MILLIMAN RESEARCH REPORT

UNIVERSAL LIFE AND INDEXED UNIVERSAL LIFE ISSUES

2019/2020 Survey: Key discoveries

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Background

Universal life (UL) and indexed universal life (IUL) continue to play a significant role in the life insurance market today. In recent years, the market share of UL and IUL products combined has consistently been in the range of 35% to 40%[1] of total life sales measured by first-year premium. IUL has continued to drive strong sales growth in recent years. (Throughout this report, IUL products are not included when using the term "UL.") In 2019, Milliman conducted its 13th annual comprehensive survey aimed at addressing UL and IUL issues, and to provide carriers with competitive benchmarking to evaluate where they stand relative to their peers. Survey topics and questions were determined based on input from Milliman consultants, as well as participants in the prior year's survey. The survey is updated annually to include current topics of interest. The following sections were included in this year's survey:

- Sales: UL, IUL, Sales with Chronic Illness Riders, Sales with LTC Riders
- Profit Measures
- Target Surplus
- Reserves
- Risk Management
- Underwriting
- Product Design
- Compensation
- Pricing
- Illustrations

The survey was sent via email to UL/IUL insurance companies on November 6, 2019; 30 companies submitted responses. Input from survey participants relates to the UL/IUL environment in late 2019. Data does not reflect the current interest rate environment, or the impact of the coronavirus (COVID-19) pandemic.

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[1] According to LIMRA's U.S. Retail Individual Life Insurance Sales reports.

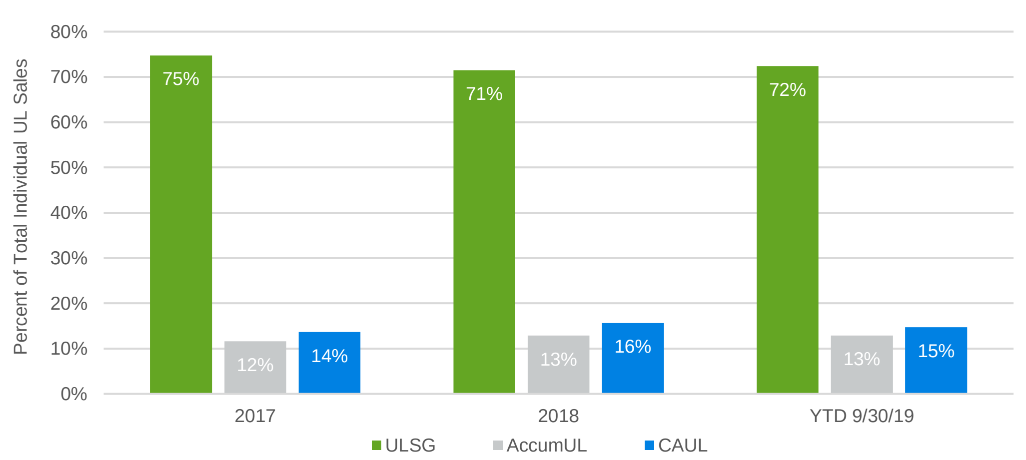
Survey information

Survey participants reported total combined individual UL and individual IUL sales of of $2.5 billion, $2.4 billion, and $1.7 billion, respectively, for calendar years 2017, 2018, and for 2019 as of September 30, 2019 (YTD 9/30/19). Note that, unless noted otherwise throughout this report, single premium sales are included at 10% of actual sales on those policies. *IUL sales during YTD 9/30/19 accounted for 63% of total UL/IUL sales combined (reported by survey participants) during YTD 9/30/19, increasing from the 50% of total sales it represented in 2017.* The following two sections include further details about UL and IUL sales, on a separate basis.

UNIVERSAL LIFE SALES DETAILS

Survey participants reported total individual UL sales of $1.2 billion, $1.1 billion, and $0.6 billion, respectively, for calendar years 2017, 2018, and for YTD 9/30/19. Of the 30 survey participants, 18 reported both UL and IUL sales, eight reported UL sales only, and four reported IUL sales only. The graph in Figure 1 illustrates the UL product mix as reported by survey participants from 2017 through YTD 9/30/19. The term "total individual UL" includes UL with secondary guarantees (ULSG), cash accumulation UL (AccumUL), and current assumption UL (CAUL) throughout this report. Definitions are included in the Appendix. The ULSG market share decreased from 2017 to 2018 and increased for the period YTD 9/30/19. The market share for AccumUL increased from 2017 to 2018 and remained stable during YTD 9/30/19. The CAUL market share increased from 2017 to 2018 and decreased during YTD 9/30/19.

