TRANSACTIONS OF SOCIETY OF ACTUARIES
1984 REPORTS

REPORT OF THE LIFE INSURANCE MARKETING AND RESEARCH ASSOCIATION, INC.

I. 1985–86 LONG-TERM ORDINARY LAPSE SURVEY IN THE UNITED STATES*

PREFACE

This report was prepared in the Manpower and Market Research Unit and the Financial Management Unit of the Life Insurance Marketing and Research Association, Inc. LIMRA has given the Society of Actuaries permission to reproduce this study as part of the Society's expansion of its experience studies. Discussions of this report as well as of any experience study are encouraged. LIMRA and the Society intend to work together to expand this report and seek additional data contributors. The Canadian version of this study appears as Part II.

INTRODUCTION

Annual Survey

This annual survey of long-term lapsation examines the experience of ordinary insurance in the U.S. between the 1985 and 1986 policy anniversaries. The study is designed to assist companies in monitoring marketing and product performance, product development, and corporate planning.

Lapse rates in this report are percentages of face amounts in force at the beginning of 1985 policy anniversaries that lapse on or before 1986 policy anniversaries.

Face amount lapse rates are measured for four types of ordinary insurance plans:

- Ordinary term
- Ordinary permanent
- Individual pension trust
- Interest-sensitive whole life.

Large rates are measured for policy years 1, 2, 3–5, 6–10, and 11 and over. These policy years correspond to issue years 1985, 1984, 1983–1981, 1980–1976, and 1975 and earlier.

In-Depth Survey

The report also presents results of an in-depth study of lapse rates on ordinary permanent insurance on three bases:

- Face amount
- Number of policies
- Annualized premium.

For each of these measures, the in-depth section shows lapse rates for specific issue ages as well as for policy-year groupings. Issue ages analyzed include ages 20–29, 30–39, 40–49, 50–59, and all issue ages combined; policy years analyzed include years 1, 2, 3, 4, 5, 6–9, 10, and 11 and over.

Medians are computed separately for each policy-year (that is, each duration is examined separately). Consequently, a table of median lapse rates for a given product most likely will not correspond solely to the experience of one company across all durations. Furthermore, if a given company's lapse experience varies significantly across duration, its first-year lapse rate may fall below the median first-year rate, but the second-year lapse rate may match or exceed the median second-year rate.

Average lapse rates in this report are the ratio of the sum of all companies' lapses to the sum of all companies' business in force. Thus, larger companies receive greater weight than smaller companies.

About the Sample

Eighteen companies contributed data to the annual survey. Table A shows the total face amount in force at the beginning of the 1985–1986 anniversary year.

TABLE A

FACE AMOUNT IN FORCE ON 1985 ANNIVERSARIES (BILLIONS)

Issue Year	Ordinary Term	Ordinary Permanent	Individual Pension Trust	Interest-Sensitive Whole Life
1985*	$ 29.0	$ 17.7	$1.9	$2.2
Before 1985	75.2	126.5	7.9	2.0
Total in force	104.2	144.2	9.8	4.2

*For issue year 1985, face amount in force on 1985 anniversaries corresponds to face amount sold during that year.

A separate report is available for Canadian experience (see Part II). In addition, a separate analysis based on in-depth data collected on ordinary permanent business over the three anniversaries ending in 1984, 1985, and 1986 will be published in 1988 by LIMRA.

Highlights

Following are highlights from this year's survey, based on average and median face amount lapse rates for the various plans.

