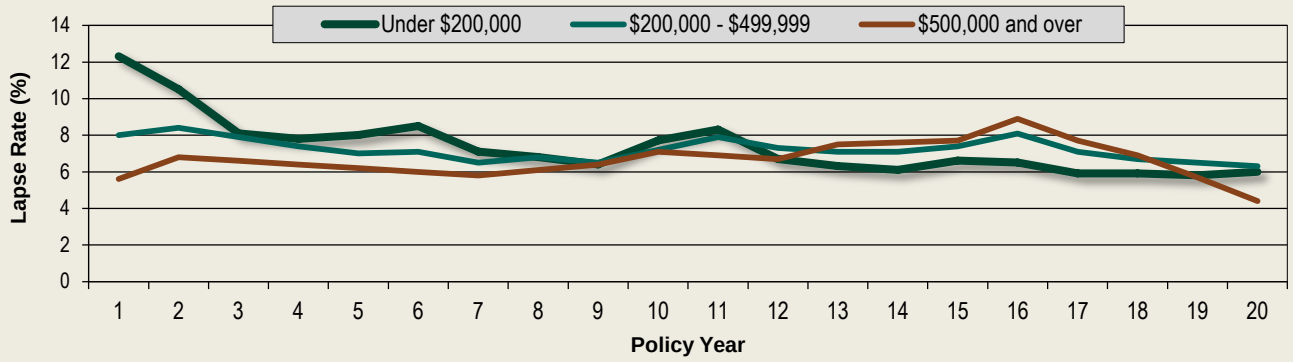



**Figure 24 —**
**Term Insurance Policy Lapse Rates by Level Premium Period**



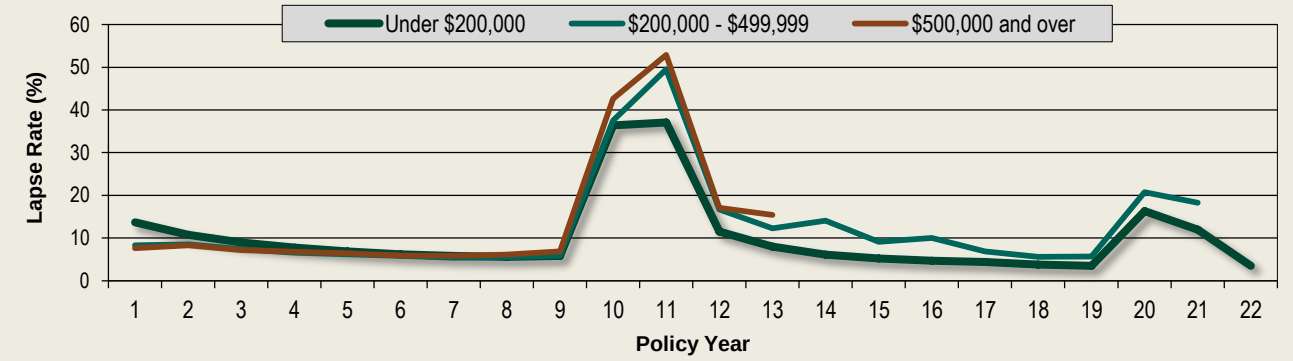
Looking at term life insurance by policy size, policies with face amounts under $200,000 are more likely to lapse in the first few policy years than policies with higher face amounts. Experience by policy size for YRT plans are shown in Figure 25.

**Figure 25 —**
**YRT Insurance Policy Lapse Rates by Policy Size**




Similar to whole life trends, smaller sized policies have a high first year lapse rate. Early policy lapse rates are followed by lower and steadily declining lapse rates in later years. However, one peculiarity for term life insurance is that larger policies have elevated lapse rates after policy year one, a pattern typical in universal and variable universal life experience, likely due to continued comparison shopping. This is most conspicuous in the YRT plans (Figure 25), and somewhat visible in the 10- and 15-year level premium term plans (Figure 26 and 27).

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

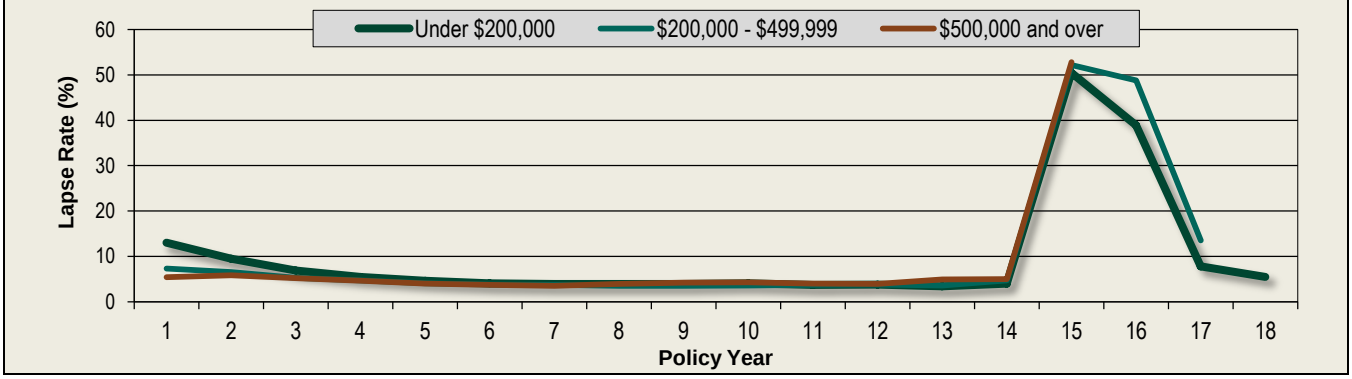


Shock lapse rates for 10-year level premium term plans averaged 43% on a policy basis, and 49% on a face amount basis in policy year 11. Variations in shock lapse rates are very noticeable by policy size (Figure 26). Policies with larger face amounts exhibit higher shock lapse rates in policy years 10 to 12. This is most likely due to the greater differential in premium after the level premium guarantee period. It is also likely that these wealthier policyholders have other options in permanent life insurance to consider at the end of the level premium guarantee period.

Variations in shock lapse rates by policy size are beginning to show through for 15-year level premium term plans as more policies approach the end of the guarantee period (Figure 27). Average shock lapse rates topped off at 52% in policy year 15, and in policy year 16 were 42% on a policy basis and 47% on a face amount basis.

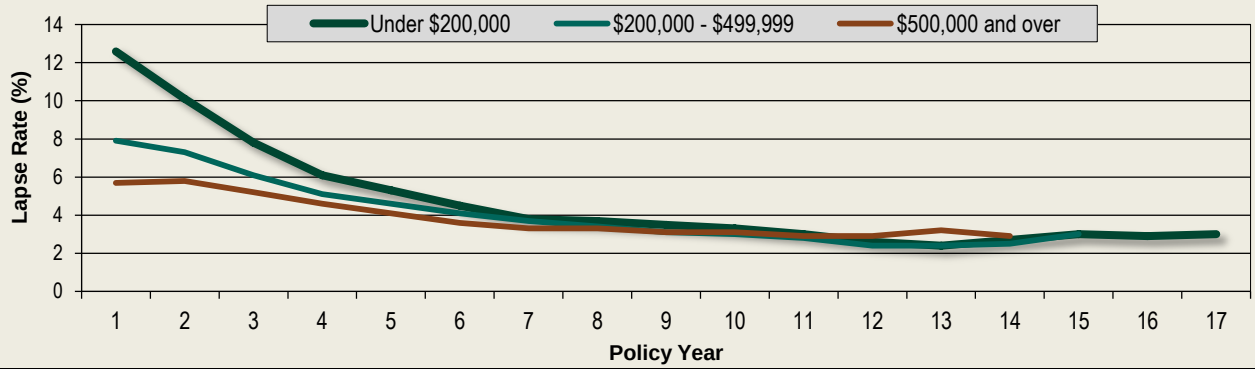
*It is important to note that the level premium term plans included in this study were designed and priced with the post-guarantee period premium levels of ten or more years ago. Future shock lapse rates will have a high degree of dependence on the magnitude of the premium jump at the end of the guarantee premium period.*

**Figure 27 —**
**15-Year Level Premium Term Policy Lapse Rates by Policy Size**



For 20-year level premium term plans, because only a handful of carriers reported data beyond policy year 17, industry lapse results near the expiration of the level premium guarantee period are unknown (Figure 28). Lapse rates on a policy basis are very similar to the lapse rates on a face amount basis. Shock lapse rates should evolve as experience data reaches the 20th duration.

**Figure 28 —**
**20-Year Level Premium Term Policy Lapse Rates by Policy Size**




## Gender

Overall term exposure by gender continues to be skewed towards males. However, female exposure increased slightly from the 2005–2007 study for YRT and 20-year term on both a policy and face amount basis. Exposure continues to vary by the type of term life insurance plan. Male exposure for 10- and 15-year term life insurance plans remains at 65%, while YRT and 20-year term seem to be trending closer towards an even gender split, but still significant differences.

**Table 14 —**
**Term Distribution of Exposure by Gender**

| | Policy Basis | | Face Amount Basis | |
|---|---|---|---|---|
| | Males | Females | Males | Females |
| YRT | 55% | 45% | 67% | 33% |
| 10 Year | 65% | 35% | 78% | 22% |
| 15 Year | 65% | 35% | 76% | 24% |
| 20 Year | 59% | 41% | 69% | 31% |

Policy and face amount lapse rates by gender are shown in Figures 29 to 32 for YRT, 10-year, 15-year, and 20-year level premium term plans. Overall trends show higher lapse rates for males over females; however, there are select policy years where the opposite is true. Lapse rates for plans with shorter level premium guarantees (YRT) show higher lapse rates for males across most policy years. Plans with longer level premium guarantees show slightly higher lapse rates for females in early policy years. This trend changes after three to six years and lapse

rates are similar for males and females until the durations of the shock rates. Shock lapse rates are notably higher for males than for females. While the shock lapse experience has yet to be seen for 20-year level premium term plans, experience so far continues to trend closely to 10- and 15-year level premium term plans.

**Figure 29 —**
**YRT Lapse Rates by Gender**

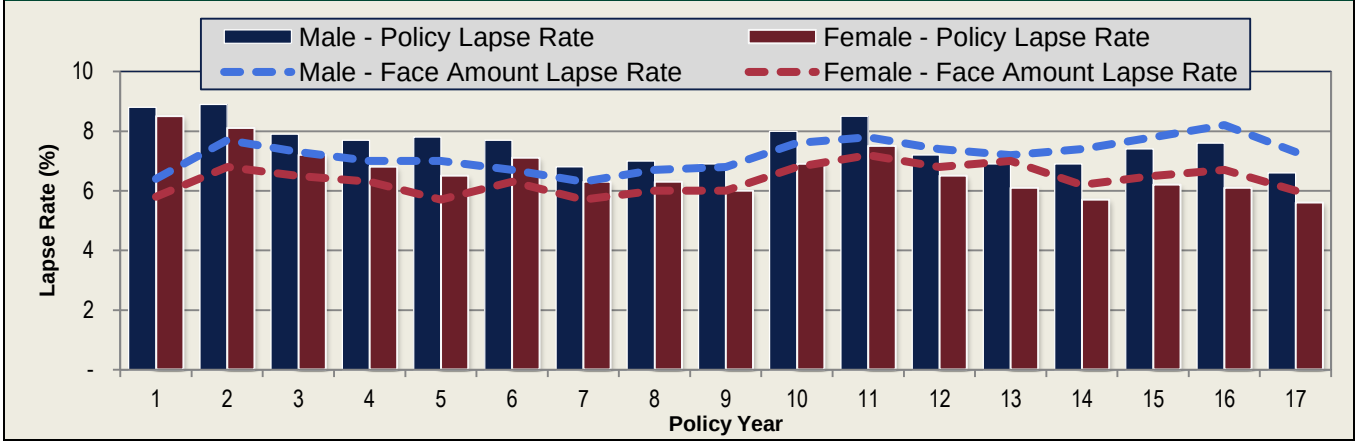



**Figure 30 —**
**10-Year Level Premium Term Lapse Rates by Gender**

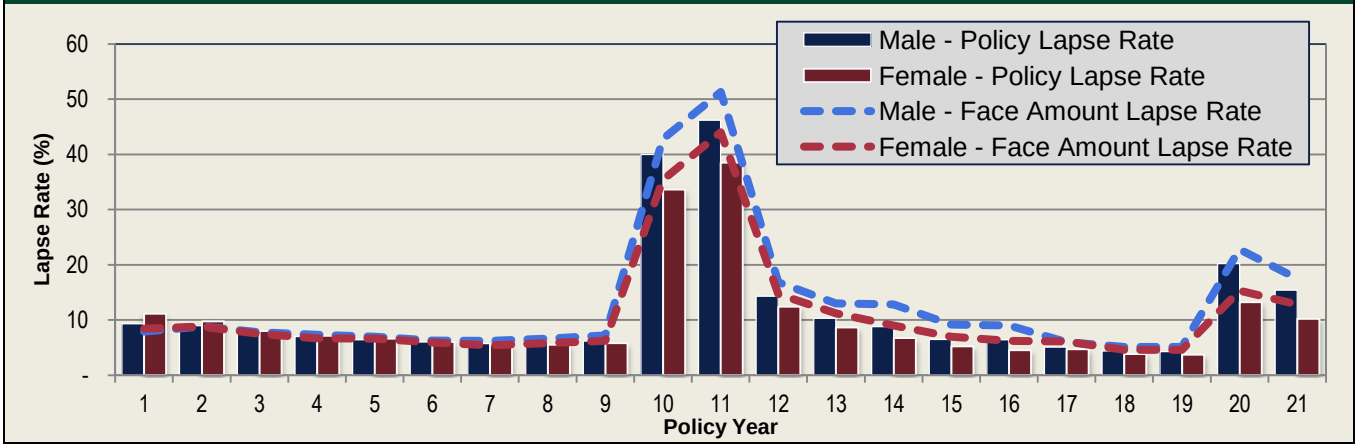


**Figure 31 —**
**15-Year Level Premium Term Lapse Rates by Gender**

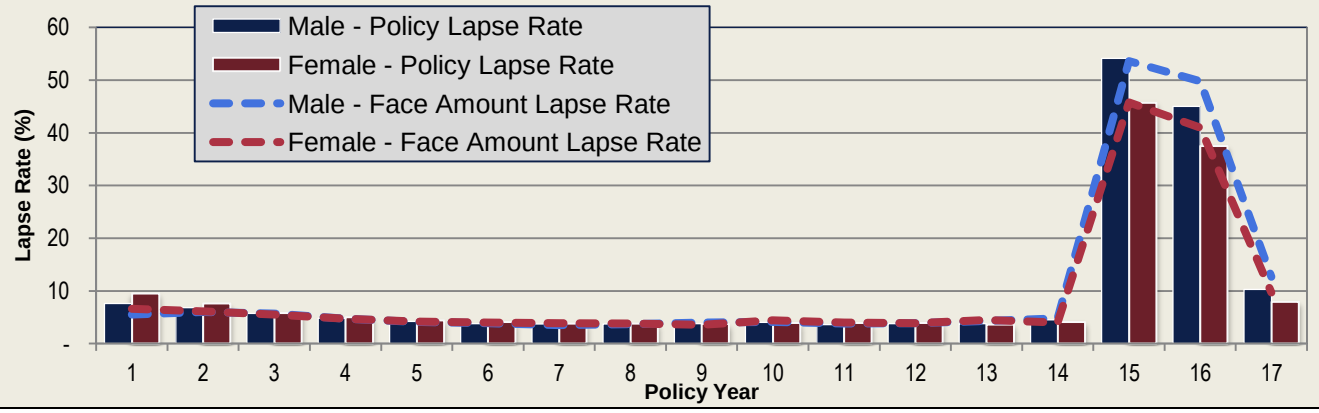
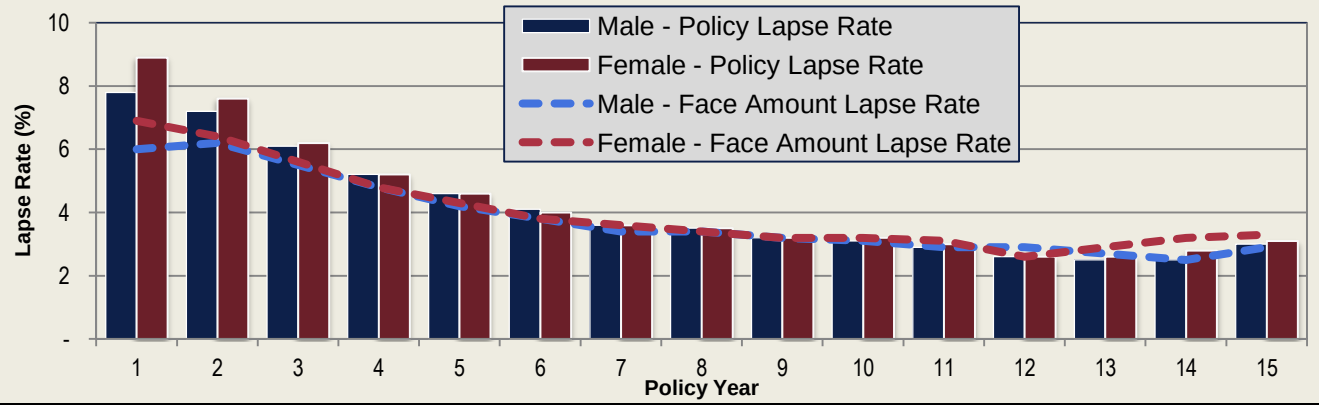



**Figure 32 —**
**20-Year Level Premium Term Lapse Rates by Gender**



## Issue Age

The distribution of policies by issue age cohorts has changed minimally across the different plans, with the majority of issues still in the 30s and 40s (Table 15). However, the average face amount exposed for YRT plans continues to decrease for all issue ages from the prior studies. This was likely due to the increased popularity of longer duration level premium term plans, where the average face amount has steadily increased from prior studies across all issue ages.

