

**TRANSACTIONS OF SOCIETY OF ACTUARIES
1991-92 REPORTS**

**SINGLE-PREMIUM DEFERRED-ANNUITY
PERSISTENCY STUDY***

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I. INTRODUCTION

This report presents the results of a study jointly sponsored by the Life Insurance Marketing and Research Association (LIMRA) and the Society of Actuaries. The study examines the persistency of single-premium deferred fixed annuities. This report shows results for the calendar years 1984 through 1989. It is based on business issued by 24 companies during 1978 through 1989.

The purpose of this study is to assess the likelihood that a single-premium deferred-annuity contract will have some or all of its cash value withdrawn and the relationship of this withdrawal activity to selected characteristics of the contract. This assessment is based on information readily available to life insurance companies, including data on product characteristics, product distribution methods, credited interest rates, and features unique to the contract such as age of the annuitant. Other variables, including the federal tax penalty for early withdrawals, changes in family income or wealth, health of the annuitant, divorce, marriage, employment status—most of which are not readily available to life insurance companies—are not included in the analysis; these variables may also be related to withdrawal activity.

Another primary purpose of the assessment is to quantify the relationship between withdrawal activity and variables associated with withdrawal activity. Quantifying the relationship is useful in product design, valuation, investment management, evaluation of marketing performance, and corporate planning.

The study examines contracts for which all of the cash value is withdrawn (full withdrawals) and contracts for which only a portion of the cash value is withdrawn (partial withdrawals). It measures full and partial withdrawal activity two ways: as a percentage of contracts in force and as a percentage of cash value in force.

Section II of the report provides detail and analysis of the results by various characteristics for contracts with an interest guarantee period of one

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year or less. Section III does the same for contracts with interest guarantee periods of greater than one year. The appendixes include detailed tables and a copy of the instructions to companies for submitting data. These instructions also document the sampling technique used.

This section of the report documents definitions used in the study and presents highlights of the study. Table 1 provides a general summary of the results.

TABLE 1
SUMMARY OF RESULTS

Type of Contract	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate*		Cash Value Withdrawal Rate*		
			Full	Partial	Full	Partial	Total
Interest Guarantee Period One Year or Less; Number of Contracts, 226,588; Cash Value In Force, \$4,926,023,100							
With a Surrender Charge							
Nonqualified	59.2%	61.6%	3.2	4.3	3.2	0.9	4.1
Qualified	34.8	30.5	3.3	3.3	3.0	1.2	4.2
Total	94.0%	92.1%	3.2	3.9	3.1	1.0	4.1
Without a Surrender Charge							
Nonqualified	5.2%	7.0%	12.3	9.2	13.9	2.1	16.0
Qualified	0.8	0.9	18.6	10.7	25.1	2.0	27.1
Total	6.0%	7.9%	13.3	9.6	15.6	2.1	17.7
All Contracts	100.0%	100.0%	3.7	4.1	3.9	1.1	5.0
Interest Guarantee Period Greater Than One Year; Number of Contracts, 123,716; Cash Value In Force, \$3,382,395,400							
With a Surrender Charge							
Nonqualified	77.3%	77.6%	1.9	2.1	2.1	0.6	2.7
Qualified	17.9	17.0	2.8	2.3	2.6	0.5	3.1
Total	95.2%	94.6%	2.1	2.1	2.2	0.6	2.8
Without a Surrender Charge							
Nonqualified	3.6%	4.3%	34.2	9.5	37.0	3.0	40.1
Qualified	1.2	1.1	23.9	7.0	33.1	2.3	35.4
Total	4.8%	5.4%	31.6	8.9	36.2	2.9	39.1
All Contracts	100.0%	100.0%	3.2	2.3	3.6	0.7	4.3

*Withdrawal rate refers to annualized withdrawal rate.

A. Definitions Used in This Study

Cash value on an in-force contract is the cash value as of January 1, before any reductions for surrender charges. The cash value on a new issue equals the initial premium if known; otherwise, it is estimated from the contract's cash value as of December 31.

Contracts with surrender charges are contracts with penalties in effect for early withdrawal of cash value. Excluded are contracts that assess nominal administrative fees on cash value withdrawals.

Contracts without surrender charges are contracts that do not have penalties in effect for early withdrawal of cash value. These contracts include those for which the surrender charges have expired and those within a 30- to 60-day period during which the surrender charges are waived (see definition of free full withdrawal provision). Included are contracts that assess nominal administrative fees on cash value withdrawals.

Contracts with cash values exceeding \$500,000 are treated as having \$500,000 of cash value.

The percentages and rates in this study are calculated as follows:

Percentage of contracts

$$100 \times \frac{\text{Number of contracts with a particular characteristic}}{\text{Total number of contracts}}$$

Percentage of cash values

$$100 \times \frac{\text{Cash values on contracts with a particular characteristic}}{\text{Cash values on all contracts}}$$

Annualized contract withdrawal rate

$$100 \times \frac{\text{Number of contracts withdrawn during the year}}{\text{Number of contracts exposed to withdrawal during the year}}$$

where number of contracts exposed recognizes the length of time a contract is exposed to risk of withdrawal during the year. For example, a new issue sold on July 1 contributes only one half-year exposure. Withdrawals contribute exposure until the end of the year. *Withdrawal rates exclude termination due to death, disability or annuitization.*

Annualized cash value withdrawal rate

$$100 \times \frac{\text{Cash value withdrawn during the year}}{\text{Cash value exposed to withdrawal during the year}}$$

where cash value exposed recognizes the length of time a contract is exposed to risk of withdrawal during the year. *Withdrawal rates exclude termination due to death, disability or annuitization.*

Withdrawal rates shown in this study are based on a minimum of 200 contracts exposed to the risk of withdrawal. If a particular category does not have at least 200 contracts, the withdrawal rate is not shown and is labeled as insufficient data.

An internal replacement or contract exchange is considered a full withdrawal in this study.

The product distribution channels included in this study:

- Career agent of your company, including personal producing general agents (PPGAs)
- Insurance broker, including agents of other companies and independent agents
- Stockbroker
- Direct response
- Bank or savings and loan employee.

Free full withdrawal provision is a contract provision that typically allows the contract-holder 30–60 days after an interest rate renewal to surrender the contract and not incur a surrender charge. Approximately 1 percent of one-year interest guarantee contracts have such provisions and 33 percent of contracts with longer interest guarantees have such provisions.

Bailout provisions allow the contract-holder to surrender the contract and not incur a surrender charge if the contract's credited interest rate falls below a certain level. Because of the complexity of some bailout provisions and the way the data were collected, it is not possible to identify contracts for which surrender charges have been waived due to the bailout provision.

Qualified Plans are annuities used to fund retirement plans established under various sections of the Internal Revenue Code that allow contributions to be excluded from taxable income. These plans include Individual Retirement Accounts, Tax Deferred Annuities (403(b), 501(c), 457(b) plans), Keogh Plans, and Corporate Plans (such as 401k plans).

B. Highlights

- This study is based on over 350,000 contracts with more than \$8.3 billion of cash value in force.
- Contracts in the study are concentrated in the early contract years, and the great majority still had surrender charges in effect. Data for the later contract years are limited, making it difficult to measure full and partial withdrawals and annuitizations for those years (Table 1).
- For one-year interest guarantee contracts, those without surrender charges are four times as likely to experience full withdrawals as those contracts with surrender charges still in place (Figure 3).
- Multiyear interest guarantee contracts with surrender charges of 4 percent or more have a full withdrawal rate of less than 2 percent. On contracts for which the surrender charge has expired, the full withdrawal rate is 36 percent (Figure 11).
- Other factors associated with full withdrawals on one-year interest guarantee contracts are age of annuitant (Table 4), size of contract (Table 5), and distribution channel (Figure 6).
- Expiration of the interest guarantee period is a primary factor in full withdrawals for multiyear contracts, particularly when there is no surrender charge in effect. In these cases withdrawal rates exceed 50 percent (Figure 10).
- Factors primarily associated with partial withdrawals for both one-year and multiyear contracts include age of annuitant (Tables 4 and 9), size of contract (Tables 5 and 10), and free partial withdrawal provision (Figures 5 and 12).
- One hypothesis holds that the withdrawal rate is a function of the spread between the contract's credited interest rate and an external "market" rate. The period analyzed here saw generally declining interest rates. Therefore, this spread is not only very small but also in many cases negative; that is, credited interest rates on new issues are less than those on in-force business. The available data yield no significant results. Sam Cox and Steven Linney are preparing a separate report. If interested, please contact Sam Cox.

II. INTEREST GUARANTEE PERIOD ONE YEAR OR LESS

Among the 226,588 contracts in the sample, 7,228 (3.2 percent) incurred a full withdrawal; 7,793 (3.4 percent) experienced a partial withdrawal; 3,127 (1.4 percent) annuitized; 1,495 (0.7 percent) surrendered because of death or disability of the annuitant; and 206,945 (91.3 percent) had no withdrawal activity. Full withdrawals (excluding death and disability claims) represented an annualized cash value withdrawal rate of 3.9 percent and partial withdrawals represented an annualized cash value withdrawal rate of 1.1 percent.

WITHDRAWAL ACTIVITY

Type of Withdrawal	Percentage of Contracts
Full	3.2%
Partial	3.4
Annuitized	1.4
Death/Disability Claim	0.7
No Activity	91.3
	100.0%

A. Summary of Contract Characteristics and Withdrawal Activity

The contract characteristics analyzed include:

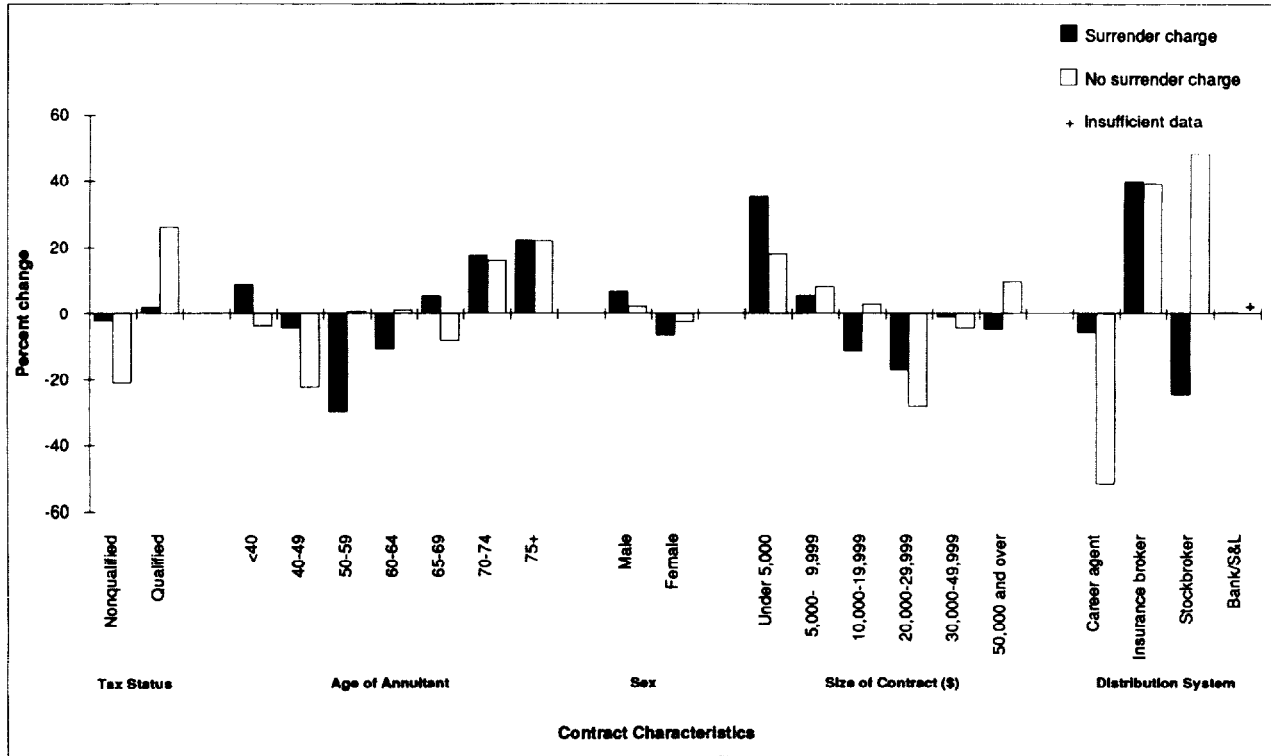
- Tax status
- Age of annuitant
- Sex of annuitant
- Size of contract
- Distribution channel
- Incidence and amount of surrender charge
- Inclusion of a free partial withdrawal provision
- Contract credited interest rate.

Four characteristics highly related to full withdrawal activity include the presence of a surrender charge, age of annuitant, size of contract, and distribution channel. Among these characteristics, amount of surrender charge showed the strongest relationship to full withdrawal activity. Contracts without surrender charges are nearly four times as likely to experience full withdrawal as those with surrender charges.

Among the 212,993 contracts with surrender charges, 5,988 (2.8 percent) experienced full withdrawals. For contracts with surrender charges, comparing full withdrawal activity on contracts with a particular characteristic to the average full withdrawal activity for all contracts with surrender charges reveals:

- Withdrawal activity on nonqualified business is similar to withdrawal activity on qualified business.
- Withdrawal activity by annuitant age varies from 30 percent lower than average for the 50-59 age group to 22 percent higher than average for the 75 and over age group.
- Withdrawal activity for male annuitants is similar to withdrawal activity for female annuitants.
- Withdrawal activity by contract size varies from 35 percent higher than average for contracts with less than \$5,000 cash value to 17 percent lower than average for contracts with \$20,000 to \$29,999 cash value.

FIGURE 1
CHANGE IN FULL WITHDRAWAL ACTIVITY BY VARIOUS CONTRACT CHARACTERISTICS
(INTEREST GUARANTEE PERIOD ONE YEAR OR LESS)



- Withdrawal activity by distribution channel varies from 40 percent higher than average for insurance broker business to 25 percent lower than average for stockbroker business.

