MILLIMAN RESEARCH REPORT

UNIVERSAL LIFE, INDEXED UNIVERSAL LIFE, AND VARIABLE UNIVERSAL LIFE ISSUES

2021/2022 Survey: Key discoveries

July 2022

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Background

Universal life (UL), indexed universal life (IUL), and variable universal life (VUL) have played a significant role in the life insurance market for many years. In the last 10 years, the market share of these UL-type products combined has consistently been in the range of 38% to 44%[1] of total life sales measured by first-year premium. (Throughout this report, IUL and VUL products are not included when using the term "UL.") In 2021, Milliman conducted its 15th annual survey aimed at addressing UL, IUL, and VUL issues, and at providing carriers with competitive benchmarking to evaluate where they stand relative to their peers. (Note: The full comprehensive survey will be conducted on a biennial basis going forward, with the next full survey scheduled for 2022 data to be published in 2023. This year's version of the survey is abbreviated and focuses on topics that are currently relevant.) Survey topics and questions were determined based on input from Milliman consultants, as well as from 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, VUL, sales with chronic illness riders, sales with long-term care (LTC) riders
- Profit measures
- Reserves
- Investments
- Underwriting
- Product design
- Pricing
- Illustrations

The survey was sent via email to UL/IUL/VUL insurance companies on October 2, 2021. Twenty-seven companies submitted responses. Input from survey participants relates to the UL/IUL/VUL environment in late 2021.

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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, individual IUL, and individual VUL sales of $2.8 billion and $2.5 billion for calendar year 2020 and for 2021 as of September 30, 2021 (YTD 9/30/21), respectively. Note that, unless noted otherwise throughout this report, single-premium sales are included at 10% of actual premium on those policies. *UL sales during YTD 9/30/21 accounted for 15% of total UL/IUL/VUL sales combined (reported by survey participants), decreasing from the 20% of total sales it represented in 2020. IUL sales during YTD 9/30/21 accounted for 57% of total UL/IUL/VUL sales combined, decreasing from the 58% of total sales it represented in 2020. VUL sales during YTD 9/30/21 accounted for 28% of total UL/IUL/VUL sales combined, increasing from the 22% of total sales it represented in 2020.* Sales in 2020 were likely impacted by the low interest rate environment, as well as challenges triggered by the pandemic. This was especially true for UL sales and, to a lesser extent, for IUL sales.

Of the 27 survey participants, 12 reported sales for all three UL types, five reported UL and IUL sales, four reported UL sales only, another four reported IUL sales only, and two reported UL and VUL sales in 2020. For 2021 sales, two participants did not report UL sales, thus their categories changed to IUL only and to IUL and VUL only.

The following three sections include further details about UL, IUL, and VUL sales separately.

UNIVERSAL LIFE SALES DETAILS

Survey participants reported total individual UL sales of $567 million and $381 million for calendar year 2020 and for YTD 9/30/21, respectively. Policy counts were 122,716 and 109,000 for the same time periods.

Total individual UL sales were reported by 22 participants for 2020 sales and by 20 participants for YTD 09/30/21 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 a 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 2020 UL sales (on a policy count basis) by underwriting approach was 57.9% fully underwritten, 31.0% SI, 11.2% AU, and 0.0% other underwriting approaches. For YTD 9/30/21 UL sales, the distribution by underwriting approach was 62.1% fully underwritten, 25.2% SI, 12.7% AU, and 0.0% other underwriting approaches.* The portion of AU business is lower than what was reported in the previous UL/IUL survey for calendar year 2019 and YTD 9/30/20 (likely due to the mix of participating companies). Also, we believe that SI and AU are more commonly used on term insurance plans than UL/IUL/VUL. Further details may be found in the report regarding the total individual UL sales within each of these underwriting approaches.

Twenty of the 23 UL participants reported sales by application type based on premiums and 19 reported sales based on face amount for 2020; for YTD 9/30/21, 19 reported sales by premium while 18 reported sales based on face amount. For 2020 sales, 17 of the 20 participants reported sales from both paper applications and e-apps, two from paper applications only, and the remaining one from e-apps only. One participant that reported sales from both paper applications and e-apps in 2020 no longer reported UL sales for YTD 9/30/21. Therefore, for YTD 9/30/21 sales, 16 of the 19 reported sales from both paper and e-apps, two from paper applications only, and the remaining one from e-apps only. Paper applications accounted for 65% of total applications (based on premiums) for 2020. This dropped to 63% for YTD 9/30/21. On a face amount basis, paper applications accounted for 71% of total applications for both 2020 and YTD 9/30/21.

Based on 2020 sales by premium, the average issue age for paper application sales was 60 and for e-app sales was 55. Based on sales by face amount for 2020, the average issue age for paper application sales was 53 and for e-app sales was 45. These averages are lower than the averages determined based on premium.