**Table 15—**
**Term Insurance Policy Exposure Face Amount Exposed**

| | Average Face Amount Exposed | | | Percent of Policy Exposure | | |
|---|---|---|---|---|---|---|
| Issue Age | YRT | 10-Year LPT | 20-Year LPT | YRT | 10-Year LPT | 20-Year LPT |
| 20–29 | $160,000 | $235,000 | $303,000 | 25% | 14% | 12% |
| 30–39 | $244,000 | $375,000 | $456,000 | 50% | 30% | 42% |
| 40–49 | $221,000 | $451,000 | $439,000 | 21% | 33% | 33% |
| 50–59 | $159,000 | $455,000 | $332,000 | 4% | 23% | 13% |

Policy and face amount lapse rates by issue age cohort are shown in Figures 33 to 40 for YRT, 10-year, 15-year, and 20-year level premium term plans. Overall trends for level premium guarantee plans continue to show higher lapse rates in early policy years for younger issue age cohorts, while issue ages in the 30s and 40s have very similar lapse patterns. The one exception is YRT plans, where older issue age cohorts have higher lapse rates through most policy years, likely due to the increasing cost of insurance at older ages.

**Figure 33 —**
**YRT Policy Lapse Rates by Issue Age Cohort**

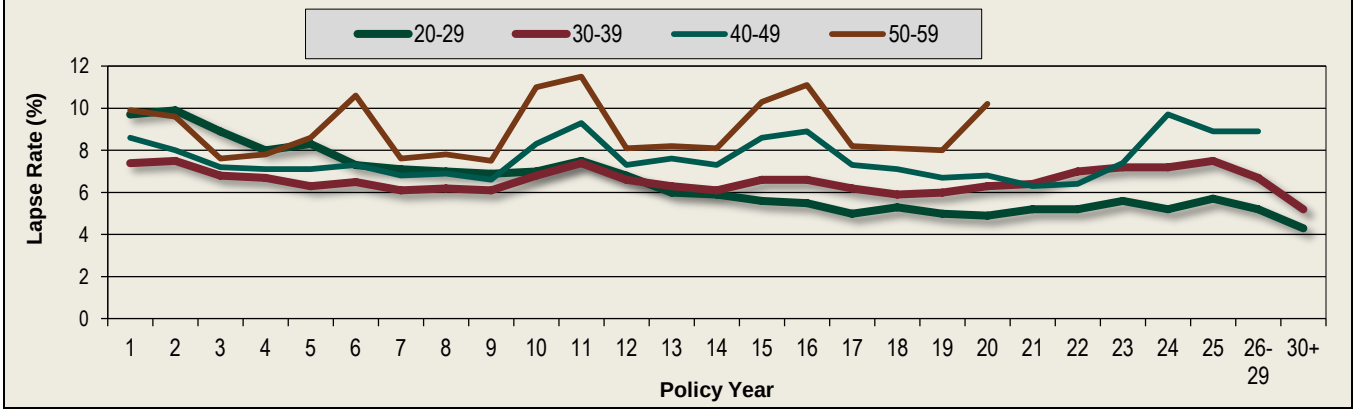


**Figure 34 —**
**YRT Face Amount Lapse Rates by Issue Age Cohort**

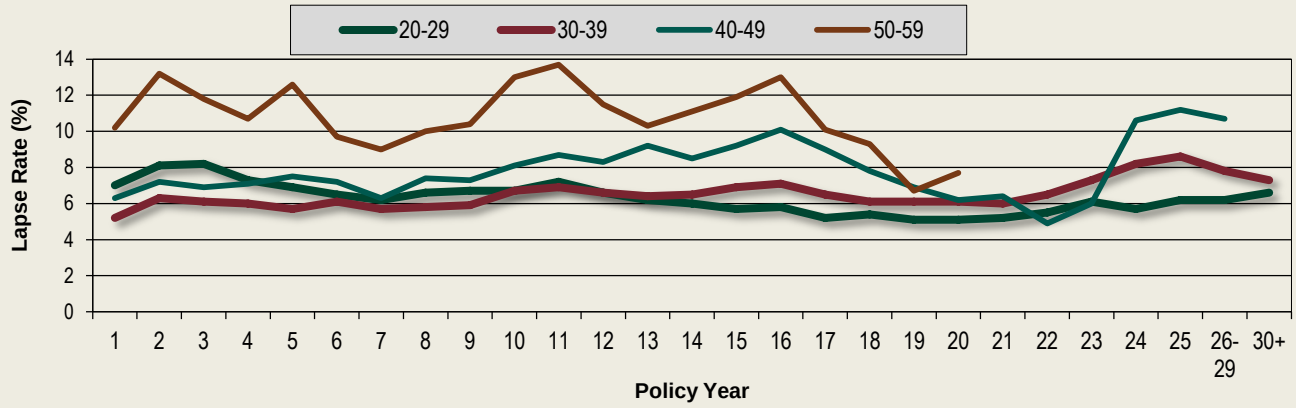



**Figure 35 —**
**10-Year Level Premium Term Policy Lapse Rates by Issue Age Cohort**

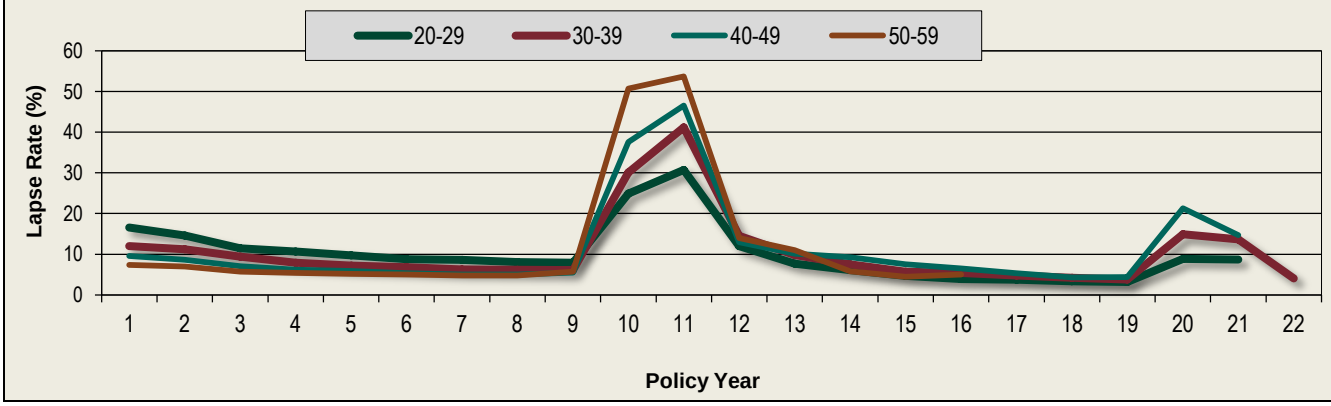



**Figure 36 —**
**10-Year Level Premium Term Face Amount Lapse Rates by Issue Age Cohort**

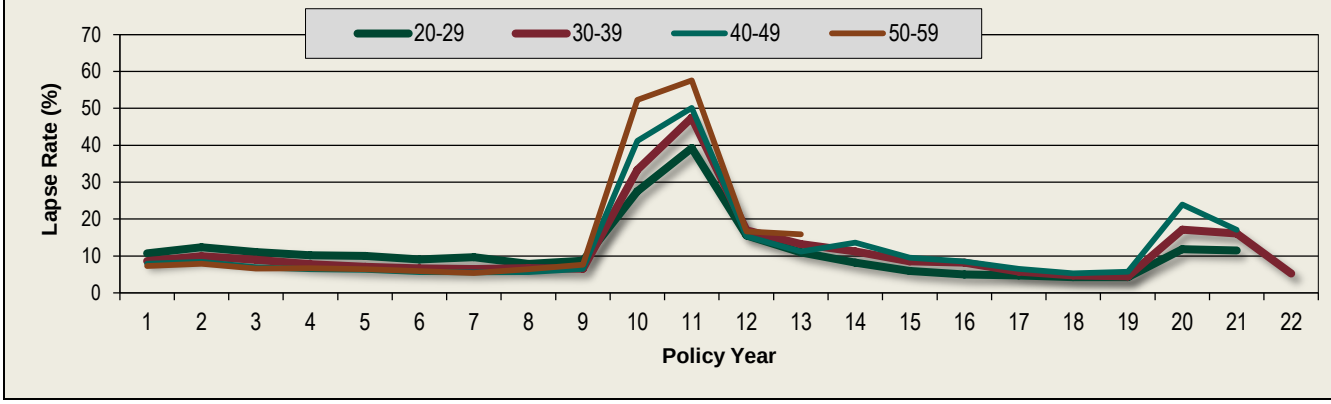


**Figure 37 —**
**15-Year Level Premium Term Policy Lapse Rates by Issue Age Cohort**

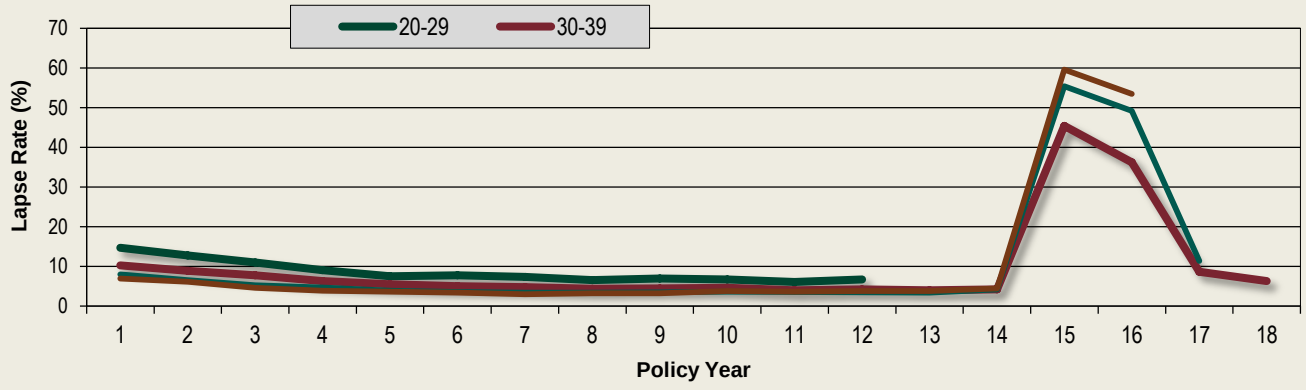



**Figure 38 —**
**15-Year Level Premium Term Face Amount Lapse Rates by Issue Age Cohort**

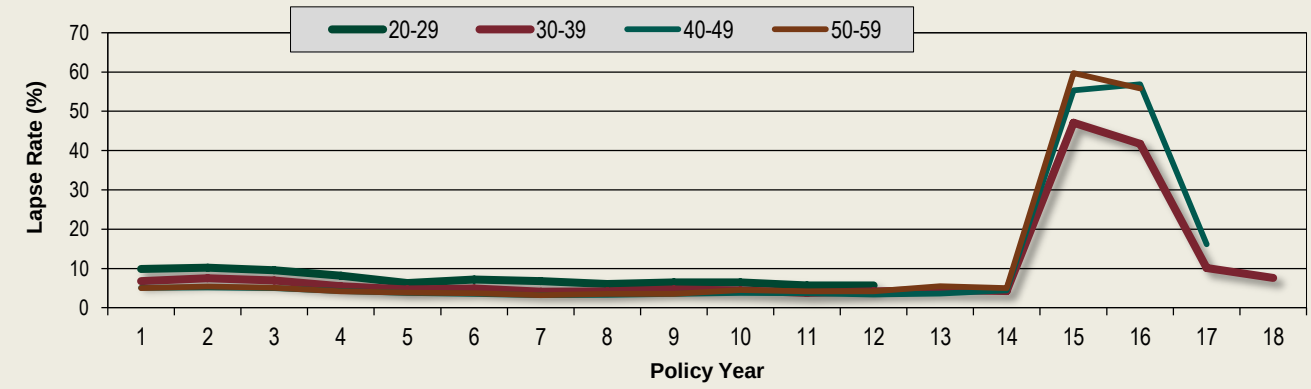



**Figure 39 —**
**20-Year Level Premium Term Policy Lapse Rates by Issue Age Cohort**

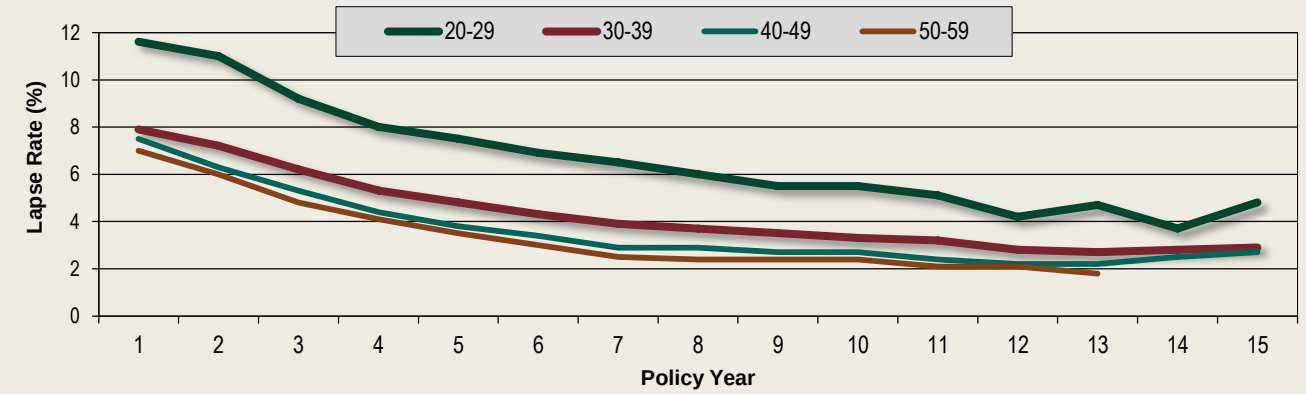
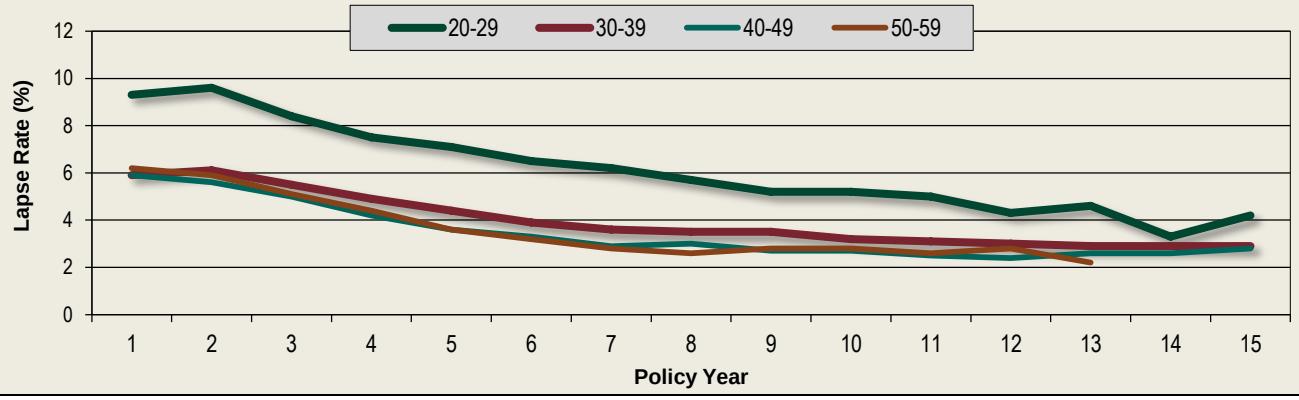


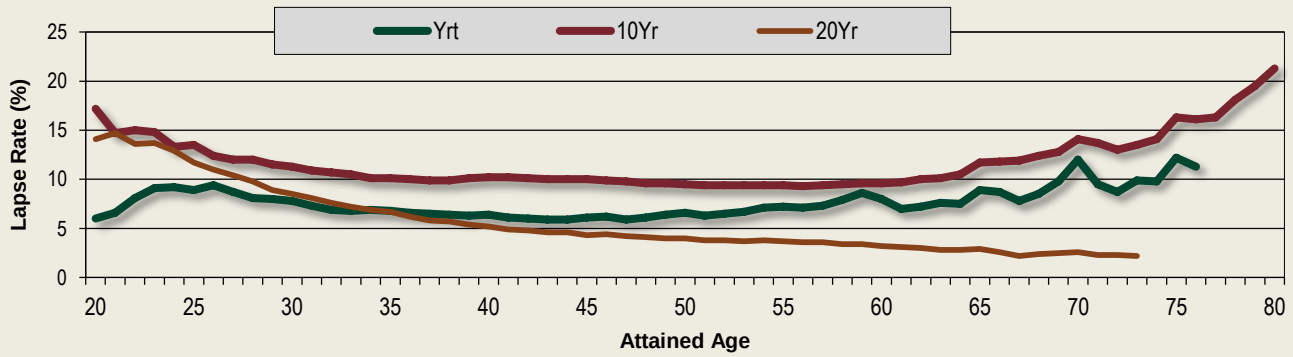
**Figure 40 —**
**20-Year Level Premium Term Face Amount Lapse Rates by Issue Age Cohort**




## Attained Age

Figure 41 shows lapse rates at different attained ages by various term plans. Twenty-year level premium term plans exhibit lower rates of lapsation than other term products after attained age 35. Only YRT shows a material increase in lapse rates around retirement ages, similar to whole life experience (Figure 13).