Among the 13,595 contracts without surrender charges, 1,240 (9.1 percent) experienced full withdrawals. For contracts without surrender charges, comparing full withdrawal activity on contracts with a particular characteristic to the average full withdrawal activity for all contracts without a surrender charge reveals:

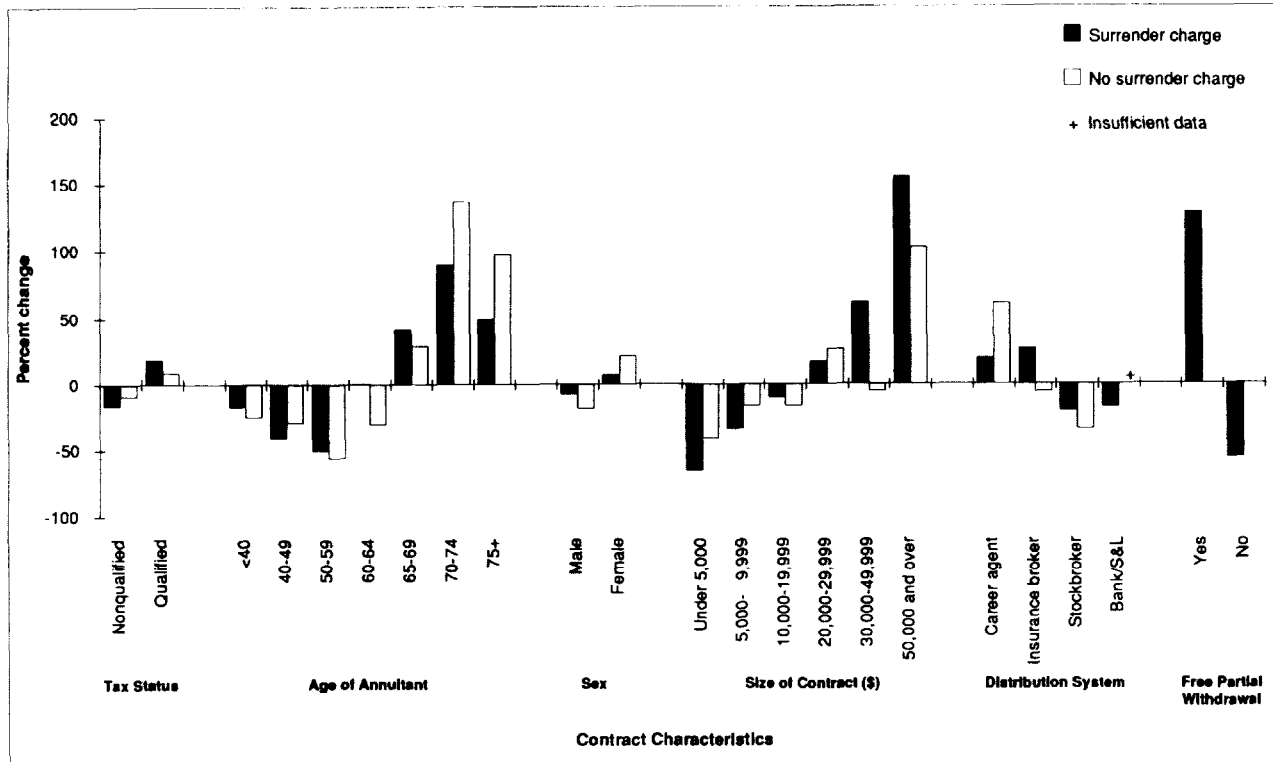
- Withdrawal activity on nonqualified business is 21 percent lower than average, while withdrawal activity on qualified business is 26 percent higher than average.
- Withdrawal activity varied by annuitant's age from 22 percent lower than average for the 40-49 age group to 22 percent higher than average for the 75 and over age group.
- Withdrawal activity for male annuitants is nearly the same as withdrawal activity for female annuitants.
- Withdrawal activity by contract size varies from 18 percent higher than average for contracts with less than \$5,000 cash value to 28 percent lower than average for contracts with \$20,000 to \$29,999 cash value.
- Withdrawal activity by distribution channel varies from 52 percent lower than average for career agent business to 48 percent higher than average for stockbroker business.

Three characteristics highly related to partial withdrawal activity include age of annuitant, size of contract, and inclusion of a free partial withdrawal provision.

Among the 212,993 contracts with surrender charges, 6,999 (3.4 percent) experienced partial withdrawals. Comparing partial withdrawal activity on contracts with a particular characteristic to the average partial withdrawal activity for all contracts with surrender charges reveals:

- Withdrawal activity is 16 percent lower than average for nonqualified business and 19 percent higher than average for qualified business.
- Withdrawal activity by annuitant age varies from 50 percent lower than average for the 50-59 age group to 90 percent higher than average for the 70-74 age group.
- Withdrawal activity for male annuitants is slightly lower than withdrawal activity for female annuitants.
- Withdrawal activity by contract size varies from 66 percent lower than average for contracts with less than \$5,000 cash value to 156 percent higher than average for contracts with more than \$50,000 cash value.
- Withdrawal activity by distribution channel varies from 28 percent higher than average for insurance broker business to 21 percent lower than average for stockbroker business.

FIGURE 2
CHANGE IN PARTIAL WITHDRAWAL ACTIVITY BY VARIOUS CONTRACT CHARACTERISTICS
(INTEREST GUARANTEE PERIOD ONE YEAR OR LESS)



- Withdrawal activity is 129 percent higher than average for contracts with free partial withdrawal and 56 percent lower than average for contracts without free partial withdrawal.

Among the 13,595 contracts without surrender charges, 794 (5.8 percent) experienced partial withdrawals. Comparing partial withdrawal activity on contracts with a particular characteristic to the average partial withdrawal activity for all contracts without surrender charges reveals:

- Withdrawal activity for nonqualified business is slightly lower than withdrawal activity for qualified business.
- Withdrawal activity by annuitant age varies from 56 percent lower than average for the 50-59 age group to 136 percent higher than average for the 70-74 age group.
- Withdrawal activity is 18 percent lower than average for male annuitants; for female annuitants, it is 22 percent higher than average.
- Withdrawal activity by contract size varies from 41 percent lower than average for contracts with less than \$5,000 cash value to 102 percent higher than average for contracts with \$50,000 or more cash value.
- Withdrawal activity by distribution channel varies from 62 percent higher than average for career agent business to 34 percent lower than average for stockbroker business.

B. Details of Contract Characteristics and Withdrawal Activity

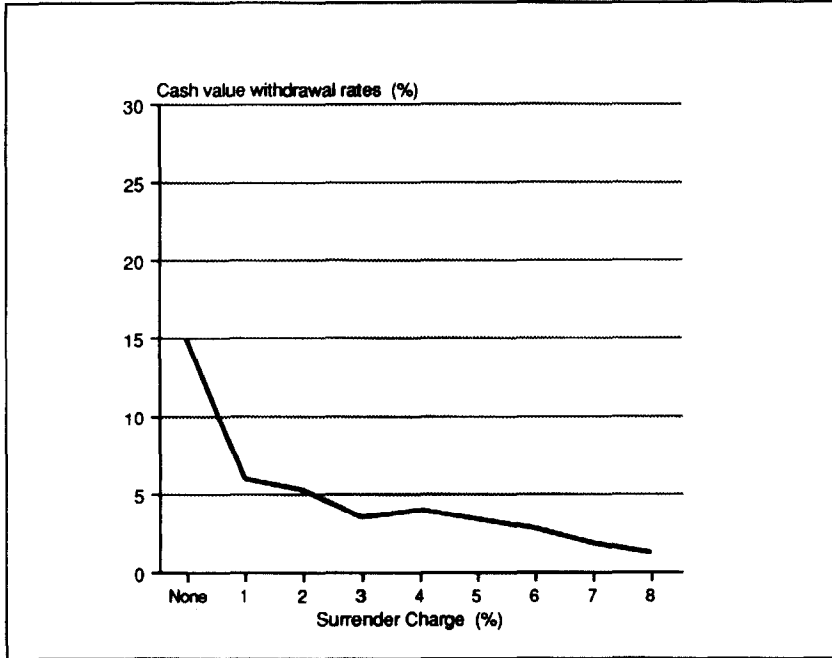
1. Surrender Charges

Contracts without surrender charges are four times more likely to experience full withdrawals than contracts with surrender charges. Among contracts with surrender charges, withdrawal rates show a fairly steady decrease as surrender charges increase. Withdrawal rates are 6.0 percent on contracts with a surrender charge of 1 percent, and they decrease nearly linearly to 1.4 percent on contracts with surrender charges of 8 percent or more. For contracts with no surrender charge, the withdrawal rate is 15.6 percent.

The contract year in which surrender charges expire is the year with the highest full withdrawal rate. In the years just before expiration, full withdrawal rates are in the 4- to 6-percent range. In the year of expiration, withdrawal rates increase to 19 percent. In the years after expiration, they decrease to the 4- to 7-percent range.

In the years prior to and concurrent with the expiration of surrender charges, full withdrawal is more likely to occur in the two months following a contract's anniversary date than in any other contract month. In the years before expiration, more than 30 percent of full withdrawals occur in the first two

FIGURE 3
FULL WITHDRAWAL RATES BY SURRENDER CHARGE



months of the contract year. In the year surrender charges expire, 78 percent of full withdrawals occur in the first two months of the contract. In the years after surrender charges expire, full withdrawals occur fairly uniformly throughout the year.

Frequently companies experience increases in withdrawal rates at the end of the surrender charge schedule. Seven companies in the study offer products with five-year surrender charge schedules. Three of these companies have been selling their products long enough for business to reach the end of the surrender charge schedule. All three of these companies experienced significant increases in withdrawal rates at the end of the schedule.

Twelve companies in the study offer products with seven-year surrender charge schedules; only three companies have been selling their products long enough for business to reach the end of the surrender charge schedule. Among these three companies, two experienced significant increases in

FIGURE 4

WITHDRAWAL RATES BEFORE AND AFTER EXPIRATION OF SURRENDER CHARGES

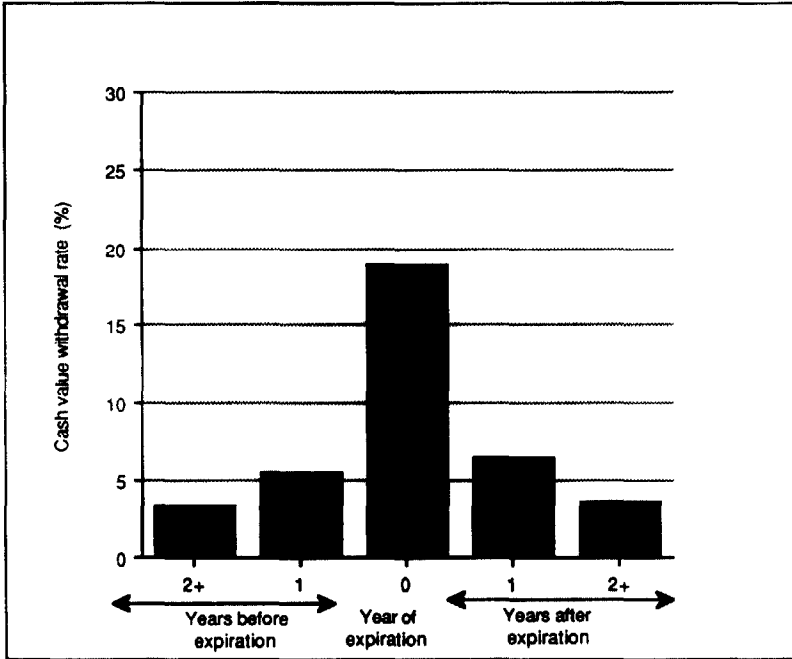


TABLE 2

DISTRIBUTION OF FULL WITHDRAWALS DURING CONTRACT YEAR (NUMBER OF CONTRACTS)

Contract Month	Years before Surrender Charges Expire	Year Surrender Charges Expire	Years after Surrender Charges Expire
1	16.4%	66.3%	8.3%
2	14.3	11.3	9.2
3	9.6	8.0	8.9
4	7.4	4.2	8.0
5	7.5	2.5	6.5
6	7.8	2.0	8.9
7	6.7	1.7	6.2
8	6.2	1.1	13.2
9	5.9	1.0	10.8
10	6.0	0.6	6.8
11	6.0	0.2	6.2
12	6.0	1.2	7.1

TABLE 3
WITHDRAWAL RATES FOR CONTRACTS WITH FIVE- AND SEVEN-YEAR SURRENDER SCHEDULES

Contract Year	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
Contracts with Five-Year Surrender Charge Schedule*							
1	42.0%	39.3%	3.0	1.1	2.2	0.3	2.5
2	27.4	25.7	3.6	6.3	3.0	1.6	4.6
3	13.8	13.5	3.3	8.8	3.0	2.1	5.1
4	8.3	9.9	3.6	8.0	3.2	1.7	4.9
5	5.2	7.1	2.9	9.8	2.1	2.1	4.2
6	2.7	3.9	14.6	10.2	14.9	2.2	17.1
7†	†	†	†	†	†	†	†
Contracts with Seven-Year Surrender Charge Schedule*							
1	34.1%	33.4%	1.8	1.3	2.1	0.3	2.4
2	22.2	21.4	3.2	6.1	2.8	1.4	4.2
3	12.6	12.7	2.5	7.1	2.7	2.0	4.7
4	9.0	9.5	3.1	7.8	2.6	1.6	4.2
5	7.1	7.2	3.5	7.2	2.8	1.6	4.4
6	4.5	4.5	5.4	8.4	5.6	1.9	7.5
7	3.6	3.6	5.8	8.6	6.1	2.0	8.1
8	4.3	4.6	5.9	7.7	5.8	1.1	6.9
9	2.6	2.9	6.1	8.1	5.8	1.5	7.3
10†	†	†	†	†	†	†	†

*Excludes contracts with free full withdrawal provisions allowing contract holders 30 to 60 days after interest rate renewal to surrender contract and not incur surrender charges.