Based on YTD 9/30/21 sales by premium, the average issue age for paper application sales was 60 and for e-app sales was 57. The average age is the same as that reported for paper application sales in 2020. The average age for e-apps of 57 for YTD 9/30/21 is two years older than the average reported in 2020 for e-apps. Based on YTD 9/30/21 sales by face amount, the average issue age for paper application sales was 53 and for e-app sales was 44. The average age is the same as that reported for paper applications sales in 2020. The average age for e-apps is one year younger than the average reported in 2020 for e-apps.

INDEXED UNIVERSAL LIFE SALES DETAILS

Of the 27 survey participants, 20 reported IUL sales. Survey participants reported total IUL sales of $1.65 billion and $1.43 billion, respectively, for calendar year 2020 and for YTD 9/30/21. Policy counts were 229,385 and 196,168 for the same time periods.

IUL sales were reported by 20 participants based on the underwriting approach. Sales were split by SI, AU, full underwriting, and other underwriting approaches. *The distribution of 2020 IUL sales (on a policy count basis) by underwriting approach was 84.2% fully underwritten, 3.3% SI, 12.5% AU, and 0.0% other underwriting approaches. For YTD 9/30/21 IUL sales, the distribution by underwriting approach was 77.7% fully underwritten, 8.8% SI, 13.6% AU, and 0.0% other underwriting approaches.* From 2020 to YTD 9/30/21, overall, there was a shift from fully underwritten sales to SI and a small amount to AU. The portion of IUL sales subject to SI was significantly lower than those reported for UL sales. The portion of IUL sales subject to AU was similar to that reported for UL sales. The reason a lower proportion of the IUL business is underwritten using SI and AU relative to fully underwritten business, we believe, is that SI and AU are more commonly used on term insurance plans than UL/IUL/VUL. Further details may be found in the report regarding IUL sales within each of these underwriting approaches.

IUL sales by application type (paper versus e-app) and issue age range were reported by 18 survey participants on both a premium and face amount basis for 2020 and YTD 9/30/21. Sixteen of the 18 reported sales from both paper applications and e-apps. One participant reported sales from paper applications only. One participant reported sales from e-apps only. Paper applications accounted for 57% of total applications (based on premiums) and 43% of total applications (based on face amount) for 2020. For YTD 9/30/21, paper applications accounted for 55% of total applications (based on premiums) and 41% of total applications (based on face amount). The use of e-apps is more common for IUL business than for UL or VUL business.

Based on 2020 sales by premium, the average issue age for paper application sales was 54 and for e-app sales was 47. For YTD 9/30/21 sales by premium, the average ages were the same as 2020. Based on 2020 sales by face amount, the average issue age for paper applications was 49 and for e-app sales was 38. For YTD 9/30/21 sales by face amount, the average age is one year younger than that reported in 2020 for paper applications and the same as that reported in 2020 for e-apps.

VARIABLE UNIVERSAL LIFE SALES DETAILS

Of the 27 survey participants, 13 reported total individual VUL sales in 2020 and for YTD 9/30/21. Total VUL sales reported by survey participants equaled $632 million and $687 million, respectively, for calendar year 2020 and for YTD 9/30/21. Policy counts were reported at 60,132 and 67,546 for the same time periods.

VUL sales were reported by 13 participants based on the underwriting approach. Sales were split by SI, AU, full underwriting, and other underwriting approaches. *The distribution of 2020 VUL sales (on a policy count basis) by underwriting approach was 65.7% fully underwritten, 0.1% SI, 34.2% AU, and 0.0% other underwriting approaches. For YTD 9/30/21 VUL sales, the distribution by underwriting approach was 63.6% fully underwritten, 0.1% SI, 36.3% AU, and 0.0% other underwriting approaches. From 2020 to YTD 9/30/21, overall, there was a minor shift from fully underwritten to AU sales.* One of the top VUL participants (in terms of sales) reported 36% and 37% of its VUL policies were issued using AU, which may be driving these distributions. Further details may be found in the report regarding VUL sales within each of these underwriting approaches.

VUL sales by application type (paper versus e-app) and issue age range were reported by 13 survey participants on both a premium and face amount basis for 2020 and YTD 9/30/21. For both time periods, 10 of the 13 reported sales from both paper applications and e-apps, and three from paper applications only. Paper applications accounted for 64% of total applications (based on premiums) for 2020 and 56% for YTD 9/30/21. On a face amount basis, paper applications accounted for 61% of total applications for 2020 and 53% in YTD 9/30/21.