**Figure 41 —**
**Term Plans Policy Lapse Rates by Attained Age**



## Premium Payment Mode

The distribution of policies by premium payment mode showed little change from the 2005–2007 study. Monthly premium payment mode continues to dominate; annual mode showed some slight increases. Table 16 provides exposure and average face amount exposure data by plan for each premium payment mode.

**Table 16 —**
**Term Insurance Policy Exposure by Premium Mode**

| | Average Face Amount Exposed | | | | Percent of Policy Exposure | | | |
|---|---|---|---|---|---|---|---|---|
| Premium Payment Mode | YRT | 10 Year LPT | 15 Year LPT | 20 Year LPT | YRT | 10 Year LPT | 15 Year LPT | 20 Year LPT |
| Annual | $333,000 | $897,000 | $781,000 | $738,000 | 19% | 30% | 38% | 25% |
| Semi-Annual | $280,000 | $549,000 | $648,000 | $531,000 | 2% | 6% | 3% | 5% |
| Quarterly | $357,000 | $475,000 | $426,000 | $485,000 | 8% | 19% | 24% | 15% |
| Monthly | $284,000 | $382,000 | $330,000 | $425,000 | 71% | 45% | 59% | 55% |

Similar to permanent insurance experience, quarterly-pay policies exhibit the highest lapse rates, while monthly-pay policies exhibit the lowest lapse rates (Figure 42). This trend is also seen at the plan level (Figures 43 to 46).

**Figure 42 —**
**Term Plans Policy Lapse Rates by Premium Payment Mode**

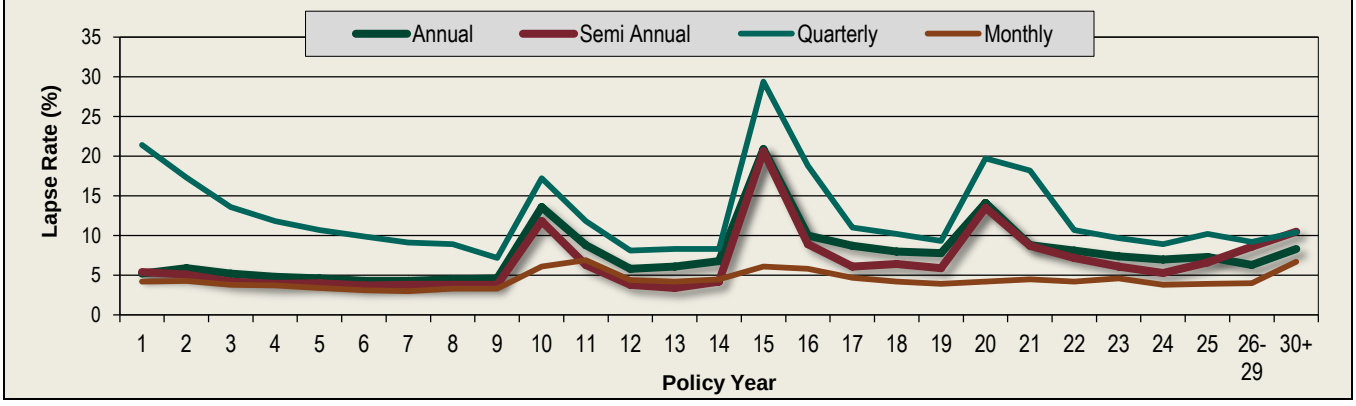


**Figure 43 —**
**YRT Policy Lapse Rates by Premium Payment Mode**

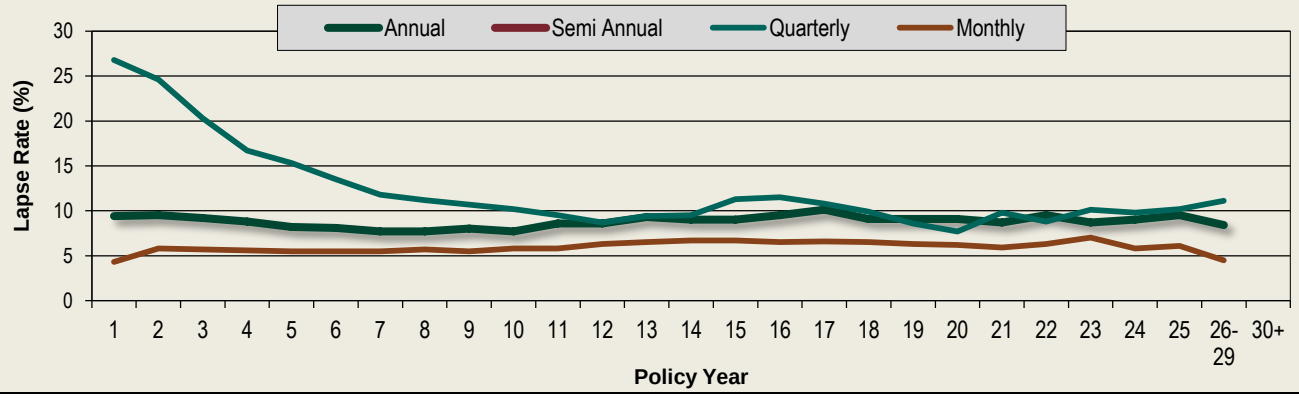



**Figure 44 —**
**10-Year Level Premium Term Policy Lapse Rates by Premium Payment Mode**

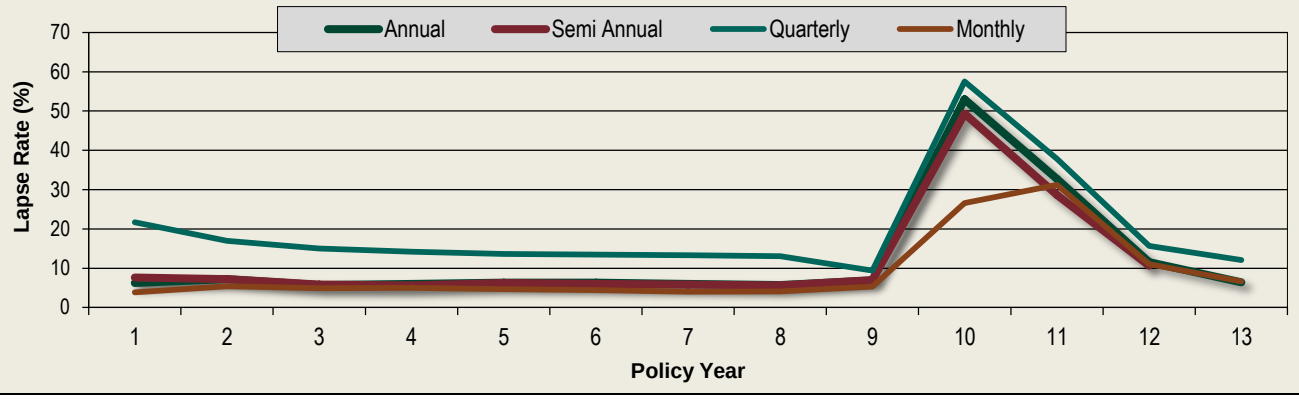



**Figure 45 —**
**15-Year Level Premium Term Policy Lapse Rates by Premium Payment Mode**

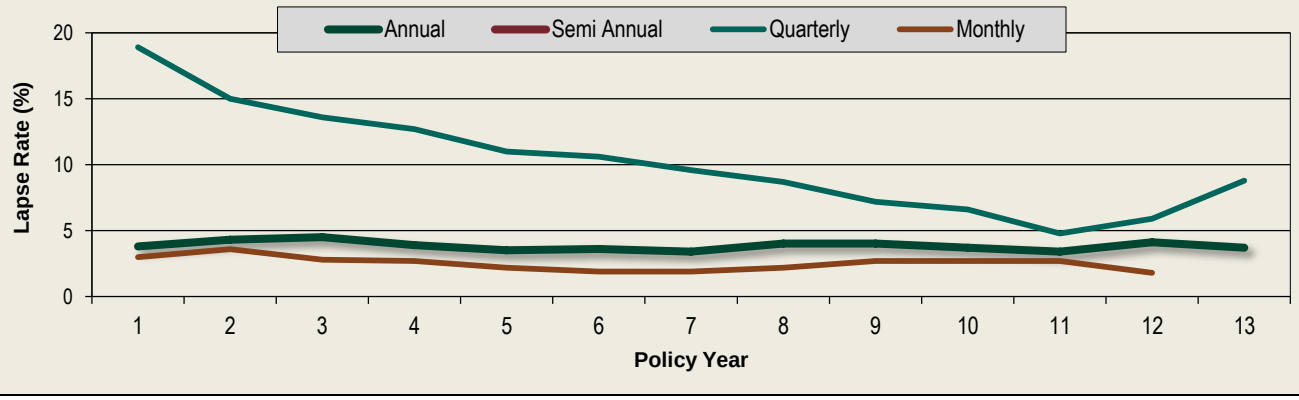
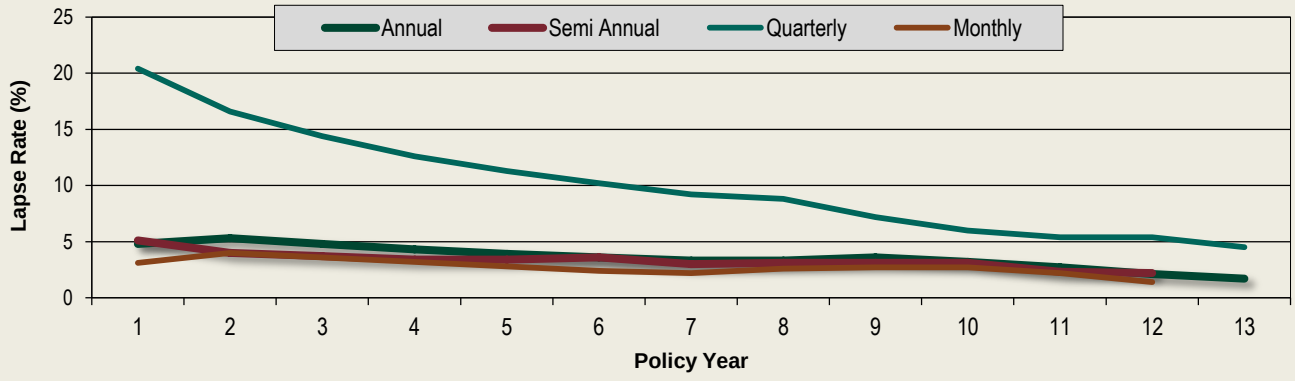


**Figure 46 —**
**20-Year Level Premium Term Policy Lapse Rates by Premium Payment Mode**



## Risk Class

The distribution of policies by risk class remained similar to the 2005–2007 study, with a fairly even split between standard and preferred risk class policies. The average face amount exposed for preferred risk class policies continued to be significantly higher than the average face amount exposed for standard risk and substandard class policies (Table 17).

**Table 17 —**
**Term Insurance Policy Exposure by Risk Class**

| Risk Class | Average Face Amount Exposed | Percent of Policy Exposure |
|---|---|---|
| Preferred | $431,000 | 44% |
| Standard | $228,000 | 51% |
| Substandard | $286,000 | 5% |

Term policies classified as falling within standard and substandard risk classes at issue continue to have higher lapse rates than the preferred risk class during the early policy years (Figures 47 and 48). This trend reverses with a spike in policy years 10, 11, and 15 due to the shock lapse rate from 10-year and 15-year level premium term.

**Figure 47 —**
**Term Insurance Policy Lapse Rates by Risk Class**

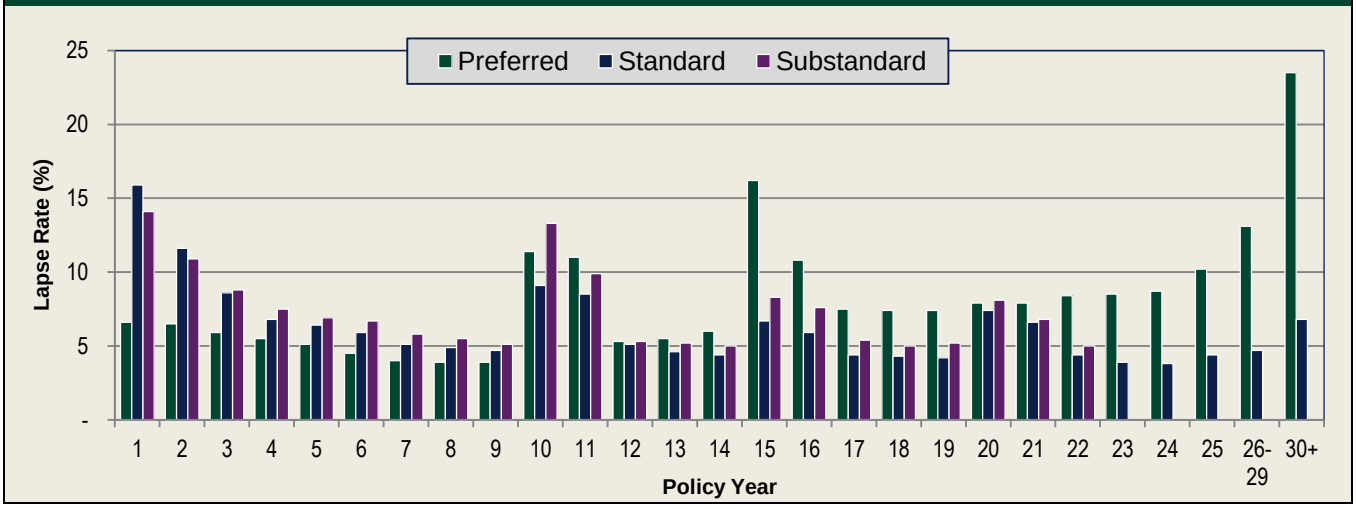
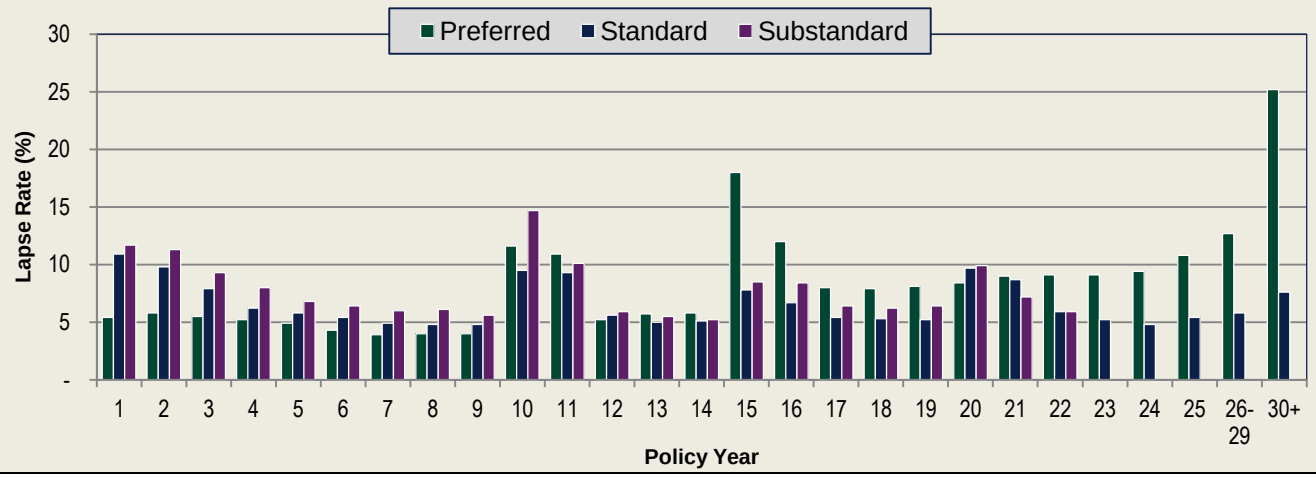


**Figure 48 —**
**Term Insurance Face Amount Lapse Rates by Risk Class**



## Smoking Status

The distribution of policies by smoking status has remained much the same over the past studies, except YRT had a slight increase in smokers. Average face amount exposed increased for 10- and 20-year level premium term plans for both non-smoker and smoker statuses. Meanwhile, YRT plans have seen a slight decrease (Table 18).

**Table 18 —**
**Term Insurance Policy Exposure by Smoking Status**

| | Average Face Amount Exposed | | | Percent of Policy Exposure | | |
|---|---|---|---|---|---|---|
| | YRT | 10-Year LPT | 20-Year LPT | YRT | 10-Year LPT | 20-Year LPT |
| Non-smokers | $231,000 | $421,000 | $425,000 | 84% | 88% | 93% |
| Smokers | $123,000 | $240,000 | $243,000 | 16% | 12% | 7% |

Smokers lapse more often than non-smokers in the early policy years (Figure 49). Consistent with YRT, 10- and 20-year level premium term plans also exhibit similar trends with smoker lapse rates dropping below non-smoker rates shortly after the shock lapse (Figures 50 and 51). Face amount lapse rates start lower than policy lapse rates at duration one but become similar to and then exceed policy lapse rates at later durations.