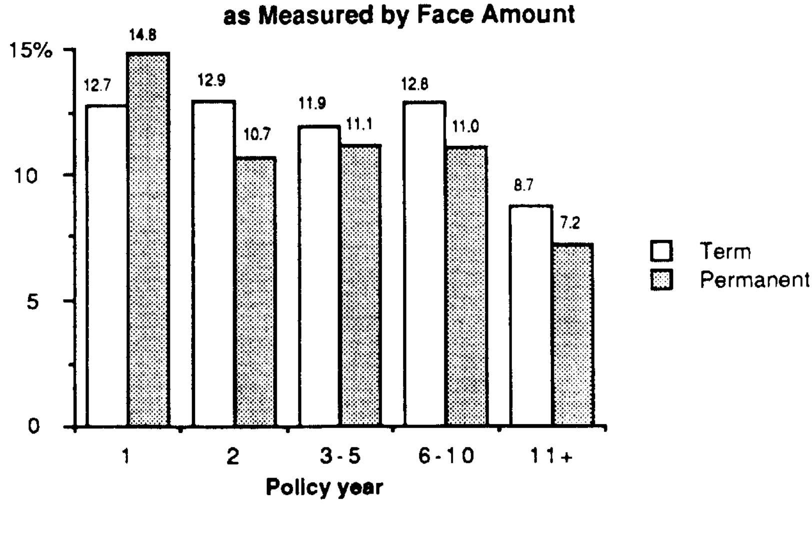
- *Ordinary Term*: The median lapse rate is highest in the first policy-year (18.1 percent) and declines to a low of 10.3 percent for policy-years 11 and over. Lapse rates in the large companies tend to be lower than lapse rates in small companies. Large companies' lapse experience pulls the average down to between 12 percent and 13 percent in policy-years 1 through 10 and to 8.7 percent in years 11 and over (Table 1).
- *Ordinary Permanent:* The average lapse rate is highest in the first policy-year (14.8 percent) and thereafter ranges from 7.2 percent to 11.1 percent. The median rate peaks during the first policy-year (17.7 percent), subsequently declining to a low of 9.4 percent for policy-years 11 and over (Table 2).

  Lapse rates on ordinary permanent plans for issue ages 20–29 tend to be higher than individual lapse rates for other issue ages (Table 8).

  The average face amount persisting exceeds the average size face amount lapsing for policy-years 1, 2, and 3–5 (Table 12). The reverse is true for policy-years 6–10 and 11 and over.

  As shown in Figure 1 and Tables 1 and 2, the average lapse rates for ordinary permanent policies are lower than the average lapse rates for ordinary term policies for all durations except the first.

Figure 1 — Term and Permanent Average Lapse Rates as Measured by Face Amount



- *Individual Pension Trust*: The median lapse rate increases gradually from 11.2 percent during the first policy-year to a high of 14.8 percent between policy-years 6–10. The average lapse rate ranges from 9.5 percent for years 11 and over to 11.7 percent for years 6–10 (Table 3).
- *Interest-Sensitive Whole Life*: The first-year average lapse rate — 19.3 percent — is the highest among all types of plans in this report (Table 4).
- *Internal Replacements of Ordinary Permanent Plans*: For the purposes of this survey, internal replacements are considered lapses. Eight companies supplied lapse data on ordinary permanent policies replaced internally.

For these eight companies, internal replacements accounted for 27 percent of face amounts lapsing between 1985 and 1986 policy anniversaries. Table B shows the distribution of these internal replacements by duration.

TABLE B

INTERNAL REPLACEMENTS BY DURATION

Policy Year	Distribution of Lapses Resulting from Internal Replacements	
1	1%	
2	6	
3–5	29	
6–10	33	
11 and over	31	
	100% =	27% of all lapses as measured by face amount

Table C shows the average face amount lapse rates and the average face amount lapse rates resulting solely from internal replacements for these eight companies. For example, in the second policy-year, 17.1 percent of the face amount in force on 1985 policy anniversaries lapsed before or on 1986 policy anniversaries. If no internal replacements occurred, only 13.9 percent of these face amounts would have lapsed (17.1 percent minus 3.2 percent).

TABLE C

LAPSE RATES AND AMOUNTS ATTRIBUTABLE TO INTERNAL REPLACEMENTS
(Eight Companies)

Policy Year	Average Face Amount Lapse Rates	Average Face Amount Lapse Rates Due to Internal Replacements
1	22.6%	0.8%
2	17.1	3.2
3–5	16.3	4.9
6–10	15.3	5.1
11 and over	9.9	2.8
All durations	13.8%	3.7%

Two-Year Trends

Figures 2 and 3 highlight trends in ordinary term and ordinary permanent insurance lapse rates as measured by face amount. Fifteen companies participated in both the 1984–85 and 1985–86 long-term ordinary lapse surveys.

Ordinary term lapse rates decreased for each duration except for policy year 1, which was up slightly during 1985–86. Figure 3 shows that ordinary permanent average lapse rates improved from 1984–85 to 1985–86 for every duration.