FIGURE 1: UL PRODUCT MIX BY YEAR



UL sales declined significantly year-over-year over the survey period (based on annualized YTD 9/30/19 sales). Total individual UL sales decreased 31%, with 14 of the 26 participants reporting decreases in their UL sales. Eleven of the 14 reported decreases of 20% or more. The decline in sales by product was 34% for ULSG, 24% for AccumUL, and 26% for CAUL sales. One driver of the decrease could be movement in sales from UL to IUL. Nine of the 14 participants appear to be focusing less on UL sales and more on IUL sales. Seven of the nine reported significant increases in IUL sales from 2017 to YTD 9/30/19 (on an annualized basis).

Total individual UL sales were reported by 23 participants based on the underwriting approach. Underwriting approaches were defined as follows:

- Simplified issue (SI) underwriting: Less than a complete set of medical history questions and no medical or paramedical exam.
- Accelerated underwriting (AU): The use of tools such as a predictive model to waive requirements such as fluids and a paramedical exam on an otherwise fully underwritten product for qualifying applicants without charging a higher premium than if fully underwritten.
- Fully underwritten: Complete set of medical history questions and medical or paramedical exam, except where age and amount limits allow for nonmedical underwriting.

For AU sales, participants were instructed to include total sales for products under which AU is offered. *The distribution of 2018 UL sales (on a premium basis) by underwriting approach was 5.7% SI, 0.4% AU, and 93.9% fully underwritten. For YTD 9/30/19 UL sales, the distribution by underwriting approach was 6.9% SI, 0.7% AU, and 92.5% fully underwritten.* For both UL and IUL sales, the portion of AU business is surprisingly low and is lower than what was reported in the previous UL/IUL survey. Note that a couple of companies restated their mix of business by underwriting type (allocations shifted from AU to full underwriting) relative to the mix reported in the previous survey. Also, we believe that SI and AU are more commonly used on term insurance plans than UL or IUL.

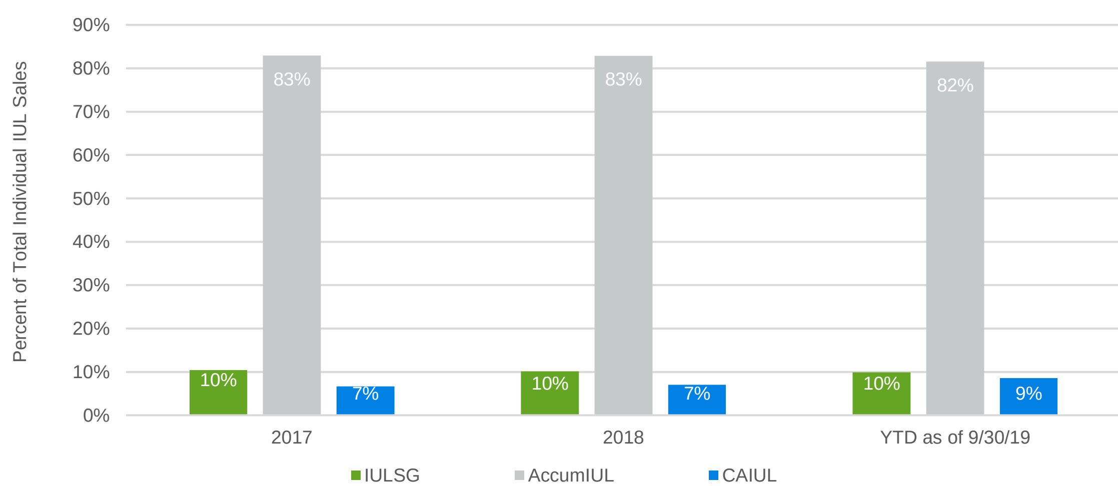
INDEXED UNIVERSAL LIFE SALES DETAILS

Of the 30 survey participants, 22 reported IUL sales. Survey participants reported total IUL sales of $1.2 billion, $1.3 billion, and $1.1 billion, respectively, for calendar years 2017, 2018, and for YTD 9/30/19. The term “total individual IUL” includes IULSG, AccumIUL, and CAIUL. Definitions are included in the Appendix.

The AccumIUL sales percentage increased from 88% to 91% of total AccumUL/AccumIUL sales. IULSG sales also increased, from 12% to 19% of total ULSG/IULSG combined sales, over the survey period. The CAIUL sales percentage increased from 33% to 50% of total CAUL/CAIUL sales from 2017 to YTD 9/30/19.