†Insufficient data.

withdrawal rates at the end of the schedule. The other company did not experience an increase in withdrawal rates at the end of the surrender schedule.

2. Free Partial Withdrawal Provision

The influence of surrender charges on withdrawal rates is further illustrated by contracts with free partial withdrawal provisions. Approximately 85 percent of the contracts have such provisions. Most of these contracts allow the contract-holder to withdraw up to 10 percent of the cash value without incurring a surrender charge. Contracts with such a provision are five times more likely to incur partial withdrawals than contracts without such a provision. However, the amount of partial withdrawal activity under both types of contracts remains low.

For contracts with surrender charges and free partial withdrawal provisions, 4.5 percent of the contract-holders make partial withdrawals, withdrawing on average 15 percent of their cash value. For contracts with surrender charges but without free partial withdrawal provisions, less than 1 percent

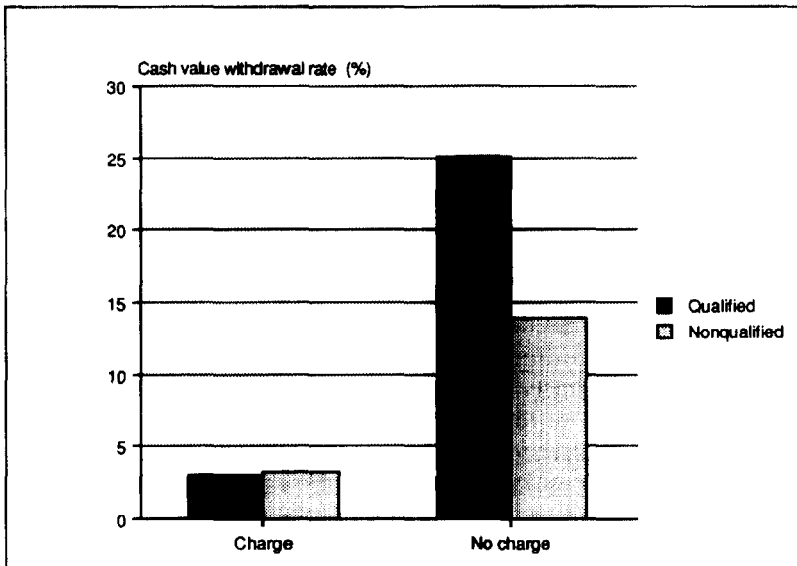
make partial withdrawals, withdrawing on average 42 percent of cash value. Among the contracts without surrender charges, 9.6 percent experience partial withdrawals, withdrawing on average 19 percent of their cash value.

3. Tax Status

On contracts with surrender charges, withdrawal rates for qualified business and nonqualified business are similar. However, within the qualified business, full withdrawal rates do vary by tax status. Individual Retirement Annuities have the lowest full withdrawal rate (2.5 percent), while Keogh and Corporate plans have the highest rate (6.1 percent).

On contracts without surrender charges, the full withdrawal rate for qualified plans (25.1 percent) is higher than the rate for nonqualified plans (13.9 percent).

FIGURE 5
FULL WITHDRAWAL RATES BY TAX STATUS



4. Age of Annuitant

Partial withdrawal activity does increase significantly after age 59, but the amount of cash value withdrawn remains less than 5 percent. Full-withdrawal rates do exhibit some variation by age. On contracts with surrender charges, the cash value withdrawal rate for full withdrawals is highest among annuitants age 18–29 (6.6 percent) and lowest among annuitants age 50–59 (2.3 percent). On contracts without surrender charges, full withdrawal activity is highest among annuitants under age 40.

TABLE 4
FULL AND PARTIAL WITHDRAWAL RATES BY AGE OF ANNUITANT

Age of Annuitant	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
Contracts with Surrender Charges							
Under 18	1.1%	0.8%	3.1	2.2	3.1	1.2	4.3
18–29	1.4	0.8	6.3	3.7	6.6	1.1	7.7
30–39	7.0	3.6	3.8	1.8	3.9	0.9	4.8
40–49	13.3	9.5	3.4	1.8	3.3	0.7	4.0
50–59	23.8	22.1	2.4	1.8	2.3	0.6	2.9
60–64	17.5	19.5	2.9	4.1	2.7	1.0	3.7
65–69	15.8	19.4	3.3	5.9	3.4	1.2	4.6
70–74	10.9	13.4	3.9	7.5	3.9	1.3	5.2
75 and over	9.1	11.0	3.7	6.0	3.3	1.3	4.6
Contracts without Surrender Charges							
Under 40	5.2%	4.6%	15.4	7.9	26.9	2.1	29.1
40–49	9.9	8.6	11.0	5.9	12.8	1.2	14.0
50–59	20.8	19.5	12.5	4.2	16.9	0.8	17.6
60–64	20.9	20.8	14.1	6.8	16.5	2.0	18.5
65–69	20.2	21.0	12.2	10.9	14.6	2.2	16.8
70–74	13.2	14.1	15.8	18.5	14.2	2.7	16.9
75 and over	9.7	11.4	13.5	17.1	13.1	4.2	17.3

5. Size of Contract

When a surrender charge is in effect, full withdrawal rates vary little by size of contract. When the surrender charge is no longer in effect, full withdrawal rates are higher among larger contracts.

Partial withdrawal activity increases considerably with size of contract. Contracts \$75,000 and over are three times more likely than average to incur partial withdrawals. The combined effect of full and partial withdrawal activity on contracts \$75,000 and over and with no surrender charge produces a total cash value withdrawal rate of 25.4 percent.

TABLE 5
FULL AND PARTIAL WITHDRAWAL RATES BY SIZE OF CONTRACT

Size of Contract	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
Contracts with Surrender Charges							
\$100,000 and over	2.7%	20.5%	3.4	12.6	3.5	1.7	5.1
75,000-99,999	1.6	6.4	2.8	10.0	2.8	1.3	4.1
50,000-74,999	5.1	13.9	3.1	8.0	3.1	1.1	4.2
40,000-49,999	3.2	6.6	3.3	7.3	3.3	1.1	4.4
30,000-39,999	6.2	9.9	3.1	6.2	3.1	1.0	4.1
20,000-29,999	13.2	14.8	2.7	4.6	2.7	0.7	3.4
10,000-19,999	30.5	19.2	2.9	3.6	2.9	0.6	3.5
5,000-9,999	20.4	6.6	3.3	2.4	3.4	0.5	3.9
Under \$5,000	17.1	2.2	4.1	1.1	4.2	0.4	4.6
Contracts without Surrender Charges							
\$75,000 and over	6.0%	27.6%	20.4	20.3	22.5	2.9	25.4
50,000-74,999	7.1	15.0	16.7	12.4	16.1	2.1	18.2
40,000-49,999	5.2	8.3	14.4	5.7	14.0	1.1	15.1
30,000-39,999	8.9	10.8	11.7	10.9	11.4	1.4	12.8
20,000-29,999	18.2	15.4	10.6	11.6	10.5	2.5	13.0
10,000-19,999	37.7	18.7	13.7	7.5	13.1	1.6	14.7
5,000-9,999	12.5	3.7	12.5	8.3	12.0	1.8	13.8
Under \$5,000	4.4	0.6	10.1	5.5	9.7	1.7	11.4

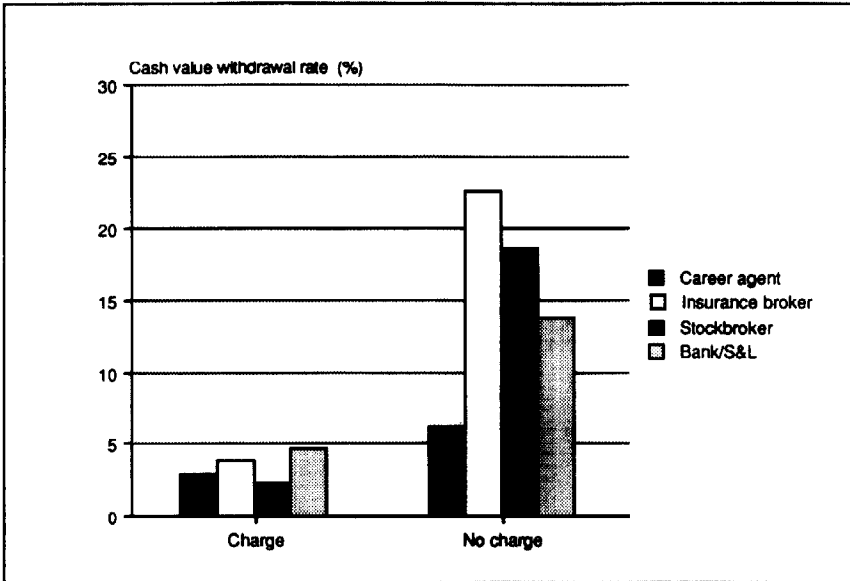
6. Distribution System

Among contracts with surrender charges, full withdrawal rates are low and exhibit little variation by distribution system. However, without surrender charges, full withdrawal rates vary significantly by distribution system. Before surrender charges expire, business sold by stockbrokers has the lowest rate (2.3 percent) and business sold through banks and savings and loans the highest rate (4.7 percent). After surrender charges expire, business sold by career agents has the lowest rate (6.3 percent) and business sold by insurance brokers the highest rate (22.6 percent). The withdrawal rate for business sold by stockbrokers is 18.6 percent; the rate for business sold by banks and savings and loans is 13.8 percent.

7. Credited Interest Rates

A limited amount of data were available for analyzing the sensitivity of withdrawal rates to credited interest rates. From 1984 through the middle of 1988, most of the in-force contracts credited interest rates higher than those available on new issues. From the middle of 1988 to the middle of 1989, interest rates on new issues were only slightly higher than the rates on

FIGURE 6
FULL WITHDRAWAL RATES BY DISTRIBUTION CHANNEL



in-force contracts. For the latter half of 1989, interest rates on in-force contracts were once again higher than rates on new issues.

To measure the competitiveness of a contract's interest rate, the study calculated the difference between median credited rates available on new issues and the rate credited on the contract's anniversary. Contracts with negative spreads have higher credited rates than newly issued contracts and hence are more competitive than new issues. Contracts with positive spreads have lower credited rates than newly issued contracts and hence are less competitive than new issues. Most contracts had spreads between -1.0 percent and 1.0 percent. The pattern of withdrawals for contracts without surrender charges is unexpected. Because of data limitations and the modest variation in credited interest rates, the relationship between credited interest rates and withdrawal rates is inconclusive.

Tables A1-A9 in Appendix A present a complete tabulation of the results by the various characteristics for contracts with interest guarantee periods of one year or less.

FIGURE 7
CREDITED INTEREST RATE ON NEW ISSUES VERSUS IN FORCE

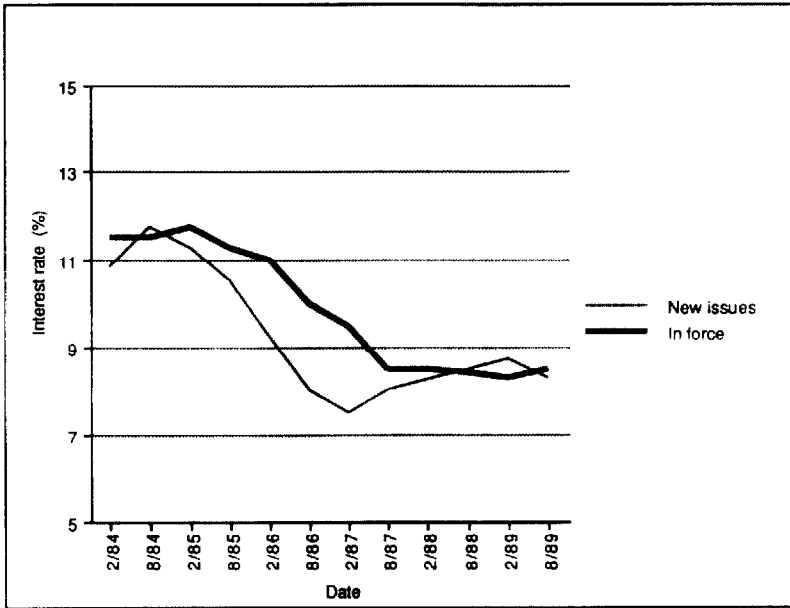


TABLE 6
FULL WITHDRAWAL RATES BY INTEREST RATE SPREAD (EXCLUDES NEW ISSUES)

Interest Rate Spread*	Contracts with Surrender Charges		Contracts without Surrender Charges	
	Percentage of Contracts	Cash Value Withdrawal Rate	Percentage of Contracts	Cash Value Withdrawal Rate
1.00% or greater	7.1%	4.1	18.5%	8.8
0.50 to 0.99%	17.0	4.2	21.9	11.8
-0.50 to 0.49	44.4	2.7	50.3	17.0
-1.00 to -0.51	9.3	2.7	8.4	26.8
Less than -1.00%	22.1	3.7	1.0	†

*Interest rate spread for a contract equals the median credited interest rate on new issues minus the contract's credited interest rate.

†Insufficient data.

III. INTEREST GUARANTEE PERIOD GREATER THAN ONE YEAR

Among the 123,716 contracts in the sample, 3,355 (2.7 percent) incurred full withdrawals; 2,479 (2.0 percent) experienced partial withdrawals; 1,181 (1.0 percent) were annuitized; 805 (0.6 percent) were surrendered because of death or disability of the annuitant; and 115,896 contracts (93.7 percent) had no withdrawal activity. Full withdrawals (excluding death and disability claims) represent an annualized cash value withdrawal rate of 3.6 percent; partial withdrawals an annualized cash value withdrawal rate of 0.7 percent.

