

Flexible Premium Universal Life Products

Lapse/Surrender and Premium Persistency Experience

2009-2013



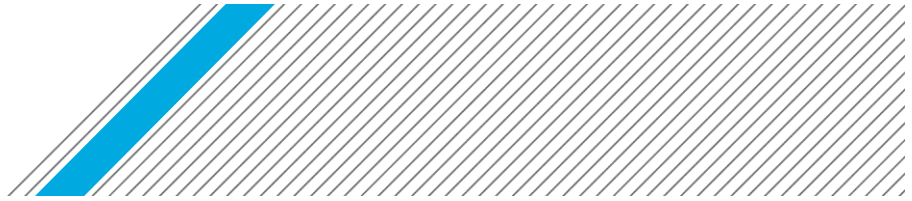
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Study Overview and Purpose

This report presents the results of a joint study conducted by the Society of Actuaries (“SOA”) and LIMRA examining both premium persistency and surrender/lapse experience for flexible premium fixed rate universal life (“UL”), indexed universal life (“IUL”) and variable universal life (“VUL”) products. This work represents the first industry study of universal life insurance premium persistency experience, a key risk influencing the profitability of both secondary guarantee products as well as products that are marketed and sold for traditional protection and savings accumulation purposes.

The objective of this study is to provide insurers with industry experience data for flexible premium universal life and variable universal life products of the following types:

- Fixed Rate Secondary Guarantee Universal Life
- Fixed Rate Cash Accumulation/Current Assumption Universal Life
- Indexed Secondary Guarantee Universal Life
- Indexed Cash Accumulation/Current Assumption Universal Life
- Variable Secondary Guarantee Universal Life
- Variable Cash Accumulation/Current Assumption Universal Life

Individual policy level data for flexible premium products was collected from 11 participating companies for calendar years 2009-2013.

The total policy exposure to lapse/surrender is 8.9 million and the total exposure by face amount is \$2.8 trillion. On a face amount basis, the study is estimated to represent approximately 39 percent of universal life and variable universal life inforce based on ACLI and LIMRA data.

The purpose of this report is to provide a tool for high-level industry benchmarking of premium persistency results.

The reported results can be impacted by factors specific to the group of participating companies and the products and markets in which they operate. Therefore, actuaries should take care in applying the results of this study for purposes other than those stated above.

This report is presented in two sections. The first section examines premium persistency experience for policies that remained inforce during the entire study period. The second section examines rates of surrender/lapse for participating companies and includes a comparison of historical premium payment patterns for contracts that remained inforce versus those that surrendered during the study.

A data tool will be provided in addition to this report in order to allow readers to perform their own analysis of aggregated industry results.

Not all companies were able to provide data for their entire inforce block and/or for all policy and product data fields requested. This report presents results for those product and policy factors provided consistently across all company data submissions including:

- Product Type (secondary guarantee product designs versus accumulation/current assumption product designs)
- Gender
- Issue Age
- Attained Age
- Policy Year
- Policy Size (by face amount band)
- Distribution Channel

Products were classified as secondary guarantee or accumulation product types by the participating companies based on the definitions used in LIMRA sales and inforce survey reporting. See Appendix B for LIMRA definitions.

Tables 1-4 provide the distribution of policy exposure for lapses and surrenders by flexible premium product type.

Table 1: Policy Exposure by Product Type

	Secondary Guarantee Products	Accumulation Products	Other
Product type share	44%	52%	4%
<i>Within type by subtype:</i>			
Fixed Universal Life	62%	65%	*
Indexed Universal Life	5%	5%	*
Variable Universal Life	33%	30%	*
	100%	100%	*

* Insufficient data

Table 2: Policy Exposure by Product Type and Age Group

By issue age				By attained age			
	Secondary Guarantee Products	Accumulation Products	Other		Secondary Guarantee Products	Accumulation Products	Other
Under 30	24%	29%	18%				
30-39	23%	30%	19%	Under 40	29%	18%	19%
40-49	23%	23%	21%	40-49	23%	21%	19%
50-59	18%	12%	22%	50-59	24%	29%	24%
60-69	10%	5%	15%	60-69	17%	20%	23%
70+	3%	1%	4%	70+	8%	11%	14%
Total	100%	100%	100%	Total	100%	100%	100%

Table 3: Policy Exposure by Product Type and Issue Year Era

Issue Year Era	Secondary Guarantee Products	Accumulation Products
Pre 1990	**	17%
1990-1999	12%	61%
2000-2004	37%	8%
2005-2009	35%	8%
2010-2013	16%	6%
Total	100%	100%

** No data

Table 4: Policy Exposure by Product Type and Face Amount Size

Face Amount Band	Secondary Guarantee Products	Accumulation Products
Under \$100,000	23%	45%
\$100,000 – 250,000	41%	32%
\$250,000 – 500,000	17%	10%
\$500,000 and over	19%	13%
Total	100%	100%

Study Methodology

This study examines rates of premium persistency and lapse/surrender for flexible premium universal life products for calendar years 2009-2013.

Contributing companies provided information on their entire in-force block of flexible premium products at the individual policy level. Both inforce and transactional level data (premium payments over time) were provided by contributing companies for purposes of the study. For flexible premium products, data was submitted separately for the premium persistency and the lapse/surrender analysis. For the lapse/surrender analysis, data was submitted on a calendar year basis and converted to a policy year basis for reporting lapse/surrender results. For the premium persistency analysis, premium paid, cumulative premium collected, and annualized planned or billed premium were submitted for each study year along with a number of product and policy data fields. For data submissions where transaction dates were not collected, premium paid was assumed to occur on or after policy anniversary in the study year.

See Appendix A for the data fields, definitions and format of the study data request.

Data Validation and Reconciliation

As this is the first publication of an industry level study of premium persistency, a rigorous data validation process was implemented to ensure that data submitted to the study was complete, accurate and consistently defined across companies. This validation was accomplished in 2 phases.

Phase 1

The first series of data validations were applied to the raw data submissions from contributors to ensure that information provided was complete and accurate as well as consistent across companies.

1. *Data Completeness Checks*

The total number of policies and face amount submitted by each participating company were compared to the information reported to LIMRA's Annual Sales and Inforce surveys by individual life insurance writers. Any material differences in total inforce submitted to this study and figures reported in the LIMRA independent surveys were investigated and resolved. In some cases a contributor may not have been able to provide data for the company's entire inforce block due to systems limitations or other technical considerations.

2. *Data Accuracy Checks*

Individual policy level data submitted was compared to the data field definitions and formats requested. Any key data fields with a significant number of missing values were identified as well as those data fields containing values not consistent with data format instructions. In addition, the distribution of business by company for the various data field values was examined to ensure that the distributions were reasonable in comparison with previous experience data submissions and survey data provided for other LIMRA studies.

3. Internal Consistency Checks

A series of logical checks were applied in order to ensure both that the policies included in data submissions were consistent with the study years of observation and that the data fields submitted were internally consistent. For example, for the lapse/surrender reporting, there should not be any records submitted for policies that terminated prior to the starting calendar year of study. These and other checks of internal consistency were applied.

These initial validation reports and any resulting questions or issues were shared with each participating company individually, in some cases resulting in corrections to data submissions provided.

Phase 2

In the second set of validations, premium persistency and surrender/lapse rate experience were determined for each participating company. These results were shared with the individual contributing companies for review and reconciliation with internal studies performed for these blocks of business. Finally, the data from all companies was combined to create an industry file for study reporting purposes.

Experience Rate Calculations

Both premium persistency rates and rates of lapse/surrender are reported.

Premium Persistency

Premium persistency is examined based on the set of premium ratios defined below:

1. **Premium Collected to Planned Premium Ratio (PC/PP ratio) = $\frac{\text{Annual Premium Collected}}{\text{Annual Planned Premium}}$**

- The annual premium collected is based on actual policy transaction data provided by participating companies.
- The annual planned premium is equal to the policyholders' billed amounts for administrative purposes.

2. **Premium Collected Up to Planned Premium Ratio (PC up to Planned/PP ratio)**
= $\frac{\text{minimum (Annual Premium Collected, Annual Planned Premium)}}{\text{Annual Planned Premium}}$

- This ratio eliminates the effect of dump ins or single premiums on the PC/PP ratio above in order to provide a clearer picture of ongoing payment activity.

3. **Premium Collected Current to Premium Collected Prior Year Ratio (PC Curr/PC Prior ratio)**
= $\frac{\text{Annual Premium Collected in the Current Study Year}}{\text{Annual Premium Collected in the Prior Study Year}}$

- This ratio indicates the year over year payment patterns.

The method a company uses to arrive at the planned or billed premium reported for policy administrative purposes can affect the reported premium persistency ratios defined above that are based on planned premium. Companies indicate that reported planned premium amounts are generally set up at the time of policy issue and may or may not bear a strong relationship to the illustrated premiums.

Some companies use target premium as the basis for developing premium persistency assumptions while others use planned or billed premium. Still others use historical year over year premium patterns as the best indicator of future expected payments. For purposes of this study, planned premium was used as the basis for defining policyholder “intended funding” since all participants provided it. We also examine year over year patterns of payment as a second premium persistency statistic.

Some companies are now trying to capture the funding pattern illustrated at issue and use this information as the basis for defining the policyholder intended funding. We believe this will prove useful measure of study; however, this was not available on a wide enough basis to be included in the analysis for this first report.

Lapse/Surrender Experience

Annual lapse/surrender rates by policy count and face amount were developed as follows:

1. Policy Lapse/Surrender Rate = $\frac{\text{Number of Contracts Lapsed/Surrendered}}{\text{Number of Contracts Exposed to Lapse/Surrender}}$

- Lapse/Surrenders contribute exposure for a full year.
- Contracts that terminate due to mortality, disability, conversion, or maturity are excluded from the numerator of the surrender rate but are included in the denominator (exposure) based on available information regarding the timing of the termination.

2. Lapse/Surrender Rate by Face Amount = $\frac{\text{Face Amount at Lapse/Surrender}}{\text{Face Amount Exposed to Lapse/Surrender}}$

- Lapse/Surrenders contribute exposure for a full year.
- The face amount exposed recognizes the face amount exposed to lapse/surrender during the year.
- Contracts that terminate due to mortality, disability, conversion, or maturity are excluded from the numerator of the surrender rate but are included in the denominator (exposure) based on available information regarding the timing of the termination.

Reporting Criteria and Data Confidentiality

To ensure that the reported analysis protects the confidentiality of individual participants' data, each experience rate shown in the report must also be based on a sufficient number of companies. Therefore, a minimum of three companies must contribute to a particular result in order for the experience rates to be reported. In addition, if a single company contributes 50 percent or more of the policy or face amount exposure used in an experience rate calculation, then the experience rate will not be disclosed.

Acknowledgments

The Society of Actuaries and LIMRA would like to extend our thanks to all participating companies for making this project a success. Without your support, such research projects would not be possible. Your contributions have led to this broad industry benchmark of the premium persistency and lapse/surrender experience results for flexible premium universal life insurance plans.

We also would like to thank Patrick Nolan and Erika Schultzy from the SOA for their leadership and coordination of the project.

Caveat and Disclaimer

This study is published by the Society of Actuaries (SOA) and LIMRA. It contains information from a variety of sources. It may or may not reflect the experience of any individual company. The study is for informational purposes only and should not be construed as professional or financial advice. The sponsors of this report do not recommend or endorse any particular use of the information provided in this study and make no warranty, express or implied, or representation whatsoever and assumes no liability in connection with the use or misuse of this study.

SECTION 1: PREMIUM PERSISTENCY EXPERIENCE

This section of the report focuses on premium persistency results. In many cases, premium persistency assumptions and lapse/surrender assumptions are developed and applied independently by companies in their modeling and valuation work.

In Section 2, there is a brief analysis of the relationship between premium persistency results and lapse/surrender results.

Distribution of Premium Persistency Results

The following tables provide information regarding the range of results for specific policy years across participating companies. Table 5 presents results for all universal life and variable universal life products based on premium collected to planned premium (PC/PP). Tables 6 and 7 present results based on premium collected up to plan level (PC up to Planned/PP) and premium collected in the current year versus the prior year (PC Curr/PC Prior).

Ratios of premium collected to planned premium are highest in the first policy year (Table 5). In addition, variance from the mean industry experience by company is greatest in policy year one, with a mean of 136 percent and a standard deviation of 122 percent.

Table 5: PC/PP Ratios: Range of Results for Participating Companies for Selected Policy Years
All Flexible Premium Products

Policy Year	Min	Max	Mean	Median	Standard Deviation
1	108%	368%	136%	172%	122%
2	45%	141%	49%	78%	40%
5	32%	75%	48%	72%	18%
10	24%	81%	40%	59%	25%
15	20%	67%	31%	37%	20%
20+	6%	71%	28%	50%	27%

If we limit the premium collected in the numerator of the PC/PP ratio to the planned premium amount for each year, the impact of early year dump ins and single premiums is reduced (Table 6). The first policy year still has the highest ratio to planned, however the standard deviation in results is reduced materially in the first few years compared to the PC/PP ratio.

Table 6: PC up to Planned/PP Ratios: Range of Results for Participating Companies for Selected Policy Years
All Flexible Premium Products

Policy Year	Min	Max	Mean	Median	Standard Deviation
1	67%	88%	86%	82%	9%
2	39%	88%	40%	65%	20%
5	30%	73%	43%	58%	17%
10	22%	75%	35%	49%	22%
15	17%	62%	27%	31%	20%
20+	5%	60%	22%	39%	23%

The ratio of current year to prior year premium collected (PC Curr/PC Prior) is shown in Table 7 below. Note that although the mean ratios of premium paid to plan decline over time, the mean ratios of premium paid current year versus the prior year tend to remain relatively stable at levels between 115 and 120 percent after policy year 2.

Table 7: PC – Curr/Prior Ratios: Range of Results for Participating Companies for Selected Policy Years
By Policy Year

All Flexible Premium Products

Policy Year	Min	Max	Mean	Median	Standard Deviation
1	***	***	***	***	***
2	40%	81%	44%	60%	19%
5	88%	192%	119%	116%	39%
10	111%	126%	115%	112%	7%
15	111%	135%	115%	115%	11%
20+	104%	163%	114%	130%	26%

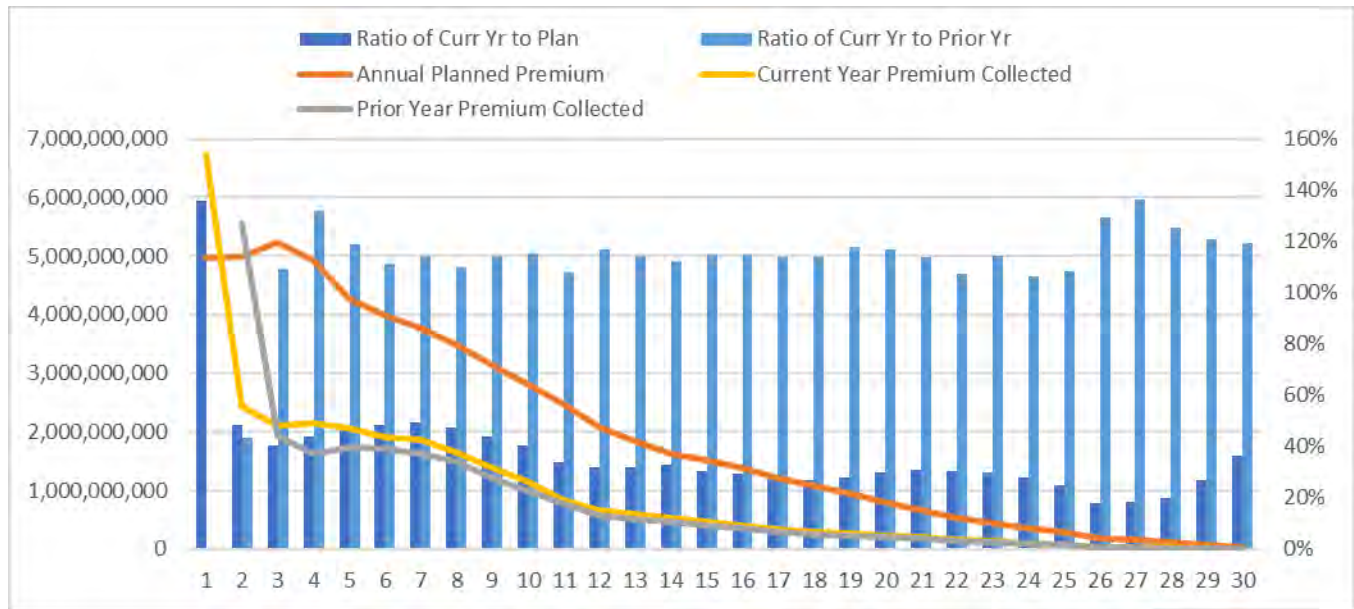
***Not applicable

Note that mean current premium collect to prior premium collected ratios (PC – Curr/Prior Ratios) are relatively level after year 2. This while both current year premium collected to plan (PC/PP) and current year premium collected up to plan (PC/PP up to plan) continue to decline by policy year. This is because planned premium amounts were significantly higher than collected amounts for the study period, beginning in the second policy year and continuing through year 30 and later.

Figure 1 below indicates relative differences in premiums collected and the annual planned or billed amounts.