Sales of AccumIUL products continued to dominate the IUL market throughout the survey period. Figure 2 shows that the market share for AccumIUL was stable from 2017 to 2018 and then decreased for the period YTD 9/30/19. The market share for IULSG was stable throughout the survey period. For CAIUL, the market share was stable from 2017 to 2018 and then increased during YTD 9/30/19.

FIGURE 2: IUL PRODUCT MIX BY YEAR



IUL sales were reported by 19 participants based on the underwriting approach. Sales were split by SI, AU, and full underwriting. *The distribution of 2018 IUL sales (on a premium basis) by underwriting approach was 1.2% SI, 1.6% AU, and 97.1% fully underwritten. For YTD 9/30/19 IUL sales, the distribution by underwriting approach was 0.6% SI, 1.9% AU, and 97.5% fully underwritten. From 2018 to YTD 9/30/19, overall there was a shift from simplified issue to fully underwritten and AU business.* The portion of IUL sales subject to SI was about 5% to 6% lower than those reported for UL sales. The portion of IUL sales subject to AU was more than double what was reported for UL sales.

SALES WITH CHRONIC ILLNESS RIDERS

There are three common approaches to chronic illness accelerated death benefit (ADB) riders: the discounted death benefit approach, the lien approach, and the dollar-for-dollar approach. The dollar-for-dollar approach includes an explicit premium, but the other approaches do not. Under the discounted death benefit approach a discounted percentage of the face amount reduction is paid, with the face amount reduction occurring at the same time as the accelerated benefit payment. There is no need for charges up front or other premium requirements because the insurer covers its costs of early payment of the death benefit via a discount factor. The second approach is the lien approach, in which payment of the accelerated death benefit is considered a lien or offset against the death benefit. Access to the cash value is limited to the excess of the cash value over the sum of any other outstanding loans and the lien. Future premiums or charges for the coverage are not affected, and the gross cash value continues to grow as if the lien did not exist. The third common approach is the dollar-for-dollar death benefit reduction approach. Under this approach, when an ADB is paid, there is a dollar-for-dollar reduction in the specified amount or face amount and a pro rata reduction in the cash value based on the percentage of the specified amount or face amount that was accelerated.

Of the 26 participants reporting UL sales, 13 reported UL sales with chronic illness ADB riders. Eleven of the 13 reported sales of $115.8 million in 2017, and all 13 reported sales of $116.6 million for 2018 and $72.1 million for YTD 9/30/19. The total face amount issued for UL policies with chronic illness riders was reported as $8.2 billion for 2017, $7.3 billion for 2018, and $4.6 billion for YTD 9/30/19.

Fourteen of the 22 IUL survey participants reported IUL sales with chronic illness ADB riders. Ten of the 14 also reported UL sales with chronic illness riders. Total IUL sales with chronic illness riders were reported equal to $344.1 million in 2017 by 13 participants. Sales reported by 14 participants equaled $433.1 million in 2018 and $397.7 million during YTD 9/30/19. The total face amount issued for IUL policies with chronic illness riders was $16.1 billion, $19.7 billion, and $17.8 billion, respectively, for 2017, 2018, and YTD 9/30/19.

The table in Figure 3 shows a summary of sales of chronic illness riders as a percentage of total sales by premium (separately for UL and IUL products). *During YTD 9/30/19, sales of chronic illness riders as a percentage of total sales were 11.4% for UL products and 37.3% for IUL products.* This difference may be a result of the greater level of new IUL product development in recent years, relative to new UL product development. IUL writers are likely including new chronic illness riders in the development process.

FIGURE 3: CHRONIC ILLNESS RIDER SALES AS A PERCENTAGE OF TOTAL SALES

CALENDAR YEAR	TOTAL INDIVIDUAL UL	ULSG	ACCUMUL	CAUL
UL SALES WITH CHRONIC ILLNESS RIDERS AS A PERCENTAGE OF TOTAL UL SALES				
2017	9.4%	7.4%	22.8%	9.5%
2018	10.5%	7.7%	24.9%	11.0%
YTD 9/30/19	11.4%	9.6%	20.4%	12.7%
IUL SALES WITH CHRONIC ILLNESS RIDERS AS A PERCENTAGE OF TOTAL IUL SALES				
2017	28.0%	17.4%	30.6%	13.1%
2018	33.2%	22.8%	36.2%	12.2%
YTD 9/30/19	37.3%	29.1%	40.8%	13.3%