WITHDRAWAL ACTIVITY

Type of Withdrawal	Percentage of Contracts
Full	2.7%
Partial	2.0
Annuitized	1.0
Death/Disability Claim	0.6
No Activity	93.7
	100.0%

A. Summary of Contract Characteristics and Withdrawal Activity

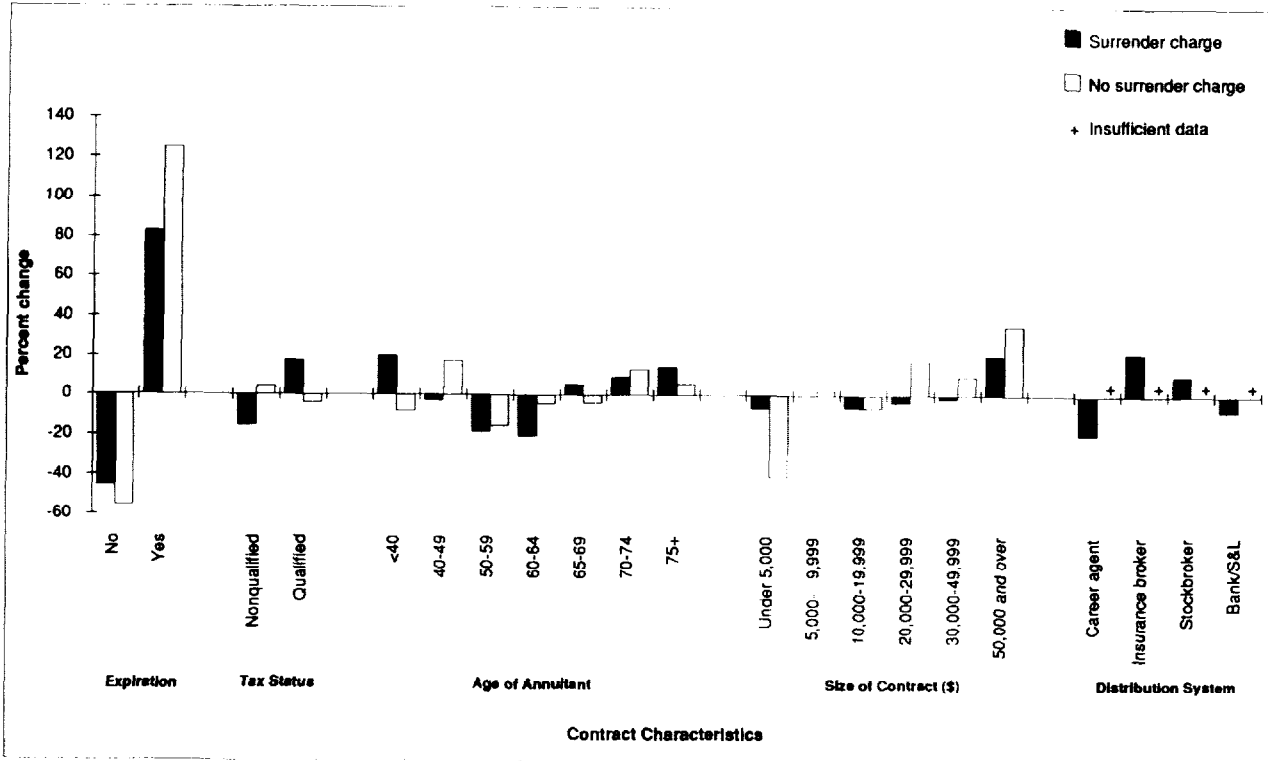
Two characteristics highly related to full withdrawal activity are amount of surrender charge and the expiration of the interest guarantee period. Contracts without surrender charges are more than 15 times as likely to see full withdrawal than those with surrender charges.

Data for analyzing contracts whose interest rate guarantees have expired are limited, because many of the contracts were sold only in the past few years.

Among the 117,778 contracts with surrender charges, 2,059 (1.7 percent) experienced full withdrawals. For contracts with surrender charges, comparing full withdrawal activity on contracts with a particular characteristic to the average full withdrawal activity for all contracts with surrender charges reveals:

- Withdrawal activity for the year the interest guarantee expires is 83 percent higher than average.
- Withdrawal activity is 15 percent lower than average on nonqualified business and is 18 percent higher than average on qualified business.
- Withdrawal activity by annuitant age varies from 20 percent higher than average for the 40 and under age group to 21 percent lower than average for the 60-64 age group.

FIGURE 8
 CHANGE IN FULL WITHDRAWAL ACTIVITY BY VARIOUS CONTRACT CHARACTERISTICS
 (INTEREST GUARANTEE PERIOD GREATER THAN ONE YEAR)



- Withdrawal activity by contract size varies from 7 percent lower than average for contracts with under \$5,000 cash value to 21 percent higher than average for contracts with cash values of \$50,000 and over.
- Withdrawal activity by distribution channel varies from 20 percent lower than average for career agent business to 22 percent higher than average for insurance broker business.

Among the 5,938 contracts without surrender charges, 1,296 (21.5 percent) incurred full withdrawals. For contracts without surrender charges, comparing full withdrawal activity on contracts with a particular characteristic to the average full withdrawal activity for all contracts without surrender charges reveals:

- Withdrawal activity for the year the interest guarantee expires is 125 percent higher than average.
- Withdrawal activity on nonqualified business is similar to withdrawal activity on qualified business.
- Withdrawal activity by annuitant age varies from 18 percent higher than average for the 40–49 age group to 16 percent lower than average for the 50–59 age group.
- Withdrawal activity by contract size varies from 41 percent lower than average for contracts with less than \$5,000 cash value to 35 percent higher than average for contracts with cash values of \$50,000 or more.

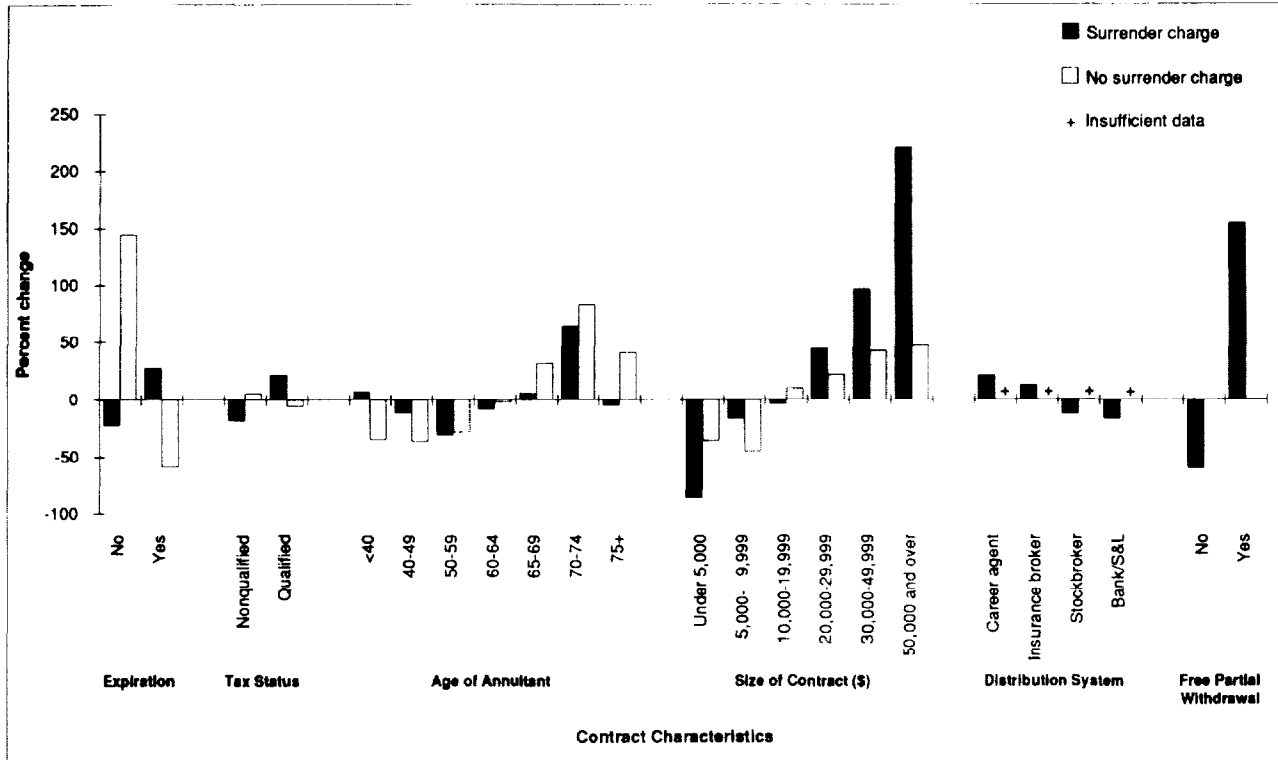
Four characteristics highly associated with partial withdrawal activity include expiration of interest guarantee period, age of annuitant, size of contract, and inclusion of a free partial withdrawal provision.

Among the 117,778 contracts with surrender charges, 2,202 (1.9 percent) made a partial withdrawal. For contracts with surrender charges, comparing partial withdrawal activity on contracts with a particular characteristic to the average partial withdrawal activity for all contracts with surrender charges reveals:

- Withdrawal activity for the year the interest guarantee expires is 28 percent higher than average.
- Withdrawal activity is 18 percent lower than average on nonqualified business and 22 percent higher than average on qualified business.
- Withdrawal activity by annuitant age varies from 31 percent lower than average for the 50–59 age group to 64 percent higher than average for the 70–74 age group.
- Withdrawal activity by contract size varies from 86 percent lower than average for contracts with less than \$5,000 cash value to 221 percent higher than average for contracts with \$50,000 or more.
- Withdrawal activity by distribution channel varies from 21 percent higher than average for career agent business to 16 percent lower than average for business sold by banks and savings and loans.

FIGURE 9

CHANGE IN PARTIAL WITHDRAWAL ACTIVITY BY VARIOUS CONTRACT CHARACTERISTICS
(INTEREST GUARANTEE PERIOD GREATER THAN ONE YEAR)



- Withdrawal activity is 155 percent higher than average on contracts with free withdrawal provisions and 61 percent lower than average on contracts without free withdrawal provisions.

Among the 5,938 contracts without surrender charges, 277 (4.7 percent) incurred partial withdrawals. For contracts without surrender charges, comparing partial withdrawal activity on contracts with a particular characteristic to the average partial withdrawal activity for all contracts without surrender charges reveals:

- Withdrawal activity for the year the interest guarantee expires is 59 percent lower than average.
- Withdrawal activity on nonqualified business is similar to withdrawal activity on qualified business.
- Withdrawal activity by annuitant's age varies from 36 percent lower than average for the 40–49 age group to 83 percent higher than average for the 70–74 age group.
- Withdrawal activity by contract size varies from 45 percent lower than average for contracts with \$5,000 to \$9,999 cash value to 47 percent higher than average for contracts with \$50,000 or more.

B. Details of Contract Characteristics and Withdrawal Activity

1. Expiration of Interest Guarantee Period

The contract year in which the interest guarantee period expires has one of the highest full-withdrawal rates. This may be attributable to several factors:

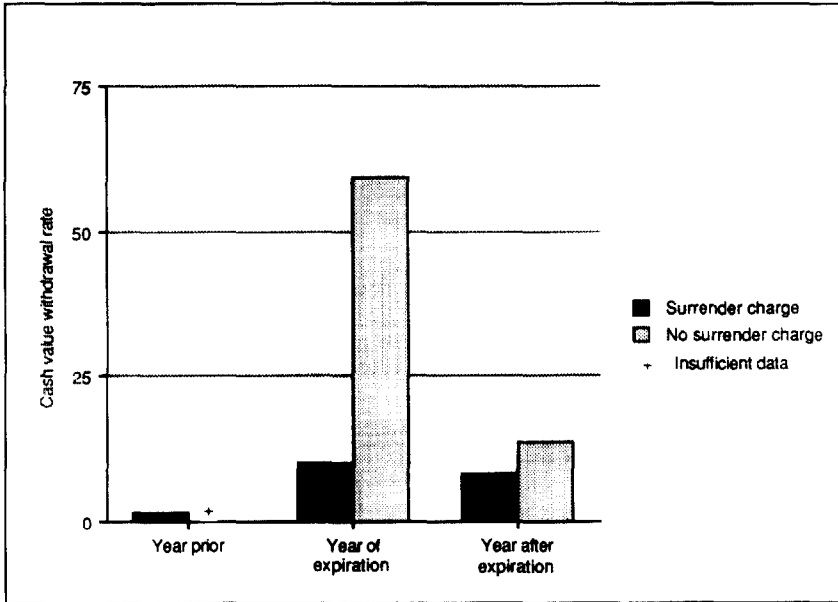
- After the interest guarantee period expires, 33 percent of the contracts allow the contract-holder 30–60 days to withdraw cash value without penalty.
- For 21 percent of the contracts, the year of expiration coincides with the year surrender charges expire.
- The credited interest rate may have changed.

Thirty-three percent of the contracts have three-year interest guarantee periods. Full withdrawal rates for these contracts are very low for the first three contract years. When the interest rate comes up for renewal, withdrawal rates increase significantly, particularly for contracts where the surrender charge goes to zero at the same time.

Fifty-four percent of the contracts have five-year interest guarantee periods. Full withdrawal rates for these contracts are very low for the first five contract years. When the interest rate comes up for renewal, full withdrawal rates increase from less than 4 percent in year five to 55.8 percent in year

FIGURE 10

FULL WITHDRAWAL RATES BEFORE AND AFTER EXPIRATION OF INTEREST GUARANTEE PERIOD



six. The surrender charge on nearly all the contracts with five-year interest guarantee periods goes to zero at the same time the interest rate guarantee expires.

2. Surrender Charges

Contracts with surrender charges of 4 percent or more have a 1- to 2-percent full withdrawal rate. On contracts without surrender charges, the full withdrawal rate increases sharply to 36 percent.

In the years prior to or concurrent with surrender charge expiration, full withdrawal is more likely to occur in the two months following contract anniversary date than in any other contract month. In the years before expiration, 30 percent of full withdrawals occur in the first two months of the contract year. In the year surrender charges expire, 82 percent of full withdrawals occur in the first two months.