**Figure 49 —**
**YRT Lapse Rates by Smoking Status**

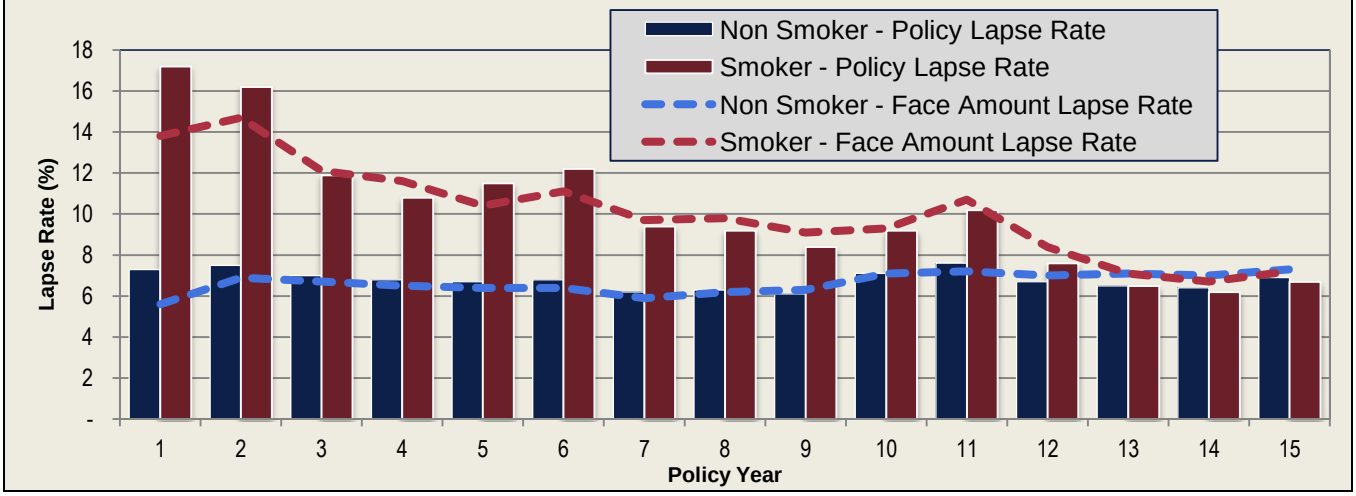


**Figure 50 —**
**10-Year Level Premium Term Lapse Rates by Smoking Status**

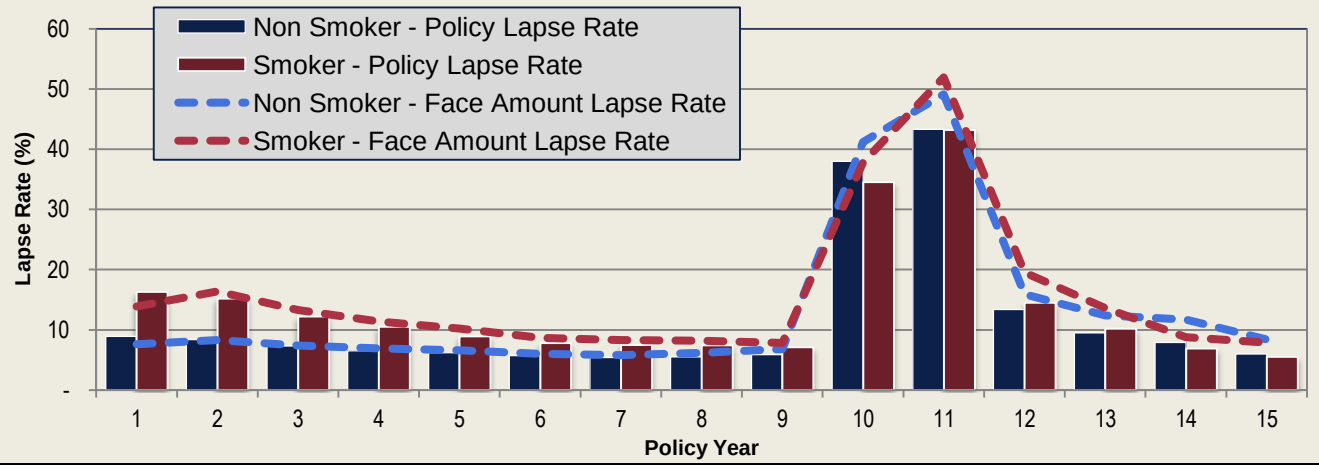
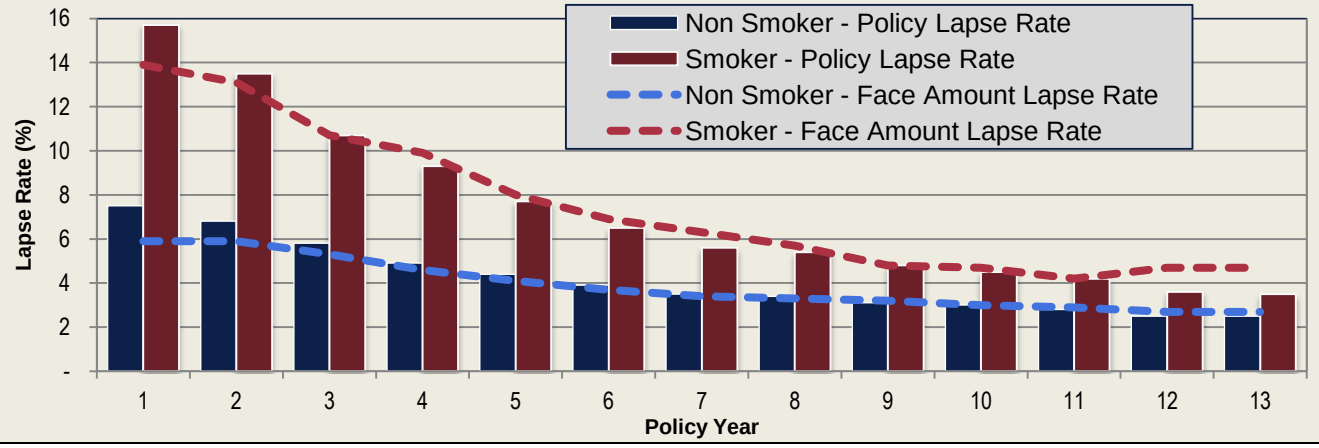



**Figure 51 —**
**20-Year Level Premium Term Lapse Rates by Smoking Status**



## Underwriting Method

The exposure of fully underwritten policies has decreased dramatically over the 2005–2007 study. A large part of this change is caused by a different mix of companies. Table 19 breaks down exposure and average face amount exposed by term plans and underwriting method.

**Table 19 —**
**Term Insurance Policy Exposure by Underwriting Method**

| | Average Face Amount Exposed | | | Percent of Policy Exposure | | |
|---|---|---|---|---|---|---|
| **Underwriting Method** | **YRT** | **10-Year LPT** | **20-Year LPT** | **YRT** | **10-Year LPT** | **20-Year LPT** |
| Full Medical | $812,000 | $1,391,000 | $934,000 | 6% | 7% | 6% |
| Paramedical | $328,000 | $364,000 | $406,000 | 42% | 78% | 81% |
| Non Medical | $92,000 | $157,000 | $207,000 | 52% | 15% | 13% |

Lapse experience by underwriting method varies by term plan (Figures 52 to 57). Paramedical underwritten policies exhibit higher rates of lapsation for most policy years on a policy basis for YRT plans. However, on a face amount basis, non-medical has the higher lapse rates during the first five policy years. For level premium term plans, non-medically underwritten policies exhibit higher early policy year lapse rates, but have lapse rates that fall below those of fully medically underwritten policies after the shock lapse.

**Figure 52 —**
**YRT Policy Lapse Rates by Underwriting Method**

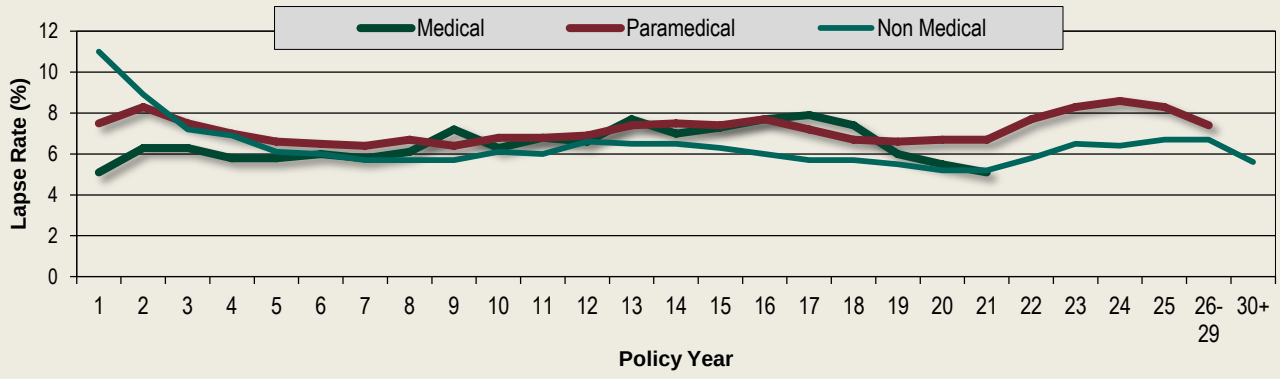


**Figure 53 —**
**YRT Face Amount Lapse Rates by Underwriting Method**

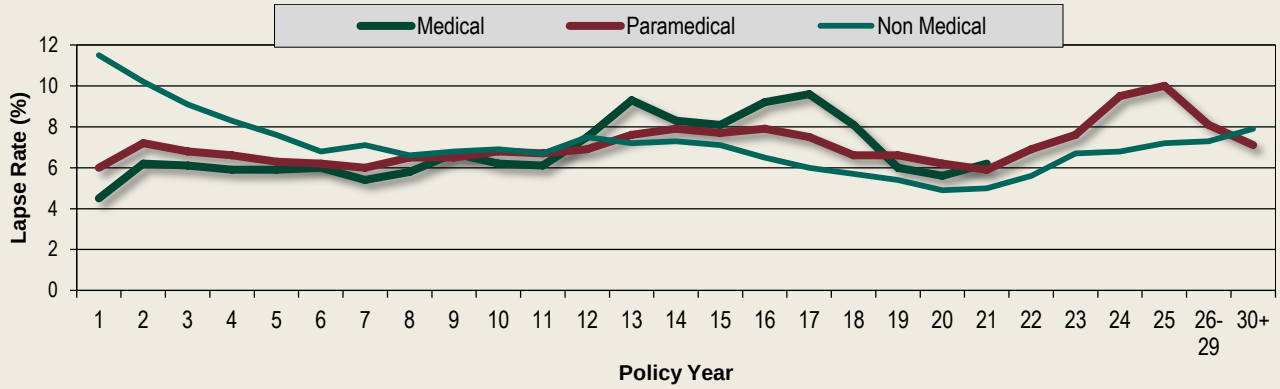



**Figure 54 —**
**10-Year Level Premium Term Policy Lapse Rates by Underwriting Method**

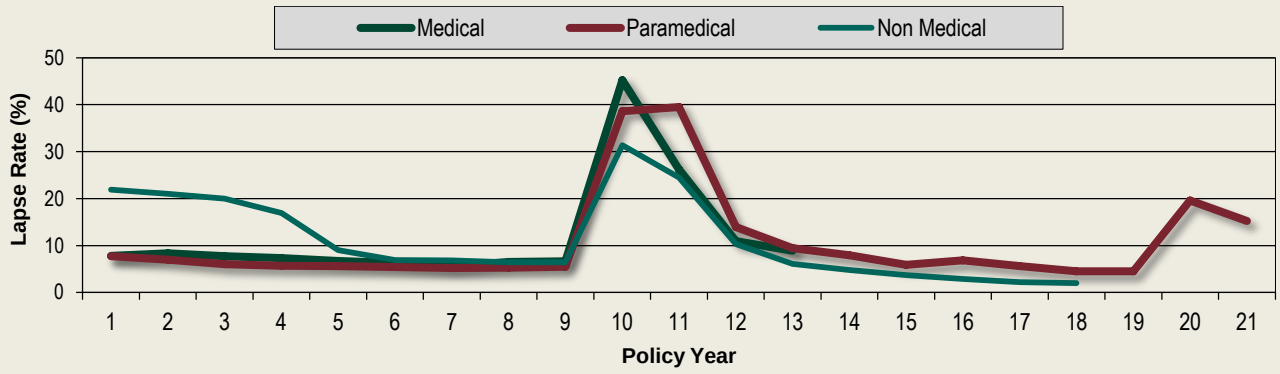



**Figure 55 —**
**10-Year Level Premium Term Face Amount Lapse Rates by Underwriting Method**

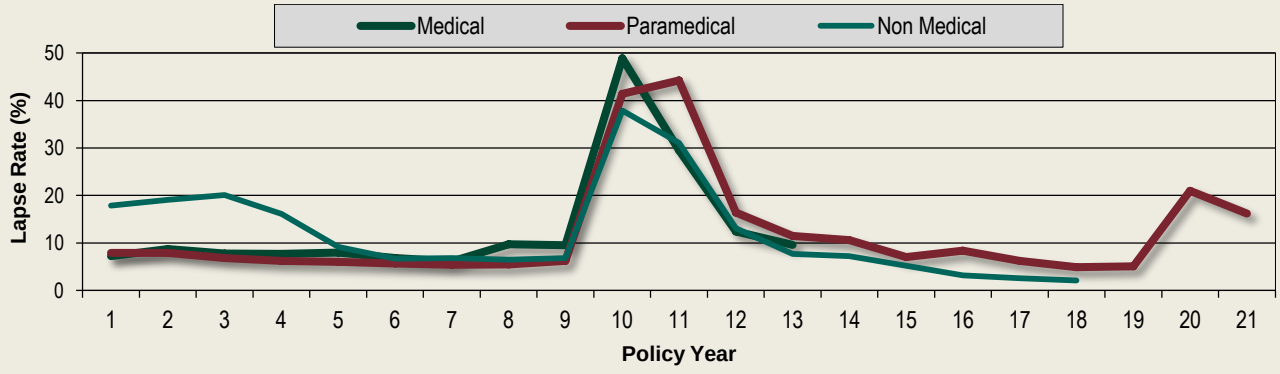


**Figure 56 —**
**20-Year Level Premium Term Policy Lapse Rates by Underwriting Method**

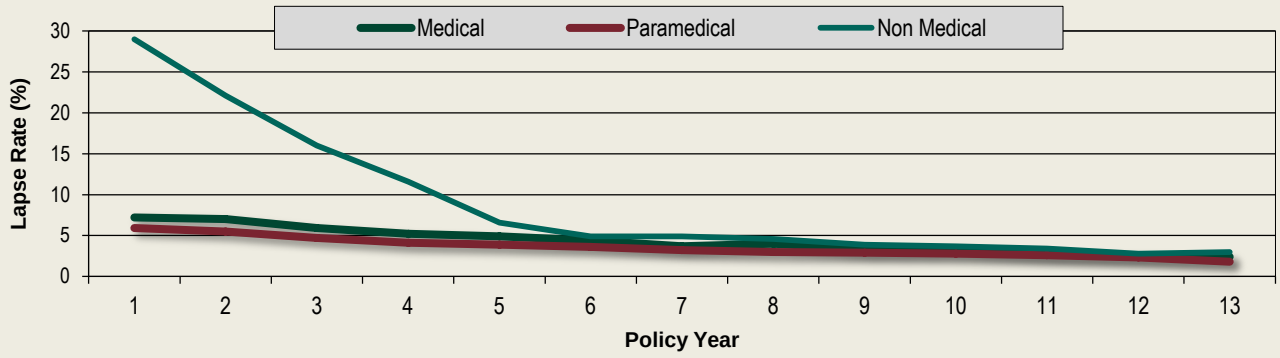
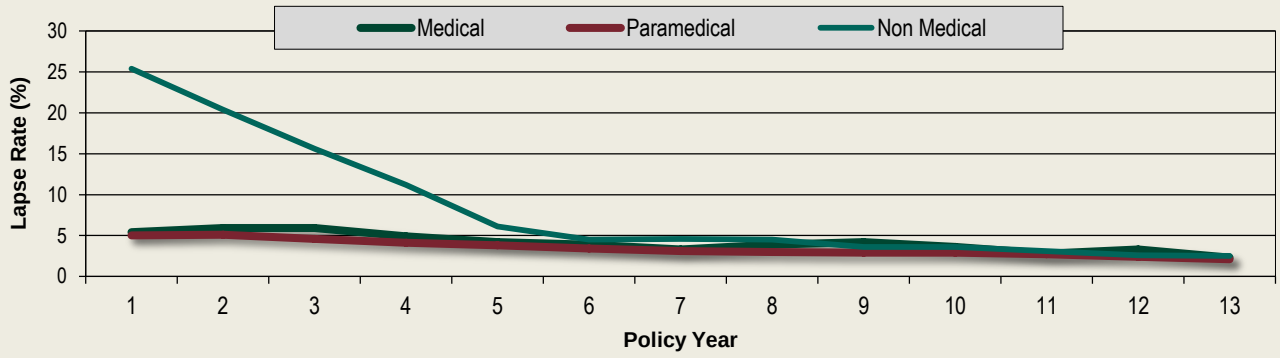