Figure 1: Comparison of Planned Premium to Collected Premium by Policy Year

All Flexible Premium Products



Looking at secondary guarantee and accumulation/current assumption products separately, mean ratios of premium collected to planned premium (PC/PP) for secondary guarantee type products are higher than accumulation/current assumption products for all policy years – with the exception of policy year 2 (Table 8).

Table 8: PC/PP Ratios: Range of Results for Participating Companies for Selected Policy Years
Secondary Guarantee Products

Policy Year	Min	Max	Mean	Median	Standard Deviation
1	125%	368%	178%	213%	107%
2	0%	141%	46%	42%	57%
5	32%	100%	56%	74%	25%
10	34%	81%	55%	58%	23%
15	26%	69%	44%	49%	23%
20+	45%	71%	47%	62%	13%

Accumulation/Current Assumption Products

Policy Year	Min	Max	Mean	Median	Standard Deviation
1	94%	165%	115%	112%	37%
2	46%	86%	50%	84%	23%
5	32%	74%	40%	68%	20%
10	23%	85%	27%	38%	32%
15	11%	50%	25%	19%	21%
20+	6%	56%	26%	49%	27%

On the basis of the PC up to Plan/PP ratios where the impact of early year dump ins and single premiums is reduced, mean ratios for secondary guarantee and accumulation products have a similar relationship to the PC/PP ratios (Table 9).

Table 9: PC up to Planned/PP Ratios: Range of Results for Participating Companies

By Policy Year

Secondary Guarantee Products

Policy Year	Min	Max	Mean	Median	Standard Deviation
1	83%	99%	86%	87%	7%
2	14%	88%	35%	46%	32%
5	30%	100%	49%	58%	26%
10	32%	75%	48%	48%	19%
15	23%	62%	38%	42%	19%
20+	38%	60%	40%	46%	11%

Accumulation/Current Assumption Products

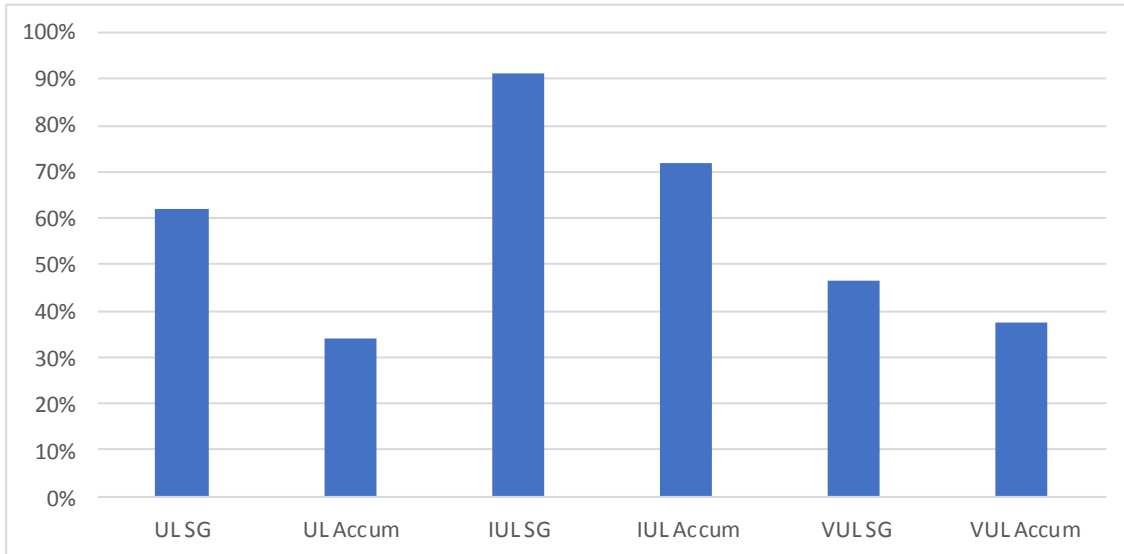
Policy Year	Min	Max	Mean	Median	Standard Deviation
1	61%	88%	86%	78%	13%
2	41%	88%	44%	73%	20%
5	30%	73%	39%	57%	17%
10	21%	76%	28%	52%	29%
15	8%	62%	23%	31%	25%
20+	5%	60%	20%	40%	23%

Premium Persistency Results

Figure 2 examines overall premium persistency based on the PC/PP ratio by flexible premium product type. The fixed rate universal life products with secondary guarantees (UL SG), the indexed universal life products with secondary guarantees (IUL SG), and the accumulation focused IUL (IUL Accum) exhibit the highest ratios of PC/PP across all policy years, ranging from 62 to 91 percent.

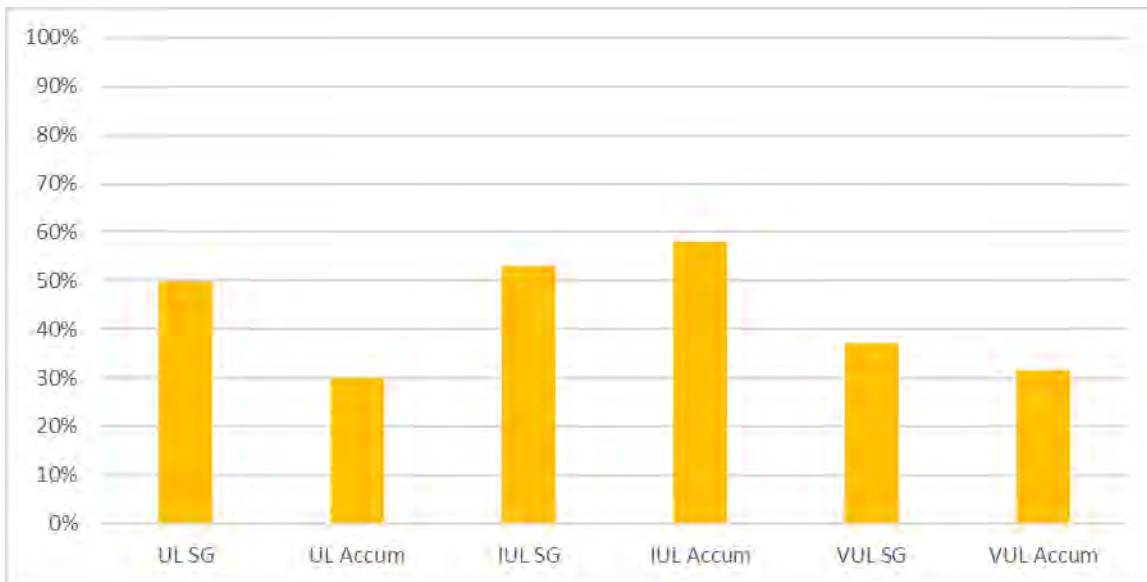
The IUL and fixed rate UL secondary guarantee products have generally had more competitive no-lapse guarantee structures than those offered on VUL plans which may have led policyholders to place greater value on maintaining the IUL and fixed rate UL guarantees by paying at minimum required premium levels. In addition, the IUL and UL SG blocks have more business still focused in the early policy years than either the fixed rate accumulation UL or the VUL of either subtype.

Figure 2: PC/PP Ratios by Product Type



Reducing the impact of dump ins on the overall ratios, the PC up to Planned/PP ratios range from 30 percent to 58 percent (Figure 3) with IUL accumulation products exhibiting the highest ratios here.

Figure 3: PC up to Planned/PP Ratios by Product Type



Finally, looking at year over year premium payment activity, PC current year to PC prior year ratios range from 69 percent for IUL Accum plans to 143 percent for UL Accum. (Figure 4)

Figure 4: PC Current Year to PC Prior Year by Product Type



Premium Persistency Results by Observation Year

Figure 5 below presents ratios of premium collected to planned premium (PC/PP) for secondary guarantee and accumulation product types by observation year. Ratios of premium collected to planned for accumulation type products were very stable by observation year. Secondary guarantee products exhibited greater variation in premium persistency on a PC/PP basis.

Figure 5: Total Premium Persistency by Observation Year
PC/PP Ratios



For ratios of premium collected up to planned, secondary guarantee product results range from 32 to 51 percent while accumulation products range between 33 and 40 percent. Results for study year 2009 may be impacted by the turmoil of the financial crisis.

Figure 6: Total Premium Persistency by Observation Year

PC up to Planned/PP Ratios



Figure 7 below is likely showing the impact of the financial crisis on ratios of current year to prior year premium collected. Note that increases of over 170 percent were seen in from 2009 to 2010 as policyholders began increasing payments from the very low levels seen in 2009. Ratios drop back down to between 62 and 87 percent consistently over the remaining study period years.

Figure 7: Total Premium Persistency by Observation Year

PC Current Year to Prior Year

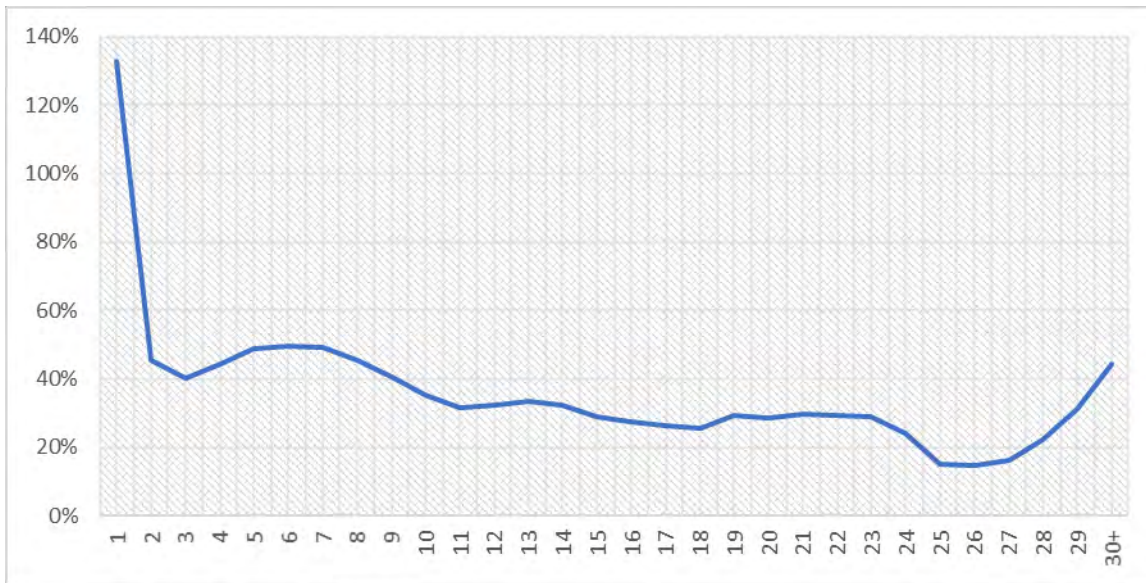


Premium Persistency Results by Product Type and Policy Year

Premium persistency rates by policy year (based on PC/PP ratios) for all flexible premium products combined are presented in Figure 8 below. After the first policy year where the impact of dump ins and single premiums have the greatest impact, ratios decline gradually from just under 50 percent in year 6 to under 15 percent in year 25.

Figure 8: Premium Persistency by Policy Year (All Products)

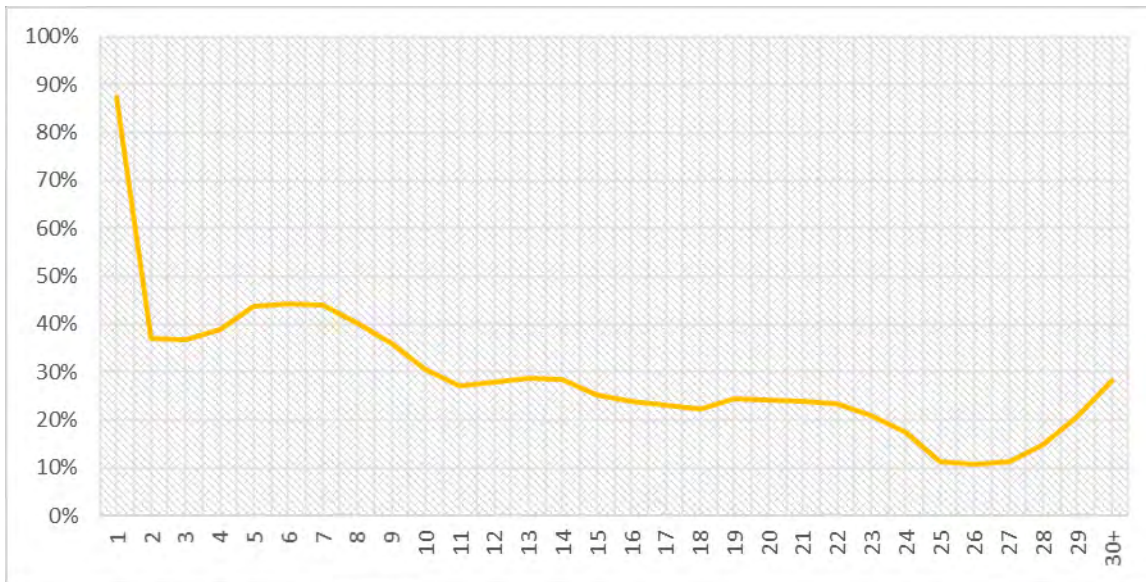
PC/PP Ratios



The pattern of results by policy year is similar on the basis of collected premium up to planned (PC up to Planned/PP ratio) (Figure 9). The first policy year still exhibits the highest ratio to planned, with nearly 90 percent of planned premium collected in the first policy year.

Figure 9: Premium Persistency by Policy Year (All Products)

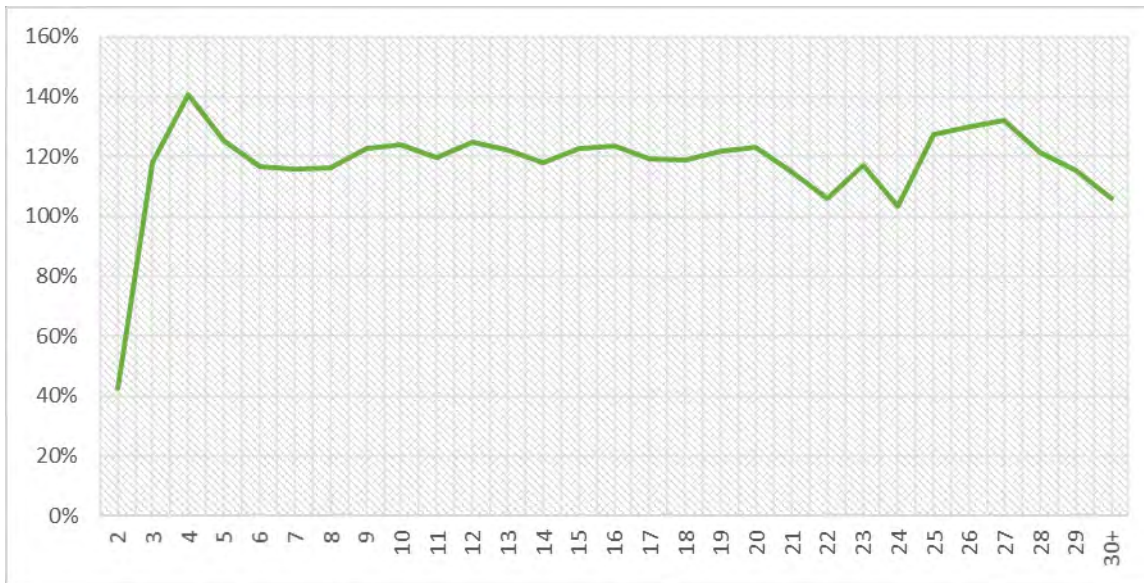
PC up to Planned/PP Ratios



After the first few years, ratios of current year to prior year premium collected become relatively stable by policy year with ratios between 115 and 125 percent from year 5 to year 20 (Figure 10).

Figure 10: Premium Persistency by Policy Year (All Products)

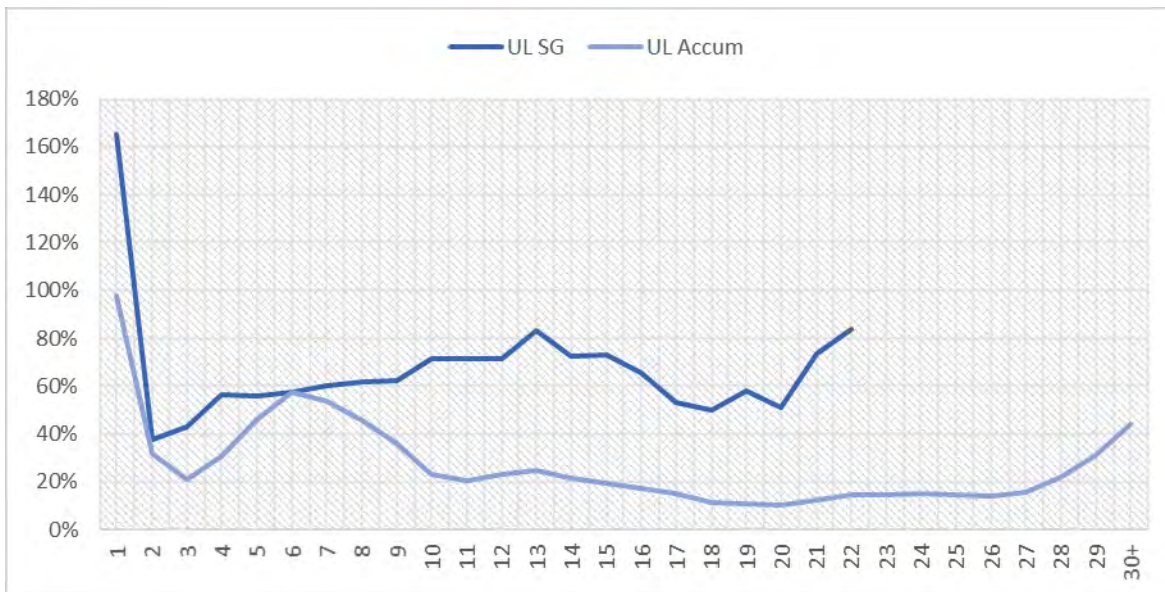
PC Current to Prior Year Ratio



Focusing on fixed rate universal life products, premium collected to planned premium ratios start at 165 percent in year 1 for secondary guarantee products and just under 100 percent for accumulation products. (Figure 11) Ratios for secondary guarantee products remain at or above ratios for accumulation/current assumption products for years 2 and later.