TABLE 7
 FULL WITHDRAWAL RATES FOR CONTRACTS WITH THREE-YEAR
 AND FIVE-YEAR INTEREST GUARANTEE PERIODS

Contract Year	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
Three-Year Contracts with Surrender Charges at Renewal							
1	34.7%	38.5%	0.9	0.6	0.6	0.2	0.8
2	22.4	22.2	1.6	2.9	1.5	1.3	2.8
3	13.8	11.6	2.0	3.2	2.0	0.7	2.7
4	11.0	9.4	6.6	5.0	9.4	2.4	11.8
5	7.8	6.9	2.9	5.7	3.6	1.2	4.8
6	5.5	5.6	4.6	6.0	5.9	1.5	7.4
7	3.4	3.8	10.0	8.8	10.6	3.0	13.6
8	1.5	2.1	11.0	14.1	12.1	4.5	16.6
Three-Year Contracts without Surrender Charges at Renewal							
1	42.6%	37.6%	2.4	0.9	1.8	0.1	1.9
2	25.3	26.8	1.8	2.0	1.5	0.8	2.3
3	20.6	22.7	2.5	3.2	3.6	0.5	4.1
4	11.0	12.9	62.4	4.5	72.2	0.9	73.1
Five-Year Contracts with Surrender Charges at Renewal							
1	54.3%	50.7%	1.2	0.3	1.3	0.1	1.4
2	34.9	37.0	1.7	2.6	1.5	0.5	2.0
3	7.9	8.9	1.7	6.4	2.2	1.2	3.4
4	2.8	3.3	1.1	5.5	0.4	1.6	2.0
Five-Year Contracts without Surrender Charges at Renewal							
1	27.3%	25.0%	1.2	0.5	1.1	0.2	1.3
2	25.7	24.5	1.6	1.6	1.9	0.5	2.4
3	20.6	20.7	1.2	2.4	1.0	0.5	1.5
4	15.1	16.9	1.4	2.1	1.9	0.4	2.3
5	7.8	9.1	3.4	2.5	3.3	0.5	3.8
6	2.8	3.3	50.7	4.2	55.8	1.8	57.6
7	0.5	0.2	21.1	4.6	24.0	7.2	31.2

3. Free Partial Withdrawal Provision

The influence of surrender charges on withdrawal rates is further illustrated by the inclusion of a free partial withdrawal provision in the contract. Approximately 85 percent of the contracts have such provisions. Most of these contracts allow the contract-holder to withdraw 10 percent of the cash value without incurring a surrender charge. Contracts with such provisions are four times as likely to experience partial withdrawals as contracts without such provisions. However, the amount of partial withdrawal activity under both types of contracts remains low.

Among contracts with surrender charges and free partial withdrawal provisions, 2.4 percent experience partial withdrawals, withdrawing on average

FIGURE 11
FULL WITHDRAWAL RATES BY SURRENDER CHARGE

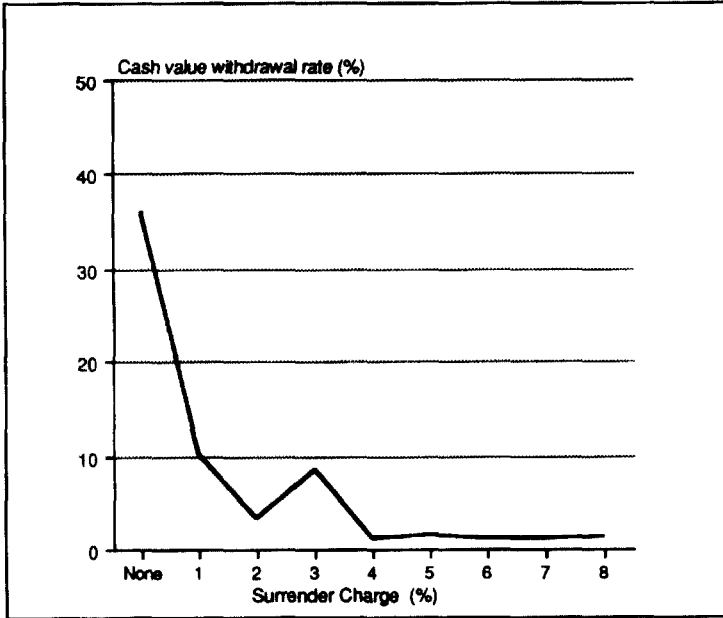


TABLE 8
DISTRIBUTION OF FULL WITHDRAWALS DURING CONTRACT YEAR

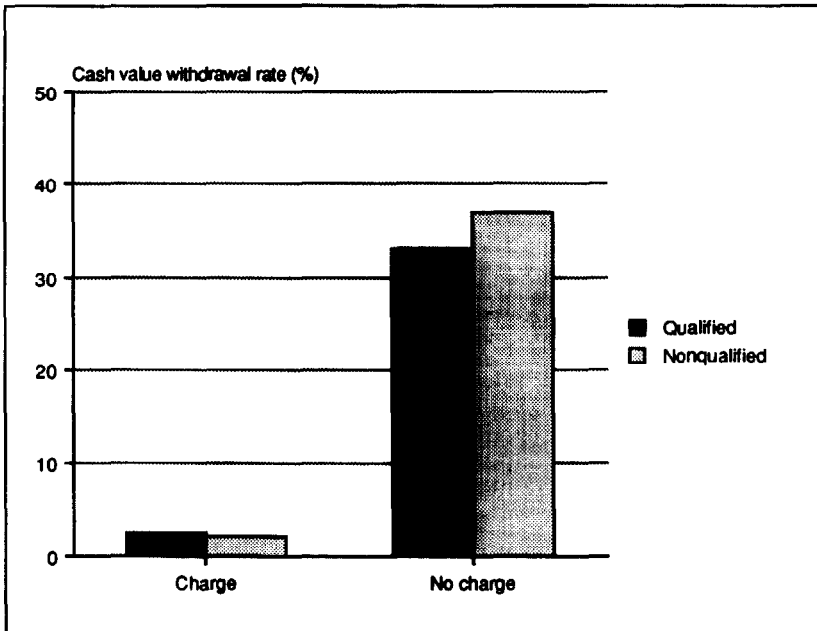
Contract Month	Years before Surrender Charges Expire	Year Surrender Charges Expire	Years after Surrender Charges Expire
1	15.7%	58.4%	10.9%
2	14.2	23.5	13.2
3	11.7	5.1	14.1
4	7.2	3.5	13.2
5	7.6	1.4	5.9
6	5.4	1.4	9.1
7	6.3	1.4	6.4
8	6.3	0.9	6.8
9	5.3	0.7	6.4
10	6.6	0.2	5.9
11	5.6	0.1	3.6
12	7.8	3.4	4.5

17 percent of their cash value. For contracts with surrender charges and no free partial withdrawal provision, less than 1 percent incur partial withdrawals, withdrawing on average 35 percent of cash value. Among the contracts without surrender charges, 8.9 percent experience partial withdrawals, withdrawing on average 29 percent of cash value.

4. Tax Status

Withdrawal rates for qualified business and nonqualified business are similar. On contracts with surrender charges, nonqualified contracts have a full withdrawal rate of 2.1 percent and qualified contracts have a rate of 2.6 percent. With no surrender charge, nonqualified plans have a full withdrawal rate of 37 percent, moderately higher than the 33 percent for qualified contracts.

FIGURE 12
FULL WITHDRAWAL RATES BY TAX STATUS



5. Age of Annuitant

On contracts with surrender charges, partial withdrawal activity varies little by age of the annuitant. On contracts without surrender charges, partial withdrawal activity increases significantly with age, but the amount of cash value withdrawn remains less than 5 percent. Full withdrawal rates do exhibit some variation by age. On contracts with surrender charges, full withdrawal rates are highest among annuitants age 30-39 (3.2 percent) and lowest among annuitants under age 18 and between ages 60 and 64 (1.5 percent). On contracts without surrender charges, full withdrawal activity is highest among annuitants age 40-49 and 70-74 (42 percent) and lowest among annuitants age 60 to 69 (33 percent).

TABLE 9
FULL AND PARTIAL WITHDRAWAL RATES BY AGE OF ANNUITANT

Age of Annuitant	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
Contracts with Surrender Charges							
Under 18	1.5%	1.4%	1.2	1.9	1.4	0.7	2.1
18-29	1.3	1.1	3.5	3.2	2.5	1.3	3.8
30-39	4.9	3.2	3.0	1.5	3.2	0.7	3.9
40-49	10.5	9.0	2.5	1.5	2.3	0.6	2.9
50-59	23.3	22.0	2.0	1.5	2.0	0.4	2.4
60-64	19.7	20.6	1.8	2.1	1.5	0.6	2.1
65-69	18.5	19.9	2.1	2.4	2.5	0.6	3.2
70-74	12.0	13.3	2.0	3.4	2.6	0.7	3.4
75 and over	8.2	9.6	2.3	2.3	2.6	0.5	3.2
Contracts without Surrender Charges							
Under 40	6.9%	4.7%	30.0	5.1	34.4	1.3	35.7
40-49	10.4	8.6	32.5	5.4	42.0	1.6	43.6
50-59	20.7	19.4	27.3	6.3	34.9	2.6	37.6
60-64	20.5	20.1	31.2	7.3	33.1	2.7	35.8
65-69	21.3	23.3	31.4	10.7	32.6	3.9	36.5
70-74	11.8	14.5	35.7	15.6	42.5	2.7	45.2
75 and over	8.3	9.5	38.6	12.7	39.8	3.7	43.5

6. Size of Contract

When a surrender charge is in effect, full withdrawal rates vary little by size of contract. When the surrender charge is no longer in effect, full withdrawal rates are higher among contracts with \$75,000 or more cash value (44.7 percent) and lower among contracts with under \$5,000 cash value (18.2 percent).

Partial withdrawal activity shows a tendency to increase with size of contract. However, the amount of cash value withdrawn remains low. For contracts with surrender charges, the cash value withdrawal rate is less than 1 percent. For contracts without surrender charges, the cash value withdrawal rate varies by size of contract, from 1.4 percent to 3.9 percent.

TABLE 10
FULL AND PARTIAL WITHDRAWAL RATES BY SIZE OF CONTRACT

Size of Contract	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
Contracts with Surrender Charges							
\$100,000 and over	4.3%	25.9%	2.6	6.0	2.8	0.9	3.7
75,000-99,999	2.3	7.1	2.6	4.3	2.6	0.7	3.3
50,000-74,999	7.6	16.4	2.1	3.5	2.0	0.6	2.6
40,000-49,999	4.2	6.7	2.2	3.5	2.1	0.6	2.7
30,000-39,999	7.8	9.7	2.1	2.7	2.0	0.6	2.6
20,000-29,999	15.2	13.4	1.8	2.2	1.7	0.4	2.1
10,000-19,999	30.2	14.9	1.9	1.6	1.8	0.3	2.1
5,000-9,999	20.2	5.0	2.2	1.3	2.1	0.3	2.4
Under \$5,000	8.1	0.9	3.2	0.5	3.2	0.1	3.3
Contracts without Surrender Charges							
\$75,000 and over	8.8%	36.8%	44.3	12.1	44.7	3.2	47.9
50,000-74,999	7.4	14.3	29.0	11.7	29.3	2.6	31.9
40,000-49,999	6.0	8.7	32.8	13.3	32.9	3.9	36.8
30,000-39,999	8.4	9.3	34.5	10.6	34.3	3.0	37.3
20,000-29,999	15.4	12.1	31.4	8.8	31.7	1.9	33.6
10,000-19,999	28.4	13.7	30.4	9.0	30.4	3.0	33.4
5,000-9,999	15.8	4.0	34.2	6.2	32.6	2.6	35.2
Under \$5,000	9.9	1.1	18.4	3.9	18.2	1.4	19.5

7. Distribution System

For contracts with surrender charges, full withdrawal rates vary little by distribution system. Before surrender charges expire, business sold by career agents had the lowest rate (1.5 percent) and business sold by insurance brokers had the highest rate (2.5 percent). Not enough data are available to analyze withdrawal rates by distribution system for contracts without surrender charges.

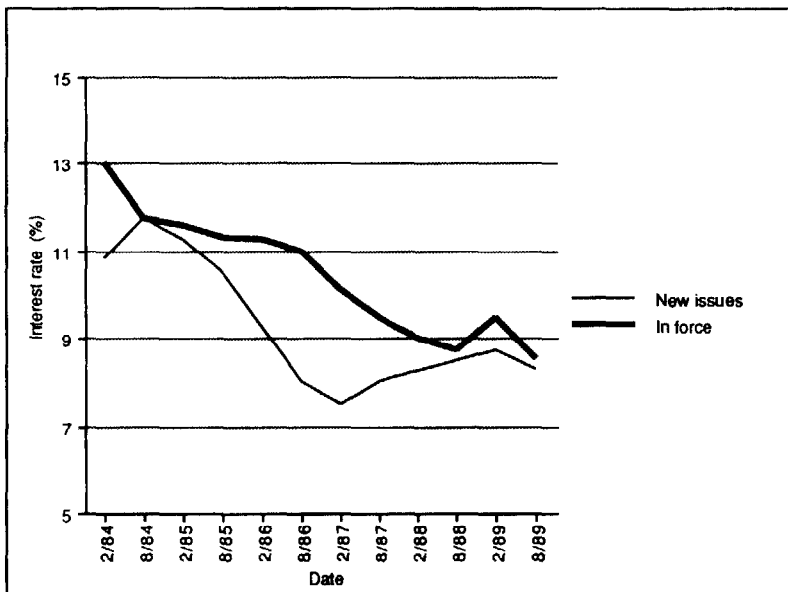
FULL WITHDRAWAL RATES BY DISTRIBUTION CHANNEL
(CONTRACTS WITH SURRENDER CHARGES)

Distribution Channel	Cash Value Withdrawal Rate
Career Agent	1.5%
Insurance Broker	2.5
Stockbroker	2.2
Bank or S&L	1.9

8. Credited Interest Rates

A limited amount of data are available for analyzing the sensitivity of withdrawal rates to credited interest rates. From 1984 through 1989, most of the in-force contracts had credited interest rates higher than those available on new issues. From the middle of 1985 until the end of 1987, the interest spread between new issues and in-force contracts was fairly wide and for a period of time exceeded 2.5 percentage points.