**Figure 57 —**
**20-Year Level Premium Term Face Amount Lapse Rates by Underwriting Method**

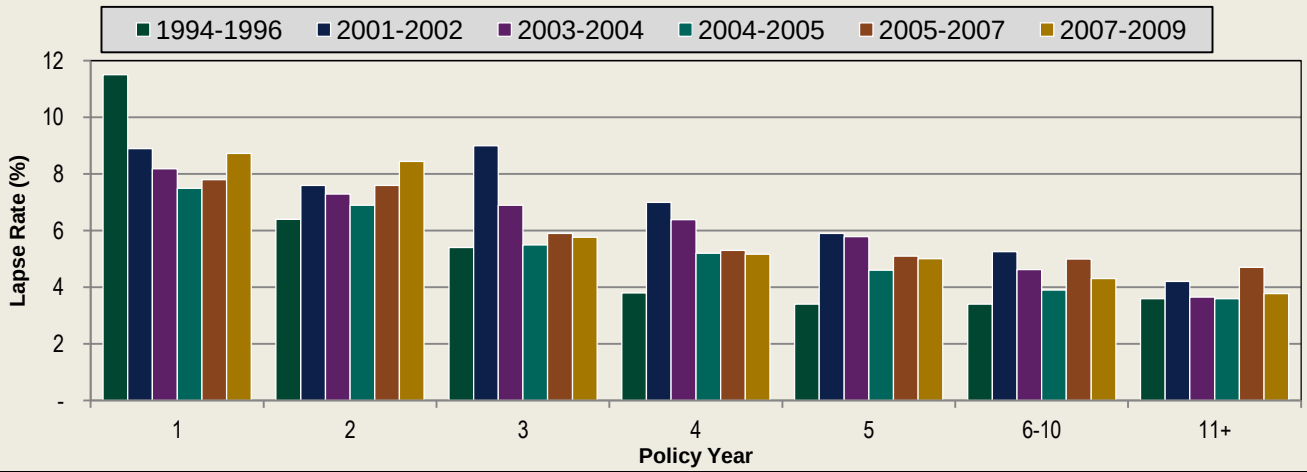


# Universal Life

Universal life insurance data shown in this section is based on data from 25 contributors. While the underlying data consists mostly of traditional current assumption universal life products, a portion of the younger policies covered by this study were issued with no-lapse guarantees or with an equity index feature. The portion of policies with lifetime no-lapse guarantees or equity index, though small, continues to increase due to their popularity in the marketplace over the past several years.

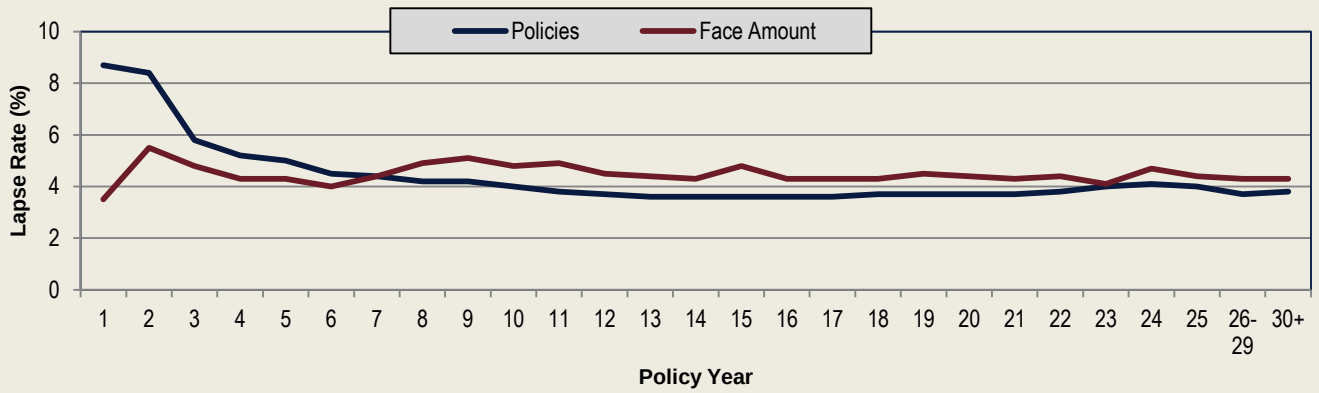
Trends in universal life lapse rates are slightly lower than the prior study. The overall 2007–2009 experience period lapse rates decreased slightly to 4.5% on a policy and face amount basis from 4.6% in the 2005–2007 study. The current experience patterns exhibits similar trends to the prior study (Figure 58).

**Figure 58 —**
**Trends in Universal Life Insurance Policy Lapse Rates**



As with the prior study, overall lapse rates are equal on a policy and face amount basis, lapse rates are lower on a face amount basis than on a policy basis for the early policy years (Figure 59). After policy year eight, lapse rates on policies with higher face amounts increase slightly.

**Figure 59 —**
**Universal Life Insurance Lapse Rates**




The distribution of policies and average face amount exposed by policy size band has changed minimally over the past studies. Table 20 summarizes the distribution of policies and average face amount exposed in the current study. Both the distribution of policies and the average face amounts are very similar to the prior study. The one exception to this is the average face amount exposed for policies with higher face amounts over $500,000. The average face amount for this block increased about 20%. This was likely due to the mix of contributing carriers, as well as the high-end market for larger face amount universal life policies.

**Table 20 —**
**Universal Life Exposure by Policy Size Group**

| Policy Size | Average Face Amount Exposed | Percent of Policy Exposure |
|---|---|---|
| Under $25,000 | $15,000 | 7% |
| $25,000–$49,999 | $30,000 | 17% |
| $50,000–$99,999 | $56,000 | 42% |
| $100,000–$299,999 | $136,000 | 28% |
| $300,000–$499,999 | $354,000 | 2% |
| $500,000 and over | $1,683,000 | 4% |

For the current study, UL policies with face amounts between $50,000 and $99,999 exhibit the highest lapse rates in early policy years. This was similar to the results of the 2005–2007 and 2003–2004 experience periods, but different from term or whole life experience in this study where the lowest face amount groups have the highest lapse rate.

Somewhat consistent with prior studies, in early policy years, lapse rates for universal life policies are lower for larger policies than smaller sized policies. Lapse rates for universal life policies with face amounts of $50,000 and over tend to decrease as the size of the policy increases during the first four policy years (Figure 60). Policies with the largest face amounts exhibit lower lapse rates in early policy years and level off between 4% and 6% in later years. This trend was most visible in the current study for policies with face amounts of $500,000 and greater (Figure 61).

**Figure 60 —**
**Universal Life Insurance Policy Lapse Rates by Policy Size — Policy Year 1 to 5**

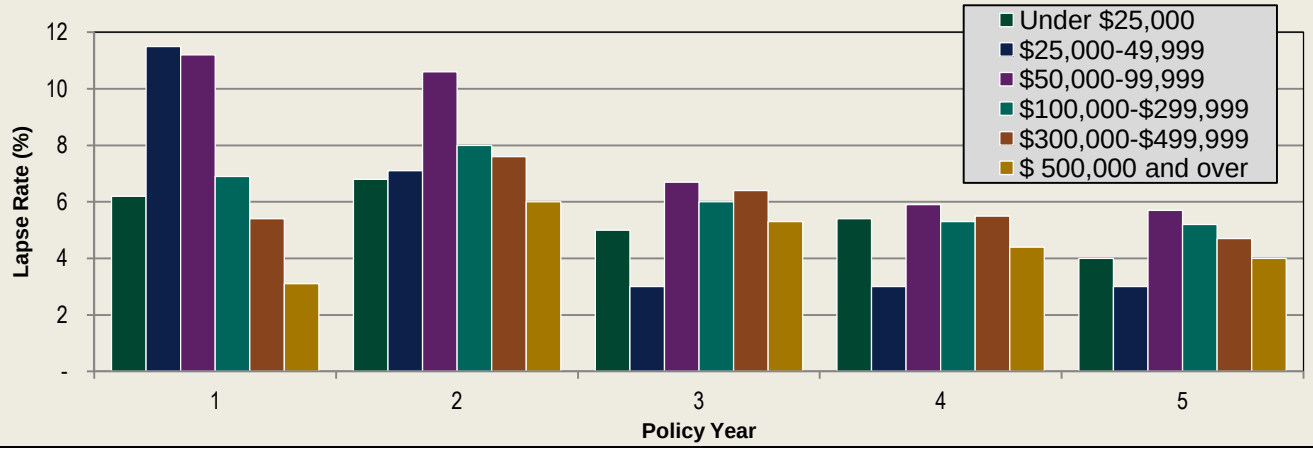
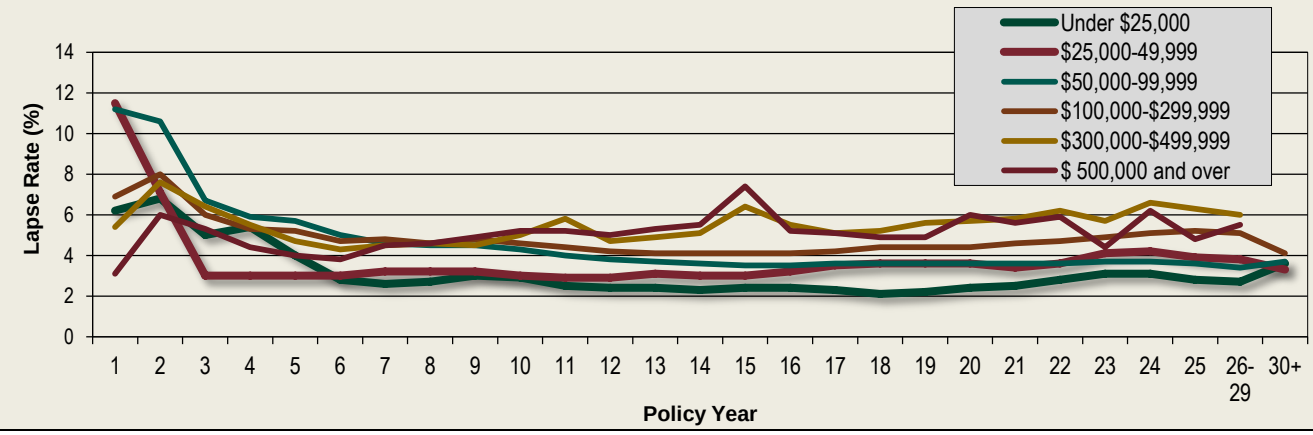



**Figure 61 —**
**Universal Life Insurance Policy Lapse Rates by Policy Size**

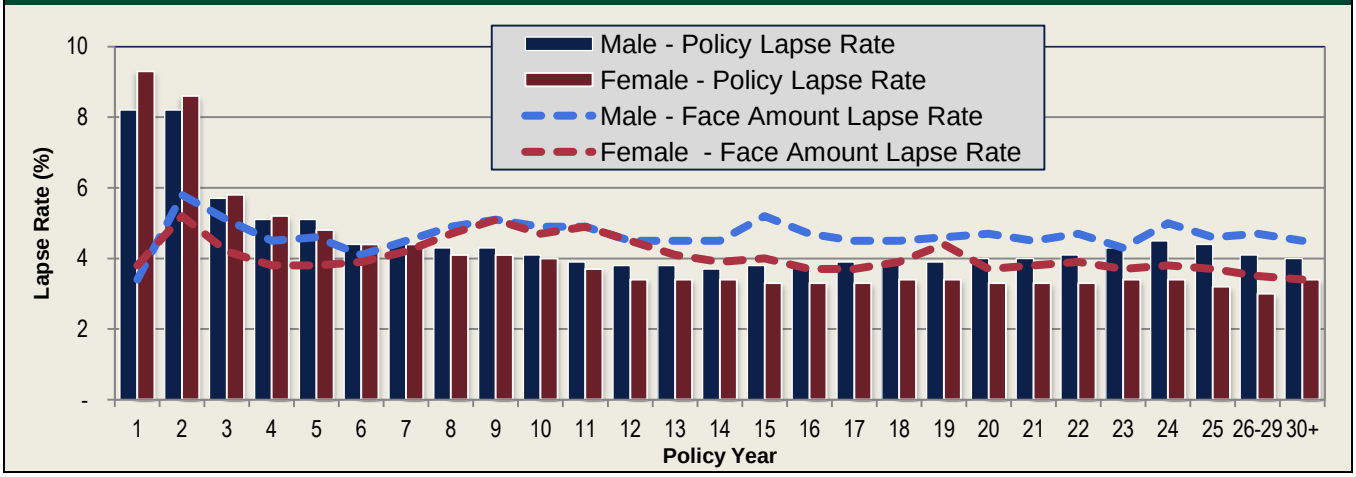


## Gender

For the current study, the distribution of UL policies is virtually unchanged at 56% for male and 44% for female. The 2005–2007 study was 57% male and 43% female. The average face amount for males was $158,000, up from $137,000 in the 2005–2007, study and also up from prior studies. The average face amount for females was also up $134,000 from $111,000. Average face amounts for males and females are slowly converging from a difference of $31,000 in the 2004–2005 study to $24,000 in this study.

Similar to whole life and longer period level guarantee premium term experience, female universal life policyholders have higher rates of lapsation in the early policy years (Figure 62). However, the difference was short-lived. After policy year four, male universal life policyholders have higher rates of lapsation. The same trend was visible for face amount lapse rates, but the crossover occurs in policy year two rather than policy year five.

**Figure 62 —**
**Universal Life Lapse Rates by Gender**



## Issue Age

The distribution of UL policies by issue age cohorts and average face amount exposed for universal life is shown in Table 21.

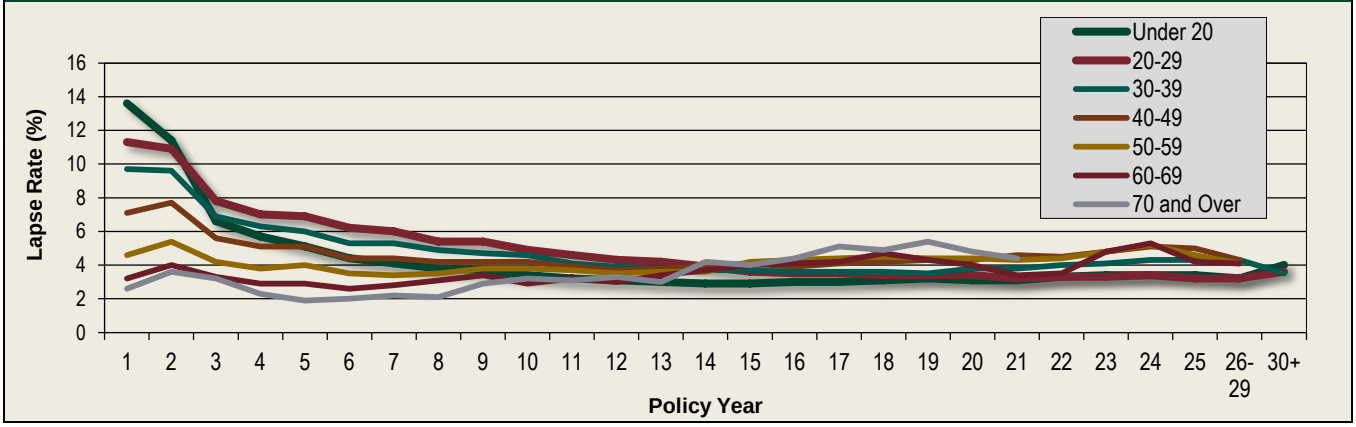
**Table 21 —**
**Universal Life Policy Exposure by Issue Age Cohort**

| Issue Age | Average Face Amount Exposed | Percent of Policy Exposure |
|---|---|---|
| Under 20 | $45,000 | 22% |
| 20–29 | $87,000 | 18% |
| 30–39 | $126,000 | 24% |
| 40–49 | $178,000 | 18% |
| 50–59 | $247,000 | 11% |
| 60–69 | $320,000 | 5% |
| 70 and older | $746,000 | 2% |
| **Total** | **$147,000** | **100%** |

Much like the experience of whole life products, universal life insurance lapse rates generally decrease with increasing age at issue during the early policy years (Figure 63). However, by policy year 15, the trend begins to change with lapse rates for older issue age policies increasing, possibly due to insufficient funding, need for cash value, or exchange to a secondary death benefit guarantee product. Unreported deaths are also likely to slide through as lapses.

The exception to this continues to be when policyholders are under age 30 at issue. These policies exhibit high lapse rates for policy years one and two, but their lapse rates quickly decline. By year 14, policies with issue ages under 20 have the lowest lapse rates of all cohorts.