Based on 2020 sales by premium, the average issue age for paper application sales was 56 and for e-app sales was 52. For YTD 9/30/21 sales by premium, the average ages were the same as reported in 2020. Based on 2020 sales by face amount, the average issue age for paper applications was 50 and for e-app sales was 44. For YTD 9/30/21 sales by face amount, the average ages were again the same as reported in 2020.

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. Definitions of the various approaches are as follows:

- **Discounted death benefit approach.** The insurer pays the owner a discounted percentage of the face amount reduction, with the face amount reduction occurring at the same time as the accelerated benefit payment. This approach avoids the need for charges up front or other premium requirements for the rider because the insurer covers its costs of early payment of the death benefit via a discount factor.
- **Lien approach.** The payment of accelerated death benefits is considered a lien or offset against the death benefit. Access to the cash value (CV) is restricted to any excess of the CV over the sum of the lien and any other outstanding policy loans. Future premiums and charges for the coverage are unaffected, and the gross policy values continue to grow as if the lien did not exist. In most cases, lien interest charges are assessed under this design.
- **Dollar-for-dollar 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 23 survey participants reporting UL sales in 2020, 15 reported UL sales with chronic illness (CI) accelerated death benefit (ADB) riders. Of the 21 survey participants reporting UL sales for YTD 9/30/21, 12 reported UL sales with CI ADB riders. Survey participants reported sales of $56.5 million for 2020 and $78.7 million for YTD 9/30/21. The total face amount issued for UL policies with chronic illness riders was reported as $6.1 billion for 2020, and $5.2 billion YTD 9/30/21.

Fifteen of the 21 IUL survey participants reported IUL sales with CI ADB riders. Eleven of the 15 also reported UL sales with chronic illness riders. Total IUL sales with chronic illness riders were reported equal to $650 million in 2020 and $713 million during YTD 9/30/21. The total face amount issued for IUL policies with chronic illness riders was $34.5 billion and $36.5 billion, respectively, for 2020 and during YTD 9/30/21.

The table in Figure 1 shows a summary of sales of chronic illness riders as a percentage of total sales by premium (separately for UL, IUL, and VUL products). *During YTD 9/30/21, sales of chronic illness riders as a percentage of total sales were 20.4% for UL products, 48.0% for IUL products, and 16.2% for VUL products.* The difference by plan may be driven by the high percentage of UL policies that are written with long-term care (LTC) riders (see Figure 3 below). A chronic illness rider would not also be included on those policies. The increase in UL and IUL CI sales in 2021 over 2020 may be due to COVID-19 and the new awareness of the need.

FIGURE 1: CHRONIC ILLNESS RIDER SALES AS A PERCENTAGE OF TOTAL SALES

CALENDAR YEAR	TOTAL INDIVIDUAL UL	TOTAL INDIVIDUAL IUL	TOTAL INDIVIDUAL VUL
SALES WITH CHRONIC ILLNESS RIDERS AS A PERCENTAGE OF TOTAL SALES			
2020	9.7%	37.4%	16.3%
YTD 9/30/21	20.4%	48.0%	16.2%

Six of the 16 survey participants that reported UL sales with chronic illness riders automatically included them with the base UL policy. Six of the 15 IUL participants automatically included chronic illness riders with the base IUL policy. One of the six VUL participants automatically included chronic illness riders with the base VUL policy.

SALES WITH LONG-TERM CARE (LTC) RIDERS

Of the 23 survey participants reporting UL sales, seven reported UL sales with long-term care (LTC) riders. Of the 21 survey participants reporting IUL sales, eight reported IUL sales with LTC riders. Of the 14 participants reporting VUL sales, five reported VUL sales with LTC riders.

Of the seven survey participants that reported UL sales with LTC riders, four offer but do not automatically include the accelerated death benefit (ADB) rider only on the base UL policy. Three participants reported that some of their UL LTC ADB riders are automatically included and others are not. These same three participants reported that some of their UL extension of benefits riders (EBRs) are automatically included and others are not. These same three participants offer the inflation protection rider (IPR) as well but do not include it automatically.

Seven of the eight participants reporting IUL sales with LTC riders offer but do not automatically include LTC ADB-only riders with the base IUL policy. The eighth reported offering an ABR with an EBR that is automatically included with the IUL. No IPR was reported on IUL.

Four of the five participants reporting VUL sales with LTC riders do not automatically include LTC ADB-only riders with the base VUL policy. The fifth reported that some ADB-only riders and ADB with EBR are automatically included, and others are not.

Figure 2 includes a summary of total UL, total IUL, and total VUL sales with LTC riders.