FIGURE 13
CREDITED INTEREST RATE ON NEW ISSUES VERSUS IN FORCE



To measure the competitiveness of a contract's credited interest rate, the study calculated the difference between the median credited rate available on new issues and the rate credited on a contract's anniversary. Contracts with negative spreads have higher credited rates than newly issued contracts and hence are more competitive than new issues. Contracts with positive spreads have lower credited rates than newly issued contracts and hence are less competitive than new issues. Most contracts have spreads between -1.0 percent and 1.0 percent. Because of the modest variation in credited interest rates, the relationship between credited interest rates and withdrawal rates is inconclusive.

TABLE 11
FULL WITHDRAWAL RATES BY INTEREST RATE SPREAD (EXCLUDES NEW ISSUES)

Interest Rate Spread*	Contracts with Surrender Charges		Contracts without Surrender Charges	
	Percentage of Contracts	Cash Value Withdrawal Rate	Percentage of Contracts	Cash Value Withdrawal Rate
1.00% or greater	7.8%	2.5	17.1%	63.6
0.50 to 0.99%	10.7	3.7	16.1	53.8
-0.50 to 0.49	35.7	2.9	61.5	30.8
-1.00 to -0.51	10.9	2.3	5.3	†
Less than -1.00%	34.9	1.8	†	†

*Interest rate spread for a contract equals the median credited interest rate on new issues minus the contract's credited interest rate.

†Insufficient data.

Tables A10-A13 in Appendix A present a complete tabulation of the results by the various characteristics for contracts with interest guarantee periods greater than one year.

CONTRIBUTING COMPANIES

AEGON Insurance Group
 Bankers Life and Casualty (Illinois)
 Confederation Life
 Family Life Insurance Company (Washington)
 Fidelity and Guaranty Life
 Fidelity Bankers Life
 First Colony Life
 Hartford Life Insurance Companies

IDS Life (Minnesota)
Keyport Life
Lincoln National Life Insurance
Lutheran Brotherhood
Manulife Financial Group
Metropolitan Life
Northbrook Life Insurance Company
Northwestern Mutual Life
Pruco Life Insurance Company (New Jersey)
State Mutual Companies
Sun Financial Group
Transamerica Life Companies
Union Central Life
United Pacific Life
USAA Life
Western National Life

APPENDIX A
TABLES OF RESULTS

TABLE A1

INTEREST GUARANTEE PERIOD ONE YEAR OR LESS; NONQUALIFIED AND QUALIFIED;
CONTRACTS WITH SURRENDER CHARGES; NUMBER OF CONTRACTS, 212,993;
CASH VALUE IN FORCE, \$4,536,867,275

	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
All Contracts	100.0%	100.0%	3.2	3.9	3.1	1.0	4.1
Tax Status							
Nonqualified	63.0%	66.9%	3.2	4.3	3.2	0.9	4.1
Qualified	37.0	33.1	3.3	3.3	3.0	1.2	4.2
Age							
Under 18	1.1%	0.8%	3.1	2.2	3.1	1.2	4.3
18-29	1.4	0.8	6.3	3.7	6.6	1.1	7.7
30-39	7.0	3.6	3.8	1.8	3.9	0.9	4.8
40-49	13.3	9.5	3.4	1.8	3.3	0.7	4.0
50-59	23.8	22.1	2.4	1.8	2.3	0.6	2.9
60-64	17.5	19.5	2.9	4.1	2.7	1.0	3.7
65-69	15.8	19.4	3.3	5.9	3.4	1.2	4.6
70-74	10.9	13.4	3.9	7.5	3.9	1.3	5.2
75 & over	9.1	11.0	3.7	6.0	3.3	1.3	4.6
Sex							
Male	54.1%	59.0%	3.4	3.7	3.3	1.0	4.3
Female	45.9	41.0	3.0	4.1	2.8	0.9	3.8
Size of Contract							
\$100,000 and over	2.7%	20.5%	3.4	12.6	3.5	1.7	5.1
75,000-99,999	1.6	6.4	2.8	10.0	2.8	1.3	4.1
50,000-74,999	5.1	13.9	3.1	8.0	3.1	1.1	4.2
40,000-49,999	3.2	6.6	3.3	7.3	3.3	1.1	4.4
30,000-39,999	6.2	9.9	3.1	6.2	3.1	1.0	4.1
20,000-29,999	13.2	14.8	2.7	4.6	2.7	0.7	3.4
10,000-19,999	30.5	19.2	2.9	3.6	2.9	0.6	3.5
5,000-9,999	20.4	6.6	3.3	2.4	3.4	0.5	3.9
Under \$5,000	17.1	2.2	4.1	1.1	4.2	0.4	4.6
Sold by							
Career agent	52.9%	52.0%	3.0	4.5	2.9	1.2	4.1
Bank/S&L	23.4	17.6	4.3	3.0	4.7	0.6	5.3
Insurance broker	13.2	15.6	4.2	3.8	3.8	1.3	5.1
Stockbroker	9.6	13.5	2.1	4.2	2.3	1.1	3.4
Direct response	0.9	1.2	*	*	*	*	*
Free Partial With- drawal Provision							
No	16.0%	11.6%	3.8	0.9	4.4	0.5	4.8
Yes	84.0	88.4	3.1	4.5	2.9	1.1	4.0

*Insufficient data.

TABLE A2

INTEREST GUARANTEE PERIOD ONE YEAR OR LESS; NONQUALIFIED AND QUALIFIED;
 CONTRACTS WITHOUT SURRENDER CHARGES; NUMBER OF CONTRACTS, 13,595;
 CASH VALUE IN FORCE, \$389,155,825

	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
All Contracts	100.0%	100.0%	13.3	9.6	15.6	2.1	17.7
Tax Status							
Nonqualified	86.8%	88.0%	12.3	9.2	13.9	2.1	16.0
Qualified	13.2	12.0	18.6	10.7	25.1	2.0	27.1
Age							
Under 40	5.2%	4.6%	15.4	7.9	26.9	2.1	29.1
40-49	9.9	8.6	11.0	5.9	12.8	1.2	14.0
50-59	20.8	19.5	12.5	4.2	16.9	0.8	17.6
60-64	20.9	20.8	14.1	6.8	16.5	2.0	18.5
65-69	20.2	21.0	12.2	10.9	14.6	2.2	16.8
70-74	13.2	14.1	15.8	18.5	14.2	2.7	16.9
75 & over	9.7	11.4	13.5	17.1	13.1	4.2	17.3
Sex							
Male	55.4%	57.3%	13.0	7.8	16.3	1.7	18.0
Female	44.6	42.7	13.6	11.8	14.6	2.7	17.3
Size of Contract							
\$75,000 and over	6.0%	27.6%	20.4	20.3	22.5	2.9	25.3
50,000-74,999	7.1	15.0	16.7	12.4	16.1	2.1	18.2
40,000-49,999	5.2	8.3	14.4	5.7	14.0	1.1	15.1
30,000-39,999	8.9	10.8	11.7	10.9	11.4	1.4	12.8
20,000-29,999	18.2	15.4	10.6	11.6	10.5	2.5	13.0
10,000-19,999	37.7	18.7	13.7	7.5	13.1	1.6	14.7
5,000-9,999	12.5	3.7	12.5	8.3	12.0	1.8	13.8
Under \$5,000	4.4	0.6	10.1	5.5	9.7	1.7	11.4
Sold by							
Career agent	63.9%	59.9%	6.4	14.2	6.3	3.0	9.3
Bank/S&L	5.6	4.4	9.6	7.1	13.8	1.9	15.7
Insurance broker	9.1	9.8	20.4	8.0	22.6	1.6	24.2
Stockbroker	15.8	19.0	19.6	7.6	18.6	2.0	20.6
Direct response	5.6	6.8	*	*	*	*	*

*Insufficient data.

TABLE A3

INTEREST GUARANTEE PERIOD ONE YEAR OR LESS; NONQUALIFIED;
 CONTRACTS WITH SURRENDER CHARGES; NUMBER OF CONTRACTS, 134,140;
 CASH VALUE IN FORCE, \$3,034,430,230

	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
All Contracts	100.0%	100.0%	3.2	4.3	3.2	0.9	4.1
Age							
Under 18	1.7%	1.1%	3.2	2.2	3.6	1.1	4.8
18-29	1.3	1.0	8.1	6.2	7.2	1.3	8.5
30-39	3.6	2.9	4.6	4.0	4.6	1.3	5.9
40-49	7.9	7.1	3.8	3.6	3.5	1.0	4.5
50-59	19.7	19.0	2.5	2.7	2.3	0.7	3.0
60-64	17.4	17.5	2.7	4.1	2.6	1.0	3.6
65-69	18.2	18.9	3.1	5.4	3.3	1.0	4.3
70-74	15.6	16.4	3.4	4.6	3.7	0.9	4.6
75 & over	14.6	16.1	3.7	5.4	3.4	1.0	4.4
Sex							
Male	49.5%	51.4%	3.2	3.8	3.2	0.9	4.1
Female	50.5	48.6	3.2	4.8	3.2	0.9	4.1
Size of Contract							
\$100,000 and over	2.5%	16.6%	3.6	9.9	3.8	1.4	5.1
75,000-99,999	1.6	6.0	3.2	8.7	3.2	1.3	4.5
50,000-74,999	5.7	14.7	3.4	7.5	3.5	1.1	4.5
40,000-49,999	3.5	6.8	3.3	6.8	3.3	1.0	4.3
30,000-39,999	7.1	10.6	3.0	5.8	3.0	1.0	4.0
20,000-29,999	15.9	16.9	2.7	4.4	2.7	0.7	3.4
10,000-19,999	36.1	21.2	2.8	3.7	2.8	0.6	3.4
5,000-9,999	21.1	6.3	3.3	3.0	3.3	0.5	3.8
Under \$5,000	6.5	0.8	5.8	2.4	5.9	0.6	6.5
Sold by							
Career agent	47.8%	45.9%	2.7	5.8	2.6	1.2	3.8
Bank/S&L	27.8	23.3	4.6	3.2	4.8	0.6	5.4
Insurance broker	9.5	11.9	5.0	4.7	4.6	1.1	5.7
Stockbroker	13.6	17.5	2.2	3.7	2.5	1.1	3.6
Direct response	1.3	1.5	*	*	*	*	*

*Insufficient data.

TABLE A4
 INTEREST GUARANTEE PERIOD ONE YEAR OR LESS; NONQUALIFIED;
 CONTRACTS WITH SURRENDER CHARGES; NUMBER OF CONTRACTS, 134,140;
 CASH VALUE IN FORCE, \$3,034,430,230

	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
Surrender Charge for Full Withdrawal More than 8%							
7.1-8.0	1.2%	1.2%	1.8	1.9	1.9	0.3	2.2
6.1-7.0	1.0	1.0	4.6	3.4	4.8	0.5	5.3
5.1-6.0	16.0	19.1	2.0	3.6	2.1	0.9	3.1
4.1-5.0	23.1	20.7	2.7	3.5	2.9	0.6	3.5
3.1-4.0	32.2	33.3	3.4	4.1	3.1	0.9	4.1
2.1-3.0	11.0	10.9	4.0	4.4	4.3	0.8	5.1
1.1-2.0	8.2	7.0	3.6	6.8	3.3	1.3	4.6
0.1-1.0	4.8	4.4	4.9	6.6	5.3	1.4	6.8
	2.5	2.4	5.7	7.4	5.9	1.7	7.6
Free Partial With- drawal Provision							
No	2.4%	2.8%	1.8	1.3	1.8	0.4	2.2
Yes	97.6	97.2	3.2	4.4	3.2	0.9	4.2

TABLE A5
INTEREST GUARANTEE PERIOD ONE YEAR OR LESS; NONQUALIFIED;
CONTRACTS WITHOUT SURRENDER CHARGES; NUMBER OF CONTRACTS, 11,783;
CASH VALUE IN FORCE, \$344,821,617

	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
All Contracts	100.0%	100.0%	12.3	9.2	13.9	2.1	16.0
Age							
Under 40	5.3%	4.8%	15.0	10.5	25.9	2.3	28.2
40-49	8.8	7.7	9.0	8.5	11.0	1.3	12.3
50-59	19.0	17.6	10.9	6.0	13.6	1.0	14.5
60-64	20.8	20.6	12.9	6.6	14.9	2.0	16.9
65-69	20.6	21.1	11.7	9.2	12.8	2.2	15.0
70-74	14.3	15.2	14.7	12.7	13.5	2.3	15.8
75 & over	11.2	13.0	13.2	14.8	12.4	3.8	16.2
Sex							
Male	55.8%	57.7%	12.2	7.2	14.6	1.6	16.3
Female	44.2	42.3	12.5	11.7	12.9	2.7	15.6
Size of Contract							
\$75,000 and over	6.0%	27.1%	17.6	17.8	19.7	2.8	22.5
50,000-74,999	6.8	14.4	14.0	11.7	13.6	2.1	15.7
40,000-49,999	5.2	8.2	11.8	6.7	11.6	1.4	13.0
30,000-39,999	9.0	11.0	11.1	10.1	11.0	1.5	12.5
20,000-29,999	18.6	15.8	9.7	10.7	9.6	2.2	11.9
10,000-19,999	38.9	19.3	13.3	7.1	12.8	1.6	14.4
5,000-9,999	12.8	3.9	11.2	8.4	10.9	1.8	12.7
Under \$5,000	2.6	0.4	10.7	10.4	10.8	3.1	13.9
Sold by							
Career agent	63.7%	59.5%	5.8	14.4	5.5	2.9	8.4
Bank/S&L	5.9	4.8	9.7	7.4	13.8	2.0	15.8
Insurance broker	6.8	7.7	17.7	12.2	21.6	2.3	23.9
Stockbroker	17.6	20.8	19.9	7.3	18.4	2.1	20.5
Direct response	6.0	7.3	*	*	*	*	*

*Insufficient data.