**Figure 63 —**
**Universal Life Insurance Policy Lapse Rates by Issue Age Cohort**



## Attained Age

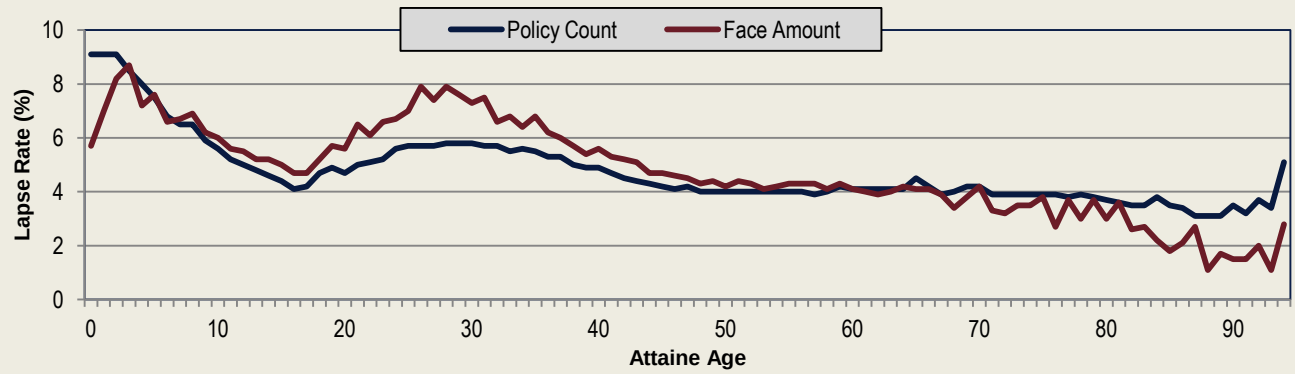
The distribution of policies by attained age cohort and average face amount exposed for universal life products are shown in Table 22. The average face amount exposed for younger attained ages was nearly unchanged from the 2005–2007 study. The average face amount for the middle to older attained ages increased, more than offsetting the decrease seen for these attained ages in 2005–2007.

**Table 22 —**
**Universal Life Policy Exposure by Attained Age Cohort**

| Attained Age | Average Face Amount Exposed | Percent of Policy Exposure |
|---|---|---|
| Under 20 | $48,000 | 10% |
| 20–29 | $60,000 | 10% |
| 30–39 | $110,000 | 12% |
| 40–49 | $148,000 | 19% |
| 50–59 | $166,000 | 23% |
| 60–69 | $186,000 | 16% |
| 70 and older | $278,000 | 10% |
| **Total** | **$147,000** | **100%** |

As with prior studies, lapse rates by attained age generally decrease significantly, with age increasing after age 30 (Figure 64). At older attained ages, policy lapse rates hover around 4% to attained age 80, and then decrease toward 3%. The trend for face amount lapse rates has not been as consistent from study to study. In the 2004–2005 study, spikes in face amount lapse rates occurred for various attained ages. In the 2005–2007 study, face amount lapse rates hovered around 2% after attained age 80. For the current study, face amount lapse rates approaching attained age 80 are about 3.5%, and then decrease toward 1.5%.

**Figure 64 —**
**Universal Life Insurance Lapse Rates by Attained Age**



## Risk Class

For both the current and prior studies, most UL policies are in the standard risk class (Table 23). Average face amount exposed increased for preferred risk class policies, but decreased for the standard and substandard risk class policies compared to the prior study. Preferred risk policies continue to have the largest average face amount, about three times the size of standard policies.

**Table 23 —**
**Universal Life Policy Exposure by Risk Class**

| Risk Class | Average Face Amount Exposed | Percent of Policy Exposure |
|---|---|---|
| Preferred | $370,000 | 19% |
| Standard | $117,000 | 77% |
| Substandard | $208,000 | 4% |
| **Total** | **$169,000** | **100%** |

In addition to the distribution of policies by risk class, another trend remains the same from study to study. In the first seven policy years, preferred risk universal life policies exhibit lower lapse rates than standard and substandard risk policies. But in later policy years, lapse rates for preferred risk policies begin to increase and remain at a higher level compared to policies with standard risk (Figures 65 and 66).

**Figure 65 —**
**Universal Life Policy Lapse Rates by Risk Class**

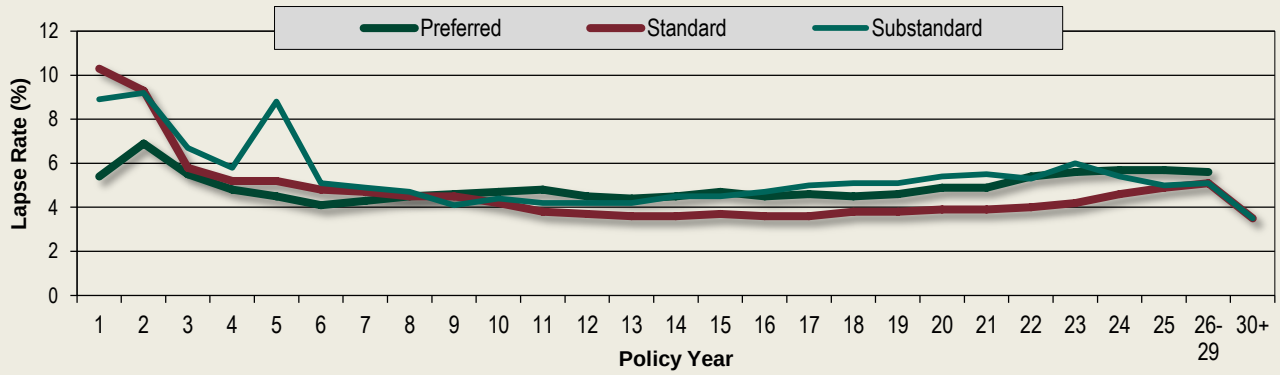
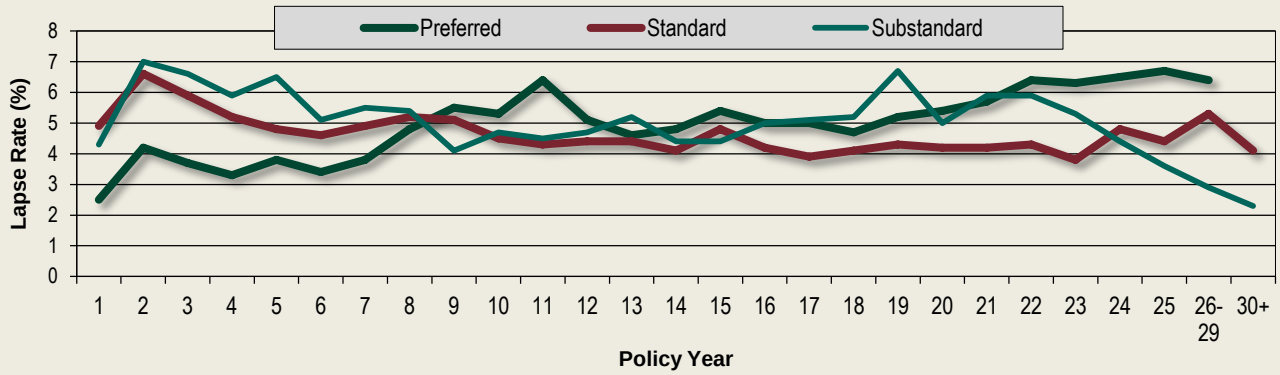


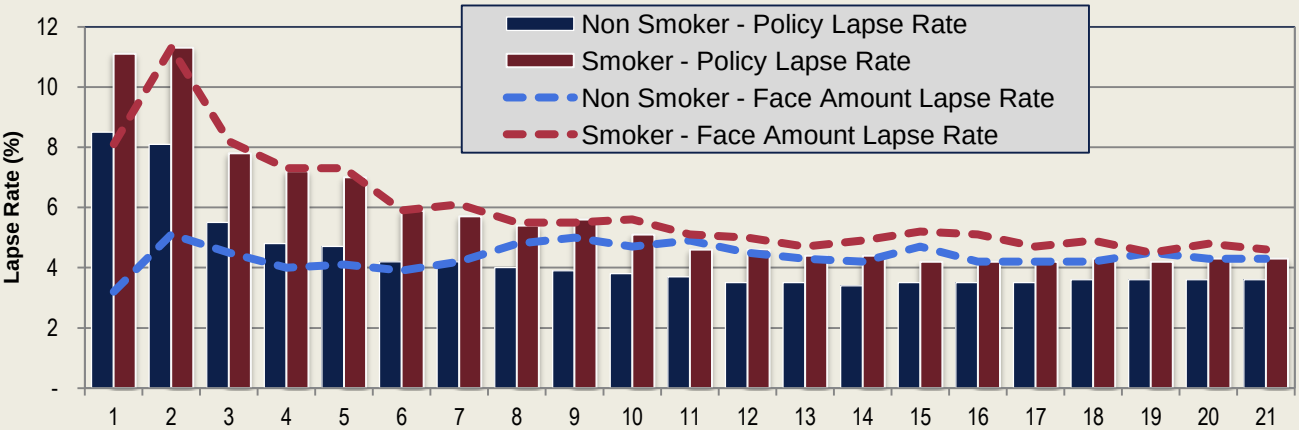
Figure 66 —
Universal Life Face Amount Lapse Rates by Risk Class




## Smoking Status

The universal life policy exposure base was 85% non-smoker. Consistent with prior studies, as well as other products, smokers exhibit higher rates of lapse than non-smokers at all durations, with greatest difference seen in early durations (Figures 67).

Figure 67 —
Universal Life Lapse Rates by Smoking Status

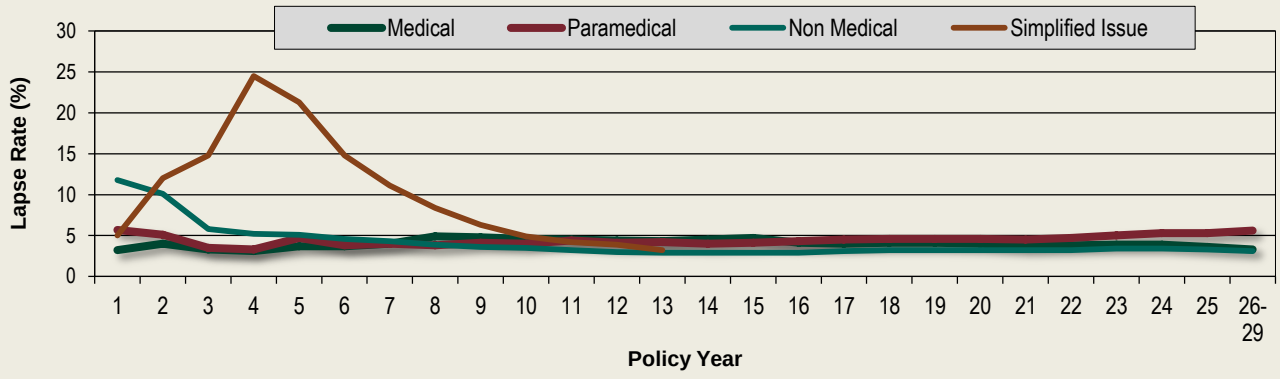



## Underwriting Method

The policy exposure underlying the universal life lapse results by underwriting method consists of 72% non-medical, 19 % paramedical, 7 % medical, and 2 % simplified issue. This was a significant shift from medically to non-medically underwritten policies due to the mix of contributing companies and the blocks of business submitted. In the early policy years, policies with full medical or paramedical underwriting exhibit lower rates of

lapse (Figure 68). However, after policy year six, lapse rates of policies with non-medical underwriting continue to decrease to about 3%, while lapse rates of policies with more significant underwriting remain around 4–5.5%.

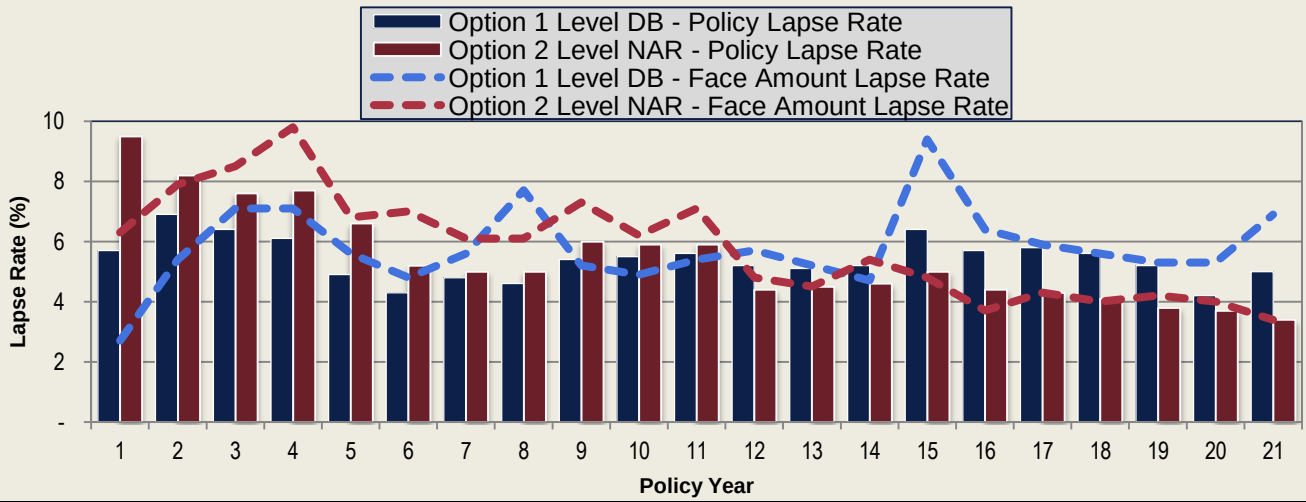
**Figure 68 —**
**Universal Life Policy Lapse Rates by Underwriting Method**




## Death Benefit Option

The policy exposure underlying the universal life lapse results by death benefit option consists of 76% level death benefit and 24% level net amount at risk. Consistent with prior studies, policies with level net amount at risk exhibit higher lapse rates in early policy years, compared to policies with level death benefit, possibly due to higher funding required to keep level net amount at risk policies inforce. However, this trend reverses in policy year 12 for policy lapse rates and year eight on a face amount basis (Figure 69).

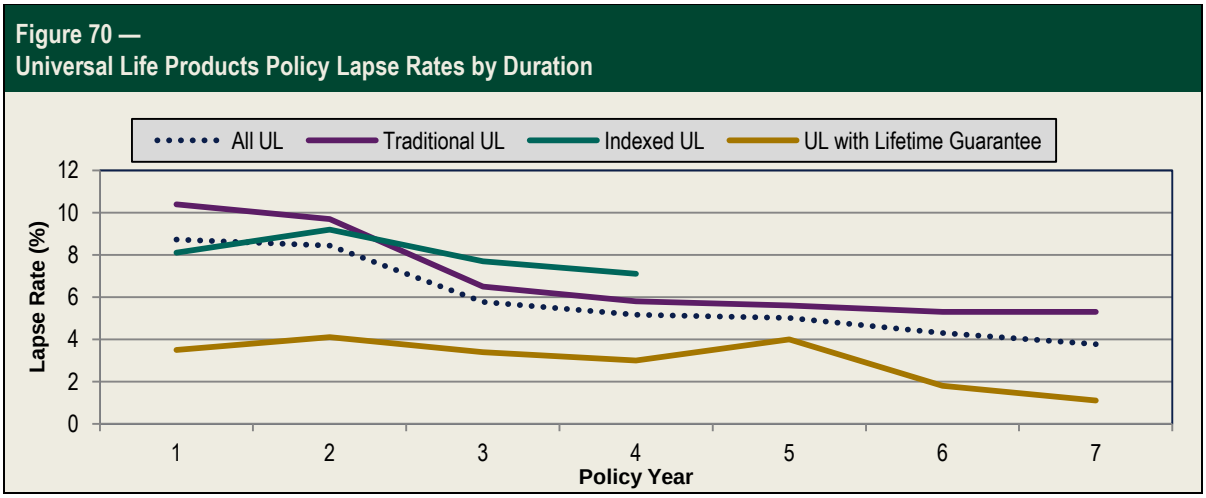
**Figure 69 —**
**Universal Life Lapse Rates by Death Benefit Option**



## Universal Life with Death Benefit Guarantees and Indexed UL

As mentioned at the beginning of this section, the universal life data consists mostly of traditional current assumption universal life products and only a portion of the younger policies were issued with no-lapse death benefit guarantees or with an equity index feature. Of the 25 contributing companies, 20 were able provide additional product information, which allowed us to identify indexed universal life (IUL) and policies with the lifetime death benefit guarantee provision. Twelve contributors provided UL with lifetime guarantee data, and there were five contributors for IUL. A portion within traditional UL and IUL consist of products with lengthy death benefit guarantees. However, products with lifetime guarantees were grouped together and UL without lifetime guarantees were separated into traditional and indexed UL in this section. Figure 70 shows the policy lapse rates for the first seven policy years, comparing three segments in the UL space with all UL data from the current study.

Figure 70 —
Universal Life Products Policy Lapse Rates by Duration




Overall policy lapse rates for UL with lifetime guarantees are lower compared to those without lifetime guarantees. While Figure 70 shows UL with lifetime guarantees with the lowest lapses rate of all UL products, this is not the case for every company. The difference in policy lapse rates, for these products compared to traditional UL, vary widely. For some companies, lapse rates for UL with lifetime guarantees are one-fifth of the lapse rates of traditional UL. Other companies experienced lapse rates 50% higher than traditional UL This variance in lapse rates was probably due to the pricing pressures of the lifetime guarantee market, with less competitive products more likely to experience higher lapse rates in early policy years.