Figure 11: Fixed Rate Universal Life Product Premium Persistency by Policy Year

PC/PP Ratios



For ratios of premium collected up to the planned level, first year ratios for both accumulation and secondary guarantee products are around 90 percent of planned. After year 5, ratios generally range between 40 and 60 percent for secondary guarantee products. For accumulation products, ratios drop to 20 percent or less for most years. (Figure 12)

Figure 12: Fixed Rate Universal Life Product Premium Persistency by Policy Year

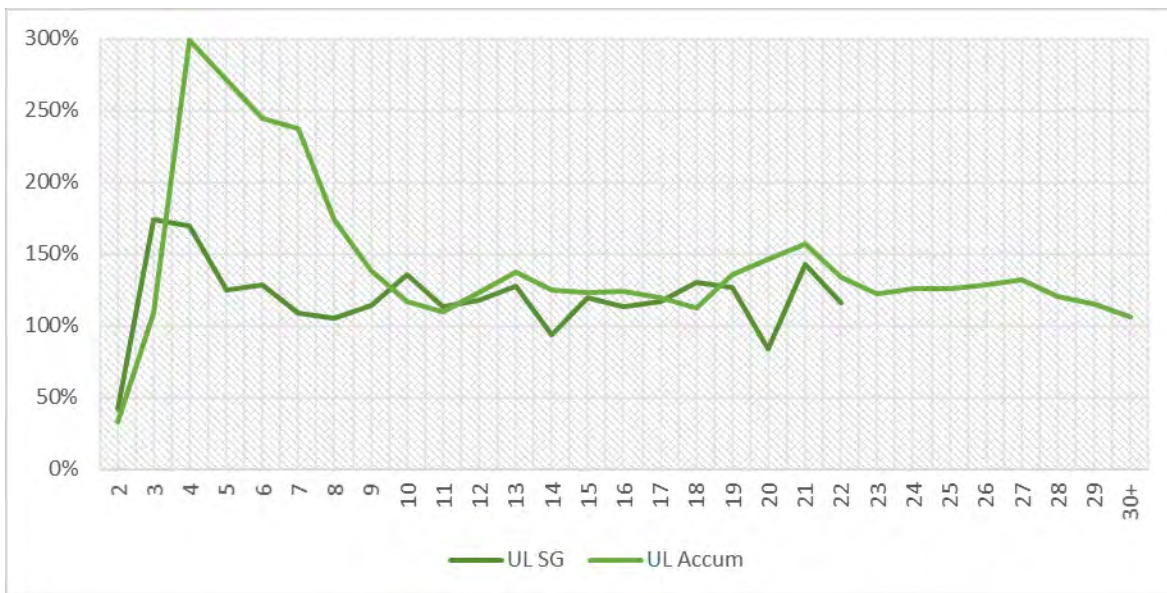
PC up to Planned/PP Ratios



Ratios of premium collected in the current year to premium collected in the prior year are shown in Figure 13 below. Ratios for the second policy year are low relative to other years consistent with patterns in the planned premium ratios. There is greater volatility on a current to prior year ratio basis for policy years 3 through 9 for both secondary guarantee and accumulation type products. However, ratios become more consistent after year 10.

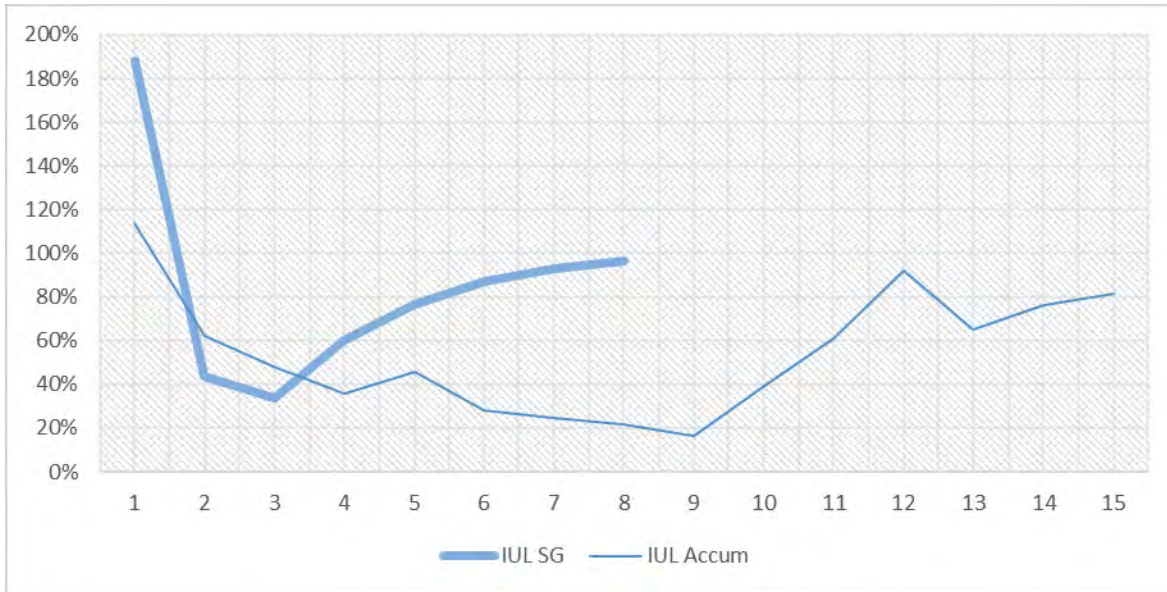
Figure 13: Fixed Rate Universal Life Product Premium Persistency by Policy Year

PC Current to Prior Year Ratio



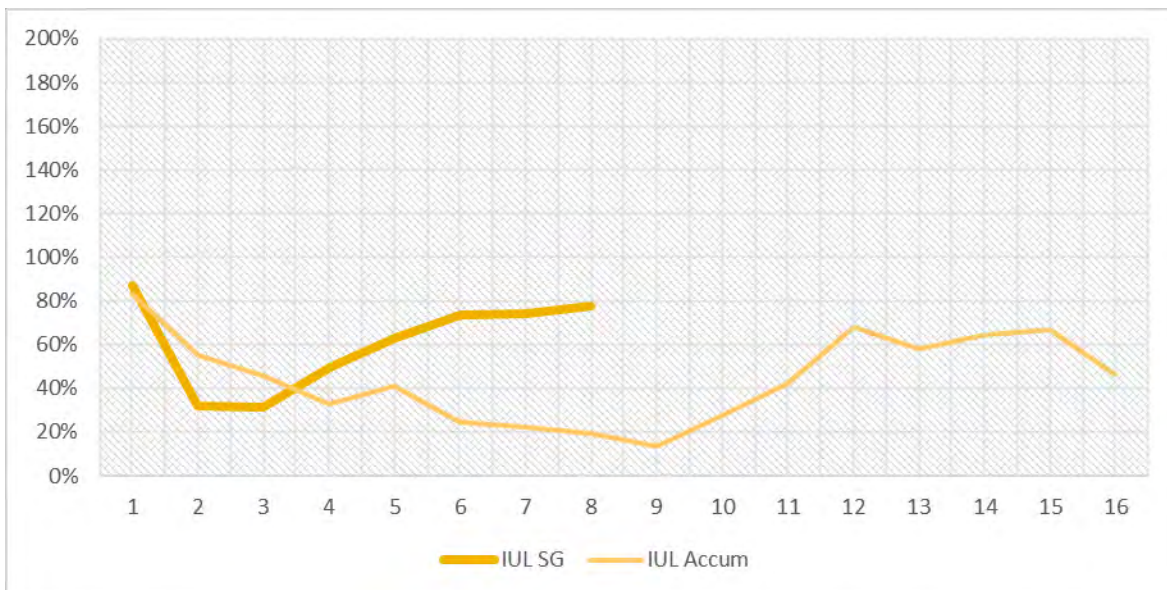
For IUL products, there is more limited experience comparing secondary guarantee designs to accumulation type designs as this distinction in product designs is newer to the IUL marketplace. For IUL, the secondary guarantee products have lower premium persistency in policy years 2 and 3 than accumulation products. Then, similar to the fixed rate UL plans, secondary guarantee IUL products exhibit greater premium persistency rates than accumulation type products beginning in policy year 4. (Figure 14)

Figure 14: Indexed Universal Life Premium Persistency by Policy Year
PC/PP Ratios



For ratios of premium collected up to the planned level, first year ratios for both accumulation and secondary guarantee products are between 80 and 90 percent of planned. For years 5 and after, ratios range between 60 and 80 percent for secondary guarantee products. (Figure 15)

Figure 15: Indexed Universal Life Premium Persistency by Policy Year
PC up to Planned/PP Ratios



Ratios of premium collected in the current year to premium collected in the prior year for IUL products are shown in Figure 16 below. For secondary guarantee plans, ratios start at just over 45 percent and grade up to close to 109 percent by year 8. For accumulation products ratios from just under 60 percent in year to just under 150 percent in year 12.

Figure 16: Indexed Universal Life Premium Persistency by Policy Year
PC Current to Prior Year Ratio



Ratios of current premium collected to planned premium for VUL products exhibit a pattern similar to IUL. However differences in results between secondary guarantee and accumulation type products are smaller for VUL between policy years 3 and 8. (Figure 17)

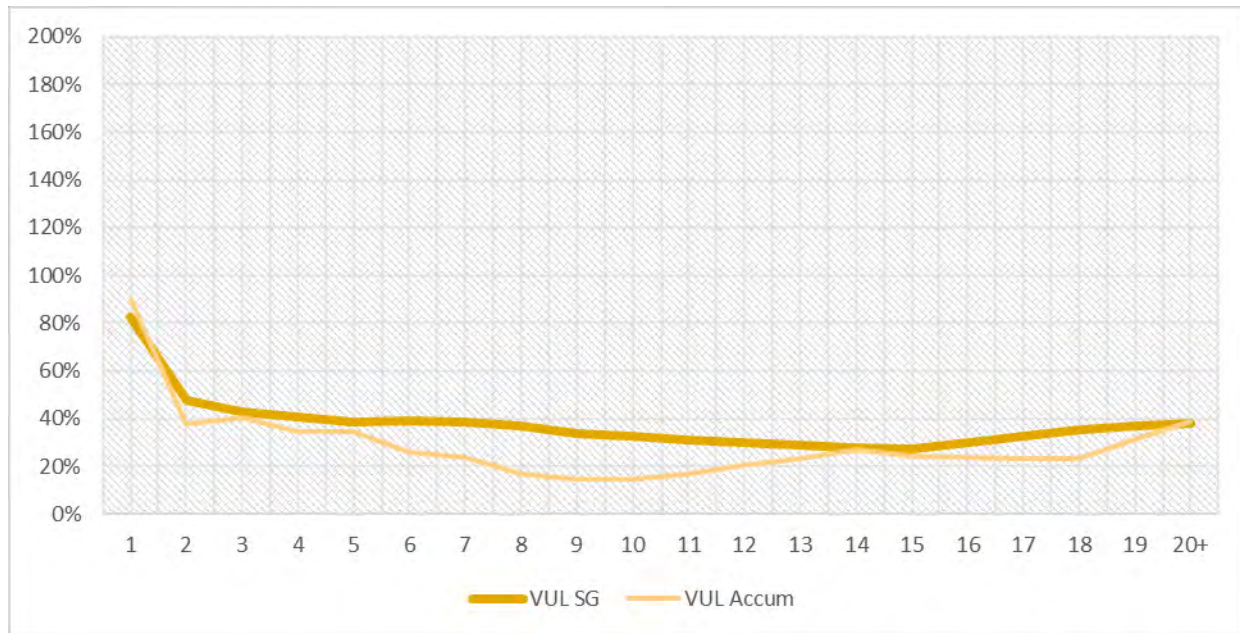
Figure 17: Variable Universal Life Premium Persistency by Policy Year
PC/PP Ratios



Ratios of current premium collected up to the planned level for VUL products also exhibit a pattern similar to IUL. (Figure 18)

Figure 18: Variable Universal Life Premium Persistency by Policy Year

PC up to Planned/PP Ratios



Ratios of premium collected in the current year to premium collected in the prior year for VUL products are shown in Figure 19 below. With the exception of policy year 2, ratios are materially higher than those for IUL plans are. In addition, secondary guarantee product and accumulation product ratios tend to trend similarly with secondary guarantee ratios lower than accumulation ratios in later policy years.

Figure 19: Variable Universal Life Premium Persistency by Policy Year

PC Current to Prior Year Ratio



Premium Persistency Results by Gender and Policy Year

In this section, premium persistency is examined for males and females by policy year and general product type (secondary guarantee and accumulation/current assumption).

Premium persistency rates based on premium collected to plan for secondary guarantee products are similar in pattern and level for males and females. (Figures 20 and 21)

Figure 20: Secondary Guarantee Product Premium Persistency by Gender and Policy Year

PC/PP Ratios

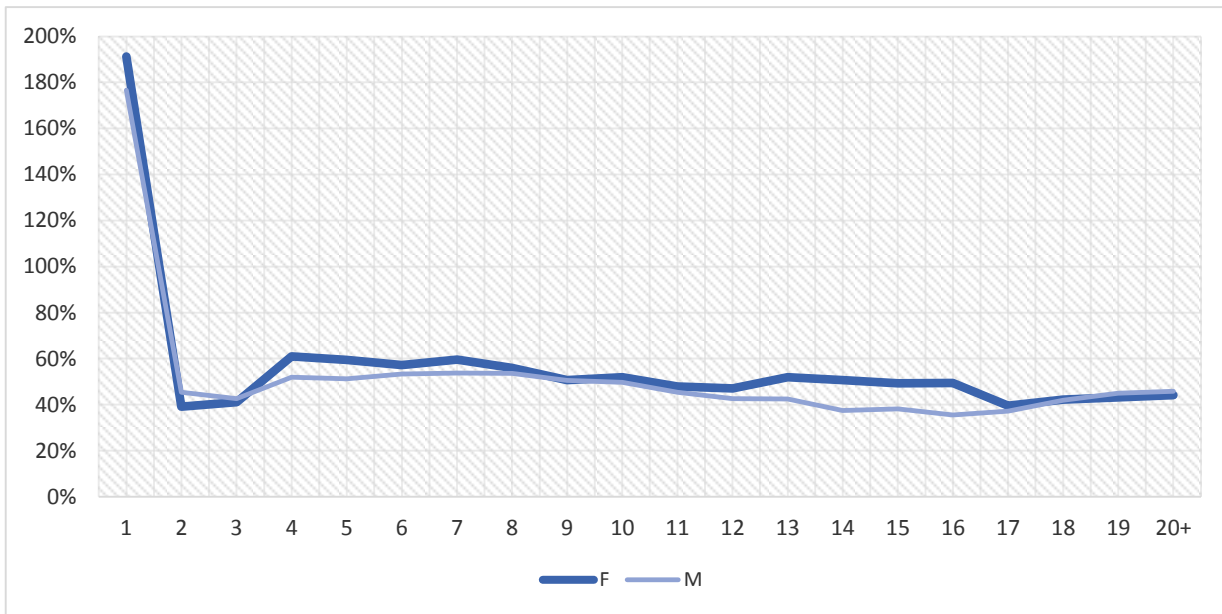
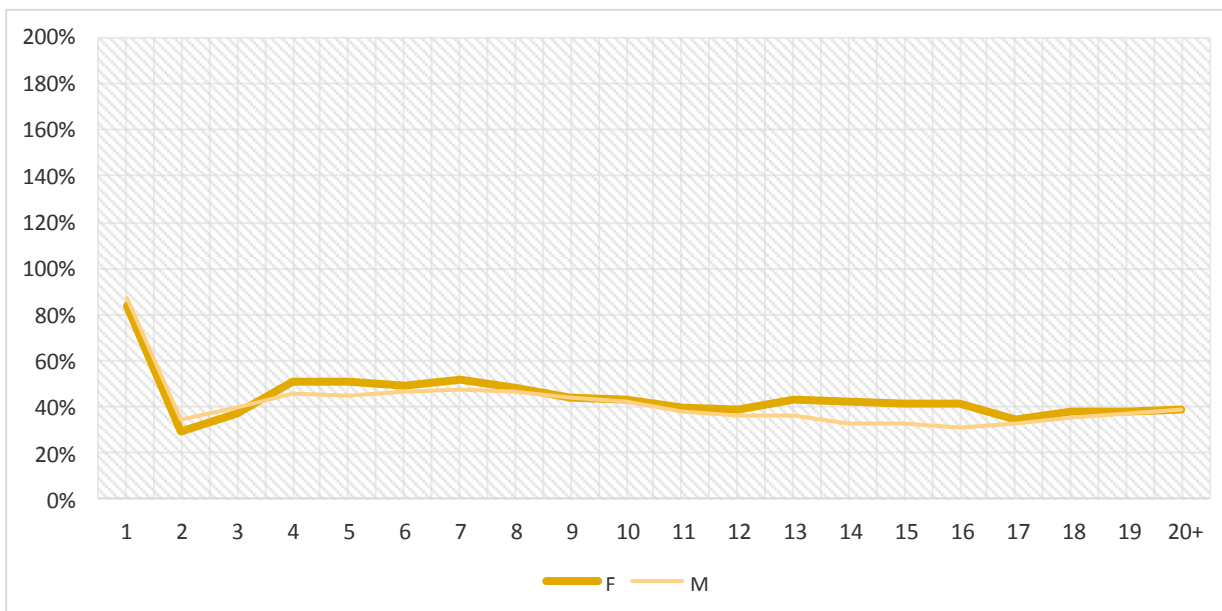


Figure 21: Secondary Guarantee Product Premium Persistency by Gender and Policy Year

PC up to Planned/PP Ratios



Ratios of current year premium to prior year premium collected for secondary guarantee products are also similar in pattern by gender; however, ratios for females are approximately 10 to 20 percent lower than males across most policy years. (Figure 22)

Figure 22: Secondary Guarantee Product Premium Persistency by Gender and Policy Year
PC Current to Prior Year Ratio



For accumulation products, premium persistency ratios are similar in pattern and level by gender on all three bases (PC/PP, PC up to Planned/PP, and PC Current to Prior Year). (Figures 23, 24, and 25).