TABLE A6
 INTEREST GUARANTEE PERIOD ONE YEAR OR LESS; QUALIFIED;
 CONTRACTS WITH SURRENDER CHARGES; NUMBER OF CONTRACTS, 78,853;
 CASH VALUE IN FORCE, \$1,502,437,046

	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
All Contracts	100.0%	100.0%	3.3	3.3	3.0	1.2	4.2
Tax Status							
IRA	77.3%	68.6%	2.9	3.1	2.5	1.4	3.9
TDA	14.6	18.4	3.1	4.7	2.6	0.9	3.5
Keogh/Corporate	8.1	13.0	7.2	2.3	6.1	0.9	7.0
Age							
Under 40	14.4%	5.7%	3.5	1.1	3.3	0.6	3.9
40-49	22.1	13.9	3.3	1.0	3.0	0.5	3.5
50-59	30.6	28.1	2.5	1.1	2.2	0.6	2.8
60-64	17.7	23.2	3.4	4.1	2.8	1.2	4.1
65-69	11.8	20.3	3.8	7.4	3.5	1.6	5.2
70 & over	3.4	8.9	7.9	28.9	4.5	3.5	8.1
Sex							
Male	61.8%	72.1%	3.5	3.5	3.3	1.3	4.5
Female	38.2	27.9	2.9	3.0	2.3	1.1	3.4
Size of Contract							
\$100,000 and over	3.2%	28.3%	3.0	15.9	3.2	2.1	5.3
75,000-99,999	1.7	7.3	2.3	12.0	2.3	1.4	3.7
50,000-74,999	4.0	12.2	2.4	9.3	2.4	1.0	3.4
40,000-49,999	2.7	6.1	3.6	8.2	3.6	1.2	4.8
30,000-39,999	4.8	8.4	3.1	7.1	3.1	0.9	4.0
20,000-29,999	8.7	10.8	2.9	4.9	2.9	0.7	3.6
10,000-19,999	21.6	15.2	3.1	3.2	3.0	0.6	3.6
5,000-9,999	19.2	7.0	3.4	1.6	3.5	0.4	3.9
Under \$5,000	34.0	4.6	3.8	0.7	3.8	0.3	4.1
Sold by							
Career agent	61.0%	63.3%	3.4	3.3	3.2	1.3	4.5
Bank/S&L	16.4	7.3	3.3	2.3	4.0	0.7	4.7
Insurance broker	19.2	22.5	3.6	3.4	3.0	1.3	4.3
Stockbroker	3.2	6.2	1.8	7.1	1.2	1.3	2.5
Direct response	0.4	0.8	*	*	*	*	*

*Insufficient data.

TABLE A7
INTEREST GUARANTEE PERIOD ONE YEAR OR LESS; QUALIFIED;
CONTRACTS WITH SURRENDER CHARGES; NUMBER OF CONTRACTS, 78,853;
CASH VALUE IN FORCE, \$1,502,437,046

	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
Surrender Charge for Full Withdrawal							
More than 8%	1.7%	1.5%	1.7	2.0	2.9	0.3	3.2
7.1-8.0	6.0	8.2	0.9	1.0	0.7	0.3	1.0
6.1-7.0	16.3	21.9	2.2	3.8	1.5	1.1	2.6
5.1-6.0	19.1	20.4	2.9	4.0	2.9	1.3	4.2
4.1-5.0	43.2	37.3	3.7	2.9	4.0	1.4	5.4
3.1-4.0	5.2	4.7	3.4	4.6	3.0	1.3	4.3
2.1-3.0	4.8	3.3	4.9	4.1	4.9	1.2	6.1
1.1-2.0	2.4	1.6	7.0	4.1	6.3	1.6	7.9
0.1-1.0	1.3	1.0	8.1	4.7	8.1	1.9	10.0
Free Partial Withdrawal Provision							
No	39.5%	29.0%	3.9	0.9	4.9	0.6	5.5
Yes	60.5	71.0	2.9	4.9	2.2	1.5	3.7

TABLE A8
INTEREST GUARANTEE PERIOD ONE YEAR OR LESS; QUALIFIED;
CONTRACTS WITHOUT SURRENDER CHARGES; NUMBER OF CONTRACTS, 1,812;
CASH VALUE IN FORCE, \$44,334,208

	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
All Contracts	100.0%	100.0%	18.6	10.7	25.1	2.0	27.1
Age							
Under 40	5.7%	3.2%	16.0	0.0	37.6	0.0	37.6
40-49	15.7	13.4	17.5	0.8	19.7	0.2	19.9
50-59	30.6	29.5	18.2	1.3	26.8	0.4	27.1
60-64	21.7	22.0	20.2	9.1	25.0	2.4	27.4
65-69	18.2	20.8	15.7	20.3	25.3	2.9	28.2
70 & over	8.0	11.0	26.9	56.4	23.8	6.6	30.3
Sex							
Male	52.6%	54.8%	18.5	9.7	27.1	1.8	28.8
Female	47.4	45.1	18.7	11.8	22.8	2.3	25.1
Size of Contract							
\$50,000 and over	15.1%	47.8%	31.1	21.1	33.4	2.5	35.8
40,000-49,999	5.6	8.8	27.2	3.6	26.6	0.3	26.9
30,000-39,999	8.2	9.8	15.1	13.4	14.8	1.0	15.7
20,000-29,999	15.7	13.5	17.3	14.3	16.8	2.9	19.6
10,000-19,999	30.8	15.5	15.9	9.2	15.2	1.6	16.8
5,000-9,999	10.3	2.8	21.4	8.4	21.3	1.9	23.2
Under \$5,000	14.3	1.7	9.2	1.9	8.6	0.5	9.1

TABLE A9

INTEREST GUARANTEE PERIOD ONE YEAR OR LESS; NONQUALIFIED AND QUALIFIED

Contract Year	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
Contracts with Five-Year Surrender Charge Schedule*; Number of Contracts, 45,110; Cash Value in Force, \$1,042,015,609							
1	42.0%	39.3%	3.0	1.1	2.2	0.3	2.5
2	27.4	25.7	3.6	6.3	3.0	1.6	4.6
3	13.8	13.5	3.3	8.8	3.0	2.1	5.1
4	8.3	9.9	3.6	8.0	3.2	1.7	4.9
5	5.2	7.1	2.9	9.8	2.1	2.1	4.2
6	2.7	3.9	14.6	10.2	14.9	2.2	17.1
Contracts with Seven-Year Surrender Charge Schedule*; Number of Contracts, 55,939; Cash Value in Force, \$1,378,374,043							
1	34.1%	33.4%	1.8	1.3	2.1	0.3	2.4
2	22.2	21.4	3.2	6.1	2.8	1.4	4.2
3	12.6	12.7	2.5	7.1	2.7	2.0	4.7
4	9.0	9.5	3.1	7.8	2.6	1.6	4.2
5	7.1	7.2	3.5	7.2	2.8	1.6	4.4
6	4.5	4.5	5.4	8.4	5.6	1.9	7.5
7	3.6	3.6	5.8	8.6	6.1	2.0	8.1
8	4.3	4.6	5.9	7.7	5.8	1.1	6.9
9	2.6	2.9	6.1	8.1	5.8	1.5	7.3

*Excludes contracts with a "window" provision that allows contract holders 30-60 days to surrender contract and not incur a surrender charge.

TABLE A10

INTEREST GUARANTEE PERIOD GREATER THAN ONE YEAR; NONQUALIFIED AND QUALIFIED;
 CONTRACTS WITH SURRENDER CHARGES; NUMBER OF CONTRACTS, 117,778;
 CASH VALUE IN FORCE, \$3,199,746,048

	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
All Contracts	100.0%	100.0%	2.1	2.1	2.2	0.6	2.8
Tax Status							
Nonqualified	81.2%	82.0%	1.9	2.1	2.1	0.6	2.7
Qualified	18.8	18.0	2.8	2.3	2.6	0.5	3.1
Age							
Under 18	1.5%	1.4%	1.2	1.9	1.4	0.7	2.1
18-29	1.3	1.1	3.5	3.2	2.5	1.3	3.8
30-39	4.9	3.2	3.0	1.5	3.2	0.7	3.9
40-49	10.5	9.0	2.5	1.5	2.3	0.6	2.9
50-59	23.3	22.0	2.0	1.5	2.0	0.4	2.4
60-64	19.7	20.6	1.8	2.1	1.5	0.6	2.1
65-69	18.5	19.9	2.1	2.4	2.5	0.6	3.2
70-74	12.0	13.3	2.0	3.4	2.6	0.7	3.4
75 & over	8.2	9.6	2.3	2.3	2.6	0.5	3.2
Sex							
Male	54.5%	58.0%	2.2	2.0	2.2	0.6	2.8
Female	45.5	42.0	2.0	2.2	2.1	0.7	2.8
Size of Contract							
\$100,000 and over	4.3%	25.9%	2.6	6.0	2.8	0.9	3.7
75,000-99,999	2.3	7.1	2.6	4.3	2.6	0.7	3.3
50,000-74,999	7.6	16.4	2.1	3.5	2.0	0.6	2.6
40,000-49,999	4.2	6.7	2.2	3.5	2.1	0.6	2.7
30,000-39,999	7.8	9.7	2.1	2.7	2.0	0.6	2.6
20,000-29,999	15.2	13.4	1.8	2.2	1.7	0.4	2.1
10,000-19,999	30.2	14.9	1.9	1.6	1.8	0.3	2.1
5,000-9,999	20.2	5.0	2.2	1.3	2.1	0.3	2.4
Under \$5,000	8.1	0.9	3.2	0.5	3.2	0.1	3.3
Sold by							
Stockbroker	61.5%	61.8%	1.9	2.4	2.2	0.7	2.9
Insurance broker	19.8	20.2	2.4	2.3	2.5	0.8	3.3
Career agent	16.0	16.4	1.5	1.3	1.5	0.4	1.9
Bank/S&L	2.7	1.6	1.6	2.7	1.9	1.7	3.6
Free Partial With- drawal Provision							
No	17.3%	18.6%	1.4	0.6	1.5	0.4	1.9
Yes	82.7	81.4	2.2	2.4	2.4	0.7	3.0

TABLE A11

INTEREST GUARANTEE PERIOD GREATER THAN ONE YEAR; NONQUALIFIED AND QUALIFIED;
 CONTRACTS WITHOUT SURRENDER CHARGES; NUMBER OF CONTRACTS, 5,938;
 CASH VALUE IN FORCE, \$182,649,352

	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
All Contracts	100.0%	100.0%	31.6	8.9	36.2	2.9	39.1
Tax Status							
Nonqualified	75.1%	79.1%	34.2	9.5	37.0	3.0	40.1
Qualified	24.9	20.9	23.9	7.0	33.1	2.3	35.4
Age							
Under 40	6.9%	4.7%	30.0	5.1	34.4	1.3	35.7
40-49	10.4	8.6	32.5	5.4	42.0	1.6	43.6
50-59	20.7	19.4	27.3	6.3	34.9	2.6	37.6
60-64	20.5	20.1	31.2	7.3	33.1	2.7	35.8
65-69	21.3	23.3	31.4	10.7	32.6	3.9	36.5
70-74	11.8	14.5	35.7	15.6	42.5	2.7	45.2
75 & over	8.3	9.5	38.6	12.7	39.8	3.7	43.5
Sex							
Male	61.3%	62.8%	30.9	7.5	35.9	2.6	38.5
Female	38.7	37.2	32.7	11.1	36.7	3.4	40.2
Size of Contract							
\$75,000 and over	8.8%	36.8%	44.3	12.1	44.7	3.2	47.9
50,000-74,999	7.4	14.3	29.0	11.7	29.3	2.6	31.9
40,000-49,999	6.0	8.7	32.8	13.3	32.9	3.9	36.8
30,000-39,999	8.4	9.3	34.5	10.6	34.3	3.0	37.3
20,000-29,999	15.4	12.1	31.4	8.8	31.7	1.9	33.6
10,000-19,999	28.4	13.7	30.4	9.0	30.4	3.0	33.4
5,000-9,999	15.8	4.0	34.2	6.2	32.6	2.6	35.2
Under \$5,000	9.9	1.1	18.4	3.9	18.2	1.4	19.5

TABLE A12

INTEREST GUARANTEE PERIOD THREE YEARS; NONQUALIFIED AND QUALIFIED

Contract Year	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
Contracts with Surrender Charges at Renewal; Number of Contracts, 29,210; Cash Value in Force, \$726,648,955							
1	34.7%	38.5%	0.9	0.6	0.6	0.2	0.8
2	22.4	22.2	1.6	2.9	1.5	1.3	2.8
3	13.8	11.6	2.0	3.2	2.0	0.7	2.7
4	11.0	9.4	6.6	5.0	9.4	2.4	11.8
5	7.8	6.9	2.9	5.7	3.6	1.2	4.8
6	5.5	5.6	4.6	6.0	5.9	1.5	7.4
7	3.4	3.8	10.0	8.8	10.6	3.0	13.6
8	1.5	2.1	11.0	14.1	12.1	4.5	16.6
Contracts without Surrender Charges at Renewal; Number of Contracts, 4,112; Cash Value in Force, \$91,897,941							
1	42.6%	37.6%	2.4	0.9	1.8	0.1	1.9
2	25.3	26.8	1.8	2.0	1.5	0.8	2.3
3	20.6	22.7	2.5	3.2	3.6	0.5	4.1
4	11.0	12.9	62.4	4.5	72.2	0.9	73.1

TABLE A13

INTEREST GUARANTEE PERIOD FIVE YEARS; NONQUALIFIED AND QUALIFIED

Contract Year	Percentage of Contracts	Percentage of Cash Values	Contract Withdrawal Rate		Cash Value Withdrawal Rate		
			Full	Partial	Full	Partial	Total
Contracts with Surrender Charges at Renewal; Number of Contracts, 10,216; Cash Value in Force, \$242,993,314							
1	54.3%	50.7%	1.2	0.3	1.3	0.1	1.4
2	34.9	37.0	1.7	2.6	1.5	0.5	2.0
3	7.9	8.9	1.7	6.4	2.2	1.2	3.4
4	2.8	3.3	1.1	5.5	0.4	1.6	2.0
Contracts without Surrender Charges at Renewal; Number of Contracts, 46,224; Cash Value in Force, \$1,378,085,760							
1	27.3%	25.0%	1.2	0.5	1.1	0.2	1.3
2	25.7	24.5	1.6	1.6	1.9	0.5	2.4
3	20.6	20.7	1.2	2.4	1.0	0.5	1.5
4	15.1	16.9	1.4	2.1	1.9	0.4	2.3
5	7.8	9.1	3.4	2.5	3.3	0.5	3.8
6	2.8	3.3	50.7	4.2	55.8	1.8	57.6
7	0.5	0.2	21.1	4.6	24.0	7.2	31.2

APPENDIX B INSTRUCTIONS FOR SUBMITTING DATA*

INTRODUCTION

These instructions describe the procedures for submitting data for the 1990 persistency and cash-flow study of single-premium deferred annuities (SPDAs). This study will develop appropriate measures of persistency and cash flow on single-premium deferred annuities; collect data for establishing norms; identify factors affecting SPDA persistency and cash flow; and track trends over time.