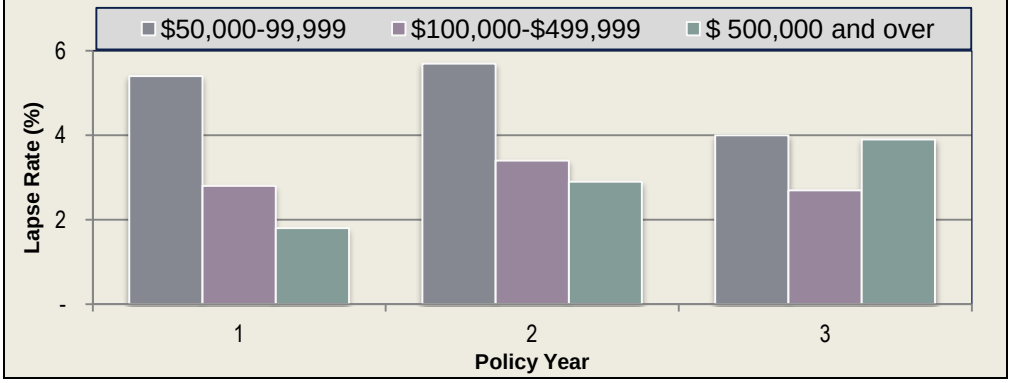
For many companies, UL with lifetime guarantees also have higher average face amounts than traditional UL. Table 24 shows the overall average face amounts for the current study.

**Table 24 —**
**Universal Life Average Face Amounts by Product**

| | Average First Year Face Amount | Average Face Amount |
|---|---|---|
| Traditional UL | $150,000 | $117,000 |
| Indexed UL | $279,000 | $265,000 |
| UL with Lifetime Guarantee | $583,000 | $348,000 |

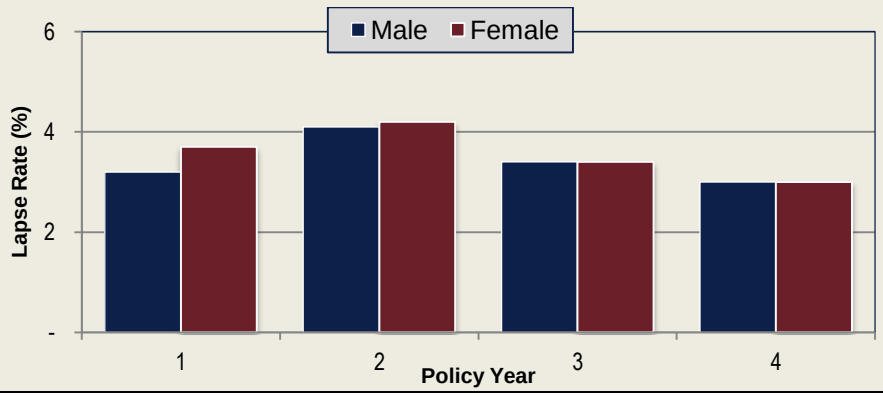
The general trend is that lapse rates for universal life policies are lower for larger policies than smaller sized policies in early policy years. This trend holds true for UL with lifetime guarantees for the first two policy years (Figure 71). Policies with a face amount between $50,000 and $99,999 represent 17% of the policy exposure. Policies with a face amount between $100,000 and $499,999 represent the majority of the policy exposure at 57%. For the 21% grouped into $500,000 and over, 13% of the policy exposure represented policies with a face amount of one million or more. The remaining 5% not consists of policies with a face amount less than $50,000 and is not shown in Figure 71.

**Figure 71 —**
**Universal Life with Lifetime Guarantees Policy Lapse Rates by Policy Size**



On a gender basis, the distribution for UL with lifetime guarantees was very similar to the overall UL data, 54% male to 46% female. The average face amount for male policyholders was $399,000, and for female policyholders was $361,000. Similar to overall UL results, female policyholders have higher lapse rates in the early policy years (Figure 72). However, the difference in lapse rates by gender is very slight for UL with lifetime guarantees, and only seen in the first two policy years.

**Figure 72 —**
**Universal Life with Lifetime Guarantees Policy Lapse Rates by Gender**



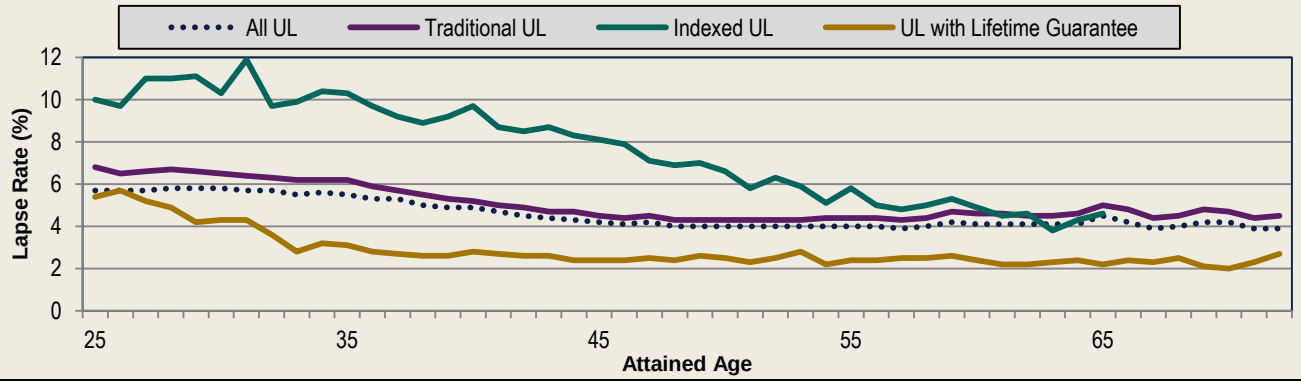

The distribution of policies by attained age cohort and average face amount exposed for indexed UL and UL with lifetime guarantees are shown in Table 25. The age distribution of UL with lifetime guarantees leaned more towards the older ages than IUL (Table 25), and all UL distribution shown in Table 22.

**Table 25 —**
**Universal Life Products Policy Exposure by Attained Age Cohort**

| | UL with Lifetime Guarantees | | Indexed UL | |
|---|---|---|---|---|
| Attained Age | Average Face Amount Exposed | Percent of Policy Exposure | Average Face Amount Exposed | Percent of Policy Exposure |
| 20–29 | $161,000 | 6% | $208,000 | 12% |
| 30–39 | $288,000 | 16% | $296,000 | 21% |
| 40–49 | $357,000 | 23% | $317,000 | 25% |
| 50–59 | $363,000 | 26% | $277,000 | 25% |
| 60–69 | $381,000 | 19% | $240,000 | 13% |
| 70 and older | $597,000 | 10% | $263,000 | 4% |

Lapse rates by attained age for UL products were relatively flat between the ages of 40 and 70, with the exception of indexed universal life products (Figure 73). This is most likely due to the indexed aspect of the product. The index selection and performance, along with participation rates of the product, produces a result closer to variable universal life products than traditional fixed universal life products. The next section discusses the results for variable universal life, and Figure 80 shows variable universal life lapse rates by attained age.

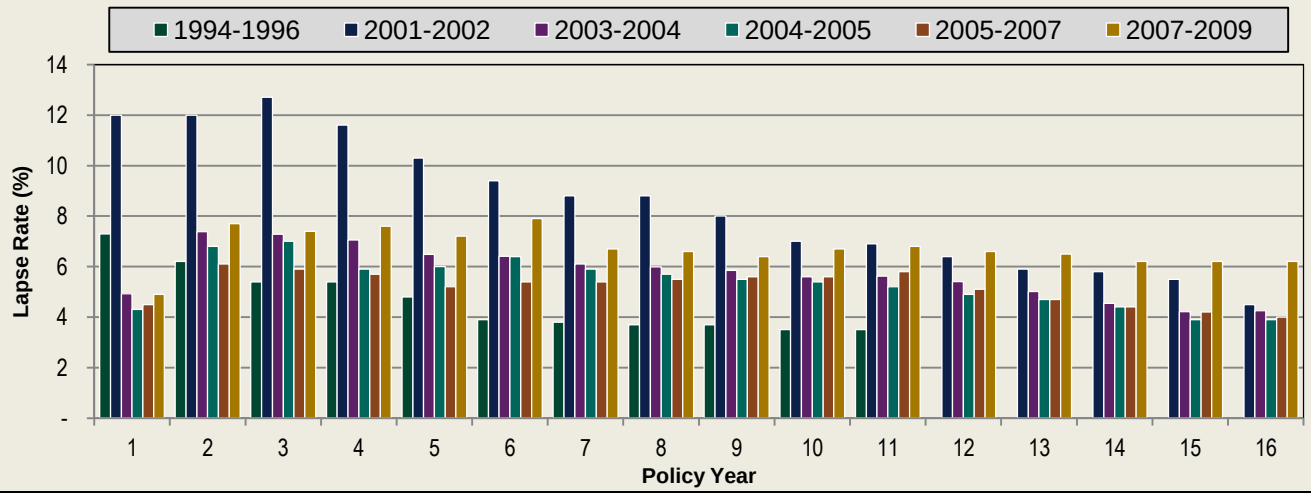
**Figure 73 —**
**Universal Life Products Policy Lapse Rate by Attained Age**



# Variable Universal Life

Overall lapse rates for variable universal life plans increased from the prior study. The overall annual lapse rate on a policy basis was 6.2 % in the current study, up from 4.8% in prior study, and also up from 5.2% in the 2004–2005 study (Figure 74). The poor economy, including the stock market drop in 2008, likely contributed to the increased lapses. On a face amount basis, the overall annual lapse rate was 6.9%, up from 5.0% in prior study, and also up from 5.3% in the 2004–2005 study. While policy lapse rates by year for variable universal life plans generally remain lower than the 2001–2002 lapse rates, they continue to be higher than the levels that were seen in the mid-1990s.

**Figure 74 —**
**Trends in Variable Universal Life Insurance Policy Lapse Rates**




Lapse rates by policy year for variable universal life plans generally exhibit a different trend compared to other permanent products. Consistent with the past three studies, first year policy lapse rates continue to be lower than lapse rates in the second and third year. In the current study, the first year policy lapse rate was lower than lapse rates for policy years two through 21 (Figure 75).

Another difference in variable universal life compared to lapse trends of other permanent products, is the elevated lapse rates in the first ten or more policy years. During this period, lapse trends for other permanent products typically begin to decline.

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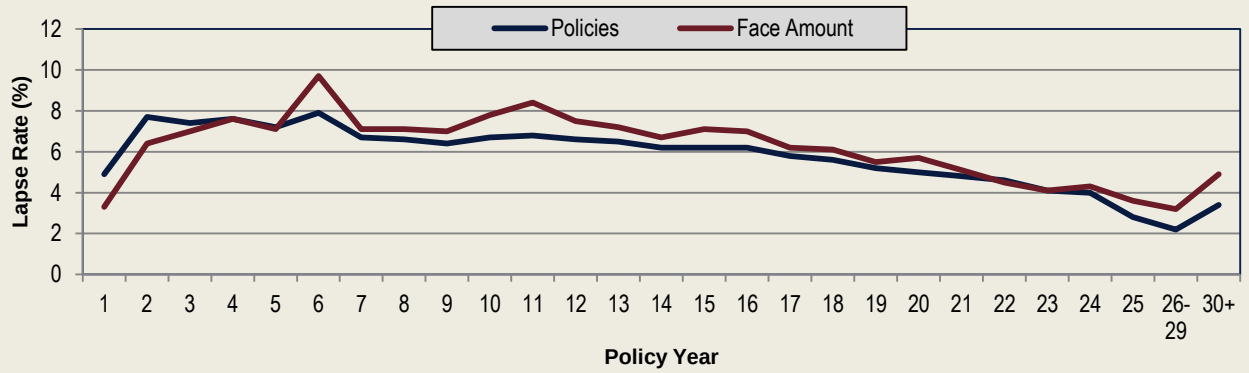
**Figure 75 —**
**Variable Universal Life Insurance Lapse Rates**




The overall average face amount for variable life policies increased significantly from the prior study, reaching $250,000 from the average of $198,000 in the 2005–2007 study. The distribution of variable universal life policies and average face amount exposed by policy size band is shown in Table 26. The majority of UL and VUL policies are between face amounts of $50,000 and $299,999. However, VUL has much lower exposure (6%) under the $50,000 face amount than UL (24%). The average face amounts by policy size band for VUL are very similar to those of UL.

**Table 26 —**
**Variable Universal Life Exposure by Policy Size Group**

| Policy Size | Average Face Amount Exposed | Percent of Policy Exposure |
|---|---|---|
| Under $50,000 | $27,000 | 6% |
| $50,000–$99,999 | $58,000 | 27% |
| $100,000–$299,999 | $131,000 | 51% |
| $300,000–$499,999 | $354,000 | 5% |
| $500,000 and over | $1,125,000 | 11% |

Similar to other products, variable universal life policies with smaller face amounts exhibit higher lapse rates in early policy years (Figure 76). In later years, policy lapse rates tend to increase as the size of the policy increases. This is a change from the 2005–2007 study where larger policies had lower lapse rates. The larger policies are likely more sensitive to the poor stock market performance during the timeframe of the current study (Figure 77).

**Figure 76 —**
**Variable Universal Life Insurance Policy Lapse Rates by Policy Size – Policy Year 1 to 5**

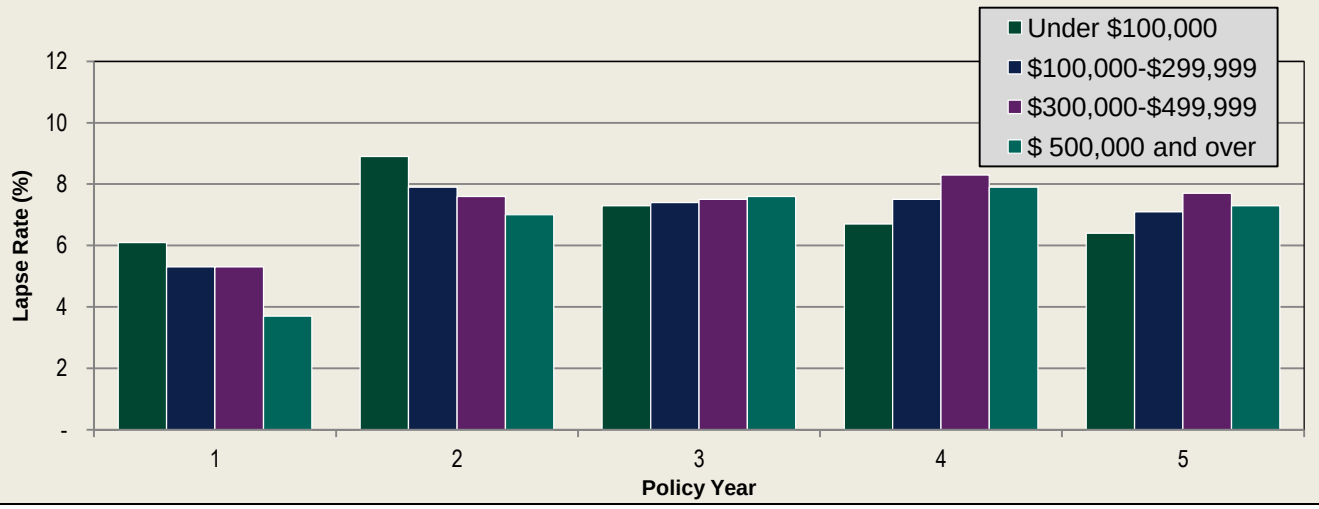
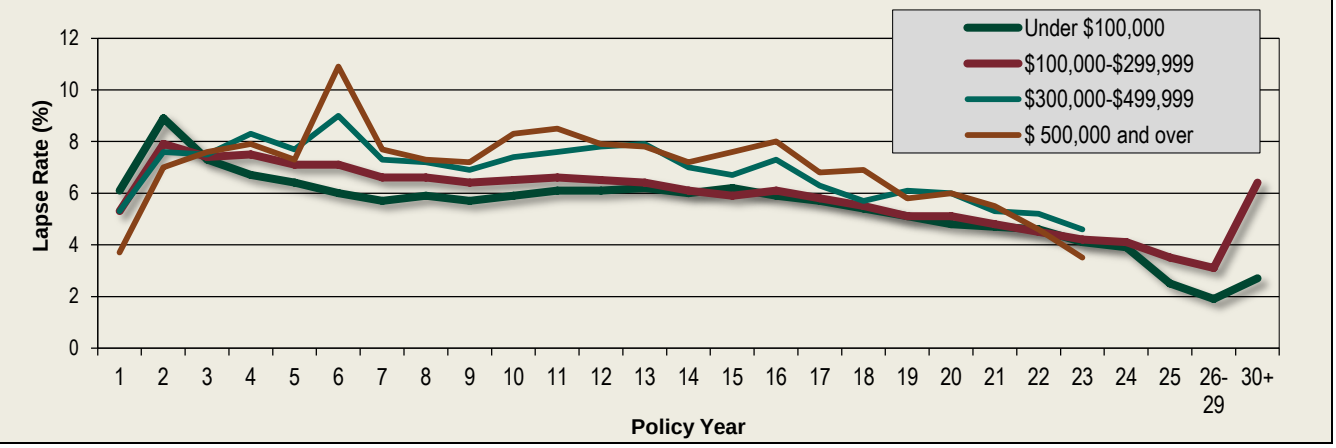