Figure 23: Accumulation Product Premium Persistency by Gender and Policy Year
PC/PP Ratios

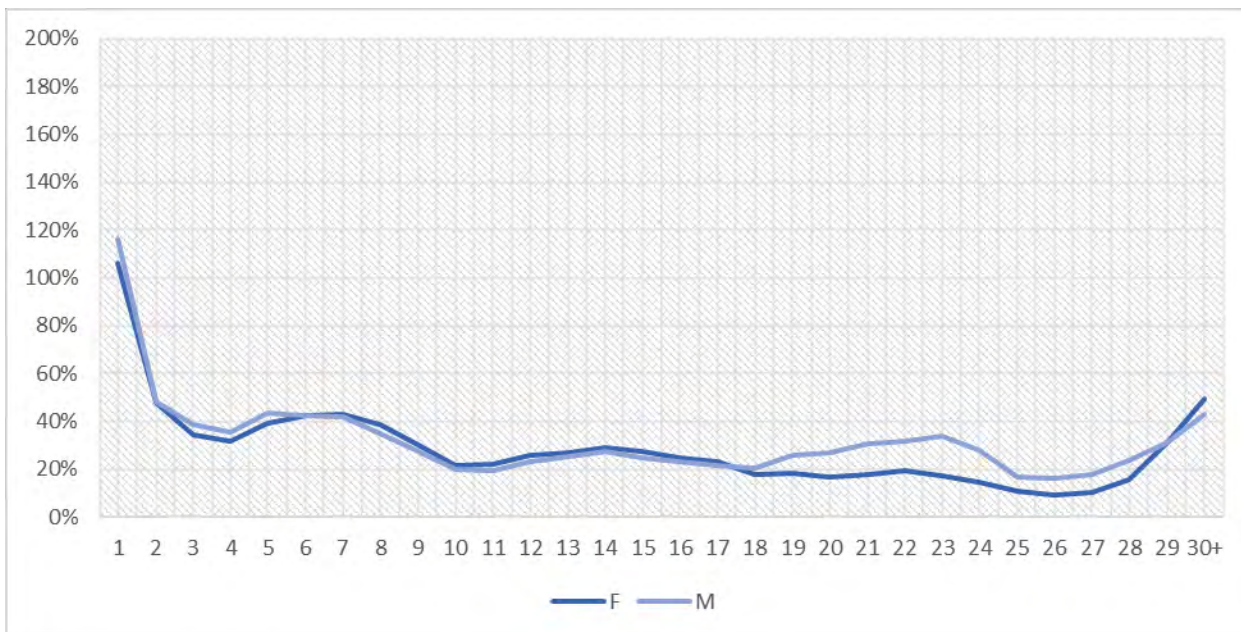


Figure 24: Accumulation Product Premium Persistency by Gender and Policy Year
PC up to Planned/PP Ratios

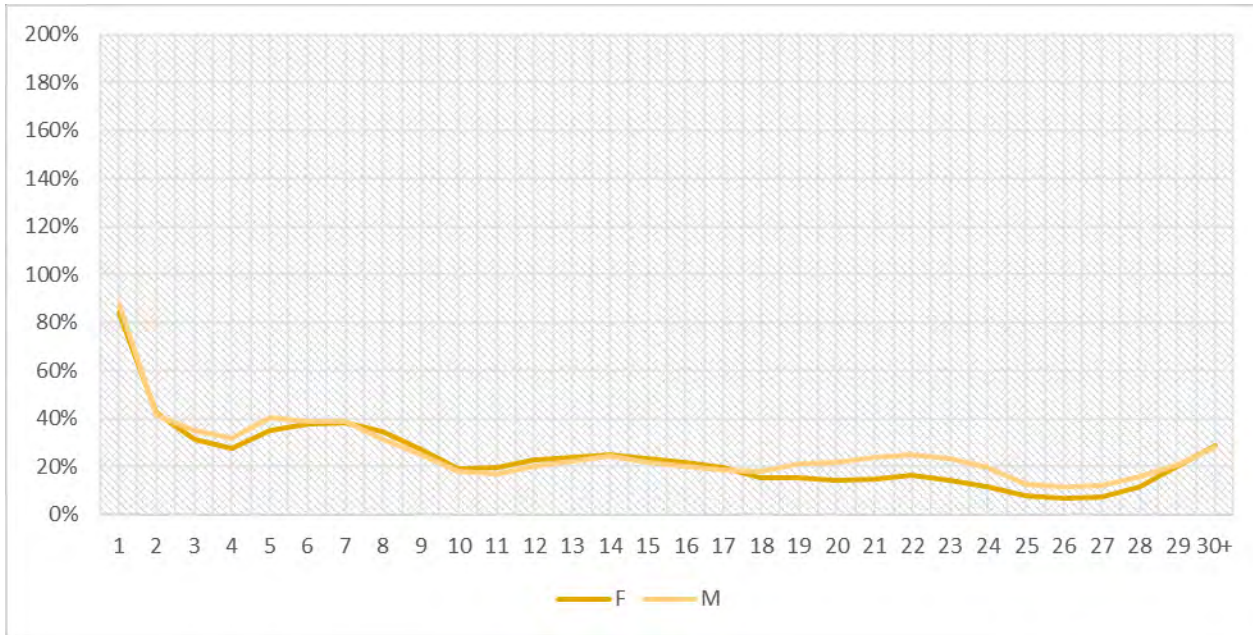
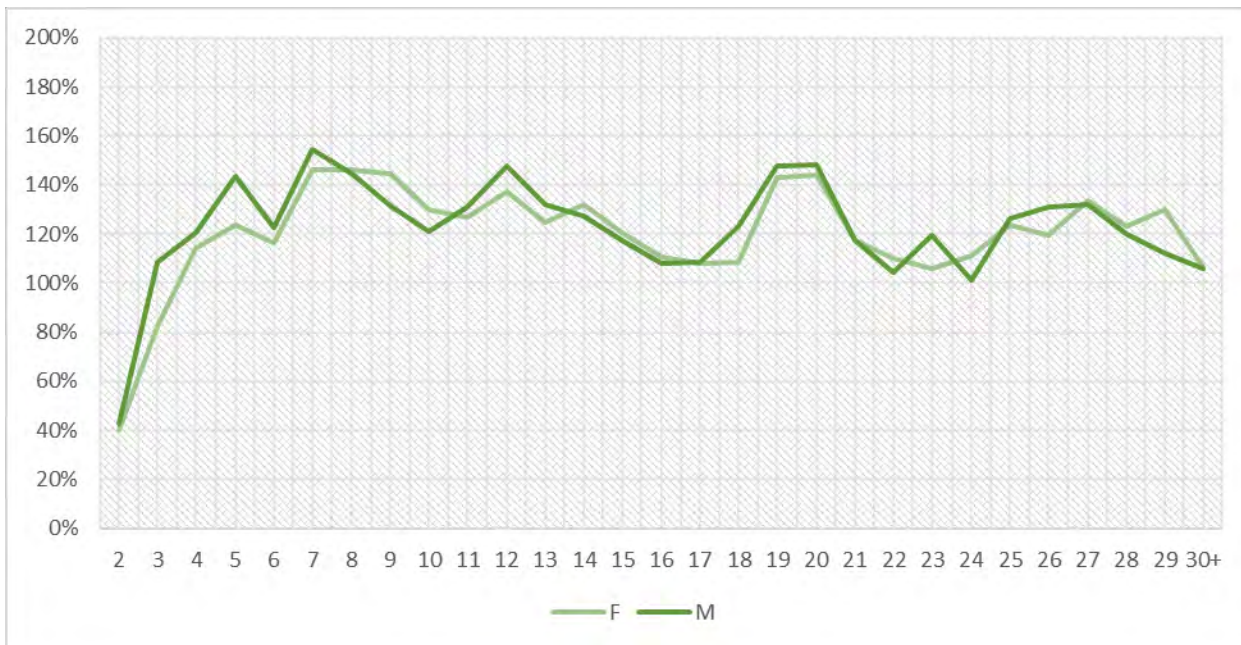


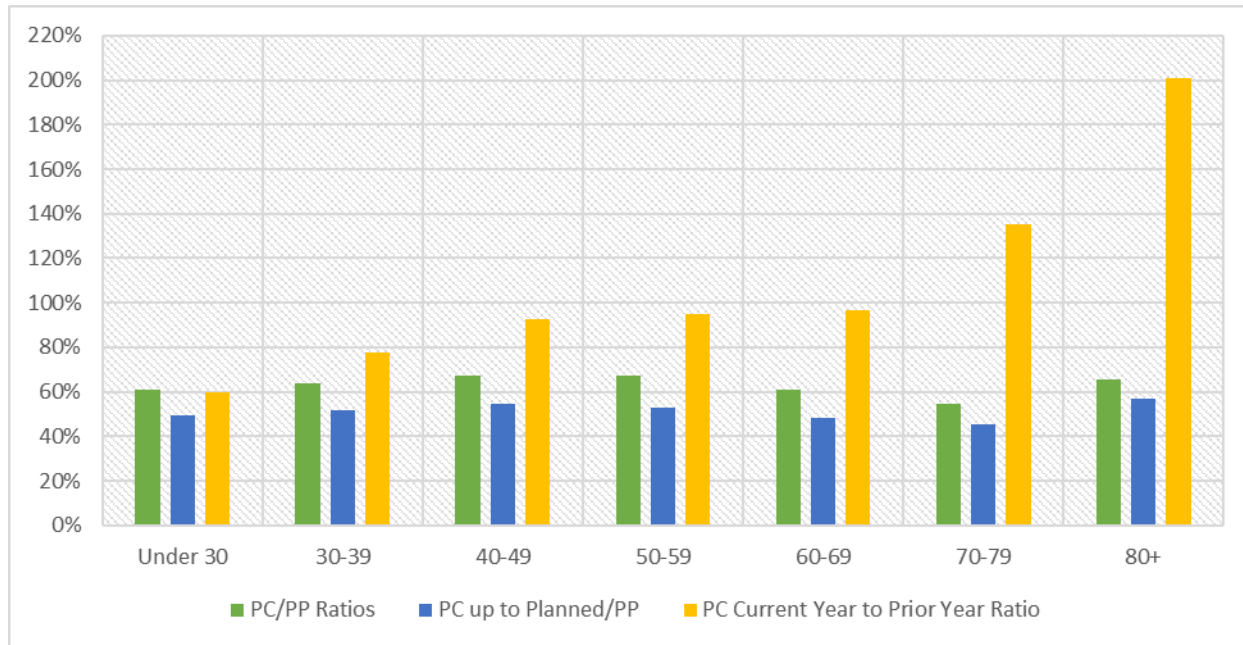
Figure 25: Accumulation Product Premium Persistency by Gender and Policy Year
PC Current to Prior Year Ratio



Premium Persistency Results by Attained Age Group

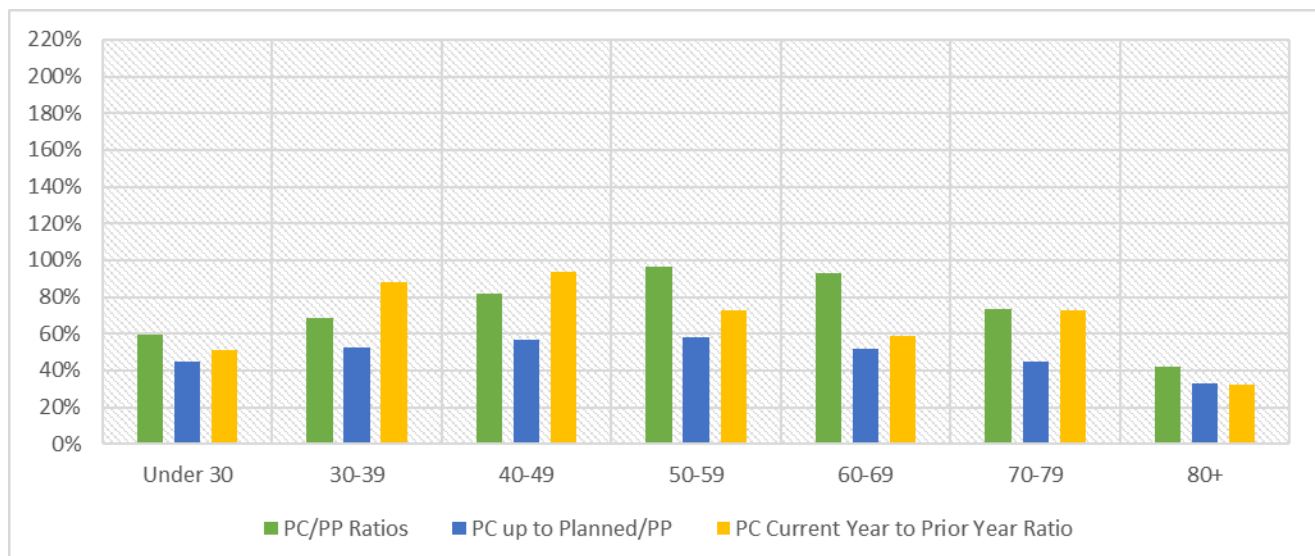
Looking at the different secondary guarantee universal life plans, fixed rate UL products exhibit planned premium persistency ratios (PC/PP and PC up to Planned/PP) of between 45 and 65 percent across all attained age groups. Ratios of current to prior year premium collected steadily increase by attained age from around 60 percent at ages under 30 to over 200 percent at ages 80 and older. (Figure 26)

Figure 26: Fixed Rate UL Secondary Guarantee Products Premium Persistency by Attained Age Group



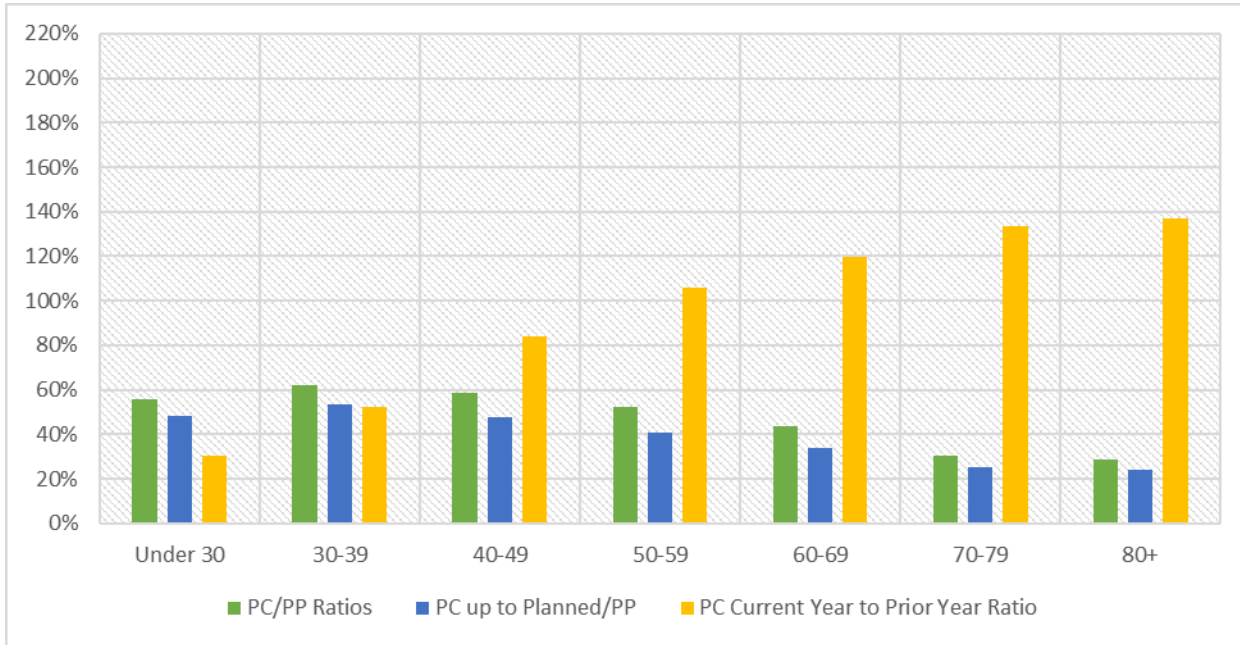
For IUL secondary guarantee universal life plans, planned premium ratios vary more widely by age widely than for fixed rate UL plans with PC/PP and PC up to Planned/PP ratios varying between 33 and 96 percent across all attained age groups. (Figure 27) In addition, current to prior year premium collected ratios are highest for IUL SG for ages between 30 and 49.