SALES WITH LONG-TERM CARE (LTC) RIDERS

Of the 26 survey participants reporting UL sales, eight reported UL sales with long-term care (LTC) riders. Similarly, of the 22 survey participants reporting IUL sales, seven reported IUL sales with LTC riders. One of the eight reported UL sales with LTC riders for 2017 only, another for 2018 and YTD 9/30/19 only, and the other six for 2017, 2018, and YTD 9/30/19. One of the seven reported IUL sales with LTC riders for 2018 and YTD 9/30/19 only, and the other six for 2017, 2018, and YTD 9/30/19. Figure 4 includes a summary of total UL and total IUL sales with LTC riders. In addition to the sale of LTC ADB riders, three of the eight UL participants also reported sales of an extension of benefits (EOB) rider and an inflation protection rider (IPR), although others that offer these riders did not report sales here. The seven IUL participants reported sales of LTC ADB riders only.

FIGURE 4: TOTAL LTC RIDER SALES

CALENDAR YEAR	UL SALES WITH LTC RIDERS ($ MILLIONS)			IUL SALES WITH LTC RIDERS ($ MILLIONS)		
	NUMBER OF RESPONSES	SALES (PREMIUM)	SALES (FACE AMOUNT)	NUMBER OF RESPONSES	SALES (PREMIUM)	SALES (FACE AMOUNT)
2017	7	$605.9	$5,246.2	6	$215.9	$13,184.4
2018	7	$568.3	$4,517.8	7	$211.3	$13,424.0
YTD 9/30/19	7	$344.6	$3,137.8	7	$156.6	$9,600.9
YTD 9/30/19 ANNUALIZED	7	$459.5	$4,183.7	7	$208.8	$12,801.2

Sales of policies with LTC riders as a percentage of total sales (measured by premiums, and weighting single premium sales at 10%) are shown in Figure 5. *During YTD 9/30/19, sales of LTC riders as a percentage of total sales by premium were 54.6% for UL products and 14.7% for IUL products***.** *It is notable that over half of UL sales by premium include an LTC rider. Also, most of those sales include EOB riders.*

FIGURE 5: LTC RIDER SALES AS A PERCENTAGE OF TOTAL SALES BY PREMIUM

CALENDAR YEAR	TOTAL INDIVIDUAL UL	ULSG	ACCUMUL	CAUL
UL SALES WITH LTC RIDERS AS A PERCENTAGE OF TOTAL UL SALES				
2017	49.5%	62.1%	2.8%	20.1%
2018	51.0%	65.7%	7.4%	19.3%
YTD 9/30/19	54.6%	68.6%	15.7%	19.9%
IUL SALES WITH LTC RIDERS AS A PERCENTAGE OF TOTAL IUL SALES				
2017	17.6%	25.9%	17.2%	10.1%
2018	16.2%	22.8%	15.4%	15.6%
YTD 9/30/19	14.7%	20.4%	13.8%	16.8%

Within 24 months, 90% of survey respondents may market either an LTC or chronic illness rider.

DRIVERS OF UL/IUL PRICING

Survey responses included information about the following key drivers of UL/IUL pricing:

1. Profit targets
2. Target surplus
3. Reserves
4. Reinsurance
5. Investment yields
6. Expenses

Profit measures

The predominant profit measure reported by survey participants continues to be an after-tax, after-capital statutory return on investment/internal rate of return (ROI/IRR). The median ROI/IRR reported is 10.0% for ULSG, AccumUL, CAUL, and IULSG, 10.5% for AccumIUL, and 11.0% for CAIUL. Six participants reported changes to profit measures or goals in the last two years and five of the six reported reductions in profit targets. One of these five also reported a greater focus on profit margins. The sixth participant reported a greater focus on GAAP return on assets (ROA).

Survey participants reported their actual results relative to profit goals for 2018 and YTD 9/30/19. *The percentage of participants reporting that actual results were short of profit goals in 2018 was 44% (ULSG), followed by 27% (AccumUL), 27% (IULSG), 21% (CAUL), 10% (IULSG and AccumIUL), and 0% (CAIUL). For YTD 9/30/19, 50% were short of their profit goals for ULSG, 33% for AccumUL, 27% for IULSG, 14% for CAUL, 10% for AccumIUL, and 0% for CAIUL. The primary reasons reported for not meeting profit goals in both periods were low interest earnings and higher expenses.*

Target surplus

The majority of survey participants continue to set target surplus pricing assumptions as a percentage of the National Association of Insurance Commissioners (NAIC) company action level. The overall NAIC risk-based capital (RBC) percentage of company action level ranged from 250% to 450%. The report includes details about the overall NAIC RBC percentage, broken down by component, and is shown by UL/IUL product type.