Figure 2 — Ordinary Term Average Lapse Rates
(15 companies)

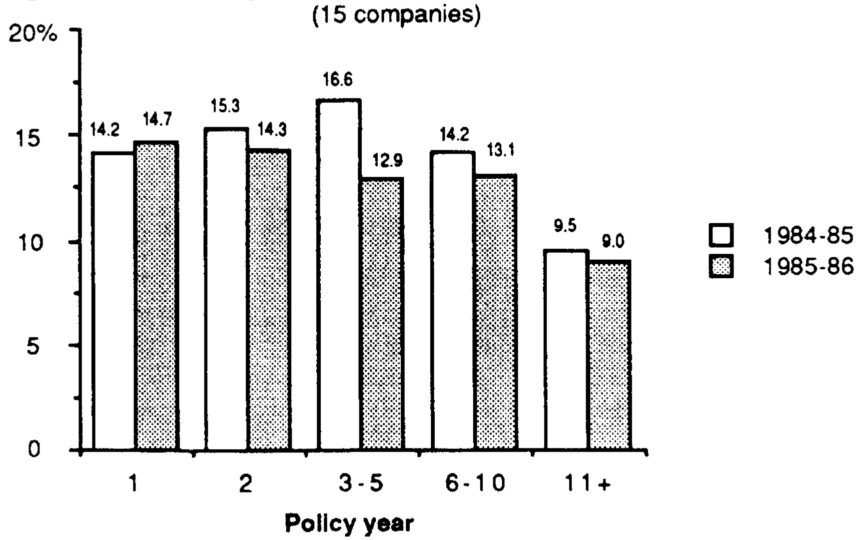
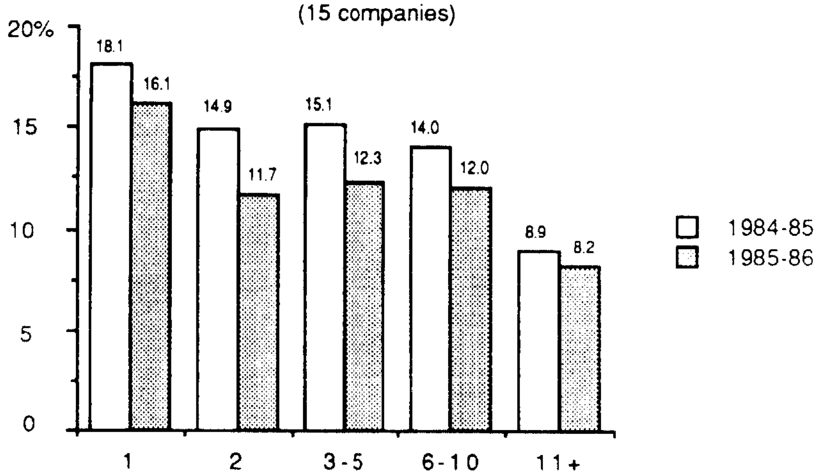


Figure 3 — Ordinary Permanent Average Lapse Rates

(15 companies)



ANNUAL SURVEY

Face Amount Lapse Rates

TABLE 1

ORDINARY TERM LAPSE RATES
(Eighteen Companies)

Policy Year	First Quartile	Median	Third Quartile	Average
1	12.3%	18.1%	24.5%	12.7%
2	11.1	17.0	22.4	12.9
3–5	11.9	16.8	21.4	11.9
6–10	11.7	15.0	16.6	12.8
11 and over	7.4	10.3	11.8	8.7

TABLE 2

ORDINARY PERMANENT LAPSE RATES
(Eighteen Companies)

Policy Year	First Quartile	Median	Third Quartile	Average
1	11.1%	17.7%	25.8%	14.8%
2	8.3	16.7	21.4	10.7
3–5	10.0	16.8	20.6	11.1
6–10	10.8	15.6	19.4	11.0
11 and over	7.4	9.4	12.0	7.2

TABLE 3

INDIVIDUAL PENSION TRUST LAPSE RATES
(Nine Companies)

Policy Year	First Quartile	Median	Third Quartile	Average
1	9.2%	11.2%	22.1%	10.7%
2	7.2	11.3	23.0	9.7
3–5	9.0	13.2	26.8	11.1
6–10	9.6	14.8	25.9	11.7
11 and over	7.4	12.3	22.5	9.5

TABLE 4

INTEREST-SENSITIVE WHOLE LIFE LAPSE RATES
(Four Companies)