Figure 27: IUL Secondary Guarantee Products Premium Persistency by Attained Age Group



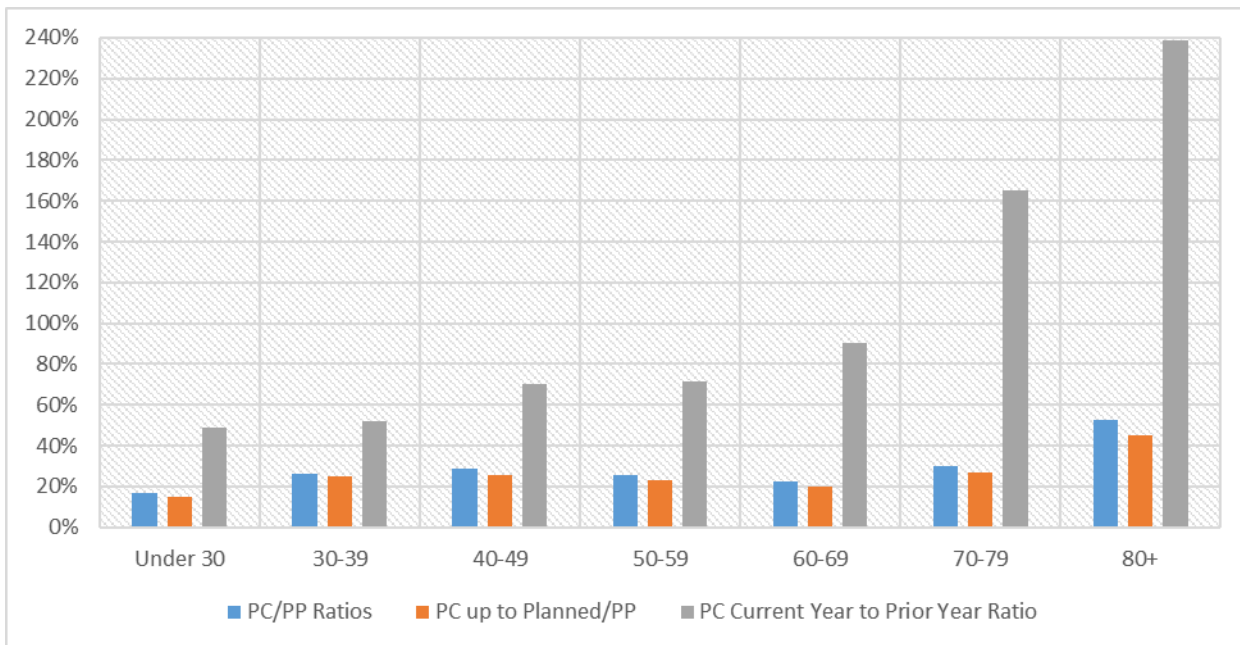
VUL secondary guarantee universal life plans, exhibit planned premium ratios that decline with increasing attained age starting at age 30 with ratios varying between 24 and 62 percent. (Figure 28) Ratios of current to prior year premium increase with higher attained age reaching close to 140 percent for ages 80 and over.

Figure 28: VUL Secondary Guarantee Products Premium Persistency by Attained Age Group



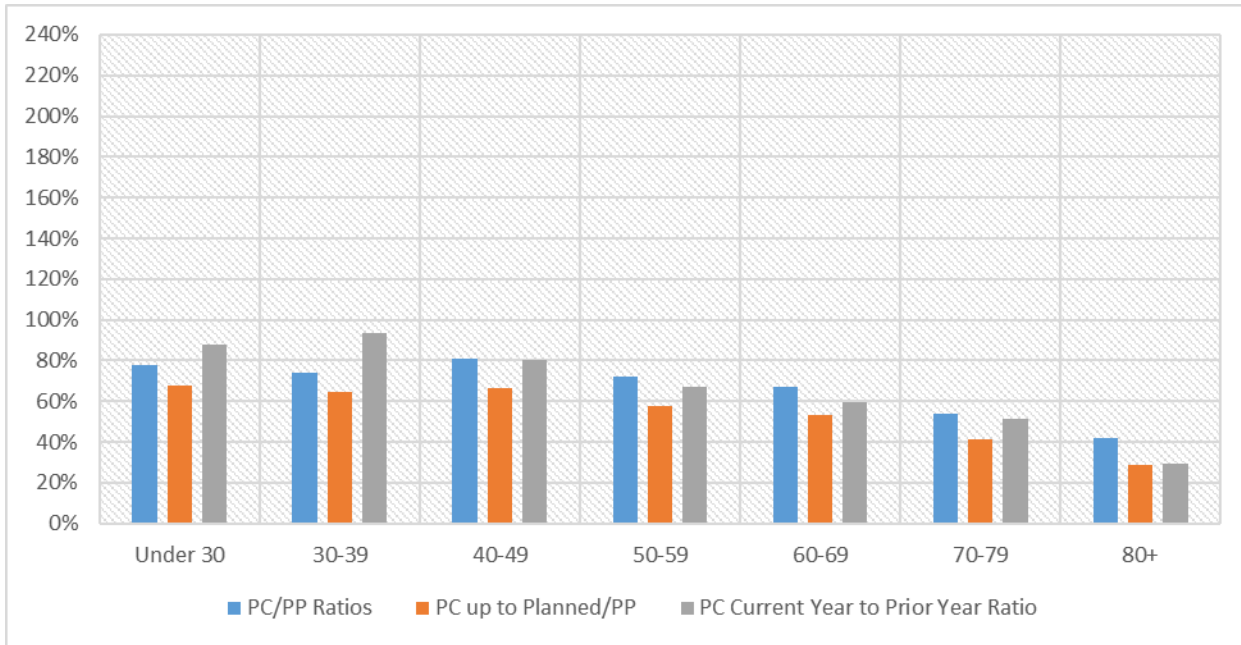
For accumulation products, fixed rate UL has very low ratios of premium collected to plan across all attained age groups with ratios ranging from 15 to 30 percent for ages under 80. (Figure 29) Ratios of current to prior year premium increase with higher attained age with the most material increases at ages 60 and older.

Figure 29: Fixed Rate UL Accumulation Products Premium Persistency by Attained Age Group



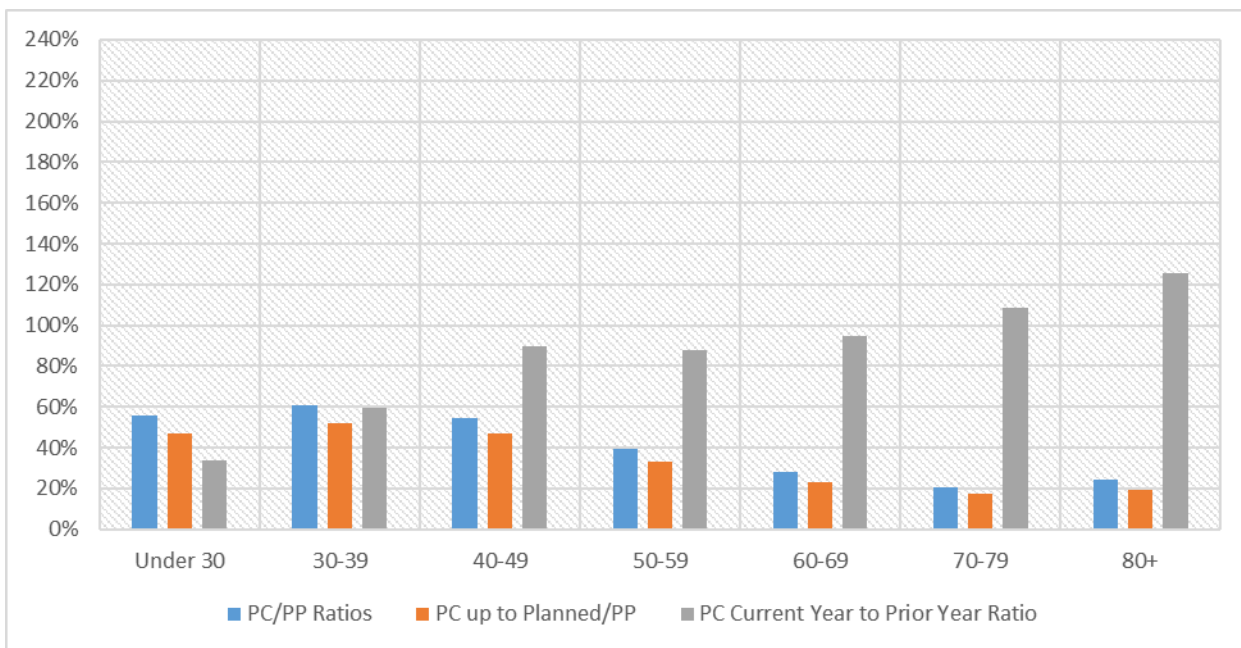
Accumulation IUL products exhibit relatively flat PC/PP and PC up to Planned/PP ratios beginning to decline slightly at ages over 70. (Figure 30) Ratios of current to prior year premium gradually decline with increasing attained age starting at attained age 30.

Figure 30: IUL Accumulation Products Premium Persistency by Attained Age Group



VUL accumulation products exhibit PC/PP and PC up to Plan/PP ratios that are declining slightly at between ages 30 and 79. (Figure 31) Ratios of current to prior year premium increase gradually with age starting at age 50.

Figure 31: VUL Accumulation Products Premium Persistency by Attained Age Group



Premium Persistency Results by Distribution Channel

Six of the eleven participating companies provided data by distribution channel. For the data contributed to this study, the most common distribution channels for flexible premium products are career/multiline agents, independent agents, and wirehouses. For all policy years combined, secondary guarantee product planned premium ratios are similar across channels with career/multiline exhibiting slightly higher ratios than the other channels. Current to prior year premium ratios are greatest for independent agents for both accumulation and secondary guarantee plans (Figures 32 and 33)

Figure 32: Premium Persistency by Distribution Channel - Secondary Guarantee Products

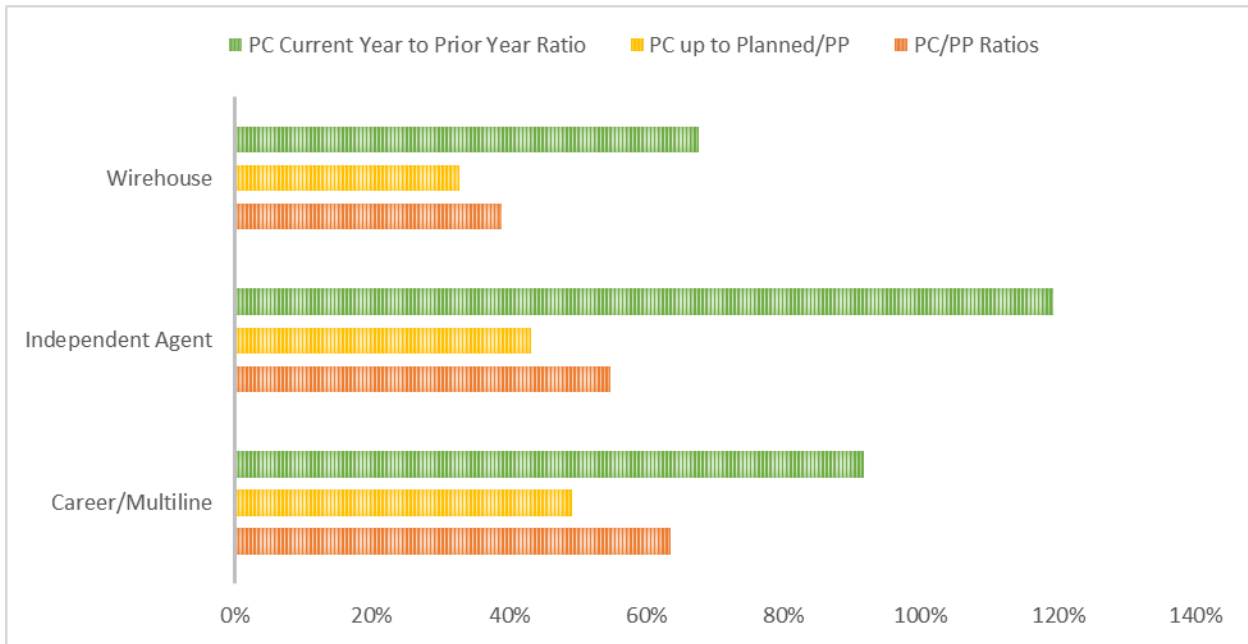
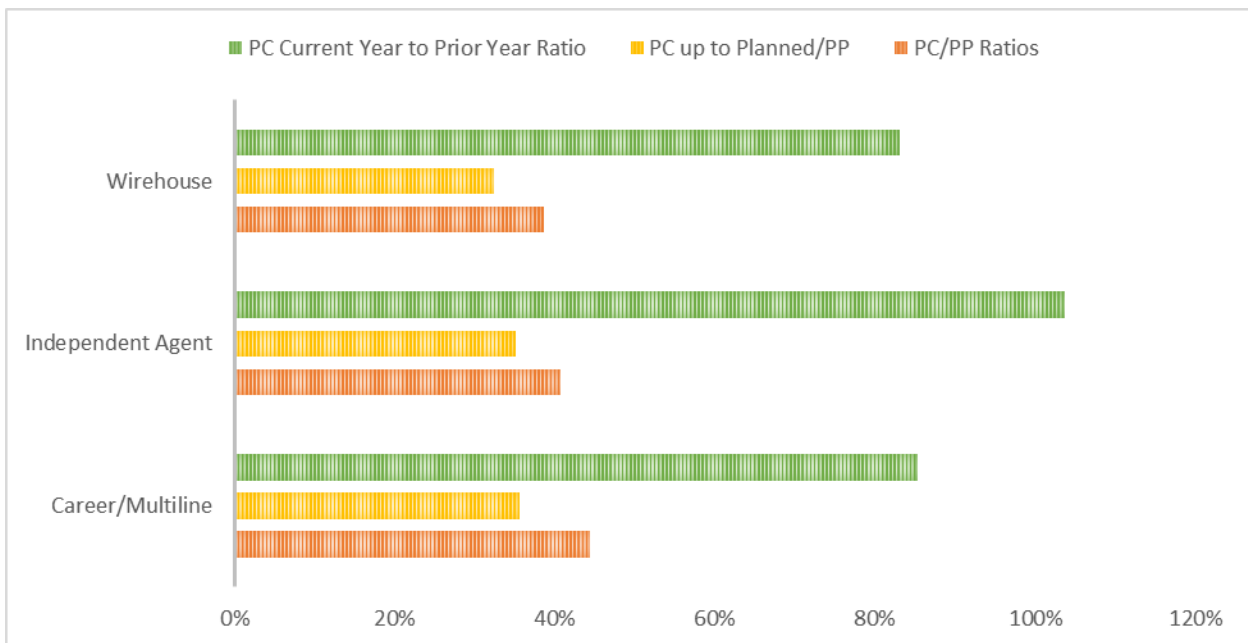