Reserves

The stochastic exclusion test (SET) is a means of determining whether the added effort of calculating stochastic reserves under principle-based reserves (PBR) is required. The majority of survey participants are not using the SET. Of 28 responses, 20 are not using the test, have not analyzed the test, or principle-based reserves (PBR) do not apply to them. Seven participants are using the ratio test for this aspect of Valuation Manual Chapter 20 (VM-20) relative to UL/IUL products. One participant is using the certification option. Four of the eight participants using the SET indicated that the SET results are consistent both pre-reinsurance and post-reinsurance. One participant noted that the results are not consistent. Two participants reported that SET results with respect to reinsurance have not been analyzed or completed. The eighth participant indicated that it is not modeling reinsurance at this time because it is immaterial.

Ten survey participants reported they are explicitly modeling the deterministic reserve (DR) and stochastic reserve (SR) in pricing projections (i.e., projecting these reserve components). An additional seven participants are explicitly modeling the DR, but not the SR. The remaining 13 participants are either not explicitly modeling either the DR or SR in pricing projections or did not respond to the question.

Many survey participants are struggling with challenges presented by forecasting the deterministic and stochastic reserves. Difficulties were reported with runtimes, scenarios, modeling, and assumptions.

A variety of responses were received from 18 survey participants relative to how the company is reflecting reinsurance in the DR/SR for yearly renewable term (YRT) deals. Approaches included not reflecting reinsurance, taking the ½ C_x reserve credit for YRT deals, using prudent estimates for reinsurer actions, adjusting YRT rates consistent with projected mortality, modeling expected experience with a margin on the YRT premium, reflecting the YRT deals in the reserves, and treating reinsurance as a cash flow item in pricing.

Survey participants provided responses relative to the aggregation of mortality segments for determining credibility for UL/IUL products. The Valuation Manual defines a mortality segment as “a subset of policies for which a separate mortality table representing the prudent estimate mortality assumption will be determined.” The majority expect to aggregate mortality segments across broad categories, such as all life products, all permanent products, or all fully underwritten products.

Reinsurance

Retention limits ranged from $350,000 up to $30 million, with a median limit of $3 million and an average of about $6.1 million.

Seventeen participants reported the level of reinsurance used for AU UL/IUL business. Seven of the 17 participants reported that AU UL/IUL business is being reinsured consistent with other UL/IUL business. AU business is being fully retained by six other participants. The final four participants reported other reinsurance approaches used with AU UL/IUL business that suggest the expanded use of reinsurance with these cases.

The percentage of new UL/IUL business ceded in 2018 and YTD 9/30/19 is shown in Figure 6. The percentages for IUL business are higher than those reported for UL business.

FIGURE 6: PERCENTAGE OF NEW UL/IUL BUSINESS CEDED

STATISTIC	PERCENTAGE OF NEW UL BUSINESS CEDED IN:		PERCENTAGE OF NEW IUL BUSINESS CEDED IN:	
	2018	YTD 9/30/19	2018	YTD 9/30/19
NUMBER OF RESPONSES	25	25	22	21
AVERAGE	32.7%	32.3%	36.3%	33.4%
MEDIAN	22.0%	19.4%	23.9%	30.0%
MINIMUM	2.0%	0.4%	4.0%	3.0%
MAXIMUM	90.0%	90.0%	100%	100%

Investment yields

Figure 7 shows the split between respondents assuming a new-money crediting strategy versus a portfolio crediting strategy in pricing UL/IUL products. The report includes details about earned rates assumed in pricing UL/IUL products, in total and by crediting strategy.

FIGURE 7: UL/IUL NEW-MONEY VERSUS PORTFOLIO CREDITING STRATEGY

UL/IUL PRODUCT	CREDITING STRATEGY	
	NEW-MONEY	PORTFOLIO
ULSG	67%	33%
ACCUMUL	46%	54%
CAUL	42%	58%
IULSG	45%	55%
ACCUMIUL	26%	74%
CAIUL	50%	50%

Expenses

Actual expense levels and those assumed in pricing UL/IUL products vary widely among survey participants, with details provided in the report. For comparison purposes, we converted acquisition and maintenance expenses to a dollar amount for a representative sample policy for each participant. (Commissions and field expenses were not included.) The calculation was done for both pricing expenses and actual (fully allocated) expenses. We assumed an average face amount of $500,000 issued at age 55, and premiums of $12 (“low premium”) and $18 (“high premium”) per $1,000 of face amount. We also assumed an average face amount of $500,000 issued at age 35, and premiums of $12 per $1,000 of face amount. This level of premium is thought to be at the high end of the range of actual premiums for this issue age. The calculations were done including and excluding premium taxes.