**Figure 77 —**
**Variable Universal Life Insurance Policy Lapse Rates by Policy Size**



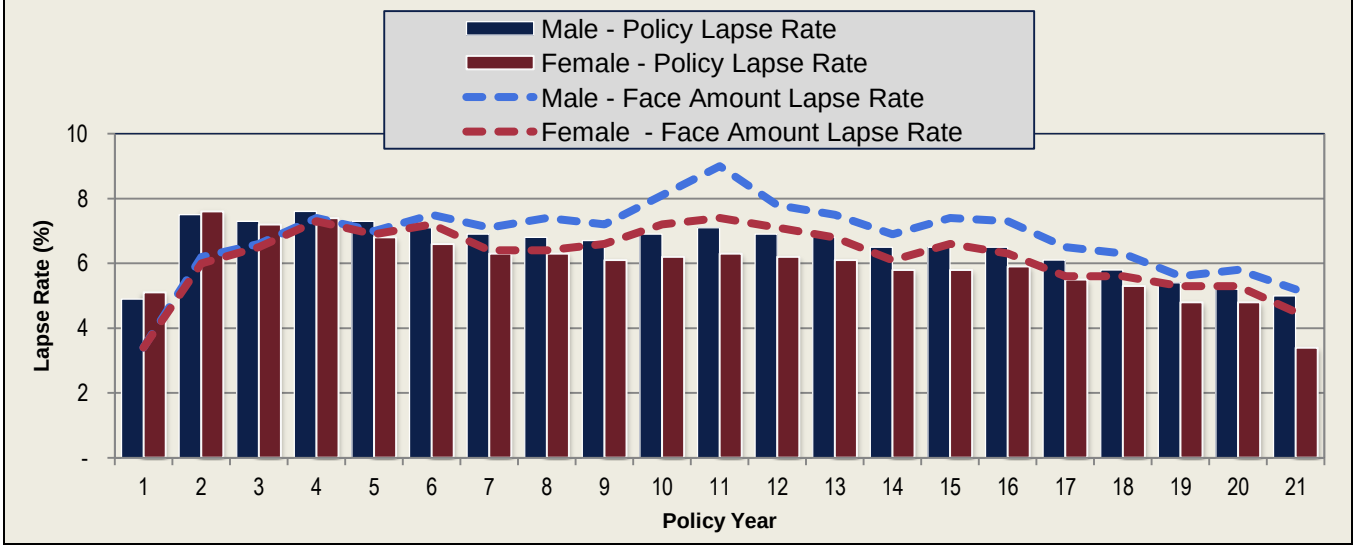
Distinct from the experience of other permanent products, variable universal life policies with face amounts under $50,000 exhibit the lowest lapse rates until policy year 12. The one exception to this is the low first-year lapse rate for policies over the $500,000 face amount. When comparing characteristics of policyholders of smaller face amount policies, variable universal life policyholders are likely in a higher income range than policyholders of other permanent products. The choice of a lower face amount policy is more likely due to the diversification of investments rather than an affordability issue.

## Gender

The distribution of variable universal life data split by gender has stayed consistent over the past four studies. The current data consists of 59% male and 41% female exposure by policy count. On a face amount basis, the data was split by 66% male and 34% female. The difference in average face amount between males and females has increased again in the current study, with averages for males increasing $53,000 and averages for females decreasing $42,000. The average face amounts for male and female policies in the current study are $275,000 and $205,000, respectively.

Regardless of the difference in average policy size, lapse rates for male variable universal life policyholders are slightly higher than lapse rates for females at all durations after the first few policy years as with the prior study (Figures 78).

**Figure 78 —**
**Variable Universal Life Lapse Rates by Gender**



## Issue Age

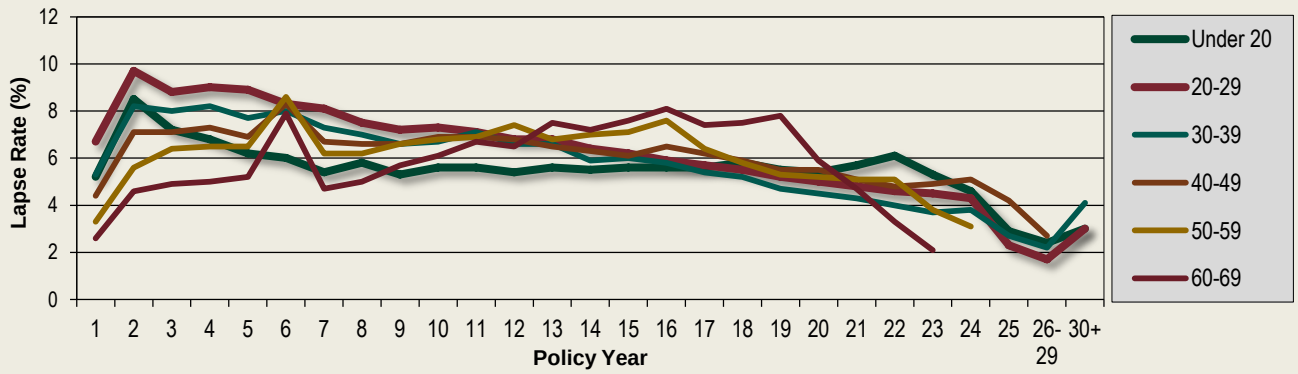
The distribution of variable universal life policies by issue age cohort continues to center around the working ages well before retirement (Table 27). The average face amount exposed increased for all issue age cohorts. This is a change from the past four studies where average face amounts for younger issue ages increased, while the average face amount exposed for older ages trended down.

**Table 27 —**
**Variable Universal Life Policy Exposure by Issue Age Cohort**

| Issue Age | Average Face Amount Exposed | Percent of Policy Exposure |
|---|---|---|
| Under 20 | $109,000 | 15% |
| 20–29 | $180,000 | 16% |
| 30–39 | $264,000 | 30% |
| 40–-49 | $311,000 | 24% |
| 50–59 | $341,000 | 11% |
| 60–69 | $332,000 | 3% |
| 70 and older | $334,000 | 1% |
| **Total** | **$250,000** | **100%** |

Similar to the experience of whole life and universal life products, lapse rates for variable universal life policies generally decrease with increasing age at issue during the early policy years, with the exception of policies issued under 20 (Figure 79).

**Figure 79 —**
**Variable Universal Life Insurance Policy Lapse Rates by Issue Age Cohort**



## Attained Age

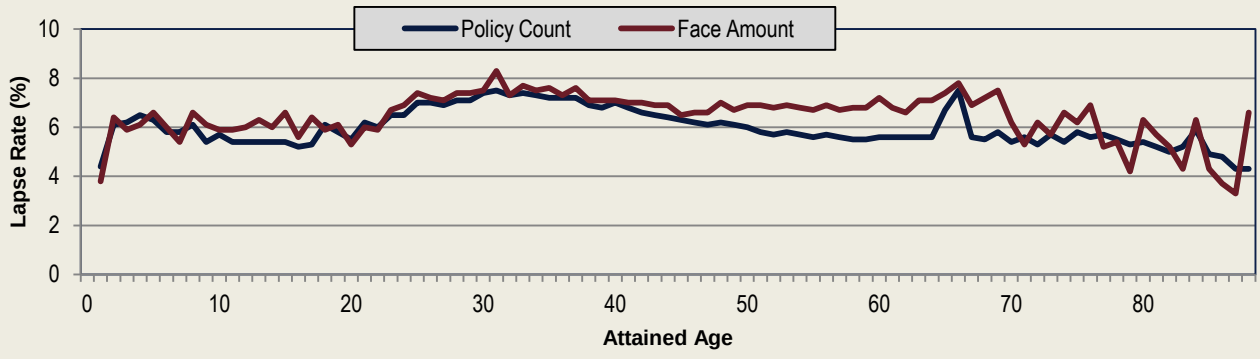
The distribution of policies by attained age cohorts is very similar to the last study (Table 28).

**Table 28 —**
**Variable Universal Life Policy Exposure by Attained Age Cohort**

| Attained Age | Average Face Amount Exposed | Percent of Policy Exposure |
|---|---|---|
| Under 20 | $116,000 | 8% |
| 20–29 | $161,000 | 7% |
| 30–39 | $272,000 | 14% |
| 40–49 | $292,000 | 25% |
| 50–59 | $270,000 | 26% |
| 60–69 | $257,000 | 14% |
| 70 and older | $214,000 | 6% |
| **Total** | **$250,000** | **100%** |

Similar to the results of prior studies, lapse rates by attained age decrease with increasing age after age 30 (Figure 80). With variable universal life, there are spikes in lapse rates at attained ages 65–66, likely due to retirement. Some policyholders access their cash value in retirement through full surrender.

**Figure 80 —**
**Variable Universal Life Insurance Lapse Rates by Attained Age**



## Risk Class

The distribution of policies by risk class continues to be mostly standard risk class policies, with increases in average face amount exposed for all risk classes (Table 29). Although the majority continues to be standard class, note the preferred risk class did increase significantly from 23% in the prior study to 32% in this study.

**Table 29 —**
**Variable Universal Life Policy Exposure by Risk Class**

| Risk Class | Average Face Amount Exposed | Percent of Policy Exposure |
|---|---|---|
| Preferred | $391,000 | 32% |
| Standard | $191,000 | 64% |
| Substandard | $237,000 | 4% |
| **Total** | **$256,000** | **100%** |

Similar to trends seen in universal life, policies with a substandard risk classes exhibit higher lapse rates than standard and preferred risk policies in the first five policy years (Figures 81 and 82). In later policy years, lapse rates for preferred risk policies are even higher than those of substandard risks as healthier policyholders are more likely to shop for other coverage once past the surrender charge period.

**Figure 81 —**
**Variable Universal Life Policy Lapse Rates by Risk Class**

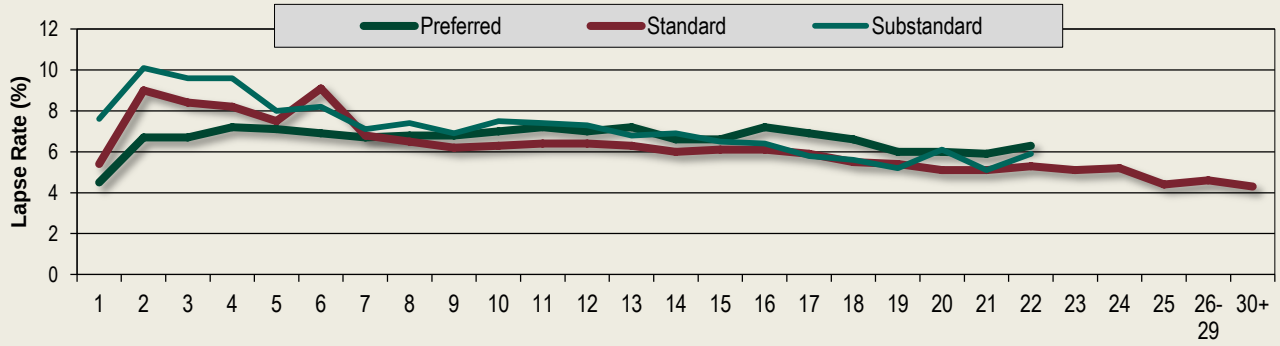
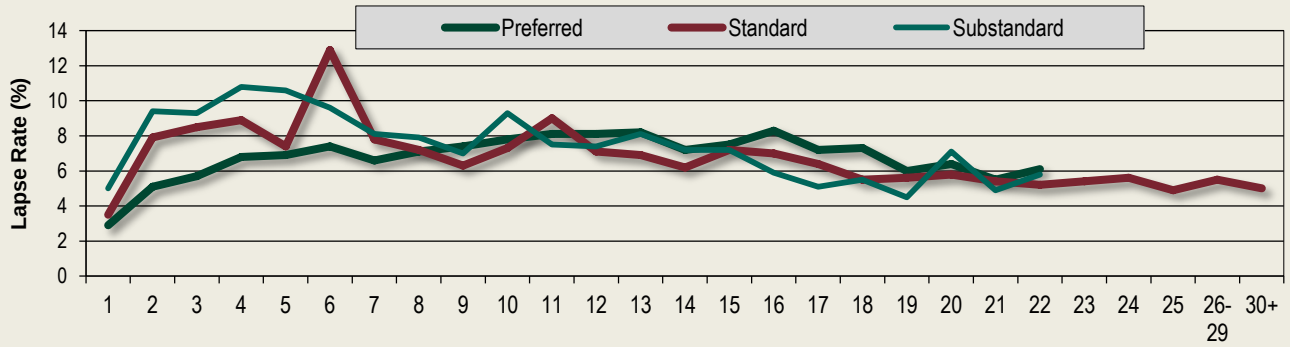


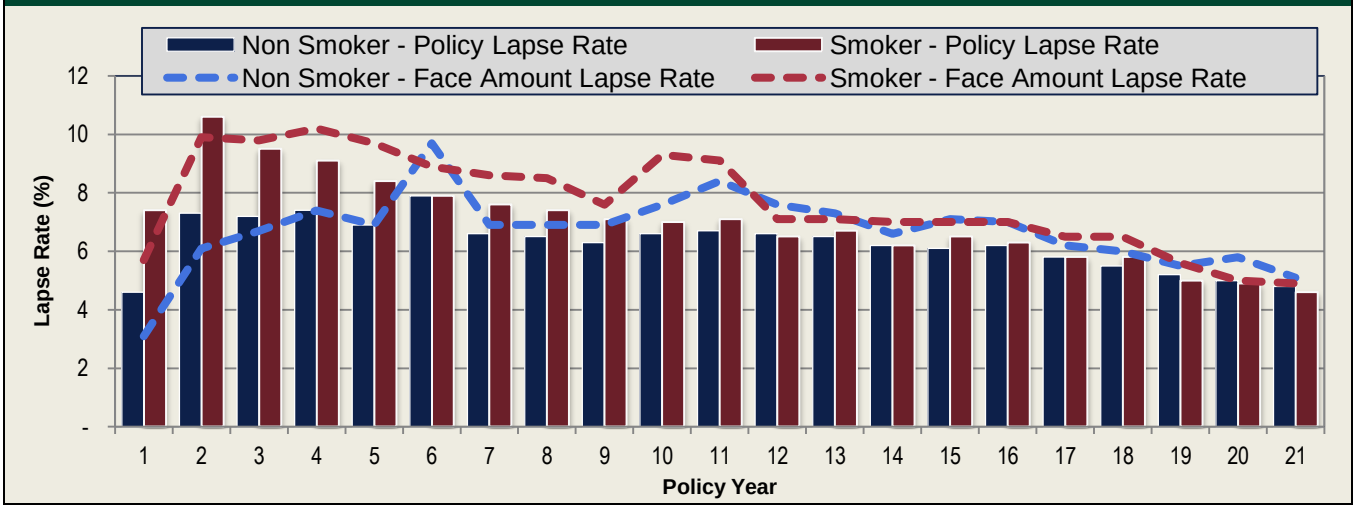

**Figure 82 —**
**Variable Universal Life Face Amount Lapse Rates by Risk Class**



## Smoking Status

The variable universal life policy exposure by smoking status has stayed constant over the past studies. This is mainly because variable universal life is a much newer product compared to whole life and universal life, and the smoking status of most policies is known. The policy exposure for a non-smoker was 86% of the total. Consistent with prior studies, as well as other products, smokers exhibit higher rates of lapse than non-smokers in early and most mid-durations (Figures 83).

**Figure 83 —**
**Variable Universal Life Lapse Rates by Smoking Status**



# Methodology

For purposes of this report, lapse includes termination for nonpayment of premium, insufficient cash value or full surrender of a policy, and transfer to reduced paid-up or extended term status and 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 years in the study were 2007 to 2009, with partial data for 2009. Contributing companies were asked to provide information on their entire in-force block at the policy level. A portion of contributors provided two full policy (or anniversary) years of data, while others provided data for calendar years 2007 and 2008. All policies were converted to policy year for analysis.

The lapse rates shown are based on 100% 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 contributors such that overall industry results would be unduly skewed.

It should be noted that not all contributing companies in the study contributed data for their entire inforce block of subsidiaries, product lines, and experience years. In addition, several companies were not able to provide data for all policies and product factors requested. Therefore, care should be taken in interpreting the results.

Lapse rates are calculated as follows:

$$\text{Annualized Policy Lapse Rate} = 100\% \times \frac{\text{Number of Policies Lapsed During the Year}}{\text{Number of Policies Exposed to Lapse During the Year}}$$

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 inforce.

Industry lapse rates are calculated as a weighted average of the experience of all contributing companies; companies with larger inforce blocks will affect the overall results more than companies with smaller inforce blocks. However, results for each policy factor analyzed are also examined at the company level to ensure 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 was reported exactly as calculated. No attempts were made to level or smooth results.

# Contributing Companies

| | |
|---|---|
| Allstate | Mutual of Omaha |
| American United | NACOLAH |
| AVIVA | Nationwide Financial |
| AXA | New York Life |
| Farm Bureau Financial Services | Northwestern Mutual |
| Farm Family Life | Pacific Life |
| Fidelity Investments | Penn Mutual |
| Government Personnel Mutual Life | Protective |
| Horace Mann Life | Prudential Financial |
| Jackson National | State Farm |
| John Hancock | Sun Life |
| MetLife | Thrivent Financial |
| Minnesota Life | USAA Life |
| | Western & Southern Life |

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