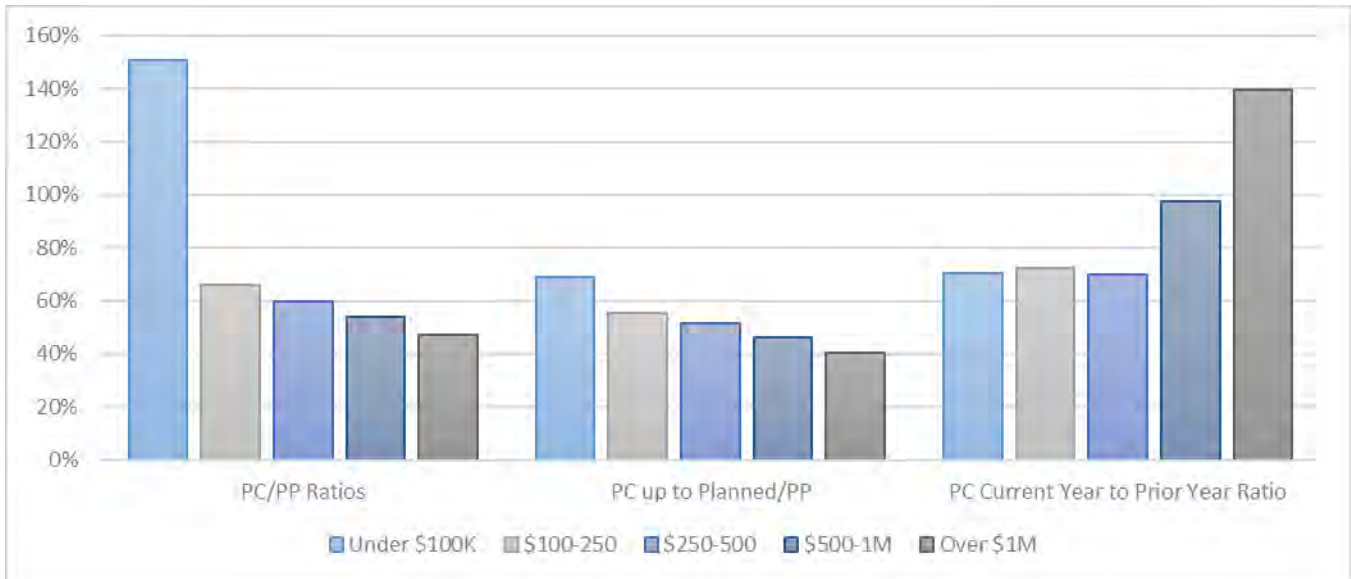
Figure 33: Premium Persistency by Distribution Channel - Accumulation Products



Premium Persistency Results by Policy Size (Face Amount Band)

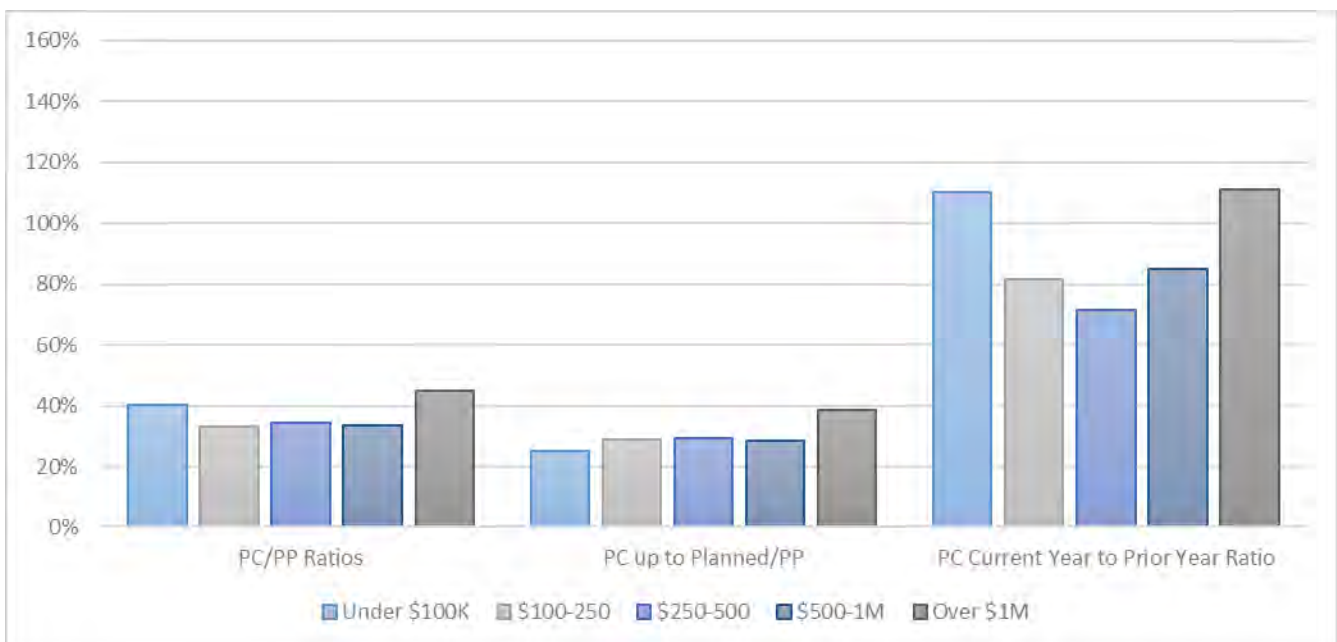
For secondary guarantee plans, the PC up to Planned/PP ratios, which tend to eliminate the impact of dump ins and single premiums, exhibit a pattern of slightly declining levels by policy size. The smallest policy sizes tend to have PC/PP ratios over 100% in total. Ratios of current to prior year premium are greatest for the largest policy sizes. (Figure 34)

Figure 34: Premium Persistency by Face Amount Band – Secondary Guarantee Products



For accumulation products, planned premium ratios are more level across all face amount bands with slightly higher ratios at the largest face amounts. Current to prior year premium ratios exhibit a “U-shaped” pattern by face amount band with the smallest and largest face amount ratios around 110 percent in total. (Figure 35)

Figure 35: Premium Persistency by Face Amount Band – Accumulation Products



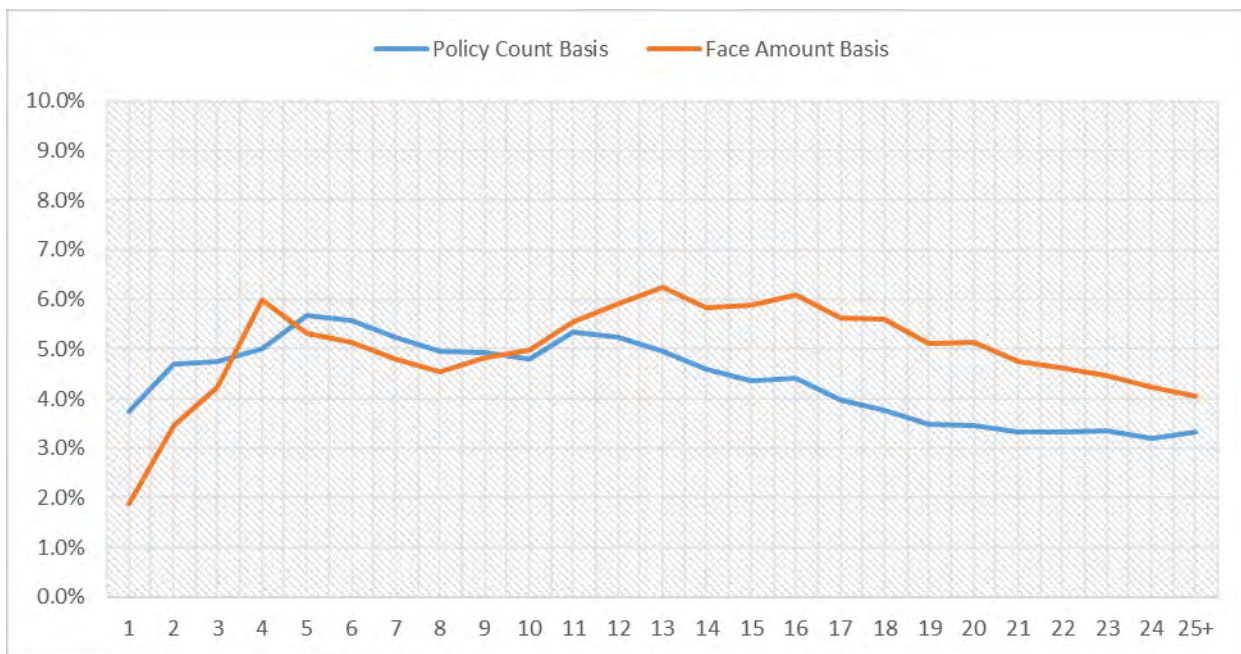
SECTION 2: LAPSE/SURRENDER EXPERIENCE

This section of the report examines rates of lapse/surrender for flexible premium policies included in the premium persistency study. In addition, in order to identify possible correlation between premium persistency experience and lapse/surrender experience, premium persistency ratios for policies that lapsed during the study are compared with policies that remained inforce.

Lapse/surrender rates for all flexible premium products are shown by policy year in Figures 36 and 37 below. Lapse/surrender rates increase over the first 4 to 5 policy years and tend to decline consistently after policy year 15. Lapse/surrender rates are consistently higher on a face amount basis beginning in policy year 10.

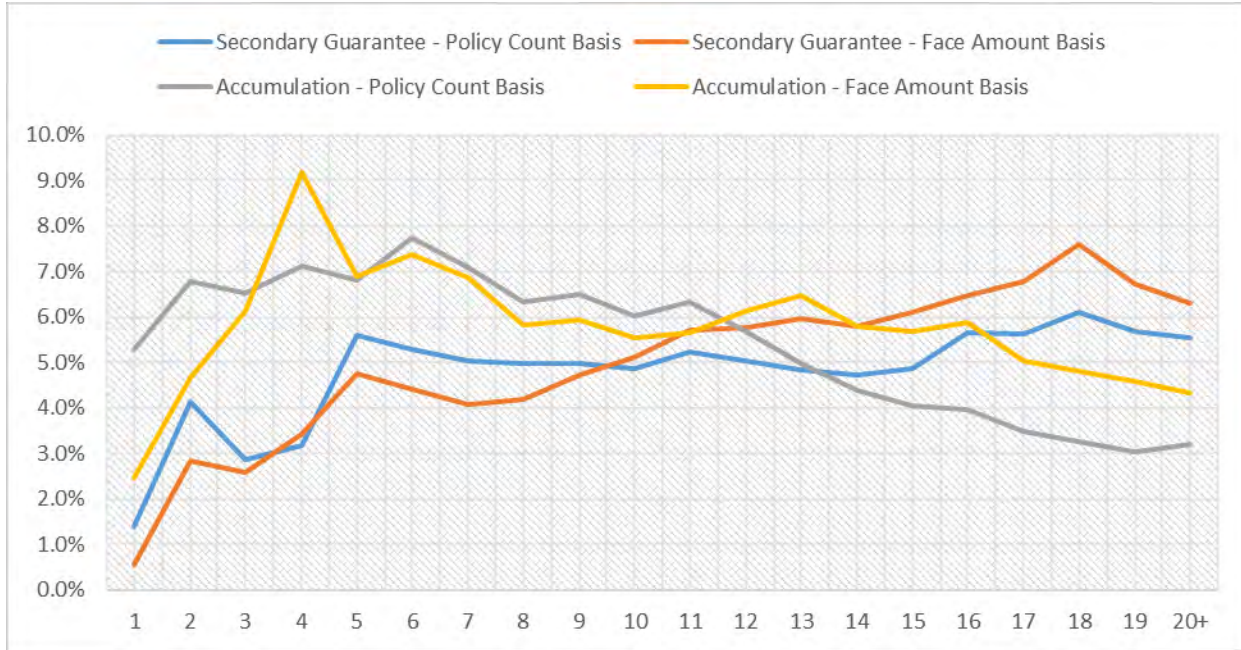
Lapse/Surrender Results by Policy Year

Figure 36: Lapse/Surrender Rates for Flexible Premium Products by Policy Year



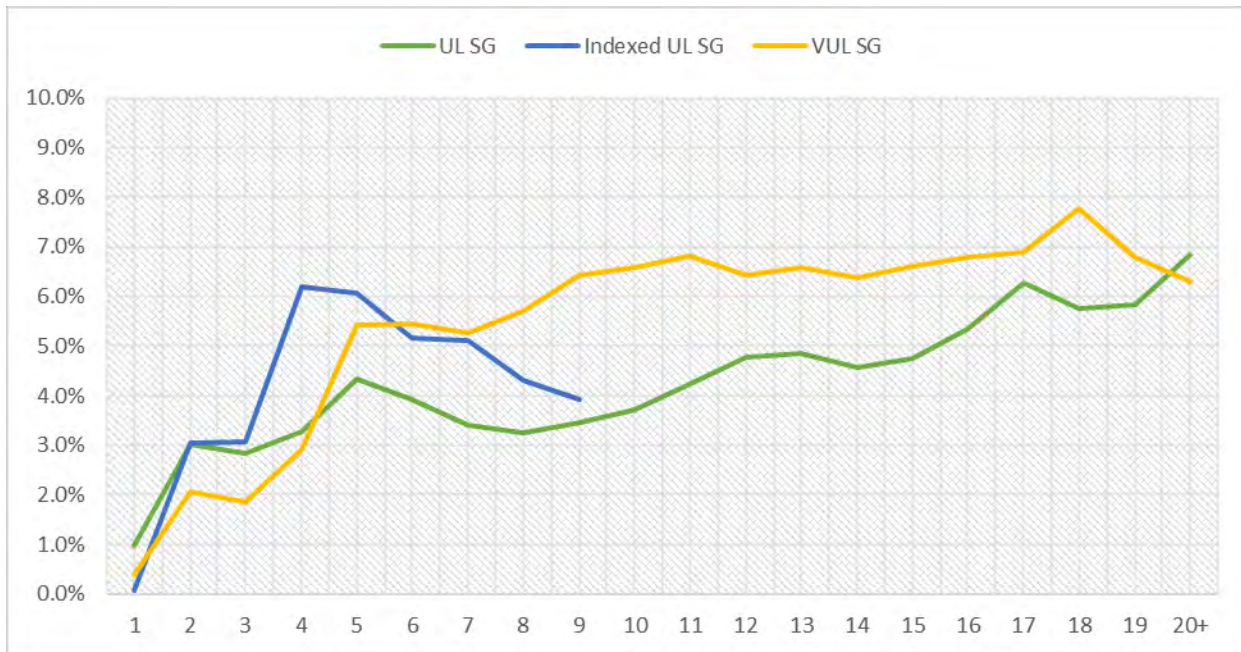
Accumulation products exhibit consistently higher rates of lapse/surrender than secondary guarantee products through duration 10. However, after year 10, the pattern is less clear. This may be impacted by policyholders in later durations with guaranteed interest rates at or above 4 percent who are less likely to lapse than those with lower guaranteed rates are.

Figure 37: Lapse/Surrender Rates for Flexible Premium Products by Policy Year and Product Type



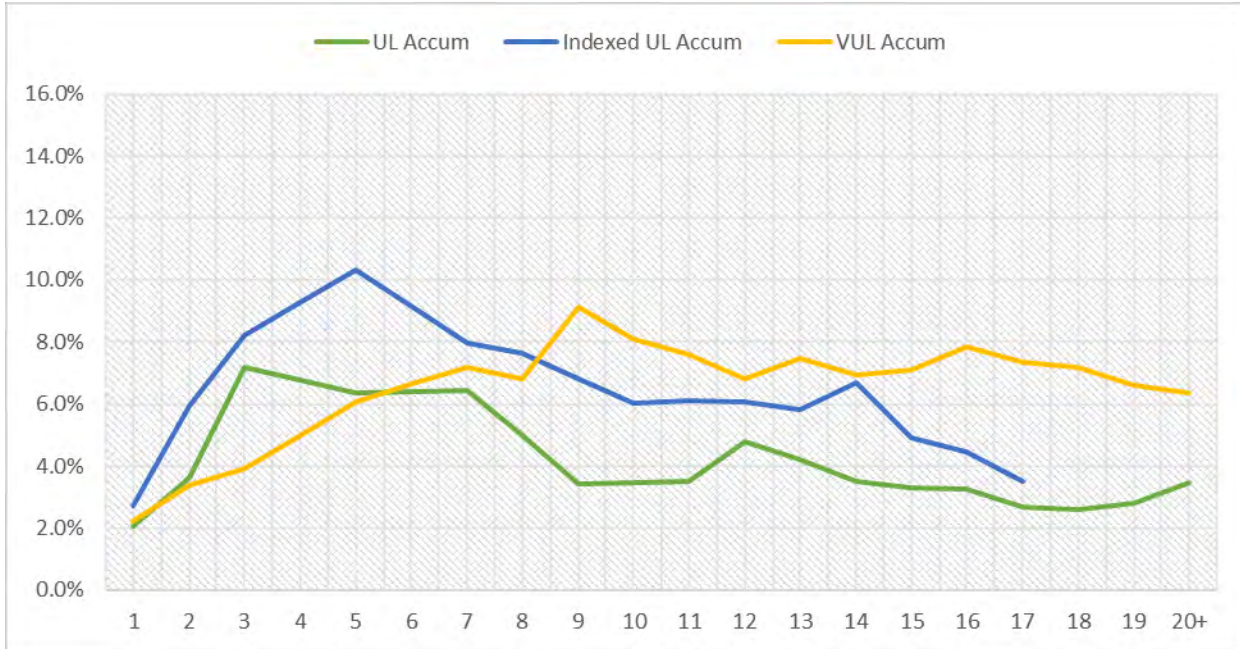
For secondary guarantee product designs, fixed rate UL exhibits the lower lapse/surrender rates than IUL for most policy years. Between year 5 and 29, observed lapse/surrender rates for VUL SG policies are between 1 and 3 percent higher than those for fixed rate UL. For IUL SG there is less experience available for the current study period, however, the pattern and level of lapse/surrender that is emerging appears to be similar to the other secondary guarantee product designs.