CONFIDENTIALITY OF DATA

LIMRA has been conducting long-term lapse studies for many years and realizes the importance of maintaining utmost confidentiality of data. LIMRA and the Society of Actuaries assure you that individual company data will not be published in any way that will allow identification of individual companies. All company data will be confidential unless otherwise authorized by your company.

CALENDAR YEARS OF OBSERVATION

Please provide data for calendar year 1989 and, if available, calendar years 1981 to 1988. Each calendar year will be referred to as a calendar year of observation. If you are able only to submit data for calendar year 1989 or for only a few calendar years, you are encouraged to do so.

PRODUCTS TO INCLUDE

Submit data only on single-premium deferred fixed-annuity products. Include market-value-adjusted annuities and CD annuities. Also include products that allow subsequent premium payments but are sold essentially as single-premium deferred annuities. Include individually issued products and individual products marketed on a group basis.

Also include group products marketed on an individual basis. Group products marketed on an individual basis feature a master group contract and trust agreement. The participants are issued certificates as evidence of participation and have the rights to full or partial surrender of cash values.

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Exclude employer-sponsored group annuity products, variable annuity products, and combination annuity products (that is, variable products with a fixed account).

DESCRIPTION OF INFORMATION TO SUBMIT

The data requested for this study fall into three categories:

- Information describing the single-premium deferred-annuity products your company included in this study
- Information summarizing each product's history of credited interest rates
- Information at the individual contract level.

1. Procedures for Submitting Product Information

Briefly describe the product features listed below for each product your company includes in this study, regardless of whether the product is currently being sold.

- a. Product name.
- b. Plan code—if contract level data is submitted for more than one product, or more than one version of a product, include a plan code in this section. If a product offers more than one interest rate guarantee period, treat each version as a separate product, and assign it a unique plan code.
- c. Calendar years product was sold.
- d. Time period initial credited interest rate is guaranteed—include whether this period is on a calendar-year basis or a policy-year basis.
- e. Minimum guaranteed interest rate for life of contract.
- f. Indexing of credited interest rates to an external index, such as the interest rate on 13-month Treasury bills.
- g. Bonus interest provisions (for example, banding of credited interest rates, client persistency bonus, and so on).
- h. Contract sales and maintenance expense charges.
- i. Surrender charges.
- j. Free withdrawal provisions.
- k. Bailout provisions—include length of time the client has to exercise option (for example, 30 days).
- l. Distribution channels used to sell product.
- m. Percent of sales by distribution system (estimate, if necessary).
- n. Writing-agent commissions—include asset-based compensation and general agent override and expense allowance, if applicable.

The following is an example of the product information requested.

- a. The product name is Capital Idea.
- b. The plan codes for this product are A101 through A109.
- c. The product was sold from 1984 to the present.
- d. The buyer has a choice of how long the initial credited interest rate is guaranteed. The choices are one policy year from date of issue or three policy years from date of issue.
- e. The minimum credited interest rate guaranteed for the life of the contract is 6 percent for contract years 2 through 5 and 4 percent thereafter.
- f. Credited interest rates and bailout rates are not tied to an external index.
- g. Products with year-end accumulation values in excess of \$25,000 are credited with an extra 0.25 percent interest.
- h. The contract has no expense charges.
- i. Surrender charges are a percentage of the account value and are 6 percent in year 1 decreasing uniformly to 0 in year 7.
- j. One free withdrawal per year up to 10 percent of account value is allowed.
- k. Bailout allowed if credited rate falls one percentage point below initial credited rate. The client has 30 days in which to surrender the contract without incurring a surrender charge.
- l. The product is sold by career agents, life brokers, and stockbrokers.
- m. The sources of new premium are approximately 20 percent from career agents, 10 percent from life brokers, and 70 percent from stockbrokers.
- n. Agent commissions are 3.5 percent of premium and 0.25 percent of the account value for contract years 2 and later. General agents receive 5 percent of premium instead of 3.5 percent.

2. Procedures for Submitting Information on the History of Credited Interest Rates

This information may be submitted using one of two methods.

Method 1

Complete a table for each product included in the study similar to the table shown in the example below. If possible, please submit these data on a diskette (MS-DOS, 5¼ inch, 360 K or 3½ inch, 800 K) using standard ASCII format only—no spreadsheet, word processing, or database formats. If the data are submitted on diskette, please include a description of the record format of the file.

EXAMPLE OF METHOD 1

Contract Issue Date	Credited Interest Rates As of:				
	1/1/89	2/1/89	...	11/1/89	12/1/89
12/1/89	—	—		—	8.25%
11/1/89	—	—		8.5%	8.5%
⋮					
2/1/88	9.0%	8.75%		8.75%	8.75%
1/1/88	8.75%	8.75%		8.75%	8.75%
12/1/87	8.75%	8.75%		8.75%	8.75%
and earlier					

If your company submits data for other calendar years of observation (1981–1988), complete separate tables for each calendar year of observation.

If your company submits data for more than one product, please complete separate tables for each product and include plan code on each table. If a product offers more than one interest rate guarantee period, treat each version as a separate product and complete separate tables for each.

Method 2

If you have this information summarized in a different format, you may send the information in your own format as long as the information is sufficient for LIMRA to complete the tables shown in method 1. If possible, please submit data on a diskette (MS-DOS, 5¼ inch, 360 K or 3½ inch, 800K) using standard ASCII format only—no spreadsheet, word processing, or database formats.

EXAMPLE OF METHOD 2

Initial Rate		First Renewal		Second Renewal		Third Renewal	
Contract Issue Date	Interest Rate	Renewal Date	Interest Rate	Renewal Date	Interest Rate	Renewal Date	Interest Rate
01/01/86	9.5%	02/01/87	8.75%	02/01/88	8.5%	02/01/89	8.25%
02/01/86	9.5	03/01/87	8.5	03/01/88	8.5	03/01/89	8.5
⋮							
12/01/88	8.75	01/01/90	8.5				
⋮							
12/01/89	8.60						

3. Procedures for Submitting Contract Level Information

The information at the individual contract level will be submitted on a seriatim basis for a random sample of contracts from your company's in-force business. The sample should be drawn from contracts in force at the start of the calendar year plus contracts sold during the calendar year. The sample should include both contracts that remain in force and contracts that are surrendered. For each calendar year of observation, use the table below to determine the appropriate number of contracts to submit. The number of contracts in force includes all products and product versions and the minimum sample size to submit should be based on all products and product versions combined.

Number of Contracts In Force	Sample Size to Submit
25,000 or more	10 percent of contracts in force
Less than 25,000	2,500 contracts, or entire in-force if less than 2,500

Use following criteria for selecting contracts:

Include only those contracts with a particular ordinal position in the master file, such as every tenth contract. The ordinal position your company uses will depend on the number of contracts your company has in force. Choose an ordinal position that will yield an appropriate sample size for your company.

For example, if your company had 30,000 contracts in force in 1989, please submit the information for 3,000 contracts by choosing every tenth contract from the 1989 master file. If your company in 1986 had 10,000 contracts in force, please submit the information for 2,500 contracts by choosing every fourth contract from the 1986 master file. The data submitted for each calendar year should be a random sample of contracts; no attempt should be made to include the same contracts in each calendar year's data submission.

The information collected on each contract includes:

- Plan code
- Contract number
- Type of plan (for example, IRA)
- Issue date
- Interest guarantee period (for example, 3 years)

- Initial premium payment
- Accumulated account value at beginning of calendar year (or end of prior calendar year)
- Accumulated account value at end of calendar year
- Termination code
- Date contract surrendered (to be left blank if contract not surrendered)
- Partial withdrawals
- Surrender charge
- Annuitant's year of birth
- Sex of annuitant
- Annuitant's marital status
- State of residence of owner at beginning of calendar year
- Zip code
- Type of agent who sold the product (for example, career agent, stockbroker).

Please submit the contract level data on tape with the following specifications:*

- Tape is 9-track
- Tape has a density of 6250 BPI
- The recording mode is EBCDIC
- Character type data only
 - NO block numbering
 - NO multi-punch data
 - NO binary data
 - NO packed-decimal data
 - NO floating-point data
- Records should be fixed length and blocked with 10 records per block
- Label should be Standard IBM label (please use the label SPDA90).

If you submit data for more than one calendar year of observation, you may include all the data on one tape and in one file.

Label the outside of the tape with the following information:

1990 SPDA Cashflow Study
Volume serial number of tape
Your company's name

Include with the tape a printout of the first block and last block of records in the file.

Please use the record layout and coding instructions shown in Table B1.

*If you prefer submitting contract level data on diskette, please call Lucian Lombardi or Dan Boyce.

TABLE B1

Position	Data Item*	Coding Instructions
1-2	Calendar year of observation	Specify the last two digits of the calendar year these data pertain to. For example, data from the 1989 master file should be coded as 89.
3-10	Plan code†	If data are submitted for more than one product (or one version of a product), include some way of identifying the different products.
11-30	Contract number or account number	If this number is alphanumeric, include alphabetic codes.
31-32	Type of plan	01-IRA 02-IRA rollover from a qualified pension plan 03-IRA-SEP 04-TDA (include: 403(b), 501(c), 457(b) plans) 05-Keogh (HR10) 06-Corporate 07-Other Qualified 08-Nonqualified
33-34	Month contract issued	01-12 for January through December
35-36	Day of month contract issued	01-31 for 1st through 31st
37-38	Calendar year issued	Last two digits of year
39-40	Interest guarantee period	Number of years the credited interest rate is guaranteed from date of issue or date of last renewal (0 if guaranteed for less than 1 policy year).
41-50	Initial premium payment	Round amounts to nearest dollar. Do not include dollar sign, commas, decimal point, or cents.
51-60	Account value at beginning of year (or end of previous year)	Report account value as of January 1 and before surrender charges. Include loan amounts, if any. Round amounts to nearest dollar. Do not include dollar sign, commas, decimal point, or cents.
61-70	Account value at end of year (if contract is still in force)	Report account value as of December 31 and before surrender charges. Include loan amounts, if any. Round amounts to nearest dollar. Code this field as 0 for contracts that terminated during the year. Do not include dollar sign, commas, decimal point, or cents.
71	Termination code	0 = Contract in force at end of year 1 = Contract transferred to annuity payout status 2 = Contract no longer in force for reason of death or disability 3 = Contract fully surrendered† for reason other than death, disability or transfer to payout status
72-73	Month contract surrendered†	01-12 for January through December. Leave field blank if contract not surrendered.
74-75	Day of month contract surrendered†	01-31 for 1st through 31st. Leave field blank if contract not surrendered.
76-77	Calendar year contract surrendered†	Last two digits of year. Leave field blank if contract not surrendered.

TABLE B1—Continued

78-87	Partial withdrawals	Total amount of partial withdrawals made during the year. Report amounts before reductions for surrender charges if any. Round to nearest dollar. Do not include dollar sign, commas, decimal point, or cents.
88-97	Dollar amount of surrender charge	Round amounts to nearest dollar. For market-value adjusted annuities the market-value charge corresponds to the amount of surrender charge. Do not include dollar sign, commas, decimal point, or cents. Leave field blank if contract not surrendered.
98-99	Annuitant's year of birth	Last two digits of year.
100	Sex of annuitant	F for female; M for male
101	Annuitant's marital status	M for married; S for single, including all categories of single
102-103	State of residence of owner at beginning of calendar year	Use standard state abbreviation codes (for example, NY for New York)
104-108	Zip code	
109	Type of agent who sold the product	1—Agent of your company (including PPGAs) 2—Insurance broker (including agents of other companies and independent agents) 3—Stockbroker 4—Direct response 5—Bank or savings and loan employee 6—Other

*If any data item is not available, leave the field blank.

†Contracts that do not renew at the end of their interest guarantee period are considered surrenders.

ADDENDUM TO FINAL INSTRUCTIONS FOR SUBMITTING DATA
(SPDA PERSISTENCY AND CASH-FLOW STUDY)

Position	Data Item*	Coding Instructions
110-111	Interest guarantee period in effect at the start of year (or end of previous year)	The guarantee period chosen by the contract owner and in effect at the beginning of the calendar year. For example, a three-year guarantee period would be reported as 3. <i>Do not report</i> the length of time remaining in the guarantee period; report the length of time for the entire guarantee period. 0 = Guarantee period is less than 1 year 1 = Guarantee period is 1 year 2 = Guarantee period is 2 years 3 = Guarantee period is 3 years, etc.
112-113	Year the interest guarantee period in effect at the end of calendar year expires	Last two digits of year

The example below clarifies these data items:

A company markets a product that offers three different interest guarantee periods: one, three, and five years. A contract is issued on 7/1/86 and the contract owner chooses the three-year guarantee period. When this guarantee period expires on 7/1/89, the contract owner switches to a five-year guarantee period. The credited interest guarantee period in effect at the start of 1989 is a three-year period. The credited interest guarantee period in effect at the end of 1989 is a five-year period, and it expires in 1994.

*If any data item is not available, leave the field blank.