Policy Year	Average
1	19.3%
2–5	18.2

IN-DEPTH SURVEY

Lapse Rates by Policy Year

TABLE 5

ORDINARY PERMANENT FACE AMOUNT LAPSE RATES
(Eighteen Companies)

	All Issue Ages			
Policy Year	First Quartile	Median	Third Quartile	Average
1	11.1%	17.7%	25.8%	14.8%
2	8.3	16.7	21.4	10.9
3	11.2	16.6	22.4	10.7
4	8.7	17.5	19.9	12.0
5	9.2	16.5	21.4	11.5
6–9	10.7	16.1	19.5	11.3
10	10.5	13.5	17.5	10.6
11 and over	7.4	9.4	12.0	7.3

TABLE 6

ORDINARY PERMANENT NUMBER OF POLICIES LAPSE RATES
(Sixteen Companies)

Policy Year	All Issue Ages			
	First Quartile	Median	Third Quartile	Average
1	12.7%	17.3%	24.2%	23.5%
2	9.0	14.8	19.2	15.7
3	9.0	13.3	19.6	13.6
4	8.5	14.4	17.0	12.7
5	9.0	13.8	16.7	12.5
6–9	10.8	12.4	16.3	11.8
10	9.6	11.8	15.0	10.6
11 and over	6.1	6.6	10.4	6.6

TABLE 7

ORDINARY PERMANENT ANNUALIZED PREMIUM LAPSE RATES
(Fourteen Companies)

Policy Year	All Issue Ages			
	First Quartile	Median	Third Quartile	Average
1	8.6%	17.2%	22.2%	13.4%
2	7.7	13.5	18.1	9.5
3	9.3	16.4	18.4	9.4
4	8.6	15.4	18.3	11.0
5	9.2	16.0	18.6	11.3
6–9	10.0	16.0	18.0	11.5
10	10.2	12.9	18.4	10.7
11 and over	7.1	9.2	10.9	7.7

Average Lapse Rates by Policy Year and Issue Age

TABLE 8

ORDINARY PERMANENT FACE AMOUNT LAPSE RATES
(Seventeen Companies)

Policy Year	Issue Ages			
	20–29	30–39	40–49	50–59
1	23.6%	15.6%	12.3%	9.0%
2	16.8	12.1	9.2	7.0
3	15.3	12.6	9.7	7.4
4	14.6	13.5	12.0	10.4
5	14.3	13.0	10.4	9.7
6–9	13.6	12.3	11.0	9.7
10	12.5	11.0	11.4	8.6
11 and over	8.1	7.0	6.7	6.7

TABLE 9

ORDINARY PERMANENT NUMBER OF POLICIES LAPSE RATES
(Fifteen Companies)

Policy Year	Issue Ages 20–29	30–39	40–49	50–59
1	32.1%	25.5%	22.2%	17.3%
2	22.5	19.2	14.6	9.9
3	19.8	15.8	11.4	8.6
4	17.1	14.5	11.3	8.2
5	16.1	14.3	11.3	8.9
6–9	15.3	13.2	10.4	7.8
10	14.0	11.6	8.7	6.3
11 and over	7.7	6.4	5.4	4.2

TABLE 10

ORDINARY PERMANENT ANNUALIZED PREMIUM LAPSE RATES
(Thirteen Companies)

Policy Year	Issue Ages 20–29	30–39	40–49	50–59
1	27.3%	18.1%	14.0%	9.7%
2	19.0	13.7	9.8	6.6
3	16.4	12.3	9.1	7.7
4	15.6	13.1	11.3	9.3
5	15.2	13.2	11.3	10.1
6–9	14.9	13.1	11.4	10.1
10	13.8	11.3	11.2	9.0
11 and over	8.9	7.8	7.3	7.1

Three Measures of Lapsation — Companies Reporting All Three Measures

TABLE 11

ORDINARY PERMANENT MEDIAN LAPSE RATES FOR ALL ISSUE AGES
(Thirteen Companies)

Policy Year	Face Amount	Number of Policies	Annualized Premium
1	21.9%	20.5%	18.2%
2	17.4	14.7	15.0
3	16.6	13.3	16.4
4	17.5	14.6	15.4
5	16.5	14.1	16.0
6–9	17.4	13.6	16.4
10	13.5	11.9	12.9
11 and over	9.2	6.5	9.1