Figure 38: Secondary Guarantee Product Policy Lapse/Surrender Rates by Policy Year (Face Amount Basis)



For accumulation product designs, VUL policies exhibit lapse/surrender rates between 2 and 5.5 percent greater than those observed for fixed rate UL policies after year 8. For accumulation IUL, exposure for the study is more focused on recent issue years. Early duration experience on these policies points to possibly higher rates of lapse/surrender than fixed UL or VUL.

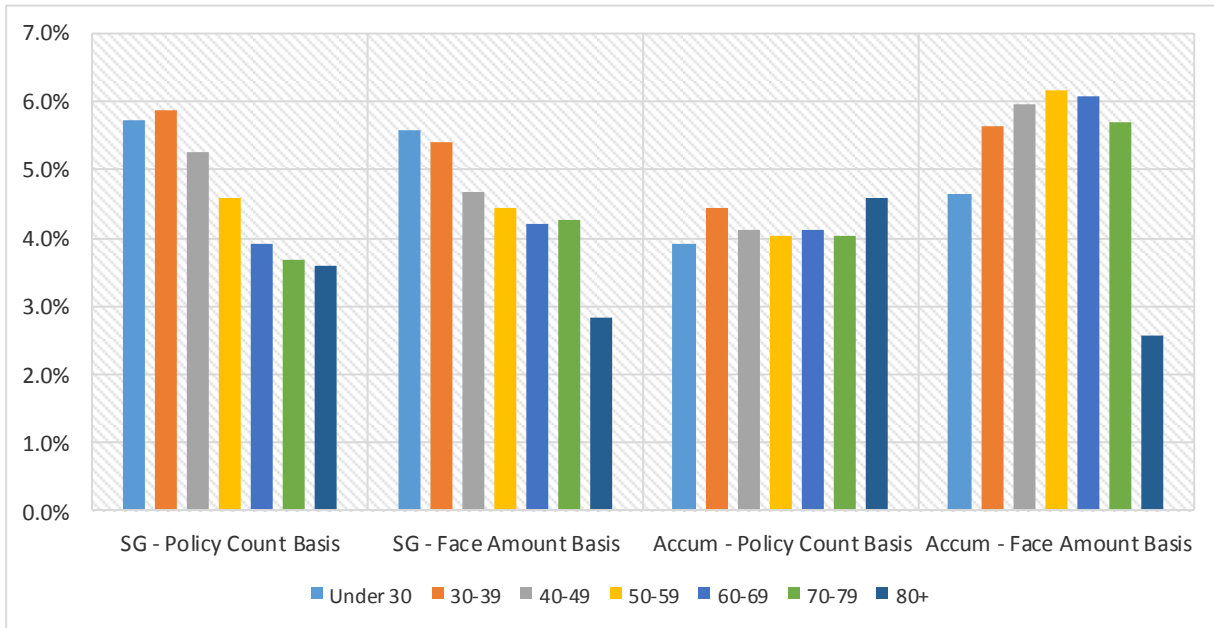
Figure 39: Accumulation Product Policy Lapse/Surrender Rates by Policy Year (Face Amount Basis)



Lapse/Surrender Results by Attained Age

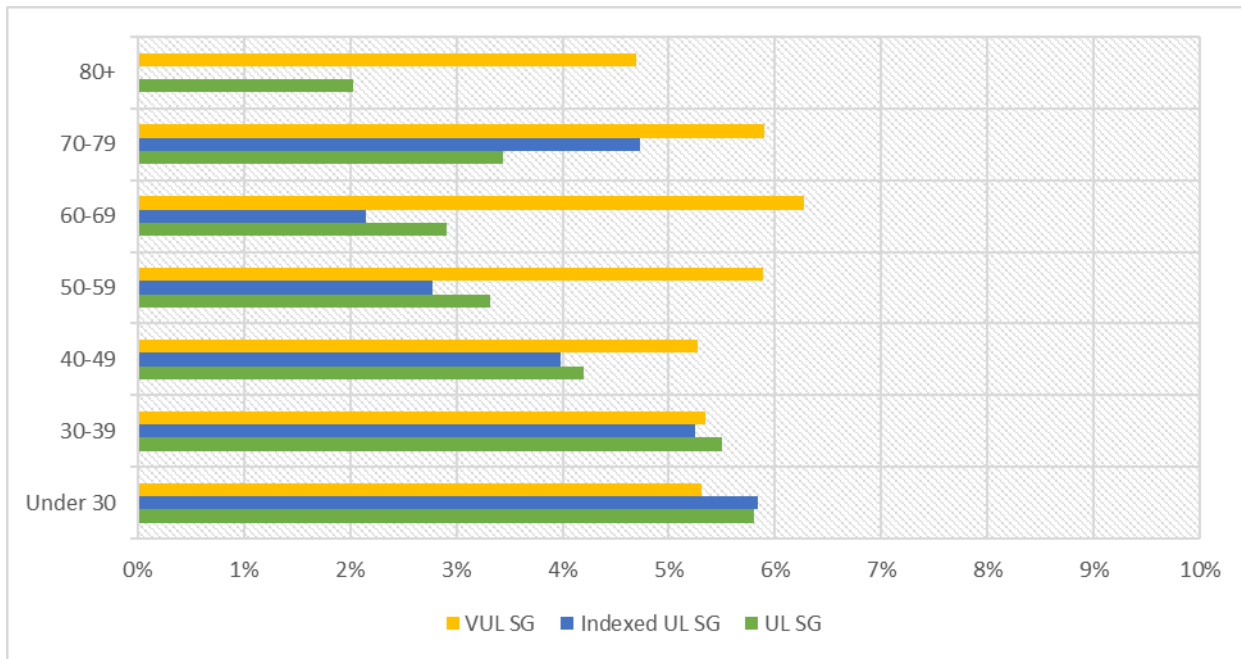
Observed results by attained age group indicate generally decreasing rates of lapse/surrender with increasing attained age for secondary guarantee designs. For accumulation product designs lapse/surrender rates are more consistent by attained age on a policy basis and exhibit a pattern of higher lapse/surrenders at ages between 50 and 69 on a face amount basis. (Figure 40)

Figure 40: Flexible Premium Product Policy Lapse/Surrender Rates by Attained Age and Product Type



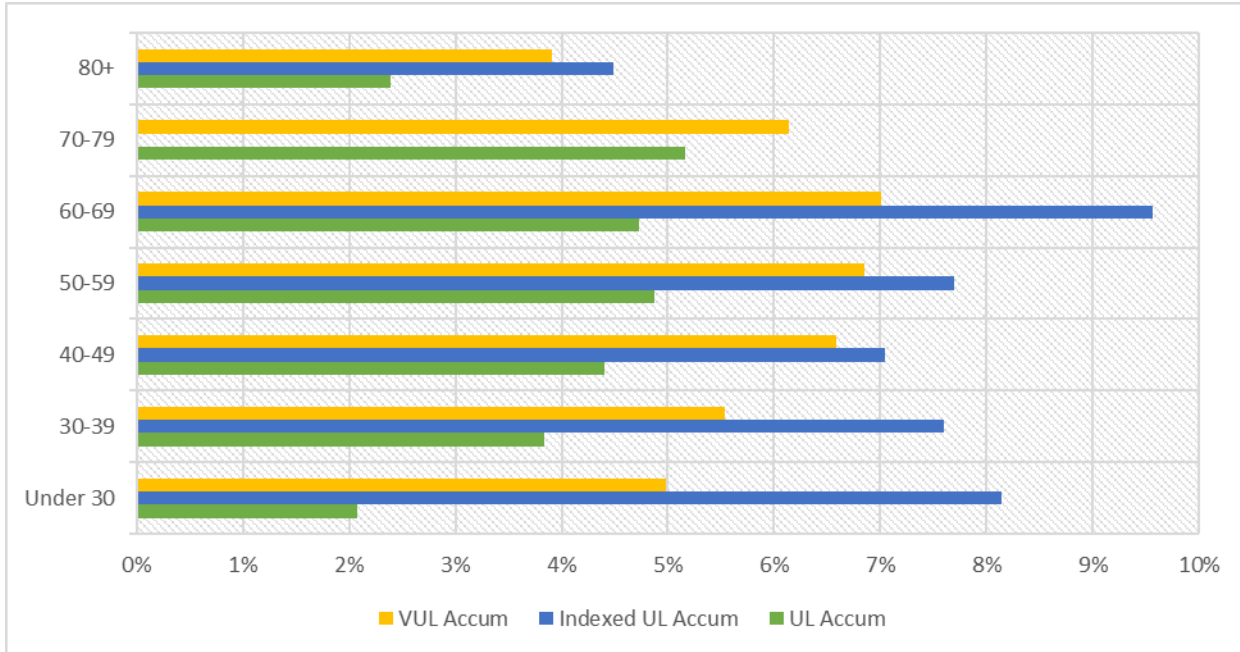
Breaking down lapse/surrender rates by attained age for secondary guarantee product types, fixed rate UL and IUL plans show the most consistent pattern of decline in lapse/surrender with increasing attained age with the exception of ages 70-79. (Figure 41) VUL SG products show less variation in results by attained age, and actually attained ages between 50 and 79 exhibit higher rates of lapse/surrender than ages under 50.

Figure 41: Secondary Guarantee Product Lapse/Surrender Rates by Attained Age (Face Amount Basis)



For accumulation product types, fixed rate UL policies exhibit a generally increasing pattern of lapse/surrender with increasing attained age. VUL policies again have the highest surrender/lapse rates at ages between 50 and 69. (Figure 42).

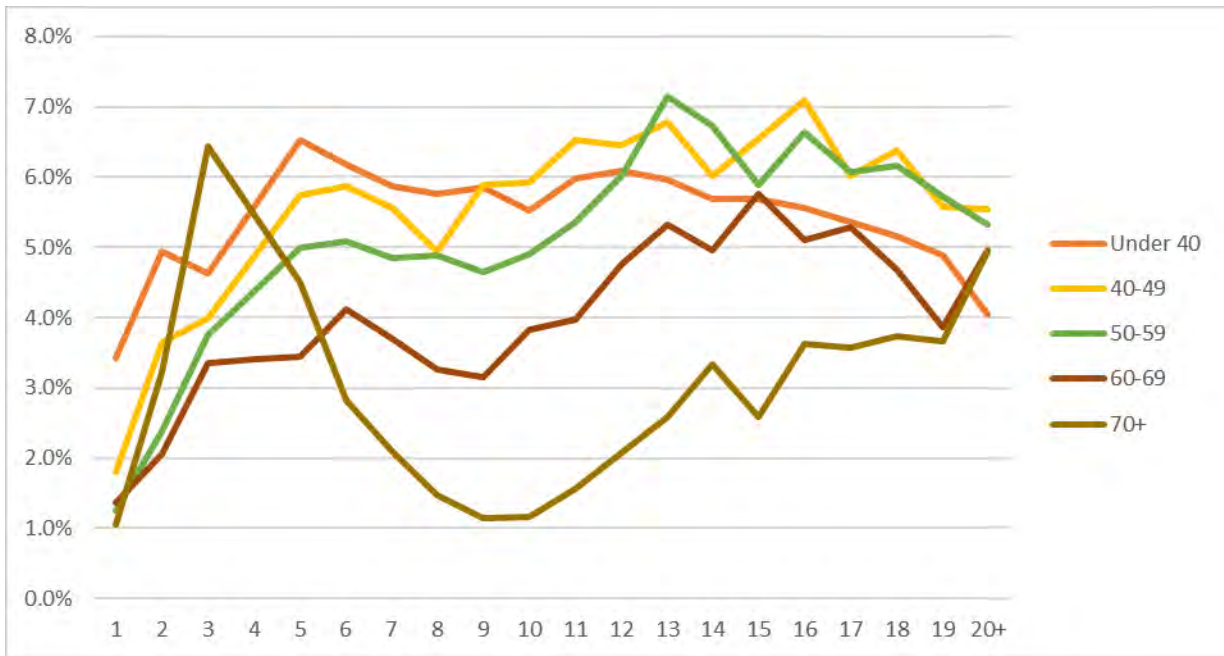
Figure 42: Accumulation Product Lapse/Surrender Rates by Attained Age (Face Amount Basis)



Lapse/Surrender Results by Issue Age and Policy Year

For issue ages 50 and older, lapse/surrender rates for flexible premium products generally decrease with increasing age at issue starting after policy year 5. (Figure 43) The relationship is less clear for ages under 50.

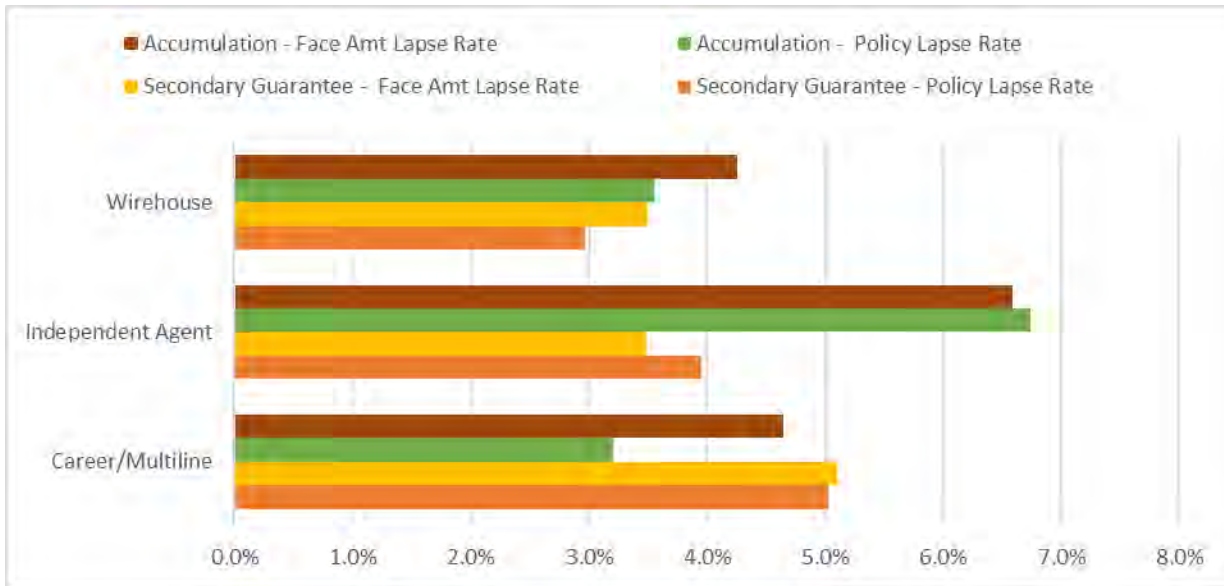
Figure 43: Flexible Premium Product Lapse/Surrender Rates by Issue Age and Policy Year (Face Amt Basis)



Lapse/Surrender Results by Distribution Channel

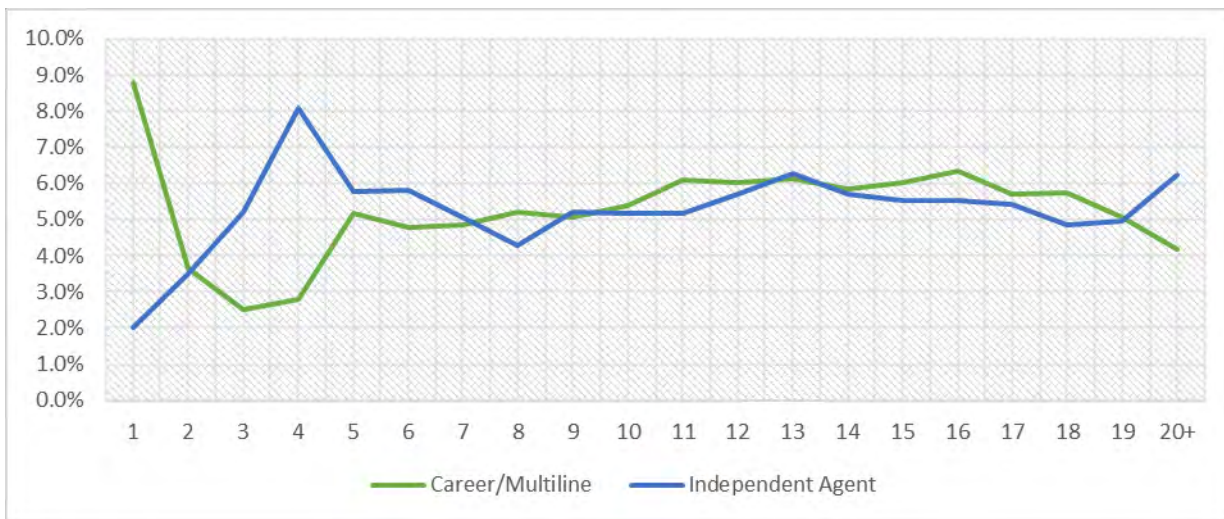
Six contributing companies provided data on the distribution channel through which the policies were purchased. For accumulation products, rates of lapse/surrender by distribution channel are greatest for policies sold through independent channels while lapse/surrender rates for secondary guarantee products are greatest for policies sold through career/multiline channels. (Figure 44)

Figure 44: Flexible Premium Product Lapse/Surrender Rates by Distribution Channel and Product Type



For career/multiline channels, lapse/surrender rates decrease from policy year 1 to 3 while for independent agents lapse/surrender rates tend to increase. Beginning in policy year 5, differences between the channels becomes less significant. (Figure 45)