The tables in Figure 9 show statistics relative to dollars of pricing and actual expenses for the representative sample policy for issue age 55, both including and excluding premium taxes.

FIGURE 8: PRICING AND ACTUAL EXPENSES FOR A REPRESENTATIVE SAMPLE POLICY INCLUDING PREMIUM TAXES

PRICING EXPENSES	NUMBER OF RESPONSES	AVERAGE	MEDIAN	MINIMUM	MAXIMUM
ISSUE AGE 55 - HIGH PREMIUM					
ACQUISITION	26	$2,460	$2,570	$173	$7,081
MAINTENANCE (WITH PREMIUM TAXES)	28	$315	$289	$55	$662
MAINTENANCE (WITHOUT PREMIUM TAXES)	28	$160	$143	$14	$482
ISSUE AGE 55 - LOW PREMIUM					
ACQUISITION	26	$1,924	$2,019	$165	$4,831
MAINTENANCE (WITH PREMIUM TAXES)	28	$246	$228	$55	$535
MAINTENANCE (WITHOUT PREMIUM TAXES)	28	$143	$141	$14	$415

ACTUAL (FULLY ALLOCATED) EXPENSES	NUMBER OF RESPONSES	AVERAGE	MEDIAN	MINIMUM	MAXIMUM
ISSUE AGE 55 - HIGH PREMIUM					
ACQUISITION	20	$3,357	$2,794	$345	$14,281
MAINTENANCE (WITH PREMIUM TAXES)	22	$362	$330	$207	$662
MAINTENANCE (WITHOUT PREMIUM TAXES)	22	$201	$178	$32	$482
ISSUE AGE 55 - LOW PREMIUM					
ACQUISITION	20	$2,597	$2,260	$345	$9,631
MAINTENANCE (WITH PREMIUM TAXES)	22	$288	$269	$152	$531
MAINTENANCE (WITHOUT PREMIUM TAXES)	22	$200	$178	$32	$482

Appendix: Definitions

Throughout the survey various terms are used to describe UL product types and markets. Following are the definitions of these terms:

Universal life (UL)

A flexible premium permanent contract that credits cash value with current interest rates and deducts mortality and expense charges from the cash values. A UL policy can fall into any of the three product types listed below. Single premium sales and juvenile sales should be reported in the appropriate category listed below.

UL with secondary guarantees (ULSG): A UL product designed specifically for the death benefit guarantee market that features long-term (guaranteed to last until at least age 90) no-lapse guarantees either through a rider or as part of the base policy.

Cash accumulation UL (AccumUL): A UL product designed specifically for the accumulation-oriented market where efficient accumulation of cash values to be available for distribution is the primary concern of the buyer. Within this category are products that allow for high early cash value accumulation, typically through the election of an accelerated cash value rider.

Current assumption UL (CAUL): A UL product designed to offer the lowest-cost death benefit coverage without death benefit guarantees. Within this category are products sometimes referred to as “dollar-solve” or “term-alternative” products.

Total individual UL: Individual UL products that include ULSG, AccumUL, and CAUL, but do not include any indexed UL products.

Indexed universal life (IUL)

A UL product with the cash value linked to an equity index, such as the S&P 500 or Dow Jones. An IUL product can fall into any of the three product types listed above under universal life. Single premium sales and juvenile sales should be reported in the appropriate category listed below.

IUL with secondary guarantees (IULSG)

Cash accumulation IUL (AccumIUL)

Current assumption IUL (CAIUL)

Total indexed UL: Indexed UL products that include IUL with secondary guarantees, cash accumulation IUL, and current assumption IUL.

Long-term care (LTC)

Long-term care refers to plans that qualify under long-term care model laws and regulations.

Chronic illness (CI)

Chronic illness refers to plans, other than terminal illness or critical illness plans, that qualify under Model Regulation 620 governing accelerated death benefit designs.

Milliman is among the world's largest providers of actuarial and related products and services. The firm has consulting practices in life insurance and financial services, property & casualty insurance, healthcare, and employee benefits. Founded in 1947, Milliman is an independent firm with offices in major cities around the globe.

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