FIGURE 2: 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)
2020	7	$167	$2,391	8	$203	$13,925
YTD 9/30/21	7	$1146	$2,499	8	$160	$10,447
YTD 9/30/21 ANNUALIZED	7	$159	$3,494	8	$233	$15,272

CALENDAR YEAR	VUL SALES WITH LTC RIDERS ($ MILLIONS)		
	NUMBER OF RESPONSES	SALES (PREMIUM)	SALES (FACE AMOUNT)
2020	5	$60	$2,705
YTD 9/30/21	5	$93	$3,731
YTD 9/30/21 ANNUALIZED	5	$141	$5,646

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 3. *During YTD 9/30/21, sales of LTC riders as a percentage of total sales by premium were 49.8% for UL products, 22.5% for IUL products, and 33.4% for VUL products***.** *It is notable that nearly half of UL sales by premium include a LTC rider.*

FIGURE 3: LTC RIDER SALES AS A PERCENTAGE OF TOTAL SALES BY PREMIUM

CALENDAR YEAR	TOTAL INDIVIDUAL UL	TOTAL INDIVIDUAL IUL	TOTAL INDIVIDUAL VUL
SALES WITH LTC RIDERS AS A PERCENT OF TOTAL SALES			
2020	46.5%	25.0%	23.3%
YTD 9/30/21	49.8%	22.5%	33.4%

DRIVERS OF UL/IUL/VUL PRICING

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

1. Profit targets
2. Reserves
3. Investment yields

In the full survey, which is conducted every other year, other data reported includes target surplus, reinsurance, and 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 targeted ROI/IRR reported is 8.0% for cash accumulation UL (AccumUL), 8.5% for UL with secondary guarantees (ULSG), 9.0% for current assumption UL (CAUL) and VUL, 9.5% for IUL with secondary guarantees (IULSG), and 12.0% for cash accumulation IUL (AccumIUL) and current assumption IUL (CAIUL).

Reserves

Various questions were included in the survey relative to principle-based reserves (PBR) in accordance with the Valuation Manual Chapter 20 (VM-20).

A little over half of the survey participants are not using the stochastic exclusion test (SET). The SET is a means of determining whether the added effort of calculating stochastic reserves under PBR is required. Of 27 responses, 14 are not using the test, have not analyzed the test, or PBR do not apply to them. Ten participants are using the ratio test for this aspect of VM-20 relative to UL/IUL/VUL products. Two participants are using the certification option. The final participant did not respond to the SET part of the survey. Nine of the 10 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.

Eleven 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 11 participants are explicitly modeling the DR, but not the SR. Five reported they are not explicitly modeling either the DR or SR in pricing projections. It is possible they passed both the deterministic exclusion test (DET) and SET.

Various responses were received from 13 survey participants relative to how these companies are reflecting reinsurance in the DR and SR for yearly renewable term (YRT) deals. Separately, four responded regarding coinsurance deals. Few details were reported for coinsurance deals. Approaches for YRT reinsurance included not reflecting reinsurance, taking the ½ C_x reserve credit for YRT deals, capping reinsurance at ½ C_x, modeling expected experience with a margin on the YRT premium, and utilizing baseline reinsurance for the DR.

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

Survey participants provided responses relative to the aggregation of mortality segments for determining credibility for UL/IUL/VUL 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.” Most participants expect to aggregate mortality segments across broad categories, such as all life products, all permanent products, or all fully underwritten products.

Investment yields

Figure 4 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. It also includes the investment strategy (benchmark) reported by survey participants for UL and IUL new business as of December 31, 2020, and September 30, 2021.

FIGURE 4: UL/IUL NEW-MONEY VERSUS PORTFOLIO CREDITING STRATEGY

UL/IUL PRODUCT	CREDITING STRATEGY	
	NEW-MONEY	PORTFOLIO
ULSG	50%	50%
ACCUMUL	33%	67%
CAUL	40%	60%
IULSG	57%	43%
ACCUMIUL	30%	70%
CAIUL	57%	43%

Abbreviations: AccumIUL, cash accumulation IUL; AccumUL, cash accumulation UL; CAIUL, current assumption IUL; CAUL; current assumption UL; IUL, indexed universal life; IULSG, indexed universal life with secondary guarantees; UL, universal life; ULSG, universal life with secondary guarantees.

IUL ILLUSTRATIONS

Actuarial Guideline 49-A (AG 49-A) applies to IUL illustrations on applicable policies sold on or after December 14, 2020. This guideline was put in place in an attempt to again level the playing field when illustrating IUL products, by addressing issues caused by new IUL product designs that were not contemplated in AG 49 (e.g., multipliers, cap buy-ups, negative loan spreads).

Twenty of the 21 IUL participants reported the rate that was calculated for the Benchmark Index Account (BIA) per Section 4A of AG 49-A.

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.

Variable universal life (VUL)

A UL product that is registered with the U.S. Securities and Exchange Commission (SEC) with cash values that fluctuate depending on investment performance.

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.

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