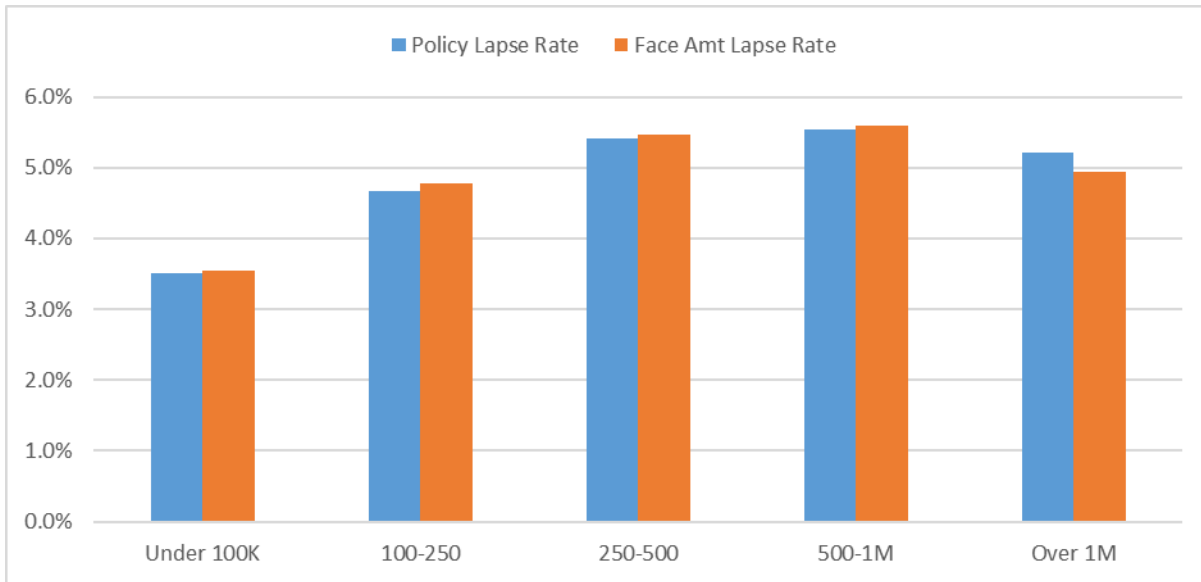
Figure 45: Flexible Premium Product Lapse/Surrender Rates by Distribution Channel and Policy Year (Face Amount Basis)



Lapse/Surrender Results by Policy Size

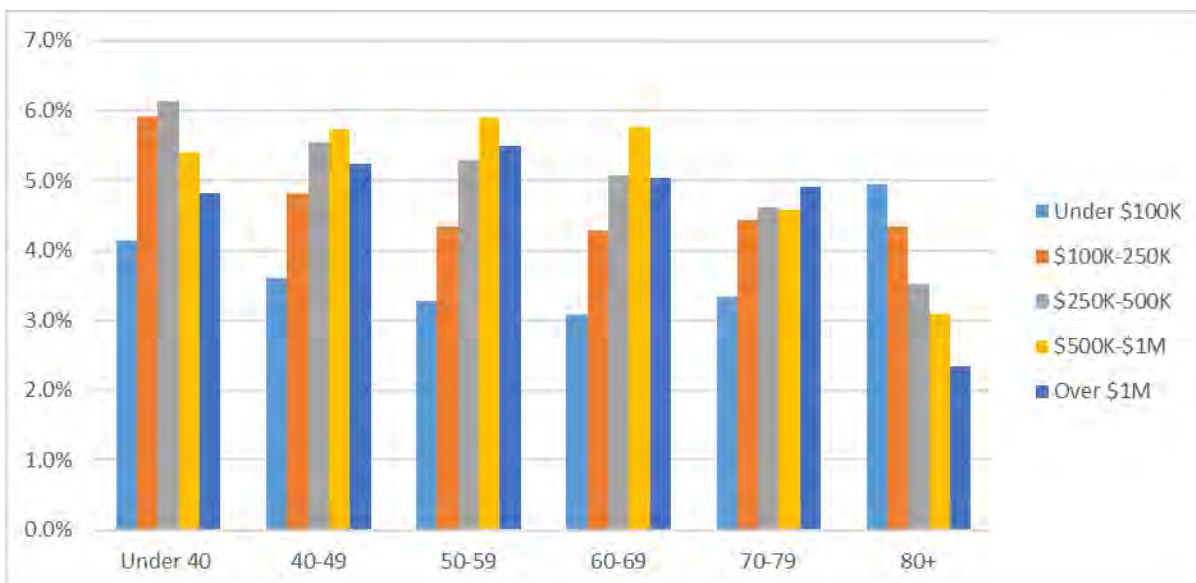
Examining rates of lapse/surrender by policy size, the lowest rates were observed for policies with face amounts under \$100K with increasing rates of lapse/surrender with increased policy size up until policy sizes of \$500,000 to 1 million. (Figure 46)

Figure 46: Flexible Premium Product Lapse/Surrender Rates by Policy Size



With the exception of ages 80 and over, for all attained age groups, policies with face amounts of less than \$100K exhibited the lowest overall lapse/surrender rates. The smaller policies were most often reported sold in the career channels where lapse/surrender rates were lower and this may influence observed results by policy size. (Figure 47)

Figure 47: Flexible Premium Product Lapse/Surrender Rates by Policy Size and Attained Age Group (Face Amount Basis)



Secondary guarantee products exhibited lapse/surrender rates of approximately 5 percent overall across policy sizes under \$1 million. Accumulation product lapse/surrender rates increase with policy size up to face amounts of \$500K and greater. (Figure 48)

Figure 48: Flexible Premium Product Lapse/Surrender Rates by Policy Size and Product Type

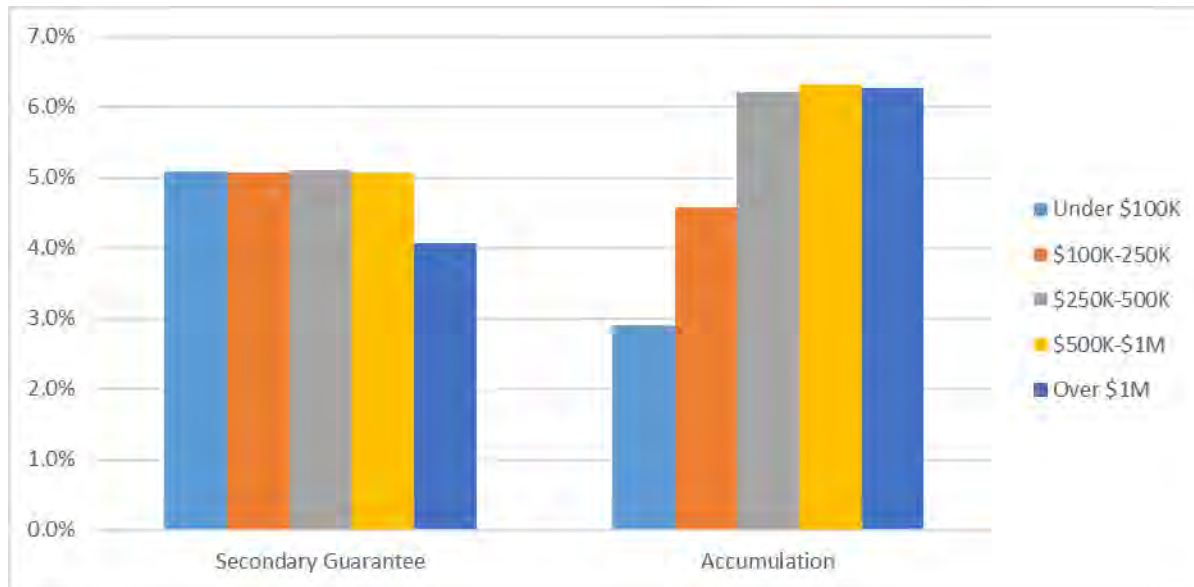
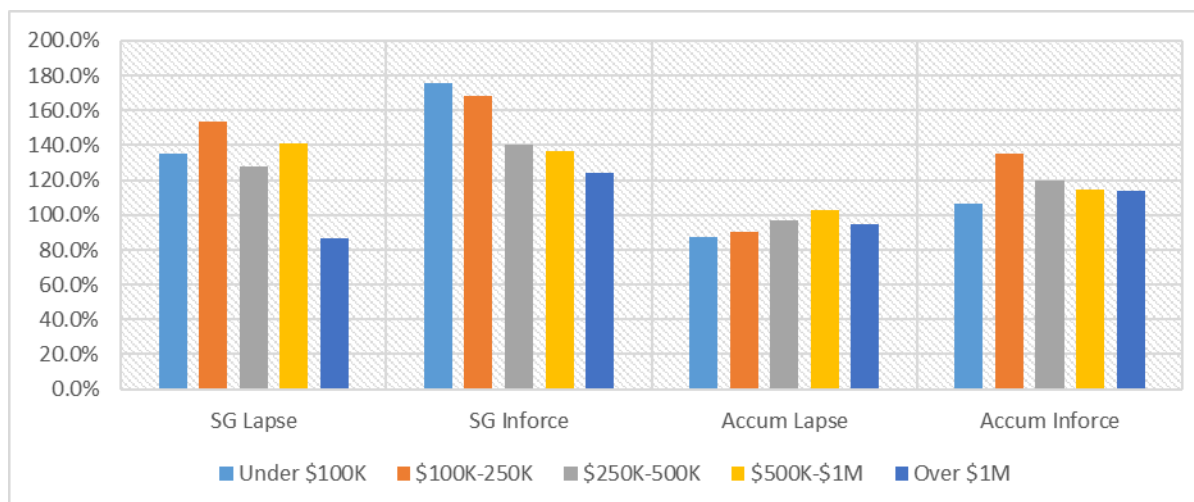


Figure 49 below examines premium persistency rates on the basis of current year premium to planned ratios (PC/PP) for those policies that survived the study period and those that terminated by lapse/surrender during the study period in order to begin to understand possible correlations in experience. For this purpose, policies that lapsed during the study were observed up to the year prior to termination and then experience for those years was compared to experience those that did not lapse.

For both secondary guarantee and accumulation products, rates of premium persistency are generally lower for lapsed/surrender policies at all policy sizes. The exception is secondary guarantee products with face amounts between \$500K and one million. Differences in rates of premium persistency are observed in the range of between 10 and 40 percentage points.

Figure 49: Premium Persistency Results: Lapsed/Surrendered Policies vs Policies Inforce at End of Study



Appendix A

DATA FORMAT REQUEST FOR FLEXIBLE PREMIUM PRODUCT EXPERIENCE STUDY

Requested Data Fields for Calendar Years 2009 to 2013

Note that data items described below should only be provided for US business for each **UL, Indexed UL, and VUL policy in force or terminated** during the study period.

Field	Field Name	Field Description	Critical Field Indicator (Yes/No)
1	Company Code	LIMRA will assign a code to each company as data is submitted.	No
2	Product Type Code	<p>Please assign one of the following product codes to each record submitted. <i>Companies should categorize products based on the primary target market objective for the product's design and pricing. See below for list of LIMRA definitions for classifying products by UL or VUL product type.</i></p> <p>01 – Universal Life – Death Benefit Guarantee focused (Secondary Guarantee Product) 02 – Universal Life – Cash Accumulation or Current assumption types 03 – Indexed UL – Death Benefit Guarantee focused (Secondary Guarantee Product) 04 – Indexed UL – Cash Accumulation or Current Assumption type product 05 – Variable Universal Life – Protection Focused (with or without lifetime or near lifetime secondary guarantee) 06 – Variable Universal Life – supplemental retirement income focused 07 – Other Flexible Premium Product – not described above</p>	Yes

Field	Field Name	Field Description	Critical Field Indicator (Yes/No)
3	Product Form Code	Please provide a unique product form code corresponding to the pricing generation for this product/policy. Companies will be asked to complete a brief Product Information Form in excel for each Product Form code above included in the in-force extract (see below for details regarding the Product Information Form).	No
4	Policy Identifier	Please provide a policy identifier <i>which is not the same as the actual policy number for privacy purposes</i> . If your company is submitting data to both the Traditional Surrender/Lapse Study and the Premium Persistency Study, please use the same identifier for policies in both studies.	Yes
5	Primary Insured Gender	M or F	Yes
6	Secondary Insured Gender	M or F (blank if not joint product)	Yes
7	Primary Insured Date of Birth	mm/dd/yyyy format	Yes
8	Secondary Insured Date of Birth	mm/dd/yyyy format Leave blank if not joint product.	Yes
9	Policy Issue State	Two character state abbreviation	No
10	5-digit zip code of policyowner at issue	5 digit zip code	No
11	Distribution Channel	0 = Unknown 1 = Career Agent/Multiline Agent 2 = Independent Agent 3 = Wirehouse 4 = Bank 5 = Financial Planner 6 = Other	No

Field	Field Name	Field Description	Critical Field Indicator (Yes/No)
12	Underwriting Risk Class for the Policy – Primary Insured	As indicated in the Product Form for this policy. Please provide a code for the underwriting risk class assigned that matches the underwriting class structure/name described in the Product Information Form.	Yes
13	Underwriting Risk Class for the Policy – Secondary Insured	As indicated in the Product Form for this policy. Please provide a code for the underwriting risk class assigned that matches the underwriting class structure/name described in the Product Information Form. Leave blank if not joint policy.	Yes
14	Policy Status Code	0 = in force 1 = terminated due to surrender 2 = terminated due to lapse 3 = terminated due to death 4 = terminated for other reasons (conversion, maturity, etc.) 5 = inforce following death of one of the insured lives (joint policies only)	Yes
15	Policy Termination Date (if applicable)	mm/dd/yyyy format	Yes
16	Policy Account Value at BOY		No
17	Policy Face Amount at BOY		Yes
18	Guaranteed Face Amount at BOY		No
19	Amount of Account Loaned at BOY		No

Field	Field Name	Field Description	Critical Field Indicator (Yes/No)
20	Secondary Guarantee on Policy	0= No 1= Yes	Yes
21	Secondary Guarantee Period at Issue (if applicable)		No
22	Secondary Guarantee Operative Indicator	0 = Secondary guarantee is no longer operative 1 = Secondary guarantee is operative	No
23	Policy has an Extended Maturity Option	0=No 1= Yes	No
24	Policy Funding Pattern	1= Level Pay 2= Single Pay 3= Limited Pay (10 yr) 4= Limited Pay (20 yr) 5= Other Limited Pay Period 6= Minimum Premium 7= Dump in then Level 8= Unknown	No
25	Cumulative Premium Paid Since Issue		Yes
26	Policy Annualized Planned/Billed Premium		Yes
27	Policy Target Premium		No
28	Premium Collected in Current Calendar Year of Experience		Yes
29	Policy Current Credited Rate at BOY		No
30	Policy Guaranteed Credited Rate		No
31	Policy Billing Method		No

Field	Field Name	Field Description	Critical Field Indicator (Yes/No)
32	CV Enhancement Rider elected	0= No 1= Yes	No
33	LTC/Living Benefits Rider Elected	0 = No 1 = Yes	No

Product Information Form Information (to be submitted in separate excel spreadsheet for each product form code assigned)

- Calendar Years the Product Form was issued
- Underwriting Risk Class Structure and Names of Classes
- No Lapse Guarantee Structure (rider or base, if available)
- Product Type (identified by companies based on how product is mostly sold – see Product Type Code descriptions below)
- Secondary Guarantee Products only – type of guarantee (multiple shadow account, minimum premium, singleshadow account, other)
- Target Premium specifications
- Surrender Charge Structure, Levels and Period
- Cash Value Enhancement rider – description if offered
- Living Benefits Riders Available (LTC, chronic illness, critical illness)

Product Type Descriptions (LIMRA Definitions)

Death Benefit Guarantee Focused Products:

A UL or VUL product developed specifically for the lifetime death benefit guarantee market that features lifetime or near lifetime no-lapse guarantees either through a rider or as part of the base policy

Current Assumption or Cash Accumulation Product Types:

A UL or VUL product that is primarily marketed for low cost permanent death benefit protection and/or accumulation of cash values for supplemental retirement planning purposes.

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Appendix B

DEFINITIONS FOR FLEXIBLE PREMIUM PRODUCT DESIGNS: LIMRA SALES AND INFORCE SUMMARY REPORTS

Death Benefit Guarantee: A universal life product developed specifically for the death benefit guarantee market that features long-term (lifetime or near lifetime) no-lapse guarantees either through a rider or as part of the base policy.

Cash Accumulation: A universal life product developed specifically for the accumulation-oriented market where cash accumulation and efficient distribution are the primary concerns of the buyer. Within this category are products that allow for high-early-cash-value accumulation through the election of an accelerated cash value rider.

Current Assumption, Combination and Other: Current assumption products are defined as those that offer the lowest cost death benefit coverage without guarantees. A combination product would include those offered by companies who use the same product in death benefit, current assumption and cash accumulation sales situations.

Annualized Premium: Recurring premium plus 10% of single premium. (Recurring premiums are the total first-year premiums that policy-holders would expect to pay if all policies remained in force for one year. For instance twelve times the monthly premium. Single premium is a lump-sum premium payment that covers the entire cost of the policy.)