Average Size Persisting and Lapsing

TABLE 12

ORDINARY PERMANENT FACE AMOUNTS PERSISTING AND LAPSING
(Sixteen Companies)

	Median Face Amount		Average Face Amount	
Policy Year	Persisting	Lapsing	Persisting	Lapsing
1	$19,230	$18,440	$38,950	$25,090
2	20,830	21,340	36,270	27,100
3–5	20,330	25,820	27,550	26,720
6–10	13,860	19,320	18,520	20,090
11 and over	7,420	10,450	8,130	10,520

TABLE 13

ORDINARY PERMANENT ANNUALIZED PREMIUM PERSISTING AND LAPSING
(Fourteen Companies)

	Median Annualized Premium		Average Annualized Premium	
Policy Year	Persisting	Lapsing	Persisting	Lapsing
1	$360	$300	$720	$320
2	350	320	660	360
3–5	370	390	540	430
6–10	310	370	400	400
11 and over	160	220	180	220

APPENDIX

DEFINITIONS OF IN-FORCE POLICIES AND LAPSES

In Force

A policy is considered in force if the first premium for the new policy year starting in 1985 is paid.

In-force business includes:

1. Policies issued in 1985.
2. Policies issued prior to 1985 where the premium due on the 1985 policy anniversary date is paid before the end of the grace period.

In-force business excludes:

1. Policies that lapsed prior to their 1985 anniversary and are on extended term or reduced paid-up status.
2. Limited-premium payment policies that are paid up.
3. Single-premium policies.

Examples of policies in force:

1. A policy issued in 1985 and the first premium is paid.
2. A policy issued in 1984 and the premium due in the 13th policy month is paid.
3. A policy issued in 1983 and the premium due in the 25th policy month is paid.

Lapses

A policy is considered a lapse if the first premium for the new policy-year starting in 1985 is paid but not all of the premium that comes due after the 1985 anniversary and before or *on* the 1986 anniversary date is paid.

Lapsed business includes:

1. Policies surrendered after their 1985 anniversary and before or *on* their 1986 anniversary.
2. Policies where a premium due after the 1985 anniversary and before or *on* the 1986 anniversary date is not paid by the end of the grace period.
3. Term policies with renewal provision that do not renew.
4. Policies that go on reduced-paid-up or extended-term status.

Lapsed business excludes:

1. Death claims.
2. Automatic premium loaned policies.
3. Expiries and maturities.
4. Conversions.
5. Policies that lapse during this policy-year but are reinstated before the end of the policy-year.
6. Policies not taken.

Examples of Policies That Lapse:

1. A policy issued in 1985 and the policyowner has paid the first premium. If any premium for policy-months 2 through 13 is not paid by the end of the grace period, the policy is a lapse.
2. A policy issued in 1984 and the policyowner has paid the 13th policy-month premium. If any premium for policy-months 14 through 25 is not paid by the end of the grace period, the policy is a lapse.
3. A policy issued in 1983 and the policyowner has paid the 25th policy-month premium. If any premium for policy-months 26 through 37 is not paid by the end of the grace period, the policy is a lapse.

Example of a Policy That Does Not Lapse:

A policy issued in 1984 is not considered a lapse if the 13th policy-month premium and all premiums for policy months 14 through 25 are paid.

PRODUCT DEFINITIONS

Ordinary Term Plans

Include:
- Level term
- Decreasing term.

Exclude:
- Term riders.

Ordinary Permanent Plans

Include:
- Level-premium whole life: continuous pay and limited pay
- Variable life.

Exclude:
- Universal life
- Interest-sensitive whole life
- Endowments
- Policies that are combinations of whole life and term plans
- Modified premium plans.

Interest-Sensitive Whole Life (Sometimes Called Current-Assumption Whole Life)

Include:
- Whole life plans that credit cash values with current interest rates. Premiums may be level, may vanish, or may be adjusted periodically.

Exclude:
- Universal life.

PARTICIPATING COMPANIES

Aetna Life & Casualty
American United Life
Baltimore Life
Canada Life (U.S.)
Guardian Life of America
Horace Mann Life
Jefferson Standard
John Hancock Mutual Life
Lutheran Brotherhood
Massachusetts Mutual Life
Monumental Life
MONY
Northwestern Mutual Life
Pilot Life
Sun Life of Canada (U.S.)
Transamerica Occidental Life
The Travelers
United of Omaha Life